

- 1 Sri Lanka faced its worst economic crisis ever, and there have been huge concerns about the affordability of fuel. The lack of foreign reserves to import resources has worsened the shortage situation. The government has responded with price control to counter the rising fuel costs.
- (a) Explain why a shortage of fuel can still exist in Sri Lanka after a rise in the price of fuel. [10]
- (b) Discuss whether price control is the most effective government policy to maintain the affordability of fuel in Sri Lanka. [15]

Suggested Responses

- (a) Explain why a shortage of fuel can still exist in Sri Lanka after a rise in the price of fuel. [10]

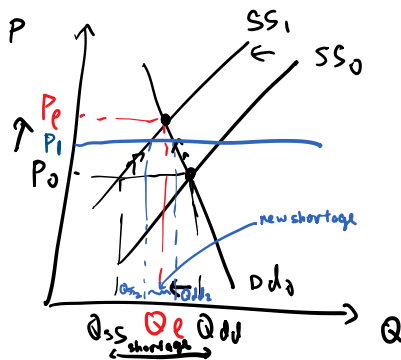
Question analysis	
Command Word	"Explain" – requires student to explain why there is currently a shortage of fuel in Sri Lanka and why the market cannot reach an equilibrium even after price adjustment process
Context	Sri Lanka's market for fuel
Concept	Demand and supply, shortage and price adjustment process

Introduction:

Fuel is a necessity for society as they are mainly needed to run vehicles. There are no substitutes for fuel, especially in Sri Lanka, where majority of vehicles are still fuel-powered instead of electric. As Sri Lanka is going through an economic crisis due to its political problems, there is a lack of foreign reserves to import fuel. To make matters worse, price of fuel has increased greatly due to other reasons such as the Russian-Ukraine war.

Foreign reserves are the amount of foreign currency the central banks holds. Typically, they are used to manage the country's exchange rate relative to foreign currencies. As there is a lack of foreign reserves available in Sri Lanka, the Sri Lankan government are unable to manage their depreciating currency due to their economic problems. This makes price of imported oil become very expensive in foreign currency. This would cause the supply of fuel in Sri Lanka to decrease from SS_0 to SS_1 . At current price P_0 , there is a shortage of oil in the market of $Q_{dd}-Q_{ss}$, assuming all other things remain constant.

According to the price mechanism, a price pressure upwards is expected in order to reach the new equilibrium and clear the shortage at Q_e . As fuel has a lack of substitutes and a necessity, the demand for fuel is price inelastic. This would mean that the expected new equilibrium price would increase sharply and by more than proportionate to the decrease in Q_{dd} .



Fuel market
in Sri Lanka

Body Paragraph 2: Explain why the shortage still exists due to price controls

According to the pre-amble, a price ceiling is implemented to keep the price of fuel affordable for households. A price ceiling is the maximum price that can be legally charged by producers. This price is lower than the equilibrium price. Due to the price control set by the government, the price pressure upwards due to the fall in supply will stop at P_{max} . As a result, the shortage caused by the fall in supply will not fully be resolved. There is now new shortage is now at $Q_{d2} - Q_{s2}$ and the market has not cleared at expected Q_e .

OR

Body Paragraph 2: Explain why the shortage still exists due to PED & PES < 1

While the shortage is expected to be cleared due to the price pressure upwards to P_e and Q_e , this might not be expected in Sri Lanka as sellers of fuel may not be able to increase the quantity supplied of fuel due to their inability to import the oil resources. This may be exacerbated due to supply of oil being price inelastic. While the shortage might reduce from $Q_{d1} - Q_{s1}$ due to some increase in price, it may not clear fully. A shortage of $Q_{d2} - Q_{s2}$ could still remain at least till Sri Lanka manages its economic problems and have resources to import fuel again.

Conclusion:

The lack of foreign reserves in Sri Lanka has affected the supply of oil to be sold in Sri Lanka. While the price mechanism theory expects the shortage to clear due to price pressures, this may not happen due to other factors in Sri Lanka.

Knowledge, Application, Understanding, Analysis		
L3 $A + A = 10$ $A + C = 8 - 9$	<ul style="list-style-type: none"> Accurate and clear analysis of <ul style="list-style-type: none"> Why there is a shortage and the expected new equilibrium price to clear shortage due to PED AND <ul style="list-style-type: none"> Why the shortage does not clear due to either a price ceiling set by the government or the inability to import for fuel Answer provides relevant examples of market for fuel in Sri Lanka 	8 – 10
L2 $C + C / A + K = 7$ $A + 0 = 6$ $C + K = 5 - 6$	<ul style="list-style-type: none"> Undeveloped / One-sided or some inaccuracies of <ul style="list-style-type: none"> Either why there is a shortage (due to SS falls) OR PED or PES or Price Control used but insufficiently to explain why shortage still exists. Answer only explains one of the above requirements Answer provides some examples of market for fuel in Sri Lanka 	5 – 7
L1 $C + 0 = 4$ $K + K = 2 - 4$ $K + 0 = 1 - 2$	<ul style="list-style-type: none"> Inaccurate and minimal analysis or descriptive answer Answer is largely irrelevant 	1 – 4

