

Case Study 1 (Housing)

- (a) Using examples from the case material, explain the difference between fixed costs and variable costs. [4]

Suggested Answer:

Fixed costs are costs that do not vary with output while variable costs are costs that vary directly with output.

One example of fixed costs is the cost of land purchase, as the developer can vary the number of housing units on the same plot of land yet the cost of the land will remain fixed/constant. And even if the developer did not develop the land and build any housing units, the cost of land will still need to be incurred.

On the other hand, an example of variable cost is the 'average hourly wages' of construction workers. By choosing to build more housing units, the developer will need to hire more workers or require workers to work longer hours thus incurring more costs in terms of total wages paid to these workers. These costs rise as the number of housing unit rises, and will not be incurred when production is zero.

Mark Scheme

- 2m for correct explanation of the difference between fixed vs variable cost .
- 2m for relevant explanation of how the examples given are fixed and variable (1m for each type of cost)
- Note: Typically, an explain the "difference"-type question requires explicit comparison of fixed cost vs variable cost – if the students did not use comparison words such as "however", "but", "while" – max 3m.

- (b) With reference to Extract 2, explain one type of economies of scale experienced by Hong Kong's real estate developers. [2]

Suggested Answer:

- i) Marketing IEOS

As the developers have a large market share (Ext 2: dominated by few local giants) and hence high level of output production, they will buy their raw materials and components in bulk. This gives them significant bargaining power and are often accorded preferential treatment by their suppliers such as discounts. As indicated in Ext 2, the 'long term contracts with suppliers' allows developers to purchase materials such as sand and cement at lower cost. As the rise in TC is spread over large output → this lowers the firm's long run average/unit cost.

OR

- ii) Financial IEOS

Due to the large scale of production, these developers hold larger land reserves (Ext 2), which enables them to use these land reserves as greater collateral when they apply for loans with banks. Such collaterals enhance the credit worthiness of the developers as they are now perceived as low risk borrowers. Hence, developers are able to secure larger loans at lower interest rates → cheaper cost of borrowing → As the cost of financing is spread over large output where rise in TC < rise in output → this lower firm's long run average/unit cost.

Mark Scheme:

- 2m for correctly identifying and explaining a type of IEOS using relevant case evidence.

(c) With use of relevant elasticity concept(s), account for the sharp increase of housing prices in Hong Kong. [4]

Suggested Answer:

Figure 1 shows an overall increase in (private) housing prices that have more than doubled over the period 2008-2018.

An increase in demand contribute to the increase in housing prices in Hong Kong. However, the sharp increase in price of housing is due to the price inelasticity of supply for housing.

- Strong income growth and low unemployment (Extract 1) contribute to higher disposable income and purchasing power for the average consumer/buyer. Given that housing is a normal good with $YED > 0$, there is now a greater willingness and ability to purchase houses at every given price level $\rightarrow$ increase in demand (DD) for housing $\rightarrow$ rightward shift of DD curve from D_0 to D_1 .
- **OR** House buyers increase DD for housing for speculation purposes (Extract 1). This is because buyers have expectations of future price increases, hence more of them are willing and able to invest and purchase houses now so as to be able to sell at them at higher prices later $\rightarrow$ increase in DD
- Given that supply for housing is price inelastic, $PES < 1$ due to lack of available spare capacity, in this case, low availability of land parcel as govt failed to increase land supply (Extract 3), the increase in demand will lead to a more than proportionate increase in price, accounting for the sharp increase in price relative to when supply is price elastic
- From figure 1, with the increase in DD, there is a shortage of $Q_s Q_d$ at original equilibrium price P_0 . This creates an upward pressure on prices as consumers try to outbid each other for the existing housing units. As prices increase, it becomes more profitable for firms to increase their output and quantity supplied increases while the higher price reduces consumers' ability to pay and willingness to pay which leads to fall in quantity demanded. The price adjustment process continues until market clears at new equilibrium E_1 . Since the supply for housing is price inelastic, it requires a significant increase in price from P_0 to P_{1i} to be able to clear the shortage at Q_1 , as compared to a case when SS is price-elastic.

