

Q6. Many people feel that free trade is unfair. Some blame it for the loss of jobs; others for worsening balance of payments deficit. *Source: adapted from World Economic Forum.*

- (a) Explain how free trade helps to alleviate the problem of scarcity. [10]
- (b) Assess the relevance of protectionism in view of the statement above. [15]

**SUGGESTED ANSWERS TO PART A**

**Introduction**

**Clarify key terms:** Scarcity arises because there are limited economic resources but unlimited human wants. Thus, resources are scarce or insufficient to satisfy all wants. Without free trade, each country would have to be self-sufficient and can only consume what it can produce with its given resources.

**Direction:** Free trade is needed to extend a nation’s consumption possibility frontier beyond its production possibility frontier i.e. it enables the people in the country to consume more goods and services than what the country could produce on its own. Hence, the Theory of Comparative Advantage can be used to explain how free trade alleviate the problem of scarcity.

**Body**

**P1: Countries should specialize and trade goods which they have comparative advantage in arising from differences in factor endowments as they can benefit in terms of efficiency in resource allocation.**

- A country is said to have comparative advantage in the production of a good if it can produce that good at a lower opportunity cost than another country.
- The opportunity cost of producing Good X is the amount of the other good which has to be sacrificed in order to produce an additional unit of Good X.
- The assumptions are there are two countries in the world, USA and China, producing two goods, cloth and wheat. Both countries have the same amount of resources which are fully employed and equally divided between the productions of both goods before specialisation. There are constant returns to scale and perfect mobility of factors of production within the country. Transport cost is negligible and there is free trade between the two countries.

Table 1 below shows the possible output before specialization.

Country/Goods	Cloth (metre)	Wheat (kg)
USA	500	500
China	400	100
World	900	600

From Table 1, we can see that by dividing their resources equally in the production of wheat and cloth, USA can produce 500m of cloth and 500kg of wheat. To produce 1 more unit of cloth, the resources for wheat production has to be channelled to produce more cloth. As a result, the output of wheat falls by 1kg. So the opportunity cost of producing 1 m of cloth in USA is 1 kg of wheat. China can produce 400m of cloth and 100kg of wheat. By the same reasoning, China’s opportunity cost of producing 1 m of cloth is 0.25 kg of wheat.

Since China incurs a lower opportunity cost of producing cloth, China is said to have a comparative advantage in the production of cloth. Hence, China will specialise in cloth production. According to the Theory of Comparative Advantage, both countries will gain if each specialises in the production of the good in which she has the comparative advantage. Hence, USA, which has the comparative advantage in wheat will specialise in the production of wheat and China will specialise in the production of cloth. In this way, both countries are being cost-efficient as they are producing efficiently in terms of what they give up least in → they are being both productively efficient and resources are also allocated in the most efficient manner.

**P2: To benefit from free trade based on comparative advantage, mutually beneficial terms of trade have to be established between the two countries.**

Table 2 below shows the output after specialisation.

Country/Goods	Cloth (metre)	Wheat (kg)
USA	0	1000

China	800	0
World	800	1000

Assuming constant returns to scale, the output of wheat in the USA will double after specialisation. Initially, only half of its resources are allocated to wheat production and the total output is 500kg. However, after specialisation, all its resources in cloth production are transferred to wheat production. In other words, the total amount of resources allocated to wheat production has now increased by 100%. This results in the same % increase in total output, assuming constant returns to scale. This means that total output of wheat increases to 1000kg which is twice that of the amount before specialisation.

To show how both countries can gain from trade, mutually beneficial terms of trade must be determined. In a two-country, two-commodity model, the terms of trade must lie within the opportunity cost ratios of the two countries for trade to be mutually beneficial.

