

**Economics Lesson Ideas**

<b>LEVEL</b>	JC1 H1/H2
<b>TOPIC</b>	Market Failure & Government Intervention
<b>DESCRIPTION OF RESOURCES</b>	Case Studies Relevant extracts from the white paper are taken out for students to see how economic concepts that they have learnt in the topic of market failure could be applied to <b>real world context</b> .

## Activity 1: Case Studies

### Extract 1:

Approximately 3 billion plastic bags were used in Singapore in 2011, resulting in an average of 1.6 plastic bags used per person on a daily basis. Burning plastic waste results in the emission of greenhouse gases such as Carbon Dioxide and Methane, and toxic compounds such as Nitrogen Oxides, Sulphur Oxides, Hydrogen Fluoride and Hydrogen Chloride. Incinerating plastic waste also requires an energy input of 252 megajoules per tonne of waste. In the Singapore context, anecdotal evidence suggests that major retail chains may pay as little as less than one cent per plastic bag procured and distributed.

**Source: Singapore Environment Council**

1.

(i) Using evidences from the white paper and other relevant sources, list down what are the

- marginal private cost,
- marginal private benefit
- marginal external benefit
- marginal external cost
- marginal social cost
- marginal social benefit

in the consumption of plastic bag.

2. Explain why the consumption of plastic bag is considered negative externality.

3. Explain whether there is a role of government intervention in both the production and consumption of plastic bag.

### Possible Answers:

Yes.

Argument: There is market failure in both production and consumption of plastic bag due to the presence of negative externalities. As a result, there is a welfare loss to the society since allocative efficiency is not achieved. Thus, there is a role of government intervention to maximise welfare by judging based on two criteria namely efficiency and equity.

No.

The Singapore government may not view plastic bag as demerit good since plastic bags could be reused. Thus, the government may not feel the current production or consumption as socially undesirable. Hence, it would be economically viable for the government to intervene.

4. Using evidences from the white paper, suggest what are the possible measures to tackle the problem in the use of plastic bag as well as the economic impact of each measure.

### Possible Answers:

- Banning
- Use of incentives: Charge 5 cents per plastic bags

Activity 2: Essay Question

“The Singapore government should **ban** the use of plastic bags to help conserve the environment.” Discuss this statement.

### Scaffolding Questions

1.

(i) With the aid of an appropriate graph, explain how the ban of plastic bag can be economically justified?

(ii) What are the necessary assumptions for the ban of plastic bag to be economically justified?

2. Using evidences from extract B and other relevant sources that you have obtained, explain the possible economic impact of banning the use of plastic bag in Singapore.

**Extract B: Should we ban plastic bags in Singapore using comparative studies done by other countries?**

A study by the National Centre for Policy Analysis in Washington DC compared the economic performance of stores in Los Angeles that were subject to a plastic bag ban and those that were not, and found that stores subject to a plastic bag ban reported a decline in sales of -3.3 per cent, and a reduction in the number of individuals they employed by an average of 10.4 per cent. Stores subject to the plastic bag ban in the abovementioned study also reported an average reduction in procurement of plastic bags by up to as much as 91 per cent, but the report argued that this would be offset by increased spending on reusable bags.

An Economic Impact Report on Checkout Bag Charges in San Francisco claims that legislation to ban free plastic bags at the point of sale will "have a very slight positive impact on the economy", with job creation, a fall in retail prices and higher profits for retailers predicted.

However, SEC felt that introducing these two solutions in Singapore would be ill-suited to our local context wherein all household waste is packed in plastic bags prior to disposal, which means plastic bags are to a certain degree, necessities in each household. Furthermore, we did not want to introduce a solution that would impose an additional financial burden on low-income households.

**Source: Singapore Environment Council**

4.

(i) Does banning plastic bags raise the issue of inequity? Why?

(ii) Is there any trade-off faced by the Singapore government if it chooses to ban the use of plastic bags?