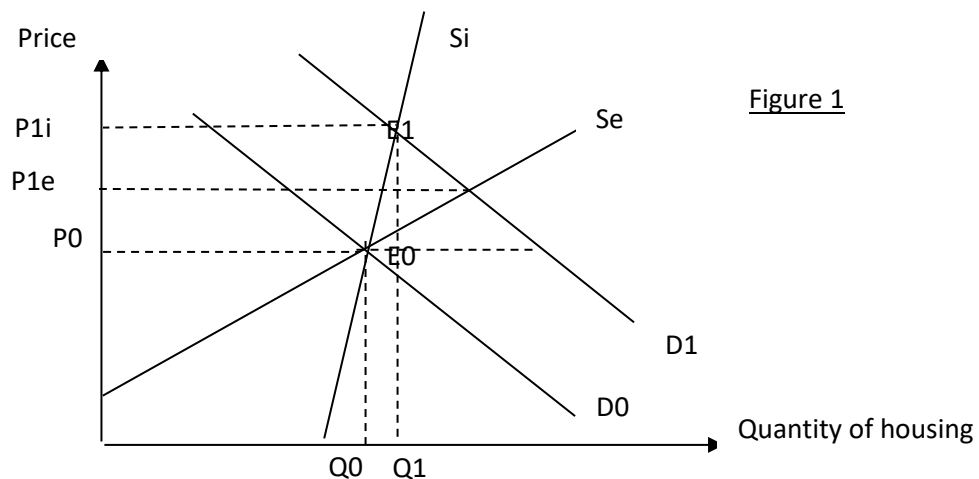


Figure 1

Alternatively,

- Cost of production is increasing due to rising land prices and higher wages of workers (Extract 3). The failure of the government to increase land supply has driven up land costs while the lack of skilled construction workers has caused the average hourly wages to rise as well. As a result, profitability in the property market fell, hence suppliers (property developers) are less willing and able to produce and make available for sale the same quantity of housing at every given price level. This decreases the SS of housing in the market.
- Given that the demand for housing is price inelastic ($PED < 1$) - as inferred from Extract 1 : residents consider owning a home a top priority as well lack of substitutes since there is no alternative to housing / private housing is poor substitute due to severe shortages of public housing (Ext 4) , the fall in supply would lead to a sharp rise in price as it requires a significant increase in price to be

able to clear the shortage as consumers are not responsive to price changes → thus causing the sharp increase in price of housing as compared to if demand is price elastic.

Mark Scheme

- 1m for explanation of a relevant demand factor (or supply factor and supported with case evidence)
- 1m for a relevant explanation of how PES (or PED) is price inelastic using case evidence
- 1m for explain how the increase in demand (or fall in supply) results in a sharp or more than proportionate increase in price of housing when PES (or PED) is <1 .
- 1m for brief market adjustment processok,

(d) Discuss whether price controls or direct subsidies is a better policy to respond to rising private housing prices in Hong Kong for low income households. [10]

Introduction

- Clarify problem/issue: rising prices in Hong Kong faced by low-income households in Hong Kong due to shortage of affordable (public) housing (Extract 4)
- Both measures can help address the problem of rising housing prices for low-income households in Hong Kong but have their own set of limitations.
- Which policy is 'Better' may be discussed using the yardsticks of effectiveness, desirability and sustainability.

Body

Requirement 1: Discussion of price controls → impact on low income households

Thesis: Price controls can help some low-income households purchase apartments at lower prices.

- Clarify that price control in context of case refers to a price ceiling policy.

With the aid of a diagram, explain the concept of price ceiling and show how it is an appropriate measure:

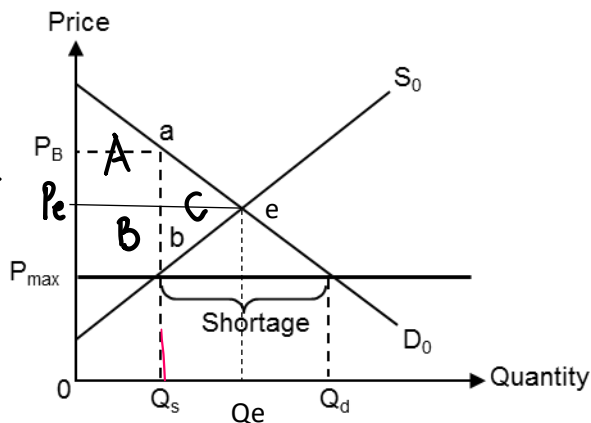


Figure 2

Effectiveness of price ceiling:

- A price ceiling is a legally established maximum price $P_{\max}$ to prevent prices from rising above a certain level.
- It is set below the market equilibrium price to be effective.
- Producers are prohibited from selling above the stipulated price. This helps to make housing more affordable to low-income earners and increases these consumers' willingness and ability to pay, thus improving equity and there is an increase in consumer surplus (area B) for consumers who were able to purchase the house at lower prices.

Anti-thesis: Limitations of price ceiling:

- A price ceiling results in shortage and under-allocation of resources to the production of housing. With reference to the figure 2, when the price is set at maximum $OP_{\max}$, a shortage of Q_sQ_d is created. This is because at lower prices,
 - Quantity demanded increases from Q_e to Q_d while
 - Quantity supplied decreases from Q_e to Q_sTherefore, since $Q_d > Q_s$, there is a persistent shortage and the market is in disequilibrium
- The persistent shortages (Ext 4: 268500 applicants on waiting list) may result in queues if housing is sold on a first-come-first-serve basis, or may result in the restriction of sales only to customers who are able to purchase housing. This could hurt / reduce the welfare of the group of people the policy is intended to help i.e (low-income households who are not able to purchase housing)
- Having price controls in the expensive private housing market may not be very effective in helping the low-income households because this market caters more to richer households. A lower price at $P_{\max}$ will benefit higher income households even more as they could purchase more units of housing at cheaper prices. However, most low-income households may still find private housing too expensive to purchase even at $P_{\max}$, hence not benefiting from the price ceiling much. **Price controls in public housing, which caters more to low-income households, could be more effective.**
- Distorts the working of the free market and results in an allocative inefficient outcome since there is an overall loss of society welfare and a deadweight loss (area abe) to society is created. (elab. briefly on the respective welfare change to consumer and producers)
- A black market may emerge where sellers ignore the government's price ceiling and sell illegally at prices above price ceiling. With reference to the above diagram, some consumers will be willing to pay a price above $P_{\max}$ to get hold of a room over their heads. These consumers could be charged the highest price they would be willing and able to pay, which is up to P_B by unscrupulous sellers
→ reducing the access to affordable housing by low income households

Requirement 1: Discussion of Direct subsidies → impact on low income households

Thesis: Direct subsidies can help some low-income households purchase apartments at lower prices.

Explain direct subsidy:

- Direct subsidies work like negative direct taxes, and are granted by the tax authorities directly to the households in the form of cash grants → **increase the willingness and ability of households to consume housing**, and leads to an increase in DD and a rightward shift of the demand curve as shown in Figure 3.
- Assuming that the government increases direct subsidies, the demand curve shifts from D_0 to D_1 . The increase in subsidy will causes price to rise from OP_0 to OP_1 and quantity to rise from OQ_0 to OQ_1 .

Effectiveness:

- While the equilibrium market price has risen to OP_1 , the 'out of pocket' price paid by the households for OQ_1 units has actually decreased to OP_B . This **increases the affordability and accessibility of housing for low-income households since households purchasing power increases. And increase CS of area P_0P_Bac .**

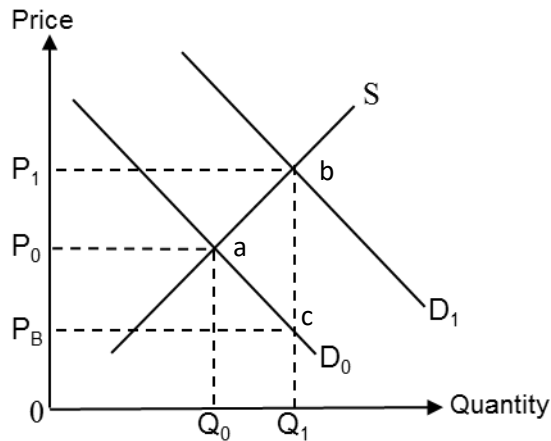


Figure 3

Anti-thesis: Limitations of direct subsidies:

