

### H1 Question 3

- a) Explain, using examples, what is meant by public good and demerit good. [10]

Singapore did not fare well in three areas - availability, affordability and quality of pre-school services. The Lien Foundation called for pre-school education to be provided free for all children nationwide.

Adapted from Straits Times, 21 July 2012

- b) Discuss whether Singapore government should take charge of preschool education, and offer it free to all children. [15]
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### **Suggested Answers:**

#### Part (a)

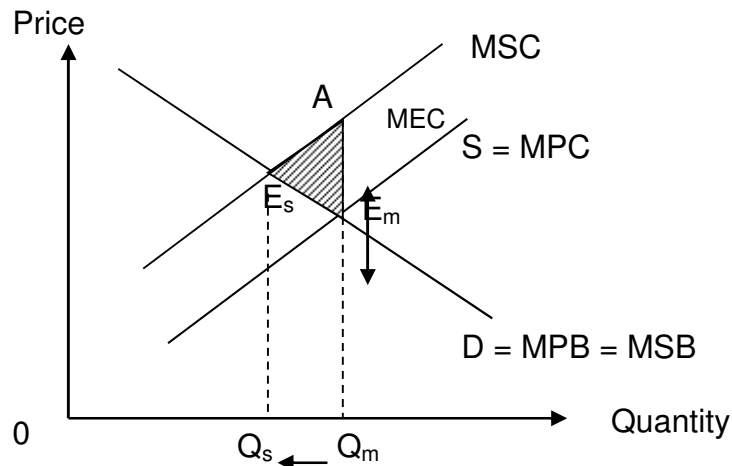
**Public goods** refers to goods or services that are non-rivalry and non-excludable in consumption.

- A good is non-rival in consumption if one person's consumption of the good does not reduce the quantity available to another person. Because of this, once a public good is provided, the marginal cost of providing the good to an additional user is zero. With zero marginal cost, the basic principle of optimal resource allocation calls for provision of public goods and services at zero price or no charge. However, if the price is zero, no firm would want to supply the good.
- A good is non-excludable in consumption if it is difficult to exclude non-payers from enjoying the good. This gives rise to a free rider problem. Since non-payers can also enjoy the good, no one would be willing to pay for it. As a result, demand is concealed and difficult to estimate. With no price and marginal cost, this leads to zero production resulting in complete market failure.
- Examples of public goods are street lighting and flood control. Once street lighting is provided, it does not get any dimmer just because another person is consuming it. It is also difficult to prevent the non-payer from enjoying it once the streets are lighted up.

**Demerit goods** are socially undesirable goods or services that generate negative externalities, and that the government feels people have over-consumed them.

- Demerit good is rivalrous in consumption as one person's consumption of the good reduces the quantity available to another person. It is possible to exclude non-payers from enjoying the good and therefore, it is excludable in consumption. Consumers are willing to pay a price for it.

- Given that the nature of the demerit good is rivalrous and excludable in consumption, the private companies provide them. Free-market provision of demerit goods therefore leads to overconsumption and partial market failure.
- The marginal social cost from undertaking the activity is the marginal private cost faced by the smoker as well as external costs accruing to third parties. Negative externalities will lead to divergence of private cost and social cost. With the presence of negative externalities, marginal social cost will be greater than marginal private cost. If cigarettes were provided through the free market, social costs of smoking exceed the private costs. Private optimum occurs at  $Q_m$  where MPB (the benefit to the individuals of smoking the last unit of cigarette) equals MPC (the cost to the individual of smoking the last unit of cigarette).



Level	Description	Marks
L3	Well-developed explanation on the features of both “public good” and “demerit good” with good use of relevant, supporting examples.	7-10
L2	Ability to explain in terms of rivalry and excludability of	5-6

	public and demerit good with some use of relevant examples.	
L1	Mere listing concepts of public and demerit goods. Some conceptual errors.	1-4

b) Discuss whether Singapore government should take charge of preschool education, and offer it free to all children. [15]