From Table 1, we observed that the opportunity cost of producing 1 kg of wheat in USA is 1 m of cloth and the opportunity cost of producing 1 kg of wheat in China is 4 m of cloth. For the USA to produce 1 m of cloth, she forgoes 1 kg of wheat. Thus, she is willing to trade only if she can get more than 1 m of cloth for every kg of wheat she exports to China. Similarly for China to produce 1 kg of wheat, she forgoes 4 m of cloth. Thus she is not willing to pay more than 4 m of cloth for every kg of wheat imported from USA.

Thus, for trade to be mutually beneficial, the terms of trade must lie between the opportunity cost ratios of producing the goods in the two countries i.e. 1 metre of cloth < 1 kg of wheat < 4 metre of cloth.

**P3: When countries exchange goods based on their comparative advantage with mutually beneficial terms of trade, their consumer welfare will increase.**

Assuming the rate of exchange or terms of trade is 1 kg of wheat 2 m of cloth, which lies within the domestic opportunity cost of production of the 2 countries and USA exports 250 kg of wheat in exchange for 500 m of cloth from China. Table 3 shows the consumption possibilities when trade takes place.

Country/Goods	Cloth (metre)	Wheat (kg)
USA	500	750
China	300	250
World	800	1000

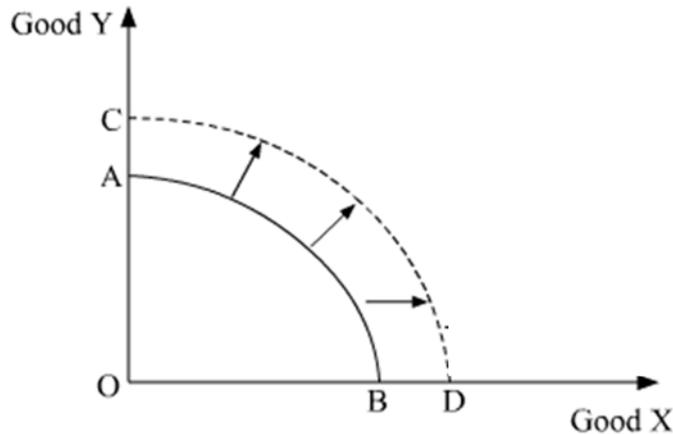
Comparing the situation before (Table 1) and after trade (Table 3), it can be seen that the USA is now able to consume 250 kg more wheat without a fall in cloth consumption. Thus, she gains 250 kg of wheat by trading with China.

China also gains from trade with the USA. Her consumption of cloth falls by 100m while that of wheat increases by 150 kg. Certainly this is better than before trade. This is because before trade, if China reduces her cloth production and consumption by 100m, she is able to produce only 25 kg of wheat. With trade, she can buy 150 kg of wheat from the USA by giving up or selling the same amount of cloth (i.e. 100m of cloth). Thus, her net gain is 125 kg of wheat.

After specialisation and trade, both the USA and China are able to consume more goods and services to satisfy their wants. They will be consuming beyond their PPCs (a point which is desirable yet unattainable before trade), hence alleviating scarcity.

**P4: There are dynamic gains from trade in the form of innovation, technological advances and productivity improvements over time, leading to a rise in productive capacity.**

By increasing competition, trade promotes research and development and helps to drive technological innovations, resulting in improvements in productivity and product quality over time. As countries specialise, they gain experience in the production of the goods and are able to improve their efficiency in producing it. As a result, the country will have an increase in the quality of resources. That will mean that the PPC can actually shift outwards to encompass more points outside the original PPC.



This means that people can now access the point in ABCD and thus the problem of scarcity has been alleviated.

### **Conclusion**

In summary, free trade allows consumption to take place beyond PPC, hence alleviating the problem of scarcity. The extent of the point beyond PPC will depend on the difference in the opportunity cost incurred and the type of goods traded (terms of trade).

However, being too dependent on trade may increase the country's vulnerability to external shocks of trade partners' economic conditions which may sometimes call for the need for protectionist measures.

