

1. Given a rapidly ageing population, rising incomes, higher rentals, limited land and manpower, Singaporeans have experienced a rapid increase in healthcare costs in recent years; however, achievements in healthcare have allowed for an ageing workforce to contribute significantly to the economy for a much longer period.

(a) Using demand and supply analysis, explain reasons for the significant rise in prices in the healthcare market. [10]

(b) Discuss the view that the best way for the government to intervene in the market for healthcare is through the provision of subsidies. [15]

### Suggested Answer

(a)

Command Word: Explain

Content: Demand and supply factors, elasticity, price

Context: Healthcare market

*Synopsis: To explain reasons that result in the significant rise in price using demand and supply factors, as well as elasticity in the healthcare market.*

#### Introduction

- Demand rise → price rise
- Supply falls → price rise
- Relevant elasticity concept → PES

#### Body

##### Demand Factors

- Rapidly ageing population → rise in demand for healthcare products
- Rise in income → rise in purchasing power → rise in demand for healthcare products
- However with limited land and manpower, difficult to increase production of healthcare products in a short period of time → supply for healthcare product is price inelastic
- Rise in demand → Demand curve  $D_0$  shifts to the right (Figure 1)

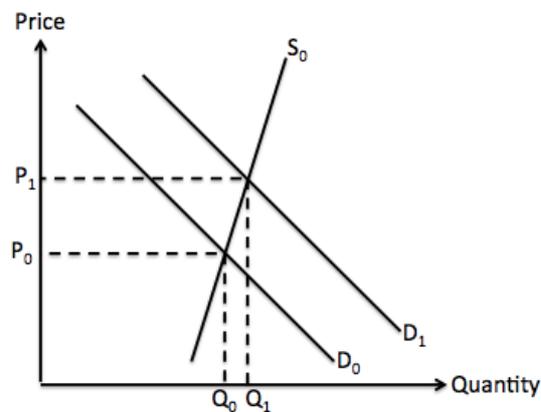


Figure 1: Healthcare Market

- Explain price adjustment process

- Rise in demand and since  $PES < 1 \rightarrow$  price ( $P_0$  to  $P_1$ ) rises more than proportionately than the rise in quantity

### Supply Factor

- Higher rentals  $\rightarrow$  rise in cost of production  $\rightarrow$  fall in supply for healthcare products
- Supply falls  $\rightarrow$  Supply curve  $S_0$  shifts to the left (Figure 1)

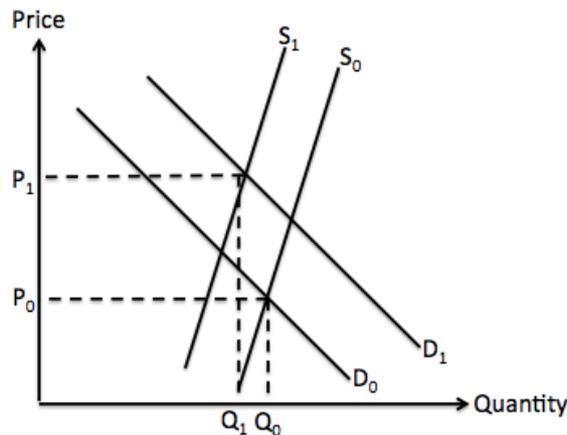


Figure 2: Healthcare Market

- Combined shift  $\rightarrow$  demand rise and supply falls  $\rightarrow$  reinforces the rise in price  $\rightarrow$  rapid increase in price from  $P_0$  to  $P_1$

### Conclusion

- For there to be a rise in price in the healthcare market, it must have been attributed to demand rising and supply falling. With  $PES < 1$ , this results in price to increase even more.
- However, this is with the assumption of *ceteris paribus*. Should there be improvements in technology resulting in fall in cost of production, supply for healthcare products could rise. Should supply rises more than demand rising, there could be significant fall in price in the healthcare market instead.