Commented [LSS1]: A must have:

R1: Supply shock - both to explain shortage and why it still exists (not just shortage exist as originally proposed)

1. Explanation of shortage (S fall, at P0, Qtd D > qty S)
 2. And PED and/or PES analysis (value, reason, implication on shortage existing)

R2: Price control - both to explain shortage and why it still exists

1. unpack price ceiling + where the Pceil is (below the new higher equilibrium Price)
 2. explain why it prevents price from rising further

NOTE:

- If not price control, only R1 (one sided) award up to 6m (A + 0)

-R1 just needs PED or PES to explain the reason shortage persists (in addition to supply shock)

-R2, answers that explain market originally at equilibrium, but with P ceiling now shortage exists – get C. (rationale: the context is that price is increasing to eliminate the shortage that already exists. The starting point of R2 should be already having a shortage. Price must increase, but increase less, not fall.)

-To remind students to USE diagram / aligned to their answers in prose

- (b) Discuss whether price control is the most effective government policy to maintain the affordability of fuel in Sri Lanka.

[15]

Question analysis	
Command Word	“Discuss” – requires student to analyse and evaluate 2 government policies (inclusive of price control) to keep prices of fuel affordable in Sri Lanka
Context	Sri Lanka’s market for fuel
Concept	Government intervention – price ceiling, policies to increase supply of oil (extraction of own oil, diversifying trade), policies to decrease demand by exploring alternative sources of energy

Introduction:

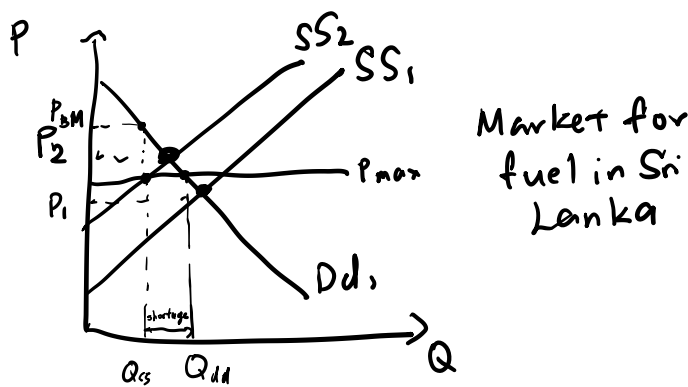
Sri Lanka is a developing country where the average income of citizens are low. Moreover, there are a huge number of businesses, coach and tuk-tuk drivers that are highly dependent on fuel to survive. Fuel is also a necessity to generate energy. Hence, it is important for the government to maintain the affordability of fuel.

The government has implemented a price ceiling in order to keep prices low. There are also other policies that could be implemented to influence the demand and supply for fuel to keep price affordable in the long run.

Body paragraph/Requirement 1: Price control can keep prices of fuel in Sri Lanka affordable

Define price ceiling

A price ceiling is the maximum price that sellers can legally charge. This price is below the equilibrium price and the government decides on this price depending on the country's needs. Due to the falling supply of fuel in Sri Lanka, prices of oil have increased to P_2 . With the price ceiling at P_{max} , prices are now more affordable to Sri Lankans.



Evaluation: Price ceilings creates shortages and may lead to a black market. It also only works in the short run

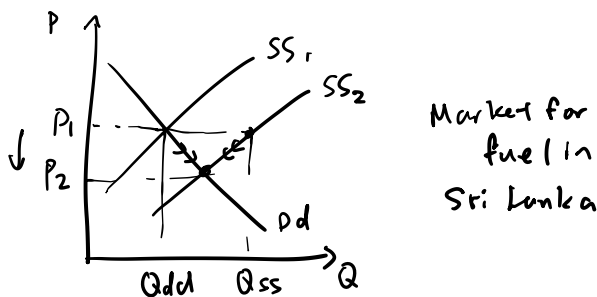
However, when a price ceiling is implemented, the quantity demanded (Q_{dd}) for fuel is higher than quantity supplied (Q_{ss}) and creates a situation of a shortage. This may result in a black market, where those who managed to purchase the fuel at P_{max} could resell the fuel at the black market price of up to P_{bm} . If this problem is extensive, it defeats the purpose of the price ceiling, making price of fuel even less affordable. This problem may be exacerbated in Sri Lanka where there is poor governance and there is likely to be limited enforcement and monitoring efforts.

A price ceiling can be an immediate approach to keep prices low, but may not be a sustainable strategy as the root cause of the problem has not been tackled.

Body paragraph/Requirement 2: Policies to increase supply of oil through technology or trade diversification are also needed to keep the price of fuel affordable

The Sri Lankan government may need to consider alternative ways to increase the supply of oil in Sri Lanka to keep prices from spiking.

The government can invest in technology to lower the cost of production of extracting oil from its own country or by inviting foreign firms with expertise to do so. This will increase the supply from SS_1 to SS_2 . At current price P_1 , there is a surplus of $Q_{ss} - Q_{dd}$, causing a downward pressure in price to new affordable price P_2 . Alternatively, the government can also start sourcing to purchase fuel from different countries to always have cheaper options to compare to or minimise supply shocks by not over-relying on one source.