<b>LEVELS</b>	<b>DESCRIPTION</b>	<b>MARKS</b>
3	<ul style="list-style-type: none"> <li>Shows good explanation of the CA theory using appropriate examples and terms of trade</li> <li>Ability to explain and illustrate well how the theory allows country is able to consume beyond the PPC and thus it is a alleviation of scarcity using either a PPC diagram or a table</li> <li>Shows understanding that scarcity can be alleviated through the dynamic gains from trade</li> </ul>	8-10
2	<ul style="list-style-type: none"> <li>Ability to explain how the law of CA lead to increased world output but inadequately explained.</li> <li>CA table contains minor errors and inadequately explained OR scarcity unexplained with PPC.</li> </ul>	5-7
1	<ul style="list-style-type: none"> <li>Major conceptual errors with little coherent explanations.</li> <li>Not linking theory of CA to scarcity</li> <li>CA table unexplained</li> </ul>	1-4

### **SUGGESTED ANSWERS TO PART B**

#### **Introduction**

- In today's globalised world, countries are more vulnerable to changing economic conditions of trade partners and may experience economic recession and *BOP deficit* when there is a worldwide recession.
- The country may also undergo structural change due to loss of CA or sharing of expertise knowledge and may experience *structural unemployment* if the workers lack the necessary skills required in the expanding industry.
- Domestic employment and industries may also be at risk when trade partners carry out *unfair competition through predatory dumping*.
- This essay aims to explain how protectionist measures such as tariffs and subsidies are relevant to correct the problems given in the preamble and to explain the costs of protectionist measures.

#### **Body:**

**P1: Protectionist policies are relevant during worldwide economic recession in order to stabilise the economy, support local industries, employment and growth.**

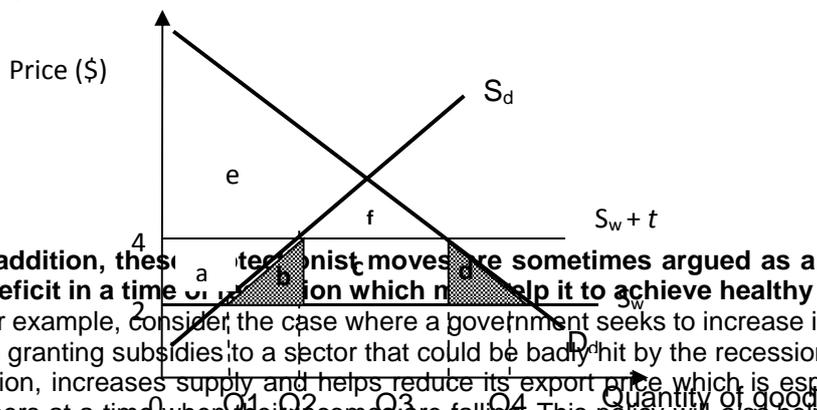
**E1:** Recession is marked by unemployment, and general economic contraction. As countries become increasingly dependent on external demand and investment, X and I will form large components of their GDP. Worldwide recession will cause a fall in external demand for a country's goods and services and reduced inward investments. Any fall in X and I will cause significant fall in AD which in turn gives rise to high unemployment and fall in real GDP. Hence, governments turn to protectionism during recession to assist powerful domestic industries to avoid falling profits and competition from imports as overall internal and external demand fall. This is because if governments impose for example, protective tariffs, this increases the price of imported goods relative to those that are domestically produced. This reduces the quantity demanded of imports and increases the demand for domestic substitutes. This in turn enables domestic production to increase and creates large number of jobs through some assured and increased access to the internal market in the short term.

L1: In this way, domestic employment is protected and derived demand for local workers in local industry rises and greater employment and economic growth can be attained.

**Evaluation/P2: However, tariffs can result in microeconomic issues of inefficiency in the use of scarce resources and loss of consumers' welfare.**

**E2:** This is because tariffs result in a higher price of goods which also means that consumers will consume less and hence there is a welfare loss of area d. In addition, if protective measures are on production that has no comparative advantage, the country suffers from welfare loss due to inefficiency in its resource allocation. In Figure 1 below, this is represented by area b. This is because before protectionism, for example, at a price of \$2, the consumers surplus enjoyed was areas abcdef.