- Subsidies are costly measures and the government incur-high opportunity costs and forgo benefits from expenditure on alternative sectors of the economy as these subsidies can be used for healthcare or education which are beneficial to the society's welfare.
- Furthermore, subsidies, once given out, may be hard to remove. This means it may not be sustainable in the long run from the government's perspective as it will need to find ways to continuously finance the costly subsidy expenditure which could lead to increased taxation and reduced welfare of taxpayers or borrowing in the economy.
- Subsidies can distort resource allocation, resulting in a deadweight welfare loss (by area abc) due to government subsidy distorting free market forces assuming no initial sources of market failure at output $0Q_0$.
- Unintended consequences: direct subsidies may further worsen the problem of high housing prices in the LR and cause some consumers to be left out of housing market due to inability to pay/ afford high housing prices despite subsidies provided especially since the supply for housing is price inelastic, so the increase in demand only results in a sig rise in housing prices but a less sig. increase in output of housing.

Conclusion and Evaluation

- Comparing between both measures, price control for private housing may be less desirable as it does not fully target the problem faced by low-income households since some consumers may be left out and also creates unintended consequences (such as possibly the formation of a black market for housing). Subsidies, on the other hand, is better and more desirable since it increases welfare of consumer and promote greater equity in the housing market where low income households get to enjoy the good (housing) as well.
- However, both measures trade off the goals of efficiency for equity.
- Nonetheless, even subsidies need to be coupled with other long run policies like increasing land supply (government releasing more land, allocate more land for housing than for other uses since this lowers the price of land purchases and reduces the cost of production for construction firms / property developers, incentivizing an increase in supply) as the latter solves the root cause of the problem of high housing price.
- In addition, subsidies may have to be means tested according to household income such that lower-income households receive more subsidies (relatively to higher income households) to make the policy more feasible and sustainable in the longer term.
- Overall, to help the low-income households more effectively, there may be dsa need to use a mix of shorter term policies such as price ceiling policy mainly for public housing coupled with a needs-based / non price rationing of housing to ensure allocation of houses to those most in need alongside a means tested subsidies as well as longer term measure such as allocating more land for housing to increase supply and reduce the price inelasticity of supply.

Mark Scheme

Knowledge, Application, Understanding, Analysis	
<i>L1 (1 – 3m)</i>	- Explained either price control <u>or</u> direct subsidy, but not both OR - 2 policies (including price control) explained very briefly / in journalistic manner with vague or incomplete economic framework - Only one policy explained and one-sided: No limitations of policies (max 3) - Conceptual errors
<i>L2 (4 – 7m)</i>	- Both policies (of price controls and direct subsidies) explained with clear economic framework - Two-sided analysis for both measures: policy limitations are also discussed - Clear evidence from case study applied *if only 1 policy well discussed – max 4
Evaluation	
<i>E1 (1m)</i>	- Unsubstantiated judgment on which policy is better
<i>E2 (2 – 3m)</i>	- Well-reasoned judgment on which policy is better or how they may complement each other. - Other well-reasoned evaluation

Case Study 2 (Coffee)

(a) (i) Compare the trend in prices of arabica and robusta coffee beans during the period shown in Figure 1. [2]

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- **Similarity** – Both the prices of arabica and robusta coffee beans increased over the period shown. [1]
- **Difference** – However, the price of arabica coffee beans increased at a higher rate compared to the price of robusta coffee beans. [1]

OR The price of arabica coffee beans **increased sharply** while the price of robusta coffee beans **remained relatively stable** [or increased marginally]. [1]

(ii) Using a relevant elasticity concept, account for the sharp change in price of arabica beans from 2020 to 2022. [2]