Marking Scheme		
L3	Well-explained answer on how demand and supply factors contribute to rising prices with the use of elasticity in the context of healthcare market.	7 – 10
L2	Incomplete explanation of how demand and supply factors contribute to rising prices in the healthcare market. Answers that did not include elasticity concepts (max 5m) Answers that did not show a combined shift (max 5m)	5 – 6
L1	Sketchy answers on how demand and supply factors affect prices.	1 – 4

(b)

Command Word: Discuss

Content: Market failure in healthcare market (positive externality & imperfect information), Policies (Subsidies and 2 alternative), Evaluate policies

Context: Healthcare market

*Synopsis: To look at the effectiveness of provision of subsidy as an intervention in the healthcare market which has sources of market failure such as positive externality and imperfect information. Assessment on the policies given as well as deducing if provision of subsidies is the best are required.*

### Introduction

- Reason for government intervening is due to the presence of market failure (define market failure) where healthcare services are under-consumed
- Provision of subsidies in the healthcare market may be able to deal with the market failure in healthcare market but due to the limitations of subsidies, alternative policies are also required.

### Body

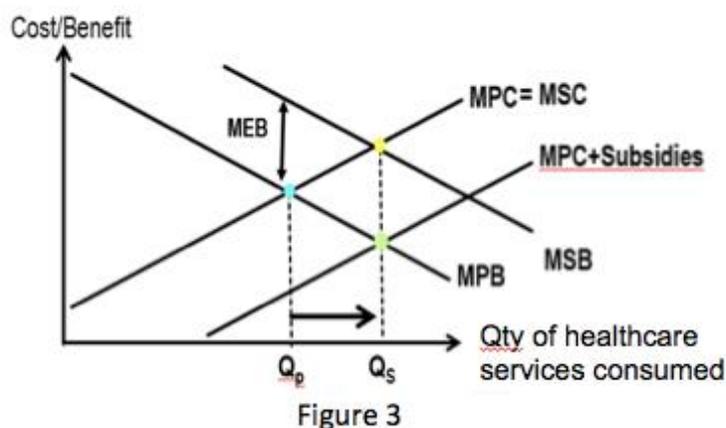
#### **Sources of Market Failure**

- Explain briefly how market fails in the healthcare market due to the existence of positive externalities
- Explain briefly how market fails in the healthcare market due to imperfect information

**THESIS:** The best way for the government to intervene in the market for healthcare is through the provision of subsidies.

#### *Explain provision of subsidy*

- Provision of subsidies → reduces private cost of consuming healthcare → reduces MPC → shifts MPC curve downwards



- Subsidising will increase consumption to socially optimal output ( $Q_s$ ) → efficient allocation of resources
- Subsidy is the best way as it can increase consumption resulting in efficient allocation of resources and eliminate deadweight loss

**ANTI-THESIS:** The best way for the government to intervene in the market for healthcare is NOT through the provision of subsidies as there are limitations in subsidies therefore alternative policies are needed

*Evaluate provision of subsidy*

- It is difficult to estimate the amount of MEB to provide the subsidies. Oversubsiding may result in deadweight loss still (Figure 4).

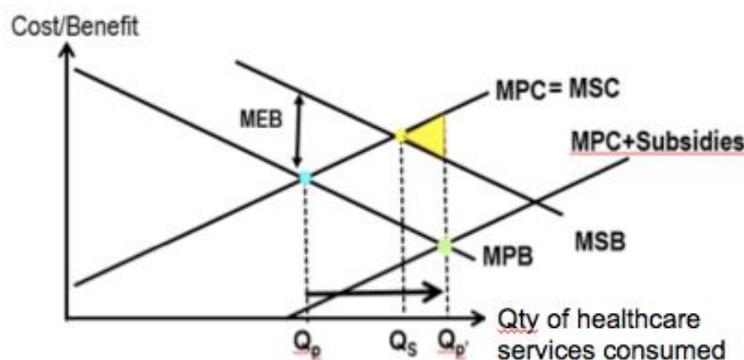


Figure 4

- Oversubsiding results in overconsumption to  $Q_p'$  and resources are not allocated efficiently with deadweight loss still existing.
- Since provision of subsidy has limitations, alternative policy is needed.