The tariff raises the price to \$4 and results in a loss of consumer surplus of area abcd. Areas b and d represents a deadweight loss to the country. This is because consumer surplus of area a is transferred to the producers. Area f represents the tax/tariff revenue collected by the government. The deadweight loss is equivalent to area b and d.



**P3: In addition, these protectionist moves are sometimes argued as a solution to a country's trade deficit in a time of recession which may help it to achieve healthy BOP goal.**

**E3:** For example, consider the case where a government seeks to increase its export competitiveness through granting subsidies to a sector that could be badly hit by the recession. This reduces its cost of production, increases supply and helps reduce its export price which is especially needful to foreign consumers at a time when their incomes are falling. This policy will also help local consumers to look to domestic suppliers rather than imports and switch of import substitutes and hence support domestic production and employment.

L3: In this way, import expenditure is reduced and export earning rises which helps to reduce a country trade deficit → can improve current account → BOP deficit will decrease helping the country achieve healthy BOP goal.

**P4: Protectionist measures can also be relevant to protect domestic employment and domestic industries in the threat of unfair competition (predatory dumping).**

**E4:** When countries become increasingly dependent on trade in today's globalized world, they become increasingly susceptible to unfair act of competition. Trade partners may carry out predatory dumping whereby they charge their goods at a price below marginal cost in overseas market. The aim is to gain monopoly power by driving out domestic firms in the overseas market. When prices of imports are lowered, since  $PED_m > 1$ , quantity demanded of imports will rise more than proportionately, ceteris paribus. Demand for domestic substitutes will fall, leading to a fall in derived demand for labour → rise in unemployment of domestic workers. Since there is a fall in demand for the goods, the fall in total

revenue, assuming cost constant will result in a fall in profits which may eventually cause a firm to shut down if it continuously make losses → demise of domestic industries.

**L4:** By imposing tariffs on foreign goods, the price of imports will rise which will make it more difficult for foreign producers to drive out domestic producers with cheap imports → govt is able to protect domestic employment and domestic industries.

**Evaluation**

Protectionist measures are relevant in the context that international trade caused many unfair acts of competition to take place such that the domestic country faces large scale unemployment and closure of industries. When this happens, the reason for protectionism is strengthened because closure of industries may result in structural change in country and give rise to further structural unemployment if the workers lack the skills required in new expanding industry.

**ANTI-THESIS**

**P5:** However, protectionism is not a foregone answer during recession as it can affect the economy negatively both in the short and long run.

**E5:** Protectionism by a country can bring about “beggar thy neighbour” effects. Assume for example, USA impose an import tariff on China’s tyres. This increases the price of china’s to USA. Ceteris paribus, if the demand for China tyres is price elastic due to substitutes from other trading partners, the quantity demanded for China’s tyres will fall to a greater extent, thus reducing China’s export earnings. Assuming import expenditure unchanged, China’s net exports will fall, causing the country’s aggregate demand to fall. This fall in bring about a fall in the production of goods and services in the country and a fall in real gross domestic product or national income by a multiple amount. Hence this has “beggar thy neighbor” effects on China as its purchasing power falls and China is made poorer as its economy contracts due to fall in employment and real national income. When China is poorer, she will not be able to buy USA’s exports → reducing USA’s (X-M) and negating the impact on employment and economic growth eventually.

**Evaluation:**

The real danger of protectionism sometimes does not lie in one country’s actions, but in the retaliatory responses of its trading partners. This is because sometimes trade barriers by themselves may have only a modest impact on trade flows. However, other countries, especially those affected directly and significantly by protectionist measures of trading partners, may retaliate with trade barriers of their own. If countries were to take this route, retaliation against trade barriers would be met with counter-retaliation, and such trade conflicts would escalate to trade wars.