- **State the sharp change in price of arabica coffee beans** – The price of arabica beans increased sharply from 2020-2022.
- An increase in price could be attributed to an **increase in demand for arabica coffee beans**. However, the **sharp increase** from 2020-2022 is due to the **low price elasticity of supply** of arabica coffee beans when there is an increase in demand.
- **Explain the determinant of an increase in demand:**
 - There is a **higher derived demand** for arabica coffee beans due to **growing taste and preference for coffee drinks** in “the fastest growing coffee markets, with nearly 111,000 shops in larger cities” [Ext1, Para 3] in China.
 - Coffee retailers such as Starbucks, Luckin Coffee and Tim Hortons generally use “arabica coffee beans for their coffee...” [Ext 2, Para 2]. Since **arabica coffee beans is an essential factor of production of coffee** such as latter for large coffee retailers, an increase in demand for coffee from these retailers will **increase the demand for the factor of production** such as arabica coffee beans from D_0 to D_1 .
- **Explain the determinant of PES of coffee beans:**
 - The supply of arabica coffee beans is **relatively price inelastic ($PES < 1$)** due to the **lack of available spare capacity**, in this case, low availability of lands that are viable for coffee production [Ext 2, Para 3], low availability of water supplies [Ext2, Para1] as farmers need to dig deeper to get water and the **long gestation period to grow these coffee beans** since it “takes 3-5 years for coffee tree to mature and yield bring red coffee cherries” [Ext3, Para2].
- Hence, an increase in demand for arabica coffee beans will lead to a shortage at the original price. Given the low PES for coffee beans, it will require a significant increase in price to clear the shortage as producers are not able to respond quickly to rising prices. As such, price of arabica coffee beans increases sharply from 2020-2022.

Alternatively, you may apply PED to explain how changes in SS leads to sharp rise in price.

Mark Scheme:

- 1m for explaining the change in demand or supply to explain the shortage that causes price to increase.
- 1m for identifying the relevant elasticity concept to explain the sharp change in price due to the shortage.
- Note that given the mark allocation, concepts explained in brief will be awarded the full marks.

(b) Distinguish, with examples, between the fixed and variable costs involved in the coffee retailing industry. [4]

- **Fixed costs do not vary with output**, where output is defined as the number of cups of coffee, whereas **variable costs do**.
- For example, fixed costs are **costs of purchasing or renting fixed factors of production such as coffee grinder, retail space, and an espresso machine** as these costs **do not vary with the level of output** → it will be incurred even when output is 0 and remains the same even when output increases.
- **On the other hand**, variable costs are **costs incurred on purchasing variable factors of production** such as arabica coffee beans, milk, water (Ext1&2) that **vary with output and increases when output increases** → as the firm sells more coffee, more coffee beans is required to make each additional cup of coffee, causing costs to increase. These costs will not be incurred when output=0.

Mark Scheme:

- 2 marks – For definition of fixed cost and elaboration of the cost example in the context of coffee retailer.
- 2 marks – For definition of variable cost and elaboration of the cost example in the context of coffee retailer.

Note: Typically, a distinguish-type question requires explicit comparison of fixed cost vs variable cost – if the students did not use comparison words such as “however”, “but”, “while” – max 3m.

(c) Explain a possible cost advantage enjoyed by large coffee retailers such as Starbucks. [2]

i. **Marketing economies of scale**

- **Identify the source of internal economies of scale** - marketing economies of scale
- Coffee retailers such as Starbucks Corp, Luckin Coffee and Tim Hortons have global presence and tend to operate on a large scale as coffee retailing chains, with retailers like Luckin Coffee opening “nearly 111,000 shops in larger cities” [Ext1, Para3] in China alone.
- **Explain the source of internal economies of scale using relevant case evidence** – Hence, they tend to have high level of production of coffee that **requires them to buy materials such as coffee beans in bulk**. As such, coffee retailers like Starbucks will have **strong bargaining power to negotiate the price of arabica coffee beans in advance at an agreed discounted price** through contracts, “protecting them from paying higher prices...due to weather event, shortage or some other issues” and ensuring that they have “supply of premium arabica green beans at an attractive cost basis” [Ext2,Para2]. [1m]
- **Link back to the cost advantage** – Therefore, large coffee retailers like Starbucks can enjoy lower average cost of production. [1m]

OR

ii. **Technical economies of scale**

- **Identify the source of internal economies of scale** – technical economies of scale.
- A large coffee retailer like Starbucks is better able to **enjoy technical economies of scale by using large storage/warehouse facilities to store their coffee beans and other raw materials**. According to Extract 2, the CEO mentioned that the coffee retailer has an intentional approach to how they “source, warehouse, and use hedging” to always have a supply of premium beans.
- Larger warehouses have a **higher volume-to-surface area ratio**, allowing firms to enjoy lower costs per unit of output based on the container principle as rise in TC < rise in output.

