

- 3 Children who grow up in lower-income families have less access to quality education. Singapore government will start to level the playing field by providing more assistance to those in danger of being left behind during pre-school years. In addition, the government will also double spending on the pre-school sector to \$1.7 billion by 2022.

Discuss the factors that the Singapore government should consider in its decision to intervene in the pre-school education market.
[25]

Suggested Answer Outline

Introduction

- In deciding whether to intervene in the pre-school education market, the government has to gather the necessary information from various economic perspectives, consider its constraints, weigh the benefits versus the costs of such intervention and consider its unintended consequences. This approach is known as the decision-making framework.

Body

Benefits of intervening in the pre-school education market

Benefit 1 Correct market failure due to positive externalities in consumption to achieve allocative efficiency

- The benefits of early education extend to society as a whole. The third party (society) benefits through better work force in the long term as pre-school education might enable a child to develop good cognitive skills which will translate to more years of schooling and better labour work force which will bring about more innovation and higher productivity.
- Hence, the presence of marginal external benefits (MEB) creates a divergence between the marginal private benefits (MPB) and marginal social benefits (MSB) where $MSB = MPB + MEB$.
- Assuming no negative externality, marginal private cost (MPC) equals to marginal social cost (MSC).

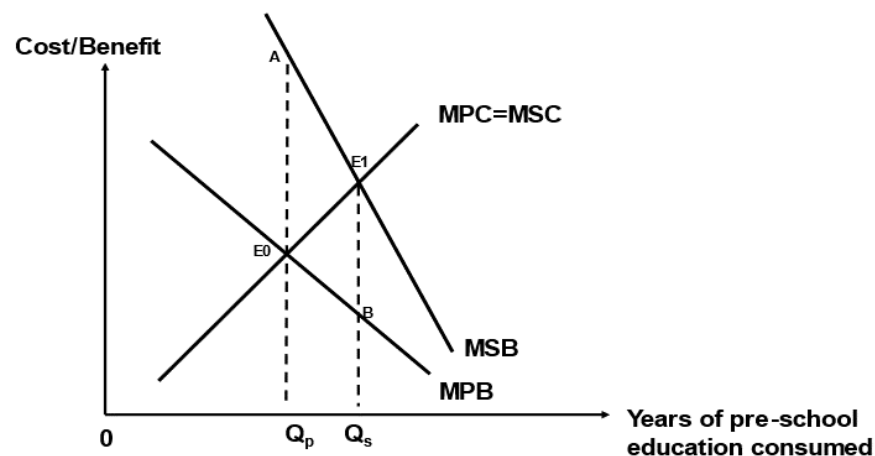


Figure 1: Market failure from the underconsumption of pre-school education

- In the pursuit of self-interest, consumers will only consider their own private costs and benefits and consume at $0Q_p$, where $MPC=MPB$. However, the socially optimum output level is $0Q_s$, where $MSB=MSC$.
- Thus, there is an underconsumption of Q_pQ_s units leading to a deadweight loss of area ABC and allocative inefficiency.
- Hence, government intervention can be beneficial via attaining allocative efficiency (the above explain the need for government intervention not the benefit of it).
- The subsidy will reduce the MPC, shifting the MPC curve from MPC to MPC + subsidy per unit, causing the consumers to consume pre-school education up to the level of Q_s , hence coinciding with the socially optimal output level.

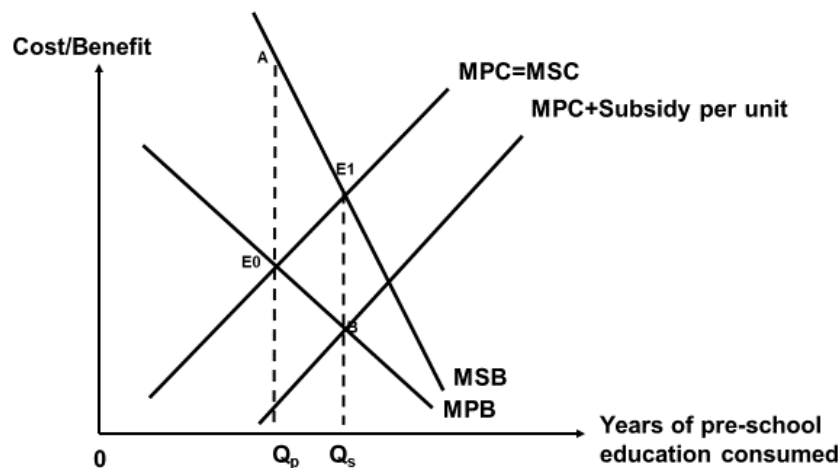


Figure 2: Subsidy for pre-school education

Evaluation of benefit 1

- Due to imperfect information, it is difficult to accurately measure the amount of MEB.