In the above example, if at the same time, China retaliated by imposing tariffs on American exports of automotive products and chicken meat, which has indeed happened, this also means that the American exports to China fall further. Hence, protectionism makes all countries poorer and protects no one and can only serve to make the recession longer, deeper and more widespread.

**L4:** Such was the well-known scenario that played out during the Great Depression of the 1930s, when “beggar-thy-neighbor” policies prevailed and the international economy suffered from a contraction of trade.

**Conclusion:**

In my opinion, protectionist measures are relevant when the country faces economic problems arising from free trade in the short run. However, once the problem is rectified, the countries should move towards free trade since trading based on comparative advantage can promote economic efficiency in resource allocation worldwide and can also help all the countries achieve their respective goals to some extent.

L3	For a well-developed answer using analysis to give a clear explanation of the costs and benefits of protectionism (using preamble).	8-10
L2	For an underdeveloped answer giving a largely descriptive explanation of the costs and benefits of protectionism (using preamble).	5-7
L1	For an undeveloped answer that shows knowledge of the costs and benefits of protectionism.	1-4

E3	For an answer that arrives at an analytically well-reasoned judgement about whether protectionism is relevant in the given context	4-5
E2	For an answer that makes some attempt at a judgement about whether protectionism is relevant in the given context	2-3
E1	For an answer that gives an unsupported evaluative statement(s) about whether protectionism is relevant.	1

Q1. Organic food such as fresh fruits, vegetables and dairy products is grown without synthetic pesticides, chemical fertilizers or genetically modified seeds. 2015 was a year of significant growth for the organic food industry despite the continued struggle to meet the seemingly unquenchable consumer demand. There was also an increase in the number of farmers converting to organic farming over time.

*Source: Organic Trade Association*

Discuss the demand and supply factors that determine the output of organic food and evaluate which is the most important factor. [25]

### **Introduction**

Definition: Demand and supply in the free market will determine the equilibrium output. Hence, changes in the demand and supply will impact the market equilibrium.

Direction:

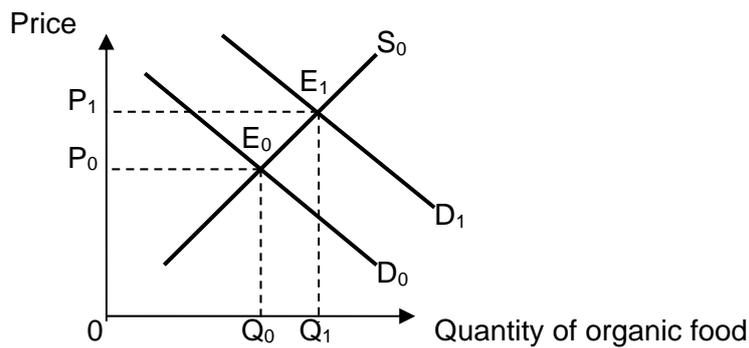
- In the farming industry, organic produce has become such an appetite for consumers to the point where the demand cannot be met due to a huge shortage of growers. Producers have responded to this growing demand by making the transition to certified organic food production.
- There are different types of organic food and there are some factors which are common to these products such as technological advancements and economies of scale which affects supply as well as factors such as tastes and preferences, income level and prices of conventional food that influence demand.

### **Body**

Selecting food is one of the most common activities that consumers pursue many times each day. But this selection requires taking into account different goals (e.g. price and taste) and may involve a complicated decision-making process in order to satisfy these different goals.

**P1: Although the organic food sector comprises only a small percent of all food sales, the perceived environmental and health benefits of organic food have received increasing recognition and broader acceptance among consumers, hence a shift of *taste and preference* from conventional food to organic food.**

Since society has been adopting health-conscious eating habits, the demand for organic food has only been steadily growing. In the minds of consumers, this trend of “eat good, feel good, look good” is convincing and rapidly growing as it has greatly contributed to why the majority of consumers are choosing organic. Environmentally conscious consumers are willing to pay a much higher price for sustainable products such as organic and locally-produced foods as ethical considerations are becoming important factors in their decision making process. Rise in demand for organic food → rightward shift of DD curve from DD0 to DD1



→ Ceteris paribus, at the original price of the organic food, there is now a shortage of the good. The resulting shortage causes the price of the organic food to increase. As the price of the organic food increases, its quantity demanded falls while the quantity supplied increases. These changes are illustrated by a movement up the demand curve  $D_1$  and a movement up the supply curve  $S_0$  respectively.

