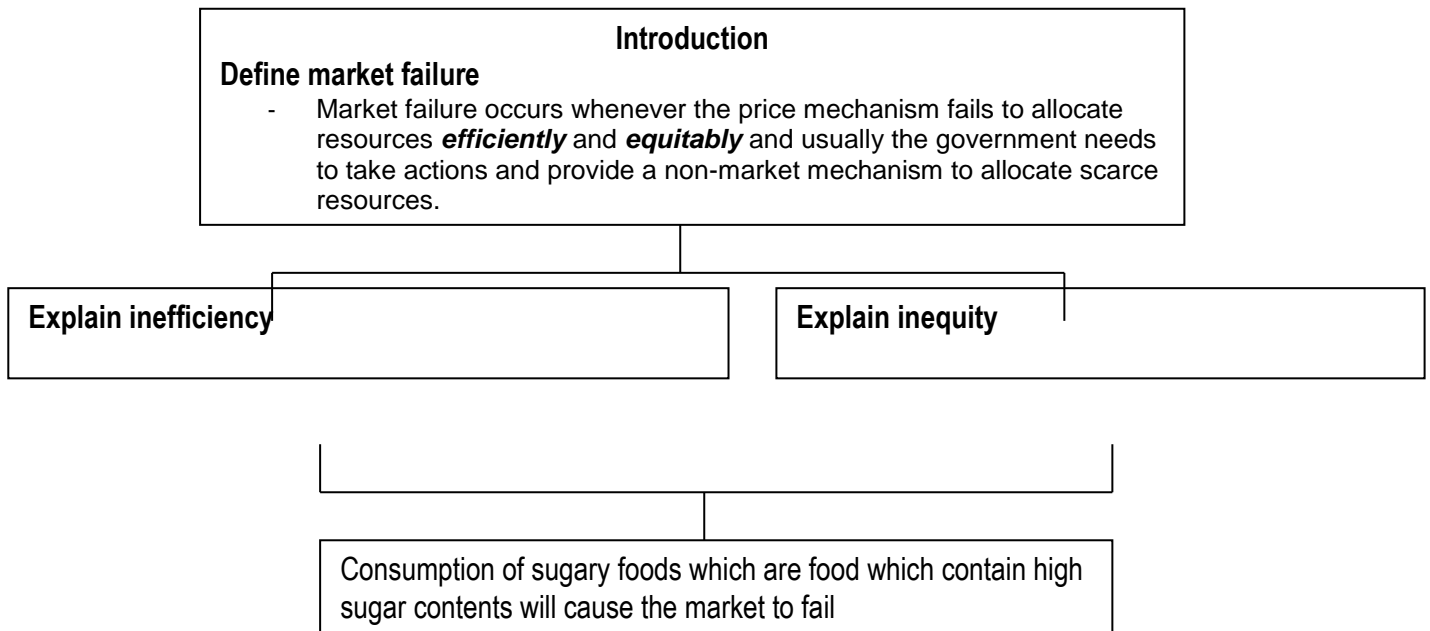


- 2 Sugar consumption contributes to increasing obesity rates in Singapore, where around 1.7 million Singaporeans are at risk of obesity-related diseases such as diabetes. There are calls for a tax on sugared drinks and soda to reduce sugar consumption, following in the footsteps of countries like Mexico, the UK and the city of Berkeley in California.

- (a) Explain how the consumption of sugary drinks is likely to cause market failure. [10]
[10m]
- (b) Discuss the view that a sugar tax represents the best option by a government to tackle obesity-related diseases such as diabetes. [15]

Suggested Answer (a)

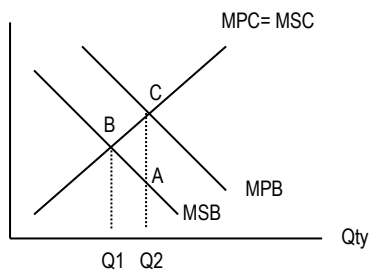


Inefficiency

Externalities

- Consumers' choice is based on private benefit and private cost. In the case of Sugary foods, the benefit of consumption is the utility that one derives from consuming sugary foods while the private cost is the monetary cost of buying them and the healthcare cost as a result of increased risk of obesity related diseases
- However, consumption of sugary foods imposes an external cost on the society i.e. cost borne by 3rd party for which no compensation is made
- E.g. healthcare expenditure by the government on obesity related diseases, lower productivity in the economy as a result of absenteeism from work with rising obesity
- Divergence between private cost and social cost curve ($MSB > MPB$)
- Individuals do not bear the full cost of their consumption decisions → over consumption of sugary food by $Q1Q2$ if left to the market → market failure and resource misallocation → society welfare loss ABC (see diagram)