Benefit 2 Correct market failure due imperfect information to achieve allocative efficiency

- If left to the free market, it is likely that pre-school education will also be under-consumed because the family/household undervalue the family's private benefits from the consumption of pre-school.
- Most parents perceived the MPB of pre-school education to be acquisition of simple knowledge by their children.
- However, parents have underestimated the amount of true benefits to pre-school education.
- As most parents may be unaware of the extent of the full benefits from pre-school education. With reference to figure 3, due to imperfect information, there is a divergence between $MPB_{perceived}$ and MPB_{actual} .
- Hence, with imperfect information, there will be an underconsumption of $Q_p'Q_a$ units of pre-school education and the welfare loss is represented by area ABC.
- To attain allocative efficiency in the case of imperfect information, the government could provide campaign to inform parents of the true benefits to

- Hence, the benefit of government intervention would be to correct market failure due to imperfect information in the case of merit goods, a government can provide the necessary information through educational campaigns to help consumers make rational decisions.
- For example, there are advertisements on the actual benefits of pre-school education.
- Assuming that social optimal level of information is provided to parents to learn about the full benefit, the demand for pre-school education would increase as illustrated by the shift from $MPB_{perceived}$ to MPB_{actual} (Figure 3) thus achieving allocative efficiency where deadweight loss is eliminated.

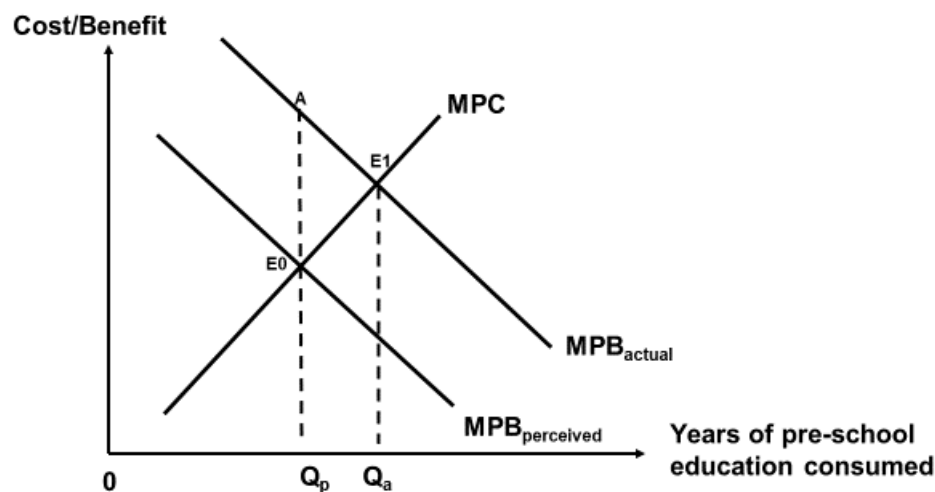


Figure 3: Imperfect information

Evaluation of benefit 2

- For some lower-income family, while parents are informed of the true benefits and the parents are willing to send their child to pre-school, but they might be unable to afford the school fees.

Benefit 3 Reduce inequity from allocating resources to pre-school education market

- Inequality in family financial resources contribute to achievement gaps that manifest very early in a child's life. Pre-school education is essential to adequately prepare the students for primary school and bringing about more equal opportunities in the child's future/long-term developments (tertiary education and career opportunities).

Costs of allocating resources to pre-school education

- The costs incurred by the government from intervening in the pre-school education market includes the costs of subsidy and the construction fees are incurred from building the pre-school centres.

Constraints faced by government in deciding whether to intervene and the unintended consequences of government's intervention

- Land constraints – Land scarcity has been a perennial issue in Singapore. Government has various plans to use the limited land for developments of pre-school centres, elderly care centres and for businesses.

Evaluative conclusion

- For Singapore, the most important factor that Singapore government should consider in their decision to intervene in the pre-school education market should be the extent of the benefit and costs.
- The government should allocate resources to pre-school education if the benefits outweigh the costs of doing so.
- Secondly, the decision to allocate resources to pre-school education could also depend on the priority of the government.

