Suggested Answers for 2021 A-Level H2 P1 Qn 1: Changes in the market for seafood



	(ii)	Suppose March 2	e a maximum price of Iceland cod of €2.25 per kg had been operating since 2016.	
		Explain cod.	the impact of such a maximum price would have had on the market for Iceland	[2]
		Betweer equilibri have be market e	n March to June 2016, the maximum price had no impact as the market um price was below €2.25 per kg. After June 2016, the maximum price would een effective, and price of Iceland cod would fall to €2.25 per kg since the equilibrium price was above the maximum price.	
	(iii)	Explain stable, a	how 'large stockpiles of frozen cod in Iceland' can be used to keep cod prices and identify two difficulties in operating such a scheme.	[4]
		The 'lar	ge stockpiles of frozen cod in Iceland' can be released onto the market to e supply, preventing a shortage from arising and pushing prices up.	
		Since F fishing v amount governn	ebruary to April is the peak cod-fishing season, the disagreements between vorkers and boat owners have caused delays in fishing. This would affect the of stockpiles accumulated, which would in turn reduce Icelandic nent's ability to release the stockpiles to stabilise prices.	
		Another	difficulty is the high costs incurred for storage of frozen cod.	
(c)	Explain product	why ma ion in the	any small-scale shrimp farmers in India took the decision to shut down short run and leave the market in 2020.	[2]
	Due to t major bu for these market i	the pande uyers like e small-se in 2020, it	emic, Indian exporters are facing significant fall in demand for shrimps from France, and the US. This translates into a large fall in average revenue (AR), cale shrimp farmers. To shut down production in the short run and leave the means that they were unable to cover at least their variable costs (P < AVC).	
(d)	Discuss benefit (whether	Barramundi Asia's plan to increase its scale of fish production is likely to rs.	[8]
	Comm	and	Discuss whether – benefits and costs	
	Start F	Point	Plan to increase its scale of fish production (iEOS)	
	End Point		Benefit consumers – in terms of lower price (P), higher quantity (Q)	
	Content		iEOS, performance/Impact question type	
	Conte	xt	Barramundi Asia (oligopoly)	
	<u>P1: Ba</u> <u>consun</u> Barramu managii be able and Au <u>Marketii</u> Barramu cost, pi	<u>rramund</u> ners undi Asia ng its who to grow a stralia ar ng iEOS undi Asia rocessing	<i>It Asia's plan to increase its scale of fish production will benefit</i> <i>Is intention to expand the size of Barramundi's fish production by owning and ble supply chain was mentioned in Extract 3. As a result, Barramundi Asia will nd raise its output level by leveraging its production facilities in Singapore and enjoy internal economies of scale (iEOS).</i>	

adhering to the principle of the division of labour. This enables the company to focus on more crucial tasks, such as import and export issues, bank loans, government concessions, etc. Due to the fact that administrative costs do not rise in step with output, Barramundi Asia will benefit from lower production costs per unit, resulting in **marketing internal economies of scale**.

Technical iEOS

Because of the large scale production and the mechanical benefit of using huge machinery, Barramundi Asia may potentially benefit from **technical internal economies of scale**. Due to the vast size of the facility, lower unit costs of production may be experienced as less energy, fewer employees, and correspondingly lower installation costs are needed.

Benefits to Consumers – Lower prices

Barramundi Asia could operate with falling long run average costs due to improvements in the production process. In addition, the abovementioned iEOS enjoyed by Barramundi Asia as a result of growth would probably result in lower prices because average cost (AC) and marginal cost (MC) would fall from AC₀ to AC₁ and MC₀ to MC₁ in the short run, respectively, as illustrated on Figure 3 below. This would result in Barramundi Asia making higher profits from normal profits ($P_0 = C_0$) to supernormal profits (shaded area). Assuming that Barramundi Asia **passes on the cost savings to consumers in the form of lower prices** from P_0 to P_1 as a result of this increase in profits, and customers will benefit from **higher consumer surplus from AB₀P₀ to AP₁D and hence consumer welfare**.



Figure 3: iEOS leading to supernormal profits for firm and lower price for consumers

Benefits to Consumers – Improved quality

Barramundi Asia may potentially be dynamic efficient as they leverage on the supernormal profits (shaded area P_1C_1DE in Figure 3) to carry out R&D and innovation such as product innovation to produce fish that are of **higher quality for consumers** (larger and more nutritionally). This is evident from Extract 3, where it was stated that due to high automated farming techniques, Barramundi Asia is currently harvesting fish that weigh 5 kg. As Barramundi Asia uses its supernormal profits to expand its online presence and home delivery services, customers may also benefit from **shorter delivery times**.

P2: Barramundi Asia's plan to increase scale of production will not benefit consumers

However, consumers may not benefit from an increase in industry concentration if Barramundi becomes a monopoly (unlikely) or the dominant player in an oligopolistic market because of more market dominance. **Prices may increase** and **options for consumers may become limited**. With fewer rivals in the market, this could indicate that demand for fish from Barramundi Asia will become more price inelastic, and the average revenue (AR) and marginal revenue (MR) curves will become relatively steeper from AR_0 and MR_0 to AR_1 and MR_1 , as illustrated on Figure 4 below. As a result, Barramundi Asia would be producing at profitmaximising output level of Q_1 and set a higher price for its fish from P_0 to P_1 . This indicates that

customers from lower-income families may be less able to purchase fish at this higher price than consumers from higher-income households, resulting in more inequity.