L1: Price will continue to rise until the market is in equilibrium at price  $OP_1$  and there is a rise in equilibrium output of  $OQ_1$  of organic food being traded.

**P2: The *global economic growth* in the last decade contributed to a rise in demand for organic food.**

Since organic food is considered a luxury good, any change in consumer income directly affects the percent change in demand, which will constitute how much consumers are willing and able to spend. If the amount of disposable income increases within consumers, they will feel more confident and compelled to spend those extra dollars towards better quality luxury goods, in this case organic foods. Conversely, the same transpires when there is a decrease in income where consumers will choose the less costly normal good as opposed to purchasing the luxury good. As the standard of living increases, consumers shift their purchases away from higher quantities of food and into higher quality food. This simple analysis of the relationship between income and consumption is crucial for understanding and/or forecasting the likely future of the organic food industry.

L2: As the standard of living increases, consumers are very likely to spend an increasing amount on food quality, including certified organic products.

**P3: The price of related goods is significant to affect the demand for organic food, since conventional food is readily available to consumers, often at prices below those for organically produced food products.**

The production, distribution, and marketing of organic foods is more costly than conventional food due to the costs of segregation of organic products. The resultant higher production costs for organic foods accounts for the higher retail prices for organic food. Majority of consumers are likely to make price comparisons between organic and conventional foods, and switch purchases based on prices. Hence the lower price of conventional food leads to a rise in quantity demanded, ceteris paribus. Since conventional food and organic food are substitutes (positive cross elasticity of demand), consumers will switch towards conventional food, hence a fall in demand for organic food.

L3: Since the bulk of consumers are willing to “trade off” the benefits of organic food with the lower prices of conventional food, the actual prices between products are likely to be a major determinant of future organic food sales.

Evaluation

However, it is important to emphasize that not every consumer will base organic/nonorganic purchase decisions on price comparisons alone. Economic theory provides a simple model of human behaviour, based on rational, or consistent, behaviour: if the benefits of purchasing organic food outweigh the costs, then consumers will buy organic food. If, on the other hand, the costs of organic food are greater than the benefits, then the consumer will not purchase organic food. The perceived benefits of organic food purchases include enhanced health for the consumer and his or her family, a decrease in damage to the rural environment, greater health for farmers and other individuals involved in the production, processing, and distribution of food, and any perceived benefits to rural communities. The costs of purchasing organic food are simply the higher retail prices paid for organic

products that result from higher production, segregation, and certification costs. An additional cost of organic food production is the loss of profits to the agricultural chemical and fertilizer industries.

Individuals who are committed to the ideals and lifestyle associated with organic food, or who have high incomes, and are unaware or insensitive to price changes are unlikely to discontinue purchasing organic food. The first group is very unlikely to alter organic food purchases based on price movements, due to strong convictions about the complex interactions between agricultural chemicals, human health, and the environment. The second group of consumers does not alter consumption habits when prices of organic food change, simply because they spend a very small fraction of their income on food. As a result, price increases are unimportant to these individuals, and consumption decisions are unlikely to be affected by price → demand for organic food for these groups of consumers is price inelastic. This means that a rise in price of organic food will lead to a less than proportionate fall in quantity demanded of organic food, *ceteris paribus*.

For high quality goods such as organic food, income is a major determinant of consumer ability to pay price premiums for the perceived benefits of a healthy diet.