Mark Scheme:

- 1m each for correctly identifying the source/type of iEOS with links to lower AC.

- 1m for explaining how exploiting the iEOS allows large coffee retailers to enjoy cost advantage using relevant case material.
- No case material or links to AVERAGE cost – max 1m

(d) Using your own knowledge and case evidence, discuss whether a subsidy or a price floor is likely to be a better measure to support coffee growers. [10]

Introduction

- **Clarify problem/issue** – Falling and unstable income/revenue/profits of coffee growers – “many small farmers are also struggling to make a profit” [Ext1, Para2].
- **State the policies** – Indirect subsidy [Ext2, Para1] and price floor for coffee beans as a form of government intervention can address the problem of falling income of small farmers in coffee growing countries like India, Vietnam, Colombia and Brazil.
- **R1/Thesis** – Explain how an **indirect subsidy to coffee farmers** can stabilize farmers’ income/revenue.
- **R1/Anti-thesis** – Explain the **limitations of providing indirect subsidy** using yardsticks such as effectiveness [ability of the policy to achieve the intended goal of stabilizing the farmers’ revenue/income], desirability [depend on the extent to which it will affect the welfare of the different stakeholders such as the consumers, producers, government and the society in terms of efficiency], feasibility [the ease with which the policy can be implemented and monitored] and sustainability [the duration the policy can be sustained in the long -run].
- **R2/Thesis** – Explain how a **price floor for coffee beans** can stabilize farmers’ income/revenue.
- **R2/Anti-thesis** – Explain the **limitations of a price floor** using yardsticks such as effectiveness, desirability, feasibility and sustainability.
- **Synthesis – Which policy is ‘better’ may depend on the following factors:**
 - Root cause of the problem – falling income/revenue of farmers
 - Severity of the problem
 - Government’s objective/priorities and available resources
 - Time frame

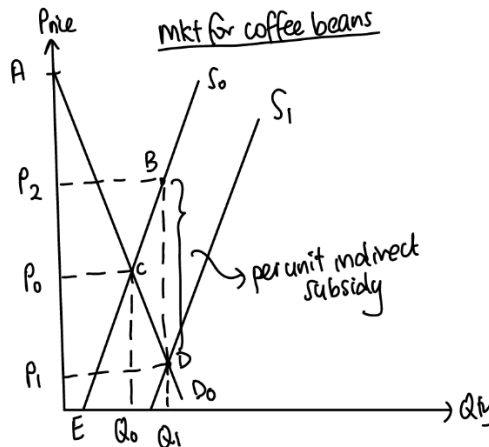
Note: Students can use their own knowledge to respond to this question as stated in the question – “Using your own knowledge and case evidence...”

R1/Thesis – Explain how an **indirect subsidy to coffee farmers** can stabilize farmers’ income/revenue.

- **An indirect subsidy** – a lump-sum payment to the farmers to purchase machineries, fertilisers and trees that can better cope with climate change – will **reduce the cost of production** for coffee growers [Ext3, Para1].
- Furthermore, investment in machineries may **improve the overall productivity of their farming practices** as it may make certain **farming processes more efficient**, increasing the **output of coffee beans per unit of input**. Moreover, the farmers may need to **hire fewer labour** as they use labour-saving machineries/technologies in attempt to cut labour cost amidst rising wages [Ext1, Para2]. As a result, farmers will **enjoy lower cost of production of coffee beans**. This is particularly important considering the extreme weather conditions as mentioned in Extract 2 that even private companies like Nestle aims to “encourage growers to use more sustainable methods” and this includes “replacing existing trees with varieties that can better cope with climate change”.
- As a result, the quantity supplied of coffee beans will increase at each and every price level due to higher profitability, resulting in an **increase in supply from S_0 to S_1** . A surplus is created at P_0 as the quantity demanded is less than quantity supplied. This creates a downward pressure on prices as coffee beans farmers attempt to sell the excess at a lower price. As prices decrease, it becomes less profitable for coffee growers, so they reduce the quantity supplied while it increases the coffee retailers’ ability and willingness to pay which leads to an increase in quantity demanded for these coffee beans. The price adjustment process continues until market clears at new equilibrium price of P_1 and Q_1 .