*Explain alternative policy 1: Legislation (Compulsory immunisation)*

- Since healthcare is a merit good and government encourages its consumption, there is a National Childhood Immunisation Programme where a child is given vaccinations against vaccine-preventable diseases such as poliomyelitis, diphtheria and tetanus. Giving these vaccinations at an early age builds up the child's immunity, preventing him/herself as well as those around him from contracting diseases. Making it compulsory ensures that vaccination is received at  $Q_s$  (Figure 5), which is the socially optimal level of output.

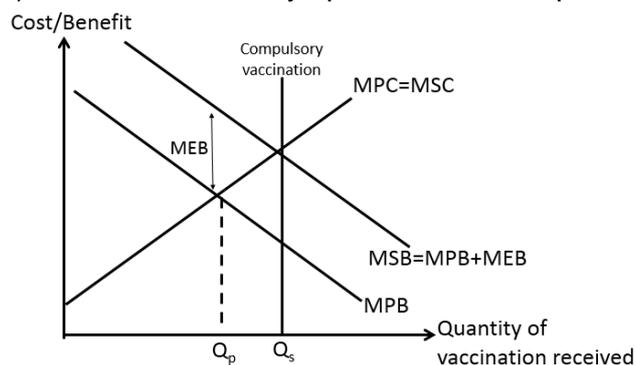


Figure 5

*Evaluate alternative policy 1:*

- This policy ensures that consumption is at socially optimal level of output as well as eliminating deadweight loss.
- Although compulsory vaccination could ensure that the consumption of healthcare services is at socially optimal output, it does not address the root cause of another source of market failure which is due to imperfect information. Alternative policy is needed to deal with this source of market failure.

*Explain alternative policy 2: Advertising/Information Sharing*

- Government improves information access and sharing → Health Promotion Board websites, posters in clinics/hospitals → consumers are being informed → consumers will now know the actual benefits from consuming healthcare services → MPB increases (Figure 6)

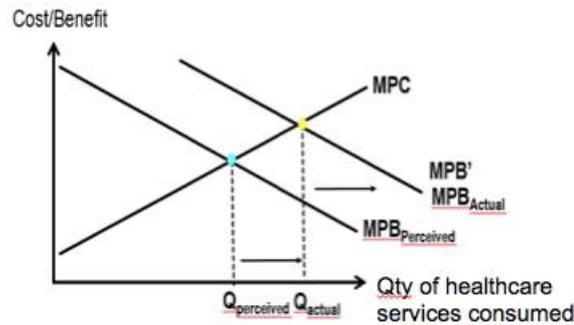


Figure 6

- Consumption increases to  $Q_{actual}$

*Evaluate alternative policy 2: Advertising/Information Sharing*

- Providing more information allows for consumption to increase to socially optimal output where allocative efficiency is achieved and deadweight loss is reduced.
- However, there could be misinformation from advertisements → the need to constantly monitor
- Additional cost incurred in advertising or providing information → government expenditure increases

Conclusion

- In Singapore, we legislate and provide certain aspects of healthcare (immunization) as the benefits of such an action outweighs the cost. Hence, certain aspects of healthcare can be subsidised
- Subsidies are the best form of intervention as it works more effectively than moral suasion and is relatively low cost when compared to free provision
- Can be selectively applied to specific treatments (e.g. infectious disease) which may have greater externalities than others (e.g. cosmetic surgery)
- Ultimately, subsidies will help the government rectify the inefficient allocation of resources.

Marking Scheme		
L3	Answer consistently debates the benefits and costs of subsidising, and is able to display good application of economic theory to both thesis and anti-thesis, providing 2 alternative policies.	9 – 11
L2	Answer is a one sided debate on whether subsidising is good or bad. Answer discussed on subsidies and provided an alternative policy. Answer only discussed on subsidies. (max 6 marks)	6 – 8
L1	For a largely irrelevant answer where there are conceptual gaps and tends to be generic in nature/lacking economic analysis.	1 – 5
E1	Mainly unexplained judgment.	1 – 2
E2	Judgment or evaluative assessment based on sound economic analysis.	3 – 4