**P4: Income growth, and the high standard of living that is enjoyed in the high-income nations of the world, is likely to be the single most important determinant of organic food consumption.**

Because any perceived benefits, no matter how small, become affordable to wealthy consumers. Price premiums also become inconsequential to individuals and families with high incomes. As per capita incomes rise, we can expect a shift into organic food. An important implication of this is that low-income individuals in the USA, and low-income nations will be less interested in organic food, if it is more expensive than conventional food. For individuals and nations with low level so purchasing power, the perceived benefits of organic food are unlikely to outweigh the lower prices of conventional food. As incomes increase above subsistence levels, health issues shift from a lack of food and starvation to healthy diets and nutrition. Those who can afford it will purchase products that are perceived to be healthy, including organic food, even if the purchase price is considerably higher than conventional food.

L4: To summarize, market information about the benefits and costs of consuming organic and nonorganic foods will determine the future market shear of organic food in the food and beverage industry.

**P5: This determinant of supply, where barriers to enter the market are very high and risky for farmers, has also contributed to this shortage in the market since there is a small amount of suppliers.**

Although retailers have been flocking to the industry to capture the customers' high willingness to pay, farmers have not followed suit. Despite the opportunity to fetch higher prices for their products, farmers have been slow to convert to organics. One reason is the high transition costs (barrier to entry) to be labelled a certified organic producer. In order to be titled a certified organic grower, one must follow and go through a three-year transition period in compliance with organic restrictions and requirements. During this time period farmers experience much lower crop yields making their costs surge; a primary element for which growers won't go organic. Also, the benefits that come with organic growing such as receiving higher and premium prices for those organic products are not included in this 36-month process, yet another hindrance for farmers to transition to become certified organic producers. Additionally, organic farm operations are subject to added fees and regulations. Organic production practices are often management-intensive, requiring greater managerial time, skill, and decision making. Organic certification requirements can also require that a farmer not use chemicals or synthetic fertilizers for three years prior to the land becoming available for organic food production. Thus, some of the transition costs are incurred prior to reaping the benefits of organic conversion. Organic production techniques replace agricultural chemicals and synthetic fertilizers with labour- and management-intensive practices, which can increase the costs of production.

L5: Therefore, the supply of organic food is rising at a slower rate than the rise in demand for organic food.

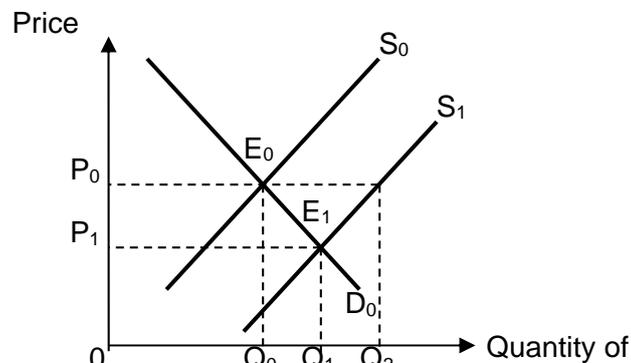
**E6: However, the rapid technological advancement and reaping of more economics of scale may change the outlook of organic food production.**

First, the technology of organic food production is changing rapidly, as producers discover more efficient production processes that result in larger quantities and higher qualities of organic food

produced at lower costs. Also, as organic farmers become more widespread, and the information base for organic processes grows and is disseminated to a larger group of organic farmers. Certification and segregation costs are also likely to be reduced as private and public institutions are developed. Similarly, a cost-saving technological or regulatory change in the processing, transportation, packaging, marketing, advertising, or certification of organic food will also result in larger quantities produced by profit-motivated suppliers.