- **Effectiveness:**

- Although coffee retailers end up paying a lower price $P_1 < P_0$, the final price that the coffee growers **receive is higher at $P_2 > P_0$** . The difference between the **final price actually received by the producer P_2** and the **price that coffee retailers pay P_1** for the coffee beans is **topped up by the government in the form of per unit indirect subsidy**.
- Hence, the total revenue (TR) earned by the coffee growers **will increase from OP_0CQ_0 to OP_2BQ_1** in India, Vietnam and other coffee growing countries.
- Producer surplus will also increase to **area EBP_2** as a result of the **higher price P_2** they receive after the subsidy and the **higher quantity sold at Q_1** . Hence, the **net gain in producer surplus is (area P_2BCP_0)**.



R1/Anti-thesis – Explain the **limitations of an indirect subsidy to coffee farmers** using yardsticks such as effectiveness, desirability, feasibility and sustainability.

- **Ineffective:**

- The **cost of purchasing capital goods** to practice sustainable farming amid extreme weather conditions **may be very expensive**. Thus, if the subsidy provided by the government is insufficient, the local farmers may not be able to see a gain in their productivity, especially in the case of smaller scale farmers as “coffee growers may not get the same subsidies and benefits that can cope with climate change” [Ext3, Para1]. Thus, the **supply of coffee beans may not increase significantly**, limiting the ability of the farmers to stabilize their income/profits.
- Furthermore, the **effect of adoption of technology, albeit small scale, on the farms also takes some time**. It takes time to train the farmers on how to incorporate and use the machineries in their production process and leverage on technology. Hence, **this policy may be limited in its ability to stabilize the income/profits of farmers in the short run**.

- **Undesirable:**

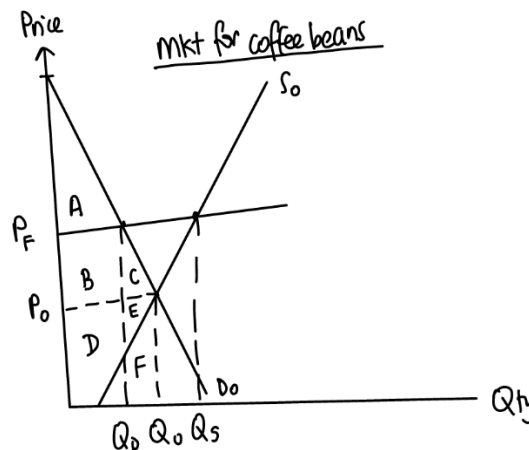
- Given the coffee growing countries are large, the governments need to **disburse large subsidies [area P_2BDP_1]** to support the coffee growers. As such, the amount of government spending is likely to be high, resulting in a deadweight of area BCD due to an overallocation of scarce resources in the market for coffee beans.
- The **resources could have diverted to the healthcare and education sectors** of these economies that are highly underdeveloped. Hence, the **forgone benefits in terms of the potential output and job creations are likely to be very large** due to the overallocation of resources in the market for coffee beans.

R2/Thesis – Explain how a **price floor** can stabilize farmers' income/revenue.

- Minimum pricing refers to a **legally established minimum price to prevent prices from falling below a certain level** and it is **set above the market equilibrium price of P_0** .

- **Effectiveness:**

- As a result, this **encourages producers to increase the quantity supplied as they are now receiving a higher minimum price of P_F** . Meanwhile, the **consumers also pay a higher price P_F** so this causes quantity demanded to decrease from Q_0 to Q_D .
- Assuming price elasticity of demand and price elasticity of supply to be relatively less price elastic (<1), this **creates a relatively smaller surplus of $Q^S - Q^D$** .
- The PED of coffee is considered to be more price inelastic because coffee beans is an essential factor of production of coffee, so it is deemed as a necessity. Hence, **an increase in price results in a less than proportionate decrease in quantity demanded of coffee beans by coffee retailers**.
- As such, the **gain in coffee farmers' revenue from selling at a higher price** as given by **area B** will be **greater** than the **loss in revenue from selling a lower quantity** given by **E+F**. Overall, the income/revenue of coffee growers will increase and be stable due to the guaranteed minimum price.
- **Moreover, as coffee producers are receiving a higher price, they enjoy an increase in producer surplus** given by the **area B+D** from an initial **area D+E**, hence there is a **net increase of area (B>E)**.