## Introduction

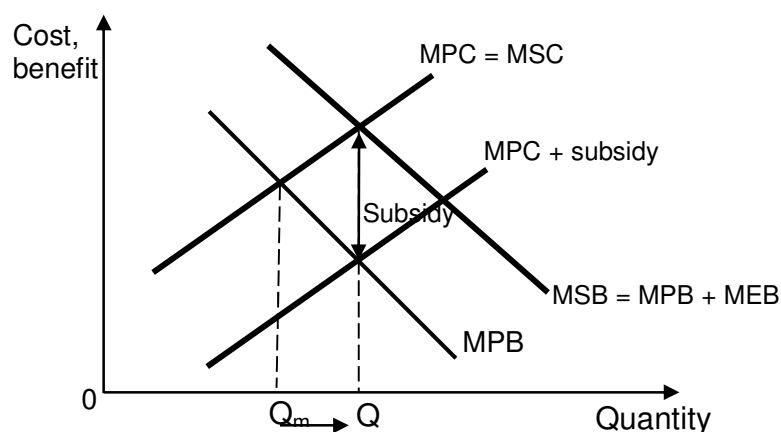
- Market failure occurs for merit goods because the price mechanism only takes into account private benefits and costs and thus there is divergence between private benefits and social benefits by the amount of external benefits. At the market equilibrium where marginal private benefit equals marginal private cost (e.g. school fees and forgone earnings), there is an underconsumption/ underproduction of higher education.
- Many parents in Singapore introduce their children to formal or partial education from a very young age. Pre-school education can be considered a merit good (i.e. a good with positive externalities or external benefits e.g. society as a whole benefits when higher productivity and real growth in gross national product rises with a better-educated work force).

## Body

**Thesis: Yes. Direct free provision by the government in the market of pre-school services improves the allocation of resources. Therefore, the government should fully take charge of the provision of pre-school services.**

### (I) Direct Provision

- The government have built and provide pre-school education e.g. PAP Community Foundation (PCF) which provides kindergarten and childcare services to supplement the amount that the market provides. This is to enhance the well-being of the community by providing quality educational services at affordable cost, as well as through welfare and community services. Such services can be provided free or at a subsidised rate determined by the government.
- To provide pre-school education for free, it means that government would have to provide full funding for the cost of provision. Compared to the free market equilibrium, if the government can directly provide pre-school education services for free, the consumption of pre-school education will increase from  $OQ_p$  to the socially optimal level  $OQ_s$ . In addition, it may help to level the playing field for kids from low or middle-income families, as the fees will be made lower and made more affordable for all pre-schoolers.
- However, the market may consume beyond the socially optimal level  $OQ_s$ .



### Evaluation:

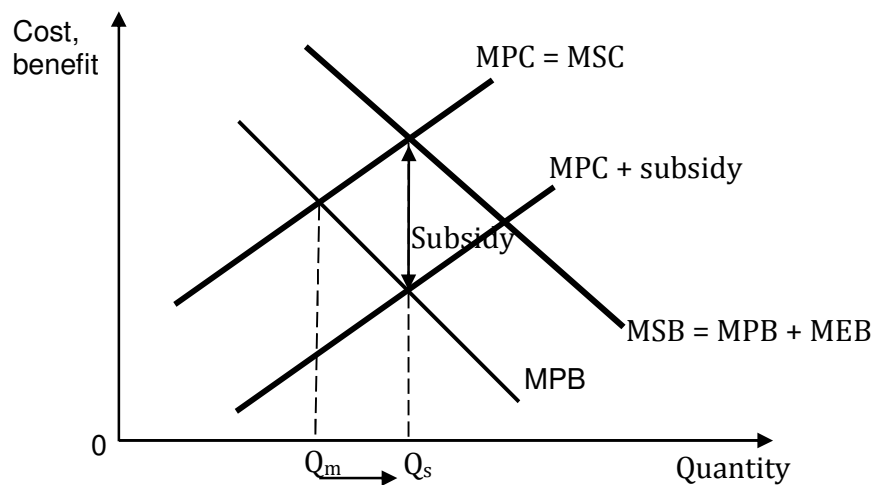
- The government will provide some merit goods for free because the marginal social benefits far outweigh the private benefits for example, compulsory free vaccination against smallpox, measles etc. For pre-school education, the government will not provide all of them for free because the private sector will produce them due to the characteristics of excludability and rivalry in consumption.
- Second, there is an opportunity cost in using the limited government funds. It is becoming apparent that to continue to provide good quality pre-school education, the government cannot solely depend on state resources. Limited resources available for government funding of pre-school education as the government needs to cope with competing demands arising from other areas like national defence, health care and social welfare.
- Third, there may be overconsumption as consumers will maximize their satisfaction by consuming up to the point where marginal benefit = 0. This would lead to increased taxes to fund the additional expenditure, which may arise if pre-school education services are provided for free.