Figure 4: Increase industry concentration might lead to higher price for consumers

Evaluation

In conclusion, consumers will probably gain from Barramundi Asia's ambition to expand its production capacity. This is due to Extract 3's suggestion that Barramundi Asia is highly motivated and capable of executing expansion plans with Temasek Life Sciences to focus on fish genomics and breeding programs. This offers more opportunities for Barramundi to benefit from external economies of scale that could further reduce its industry-wide unit cost of production. Consumers may soon realise a wider variety of fish being harvested at a faster rate and of higher quality.

Le	Level of Response and Descriptors				
L2	.2 Developed analysis of how increasing scale of production by Barramundi Asia can result in BOTH positive and negative impacts on consumers.				
L1	Limited analysis of how increasing scale of production by Barramundi Asia can result in EITHER positive OR negative impacts on consumers.	1-3			
E١	Evaluation				
E	Evaluative marks will be awarded for a conclusion reached with respect to a judgement made on whether the positive impacts outweigh the negative impacts, or vice versa, after consideration of the analysis provided.	1-2			
Du cor	Due to fears over climate change and a growing demand for plant-based diets, many consumers are changing from animal protein to vegan alternatives.				
Dis fish	Discuss whether demand factors or supply factors have a greater impact on the market for fish in the long run.				

Command	Discuss whether – suggest possible demand and supply factors
Start Point	Possible demand and supply factors
End Point	Impact on the market for fish – Equilibrium price, quantity, and total revenue for fish firms
Content	Price mechanism
Context	Fish market

Possible Demand Factors (fall in demand)

1. Preferences for plant-based diets

According to the preamble and Extract 4, there has been a shift away from animal protein in favour of more vegan alternatives as customers seek healthier and more sustainable food options. This indicates that there has been a **shift in taste and preference toward eating less fish**.

2. Fall in income due to Covid-19 pandemic

With the Covid-19 pandemic (as stated in Extract 2), which has caused recessions and unemployment across the world, most families would see a drop in disposable income and decreased purchasing power. Because fish is seen as a necessity in most nations, its YED value is likely to be positive but less than one. This indicates that a decrease in household income owing to the recession would result in a less-than-proportionate drop in demand in the fish market.

3. Lower price of plant-based diets

Novish is studying the development of more plant-based meals using plants, seaweed, and algae, according to Extract 4. These components are less expensive than farming and harvesting, which contributes to the lower cost of such plant-based alternatives. Because **plant-based food and fish are likely close substitutes with a high positive XED value**, as described in Extract 4, the flavour of the plant-based food has gotten outstanding feedback from consumers and tastes very much like actual meat. As a result, a relative decrease in the price of plant-based food will result in a more than proportionate decrease in demand for fish.

All the above 3 demand factors will lead to a fall in demand for fish from D_0 to D_1 as shown on Figure 5 below. This would create a surplus of fish Q_0Q_{dd} at initial price P_0 and cause a downward pressure on price. The downward pressure on price will incentivise consumers to increase their quantity demanded along D_1 from E_1 to E_2 and producers to decrease their quantity supplied along S_0 from E_0 to E_2 . This will continue until the surplus is eliminated at lower equilibrium E_2 and a lower equilibrium price P_1 and lower equilibrium quantity Q_1 will result. The total revenue for fish producers also falls from area $0P_0E_0Q_0$ to $0P_1E_2Q_1$.



Evaluation

The fall in fish supply will almost certainly be greater than the fall in fish demand. This is because Extract 2 said that the Covid-19 outbreak caused a global downturn and severely impacted supply chains. Many fish producers may find it unprofitable to invest in the fishing industry as demand declines when income lowers. As a result, the total price of fish will rise from P_0 to P_1 while the equilibrium quantity will reduce from Q_0 to Q_1 , as shown in Figure

7. Total revenue will likewise decline to $0P_1E_1Q_1$ since Area A's revenue rise is less than Area B's revenue loss.

Mark Scheme

Level o	evel of Response and Descriptors		
L2	For an answer that provides rigorous, coherent and in-depth assessment of the impacts on equilibrium price, quantity and total revenue of the fish industry due to BOTH demand and supply factors. Analysis must be relevant and well supported by case study evidence.	5 – 7	
L1	For an answer that has a smattering of points and merely states a few points on the impacts on equilibrium price, quantity, and total revenue of the fish industry due to EITHER demand OR supply factors – with little economic rigour or many conceptual errors. For an underdeveloped answer that provides a superficial analysis or one lacking in scope.	1 – 4	
	Evaluation		
E2	For an evaluation that justifies if demand or supply factors will have a greater impact on fish market.	2 – 3	
E1	For an evaluation / judgement that is unsubstantiated.	1	