Secondly, as the fledgling organic food industry develops, it will capture economies to scale associated with the growth and development of organic food markets. An example is marketing economies. A large firm can capitalise on its bargaining power to buy its inputs in bulk at favourable rates. Similarly, the organic food of the firm can also be sold in bulk at reduced distribution costs too. For instance, it is more cost efficient for a large firm to transport large quantities using a large truck instead of several small vans. Large firms can also afford to advertise organic food in the national press and other forms of media. Although the advertising expenditure may be substantial, the advertising average cost may be lower than that of a smaller firm because cost of advertising is spread over the larger output level. Specifically, as the infrastructure and institutions for organic food production, processing, and distribution become larger and more established, the per-unit cost of organic food

- decline fall in cost of production, assuming total revenue constant
- higher profit per unit of computer-based products



- rightward shift of the supply curve from  $S_0$  to  $S_1$  organic food
- Ceteris paribus, at the initial price  $OP_0$ , a surplus of  $Q_0Q_2$  arises and this surplus exerts a downward pressure on price. Producers lower the price to get rid of their excess stock. As price falls, producers will reduce their quantity supplied of the good as shown by a movement along the supply curve. Consumers increase their quantity demanded of the good as illustrated by a movement along the demand curve  $D_0$ .

L6: Price will continue to fall until a new market equilibrium is established at point  $E_1$ . The new equilibrium output of  $OQ_1$  is higher than before the increase in supply.

**E7: The producer adoption of organic practices is likely to depend heavily on the price premiums associated with organic food products.**

Therefore, to the extent that consumers are willing to pay higher prices for organic goods, it is likely that the price difference will be large enough to cover additional production, certification, and transition costs borne by farmers who convert to organic production techniques.

**Synthesis**

The conclusion is the cost efficiency factor (supply) is more important to determine the output of organic food in the short run. This is because the switching costs are much higher for farmers: regulations, three years of fallow ground, uncertain yields. The price they receive for a single unit of an organic product, therefore, is less valuable if it comes with greater risk and uncertainty. The organic market can only grow as far as farmers are willing to start growing organics.

However, the income factor (demand) will be more important to determine the output of organic food in the long run because demand for organic food is income elastic. As the affluence level increases, the demand for organic food will increase significantly. Luxury consumer goods such as organic food will continue to replace necessities, as high-income consumers can afford to pay for product attributes that are perceived to be healthy or good for the environment. As a result, many agricultural producers

have found organic production practices to be a profitable alternative to conventional crops. Furthermore, though transition costs are high, the cost advantages of eliminating chemical and fertilizer bills, together with crop rotation advantages can contribute to net returns. Therefore, we may see a potential growth of the organic food market.

**Conclusion**

Consumers’ interest in organic food has exhibited continued growth for the past two decades, which has attracted entrepreneurs and corporations seeing a big potential for this industry. This led to the creation of standards and regulations to guide the organic food industry. There are clear challenges on both demand and supply sides. Consumers are becoming more sophisticated in their purchasing decisions of organic food as they become more educated and affluent, and companies are focusing on supply chain management in order to ensure high quality, traceability, and supply continuity. The future extent of the increment in organic food output will depend on the market forces (market value).

<b>Level</b>	<b>Knowledge, Understanding, Application and Analysis</b>	<b>Marks</b>
L3	For a balanced and well-explained answer that uses application and analysis to discuss the importance of demand and supply factors in influencing the output of organic food. Good analysis on relative importance of demand and supply factors/PED, IED, CED and the relative magnitude of shifts are considered in the given context.	15-20
L2	For a good attempt to discuss the importance of demand and supply factors but limited in analysis. For good but one-sided answers which did not consider the importance of other factors such as elasticity values or why the rise in demand is faster than the rise in supply (max of 10).	10-14
L1	For some knowledge but limited applications of demand and supply factors on how it influence output changes. Answer may be irrelevant.	1-9
<b>Level</b>	<b>Allow up to 4 additional marks for Evaluation</b>	<b>Marks</b>
E3	For an answer that arrives at an analytically well-reasoned judgement on which factor is more important to determine the output of organic food	4-5
E2	For an answer that makes some attempt at a judgement on which factor is more important to determine the output of organic food	2-3
E1	For an answer that gives an unsupported evaluative statement(s) about the demand and supply factors that determine the output of organic food	1