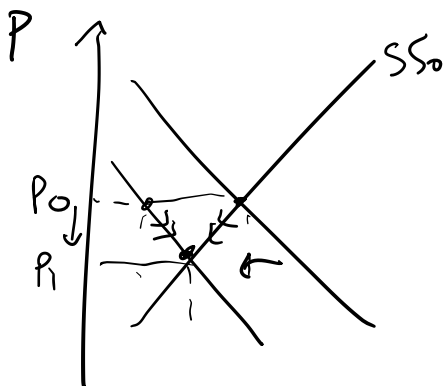
Evaluation: Policies to increase supply are costly for the government and a long term strategy. However, strategies to increase the supply of fuel in Sri Lanka is costly for the government and is also dependent on the land and resource constraints in the country. In addition, the development of technology takes a long time to see effect, therefore it may not improve the affordability in the immediate term.

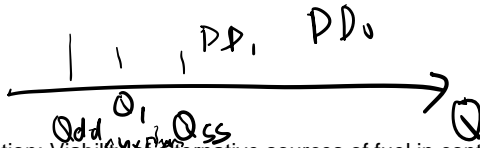
OR

Body paragraph/Requirement 2: Policies to reduce demand for fuel through exploring alternative sources can keep prices low

Explain how encouraging the use of substitutes may lower demand for fuel

With the recent developments of alternative modes of energy such as electric cars and hydrogen and natural gases, there are now more substitutes available. The Sri Lanka government can also start pushing its industries to rely less on fuel and on these alternatives. This would reduce the demand for fuel from DD_0 to DD_1 . At current price P_0 , there is now a surplus of $Q_{ss} - Q_{dd}$, leading to a price pressure downwards to P_1 .





Evaluation: Viability of alternative sources of fuel in context of Sri Lanka

However, this may be a long term strategy and difficult to implement. The main mode of transport in Sri Lanka is on motorcycles, tuk-tuks and coaches which all use fuel to run. In addition, development and adoption of electric vehicles in developing countries are low because of the lack of charging infrastructure. Moreover, the development in alternative sources of fuel are still not fully materialised yet, and may considered to be still relatively expensive. This makes it difficult to shift the focus of industries to rely less on fuels to other sources of energy.

Summative Conclusion:

In conclusion, a price ceiling is almost an imperative policy the government needs to adopt to maintain affordability in the immediate term, especially with the unplanned supply shock issues. Nonetheless, the government needs to consider more sustainable approaches to leave the country less vulnerable to such shocks and spikes in fuel prices. These policies can either to reduce reliance on the use of fuel or increasing the supply through improving technology or diversifying its trade partners and where it sources for fuel. One important aspect to note about Sri Lanka though, is to consider raising the incomes of Sri Lankans. Pursuing healthy economic growth and raising the material SOL would certainly help the population cope with sharp rises in price of necessities in general, leaving them less susceptible to such challenges.

Knowledge, Application, Understanding, Analysis	
Level	Description
L3 A + A = 10 A + C = 8 - 9	<ul style="list-style-type: none"> Breadth <ul style="list-style-type: none"> Explains two policies in the market for fuel (inclusive of price ceiling) that can be implemented by the government to keep prices affordable Depth <ul style="list-style-type: none"> Rigorous and relevant economic analysis used to explain how a price ceiling keep prices affordable Rigorous and relevant economic analysis used to explain how another policy keep prices affordable Well-contextualised to market of fuel in Sri Lanka.
L2 C + C / A + K = 7 A + 0 = 6 C + K = 5 - 6	<ul style="list-style-type: none"> Lacking any L3 criterions.
L1	<ul style="list-style-type: none"> Largely irrelevant response.

$C + 0 = 4$ $K + K = 2 - 4$ $K + 0 = 1 - 2$	<ul style="list-style-type: none"> • Largely descriptive response with non-existent or minimal or application of economic concepts or theories. • Serious and pervasive conceptual errors.
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Level	Description
E3 (4 – 5m)	<p>For an answer that builds on appropriate analysis to evaluate critically and arrives at well-reasoned judgements* and decisions using criteria.</p> <ul style="list-style-type: none"> • Strong evaluative statements about the effectiveness/appropriateness of policies • Strong concluding paragraph • Strong reasoning to justify the judgement made (including the use of criteria)
E2 (2 – 3m)	<ul style="list-style-type: none"> • Provides an opinion accompanied with partial substantiation that: <ul style="list-style-type: none"> ○ May not be entirely convincing. ○ Seems overly reliant on assumptions that may not hold. ○ Lacks relevance to the context of the question. • Evaluates at least one of the points covered in the body or provides some insightful opinion(s) but the overall stand is unclear.
E1 (1m)	<ul style="list-style-type: none"> • Unsupported evaluative statement(s). • Or unsubstantiated / generic conclusion • Or supported with very weak/incorrect/unrealistic/illogical reasoning (therefore making the judgement unconvincing)