Cost/Benefit



Market Imperfections

Imperfect Information

- In deciding to consume sugary foods, consumers may not be fully aware of the calorie content of the sugary food,; they also not understand fully or perceive accurately the risks and consequences of their choices. While the consumers are able to calculate the price of Sugary foods (short term private cost) they underestimate the private costs of health deteriorations (long-term private cost) e.g. risk of heart disease
- underestimation the private cost of consuming sugary foods (high in sugar, salt and sugary) → demand for Sugary Food is higher than what it would have been had they have the full knowledge of the negative private effects of obesity
- overconsumption of sugary foods → market failure and resource misallocation → society welfare loss

Inequity

- Sugary foods such as unhealthy fast foods are typically the cheap food option for the poor.
- As income is unequally distributed, the poor may end up with an unusually higher consumption of sugary foods as compared to the rich and therefore leading to market failure

Conclusion

Price mechanism fails to achieve optimal resource allocation due to the nature of sugary food. This necessitates government intervention.

Suggested Answer (b)

Introduction

- Obesity is a chronic medical condition which occurs over time when a person continues to consume more calories than needed. These excess calories are converted to fat and stored in the body and this leads to obesity and the higher risk of obesity related diseases.

Use of tax is best

1. Use of Tax is considered as best as it brings about improved society's welfare

Taxation leads to improved efficiency

- This corrects the over-production and over-consumption which explains why it should be used.

EV:

- In addition, the revenue generated could be used for educational projects on food nutrition and raise awareness on the higher risks associated with obesity → mitigating the problem of imperfect information of the consumers

Use of tax may not be best

Use of Tax may not be best because there are limitations

1. A Tax may worsen equity

- Consumption tax is regressive. The poor pays a bigger portion of their income as taxes
- EV: However, the consequences of risking obesity and diabetes are potentially worse than the effects of a slight fall in real purchasing power.

2. Difficult to ascertain the right amount of tax → A tax may not improve efficiency

Conclusion

- Obesity in Singapore may be higher than most of her counterparts, and there is an upward pressure on this trend and it is unlikely that the market is able to correct itself. Rising obesity not only raise healthcare expenditure but may lower the quality of the national defence. Over the longer term, the benefits of preventing higher obesity rates will be higher than the short term costs of policies and so government intervention is justified.
- The best approach is probably a combination of measures.

2. Better alternatives such as legislation and education available.

Education helps consumers make informed choices and increases welfare

- The policy option of raising tax should be considered against other options.
 - Greater awareness of the health risk of obesity will reduce demand for sugary foods and lead to optimal consumption of sugary foods
 - Government may fund campaigns to educate the public on obesity related diseases and put in more healthcare professionals in the schools and at the public outpatient clinics to educate the public and raise awareness → lower demand for sugary foods
- EV: However, outcome is hence less predictable

3. Govt should not do anything if the benefits of intervention doesn't outweigh the cost

Cost of enforcing the regulations (substantial political will and manpower) may be greater than the gains from the reduction in consumption of sugary foods and thus obesity

Marking Scheme

Part a

L3	A well structured response demonstrating economic rigour in analysis with a clear theoretical framework.	7-10
L2	Some attempt to respond to the question but quality of response is inconsistent and lack rigour or an answer that lacks scopes.	5 - 6
L1	Mere regurgitation of the various sources of market failure. Students are unable to relate the consumption of sugary foods to market failure	1- 4

Part b

L3	A balanced discussion that is well structured with a clear theoretical framework.	9-11
L2	Some attempt to respond to the question but is largely one-sided and arguments may sometimes lack rigour.	6 - 8
L1	Students did not understand the demands of the question and merely explained, with inaccuracies the various policies that government can use to intervene with rising obesity.	1- 5
Evaluation		
E2	Judgement based on analysis	3-4
E1	Mainly unexplained judgement	1-2