**Anti-Thesis: No. The presence of government in the market for pre-school services may not improve the allocation of resources. The government should not fully take charge of the provision of pre-school services, as there are other strategies such as providing government subsidies and regulation which are more suitable in improving efficiency in resource allocation of merit goods.**

Currently, there are two anchor operators in Singapore - the PAP Community Foundation (PCF) and NTUC My First Skool. The government could work hand-in-hand with the private sector in encouraging the setting up of pre-school centres. However, with more pre-schools that charge higher school fees, education is turning into a private good instead of a merit good. This may create inequalities as evidence has shown that lack of uniformity among preschools would lead to some children being more prepared than others for primary school. Hence, there have been several measures introduced by the government to better regulate the sector to ensure greater affordability and availability of pre-school education.

### **(II) Subsidies**

- To correct positive externalities, the government could give the pre-schools a subsidy equal to the amount of marginal external benefit to lower their cost of production. So far, the Government has provided more funds and grants to improve teacher quality and overall quality of centres. MOE and the Ministry of Community Development, Youth and Sports (MCYS) supported pre-schools' innovation efforts by providing Innovation Grants amounting to \$1.2 million from 2011 to 2013. The MPC curve will shift vertically downwards by the full amount of the subsidy from MPC to MPC + subsidy.
- For Singapore parents who require childcare centre based services for their children, the Government enhances the affordability of such services by giving infant/ child care subsidies to working and non- working mothers whose children are in licensed centres. The MPB curve will shift vertically downwards by the full amount of the subsidy from MPB to MPB + subsidy.



Evaluate how well subsidy works

- The main problem of using this method is that a government may suffer from imperfect information. It remains difficult to estimate the level of marginal external benefits and therefore the correct level of subsidies to be granted cannot be correctly calculated. Too much subsidies results in overconsumption of education and hence wastage of resources, while too little subsidies will result in insufficient level of education being consumed.

### (III) Legislations and Regulations

In addition to providing a subsidy, the government also launched the Singapore Pre-School Accreditation Framework (SPARK). It is a quality Assurance Framework which aims to raise the quality of pre-schools in Singapore through the improvement of teaching, learning administration and management process.

- Due to a lack of proper regulations set in terms of the pre-school curriculum, there is so much variation in terms of physical environment, curriculum and teachers' qualifications or capabilities from preschool to preschool. Recently, there was the decision to set up a statutory board to oversee the demonstrates the government's commitment to raise the quality of all pre-schools provided by private operations, and even out the difference in standards.

### Conclusion

- While the government can implement the above methods to increase the consumption of pre-school education, the key to raising the quality of pre-school education is to attract and retain talents. This focus on quality and minimum standards, not uniformity, has encouraged a variety of pre-school programmes with different approaches and models. By providing it for free, it would require too much funding which could also result in overconsumption of education and thus, resulting in wastage and inefficient allocation of resources. Therefore, the government should adopt a combination of the above measures for the provision of merit goods including healthcare services.

## Marking Scheme

<b><u>Level</u></b>	<b><u>Descriptors</u></b>	<b><u>Marks</u></b>
<b>L3</b>	Competent explanation and evaluation of subsidy and thorough explanation of 2 other policies with clear economic application	9 - 11
<b>L2</b>	Some explanation of measures with evaluation but inconsistent application of economic concepts Competent explanation and evaluation of one policy – max. 6m	6 – 8
<b>L1</b>	Smattering of ideas Descriptive answers	1 – 5

<b><u>Level</u></b>	<b><u>Descriptor</u></b>	<b><u>Marks</u></b>
<b>E2</b>	An evaluative assessment based on economic analysis that is relevant to the context	3-4
<b>E1</b>	Unexplained assessment or one that is supplied by analysis	1-2