Marking Scheme

Levels	Descriptors
High L3 18 - 20	<p>For an answer that demonstrates knowledge, understanding, application and analysis:</p> <p>EXCELLENT breadth that considers the following economic concepts in explaining multiple and balanced perspectives, viewpoints, relationships and factors. ALL points chosen should be of relevance and significance in answering the question.</p> <p>EXCELLENT depth in economic analysis that reflects the following in ALL explanations.</p> <p>✓ Accurate use of economic concepts, clear elaboration and precise use of economic terminologies, language and phrasing.</p> <p>The answer should also be supported by:</p> <p>Well-labelled and well-referred to diagram(s) / tool(s) of analysis drawn with precision (where appropriate). Relevant examples and accurate use of facts. Logical structure</p>
Low L3 15 - 17	<p>For an answer that demonstrates knowledge, understanding, application and analysis:</p> <p>At least VERY GOOD breadth that considers the following economic concepts in explaining multiple and balanced perspectives, viewpoints, relationships and factors. MOST points chosen should be of relevance and significance in answering the question.</p> <p>At least VERY GOOD depth in economic analysis that reflects the following in MOST explanations.</p> <p>Accurate use of economic concepts, clear elaboration, and precise use of economic terminologies, language and phrasing.</p> <p>The answer should also be supported by:</p> <p>Well-labelled and well-referred to diagram(s) / tool(s) of analysis drawn with precision (where appropriate). Relevant example(s) and accurate use of facts. Logical structure.</p>

<p>High L2 12 - 14</p>	<p>For an answer that demonstrates knowledge and understanding but lacks application and analysis:</p> <p>At least GOOD breadth that considers the following economic concepts in explaining multiple and balanced perspectives, viewpoints, relationships and factors. MOST points chosen should be of relevance and significance in answering the question.</p> <p>At least GOOD depth in economic analysis that reflects the following in MOST explanations. Accurate use of economic concepts, clear elaboration, and precise use of economic terminologies, language and phrasing.</p> <p>The answer should also be supported by:</p> <p>Diagram(s) / Tool(s) of analysis that may not be well-labelled, may not be well-referred to and may not be drawn with precision (where appropriate). Example(s) Logical structure</p>
<p>Low L2 9 - 11</p>	<p>For an answer that demonstrates knowledge and understanding but lacks application and analysis:</p> <p>At least SUFFICIENT breadth that considers the following economic concepts in explaining multiple and balanced perspectives, viewpoints, relationships and factors. SOME points chosen should be of relevance and significance in answering the question.</p> <p>At least SUFFICIENT depth in economic analysis that reflects the following in SOME explanations. ✓ Accurate use of economic concepts, clear elaboration, and precise use of economic terminologies, language and phrasing.</p> <p>The answer should also be supported by:</p> <ul style="list-style-type: none"> ✓ Diagram(s) / Tool(s) of analysis that may not be well-labelled, may not be well-referred to and may not be drawn with precision (where appropriate). ✓ Example(s). ✓ Logical structure.

<p>High L1</p> <p>5 - 8</p>	<p>For an answer that demonstrates knowledge but lacks understanding, application and analysis:</p> <p>INSUFFICIENT breadth that considers the following economic concept(s). Point(s) chosen may be of relevance but may not be of significance in answering the question.</p> <p>INSUFFICIENT depth in economic analysis that may reflect the following:</p> <ul style="list-style-type: none"> ✓ Lack of accuracy in the use of economic concepts, lack of clarity in elaboration, and lack of precision in the use of economic terminologies, language and phrasing.
<p>Low L1</p> <p>1 - 4</p>	<p>Demonstrates POOR breadth and POOR economic analysis.</p> <p>Is irrelevant in analysis but may contain an introduction that addresses the question or contains no economic analysis but may contain a few statements that are relevant to the concepts required to answer the question.</p> <p>Contains fundamental conceptual errors in analysis.</p>

Levels	Descriptors
<p>E3</p> <p>4 - 5</p>	<p>For an evaluation that contains</p> <p>A synthesis of earlier economic arguments to arrive at relevant judgements/decisions (i.e. answer the question).</p> <p>Well-explained criteria-based evaluative comments supported by accurate and clear analysis to provide fairness in views.</p> <p>A good summative conclusion.</p>
<p>E2</p> <p>2 - 3</p>	<p>For an evaluation that contains</p> <p>Relevant judgement(s)/decision(s) (i.e. answer the question) that may not follow from earlier economic arguments.</p> <p>Criteria-based evaluative comment(s) supported by analysis to provide fairness in views but the comment(s) may not be well-explained, may be unclear and/or may be inaccurate at times.</p>
<p>E1</p> <p>1</p>	<p>For an evaluation that contains</p> <p>Relevant but unexplained evaluative judgement(s)/statement(s) i.e. evaluative judgement(s)/statement(s) not supported by analysis or</p> <p>A relevant conclusion.</p>

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