R2/Anti-thesis – Explain the **limitations of a price floor**.

- **Ineffective:**

- **Surplus of coffee beans will emerge** at the legally established price floor as the quantity demanded will be less than the quantity supplied. Farmers may **end up selling the surplus below the price floor or even further below the market equilibrium price** as it can be costly to store the coffee beans. Furthermore, the coffee beans cannot be stored for a long period of time due to their perishable nature.
- As such, it may **cause income/revenue of coffee growers to fall significantly since the loss in revenue from selling below the stipulated price will be greater than the gain in revenue from selling a higher quantity** of coffee beans when demand for coffee beans is relatively more price inelastic, making the policy ineffective in stabilizing the income/revenue of the farmers.
- Policy **does not tackle the root cause of the problem** – rising cost of production of coffee beans that is eroding the farmers' profitability/income. The price floor **does not address the rising labour and fertilizer cost**. As such, the income of farmers will continue to remain unstable if the cost of production continues to increase at an unstable manner due to the Russia-Ukraine war (rising cost of fertilisers) or other external influences.

- **Undesirable:**

- Although there is a desirable effect on producer surplus, the **impact on coffee retailers is undesirable** and there are other unintended consequences that results from the policy.
- **The price floor will decrease consumer surplus from area A+B+C to an area of A**, so there is a **net loss in consumer surplus of area B+C** as a result of the higher price they have to pay for the lower quantity purchased at Q_D .

- There will also be a deadweight loss to society of area C+E. **Therefore, the policy is undesirable from the perspective of the society.**

Note: You may also look at the policy with government buyback.

Note: You are not required to give all the points – the focus should be on how the policy works in helping farmers, and 1 limitation for each of the policy given the mark allocation.

Conclusion/Evaluation:

- **Overall stand** – decide whether **an indirect subsidy or a price floor is a better policy** to stabilize the income/revenue of coffee growers.
- **Explain your stand:**
 - As most coffee growing countries are developing, the additional burden on government expenditure from supporting the agricultural sector would mean that other underdeveloped sectors of the economy would receive lesser funding, **increasing the opportunity cost and undesirable impacts of the policy on the society.**
 - **Meanwhile**, a price floor will **require significantly less government funding** as it does not involve disbursement of large financial resources to support the coffee growers. The resources required to monitor that the legally established price is followed is very minimal compared to provision of indirect subsidy (unless looking at govt buyback – then the cost of intervention will be higher)
 - Thus, **a price floor to stabilize the income of the coffee growers may be a better policy as it is more desirable, more effective, and certainly more sustainable** in the context of the coffee growing countries.
 - Nonetheless, governments in the coffee growing countries can **use indirect subsidies in the short run** to help the coffee growers cope with the rising cost of production and extreme weather conditions.
- Alternatively, you may justify why indirect subsidies could be a better policy in any way. It is equally acceptable.
- **Recommendation** – government should subsidize R&D so the effects can be sustainable in the **long run**.

Mark Scheme:

L1	• <i>Smattering of points not directly linked to the question.</i> • <i>Mere listing of points that lack depth of economic analysis and justification.</i> • <i>No reference to the economic framework or glaring conceptual errors.</i>	1-3
L2	• <i>One-sided answer – explained only the pros OR cons of the policies – max 4m.</i> • <i>Only explained how one policy works – explained either an indirect subsidy or a price ceiling to support coffee growers – max 4m.</i> • <i>Analysis displays rigour in terms of use of DD/SS framework to show how policies support coffee growers.</i> • <i>Balanced approach in the discussion of both policies.</i> • <i>Max 5m for no case materials.</i>	4-7
Evaluation		
E1	• <i>One evaluative point explained.</i>	1
E2	• <i>Two evaluative points and a recommendation/insight explained.</i>	2-3