**1**

**Identify the key differences between public goods and private goods.**

| Distinguishing Criteria | Private goods | Public goods |
|---|---|---|
| **Rivalrous in consumption**<br>- Definition: The consumption of the good by one person diminishes the amount available for another person to consume. | **Yes**<br>Explain the concept of rivalry using an example of one person's consumption of good/service such as car, running shoes, hair dressing<br>- When one person enjoy the good, there will be one less available for the others. | **No**<br>Explain the concept of non-rivalry using an example of street lighting<br>- The consumption of street lighting by one person does not diminish the quantity or quality available for the next person. |
| **Excludable in consumption**<br>- Definition: Means that it is technically possible or feasible to exclude anyone who has not paid for the good/service from consuming it once it is produced. | **Yes**<br>Explain the concept of excludability using an example of use of smartphones, computers, big macs<br>- The direct benefits from the consumption of the good is confined to those who pay for it. | **No**<br>Explain the concept of non-excludability using an example of street lighting<br>No single person has to pay to enjoy the light provided by street lighting. i.e. it is technically impossible / prohibitively expensive to exclude anyone who walks on the street from benefiting from it even though he /she doesn't pay for it directly. |

***As an extension, the issue of Provision can be discussed.***

**Hwa Chong Institution**
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**Chapter #9: Microeconomics II – Market Failure & Government Intervention**


**2**

Are the following examples public goods? (i) Free-to-air TV broadcast (ii)roads

Learning Objectives:
1) Applying the characteristics of rivalry and excludability to a good to arrive at a proper categorization.
2) Learning how to handle an ambiguous context, e.g. expressways are rival during peak-hours and non-rival during non-peak hours, excludable with a toll booth and non-excludable without a toll booth.

To consider if a good is a public good, one need to consider if the good fulfil 2 characteristics: Non-rivarly and non-excludability in consumption

(i)Free-to-air TV broadcast

TV broadcast signals are **non-rival** since quality of signal is not degraded for additional viewers or the number and quality of the shows on air is independent of the number of viewers.

“Free to air” TV broadcast signals **were not excludable** as it is an obligation that they have to fulfill as part of their broadcasting license. Thus it is impossible for them to encrypt the signals as part of national duty even if they want to and that there is a very high penalty (their license will be revoked) i.e. cost involved if they should exclude non-payers. OR : The broadcast signal is not encrypted and thus anyone with a television will be able to watch the shows that has been broadcasted, payer or non-payer.

→Can be considered as Public Good

*Tutor may want to extend discussion to Pay-TV*
*For Pay TV, it is relatively easy for broadcasters to scramble the signal and charge households for a descrambler and does exclude non-payers who do not need a greater selection of tv programs.*
*→ Not a public good*
*N.B: Students may argue that there is technology that allows viewer to try illegally decode the PayTV broadcast signals. That will reduce the degree of excludability.*

(ii) roads

Roads essentially public in nature, but do not exhibit fully the features of non-excludability and non-rivalry. The road network is currently available to all, but could be made excludable via a system of electronic road pricing/ toll charges. There is also non-rivalry in consumption, but only up to an extent. Once the road becomes congested there is rivalry in consumption. Hence it is **not** a pure public good.

Additional knowledge: It can be considered as quasi public good.

| | Excludable | Non-excludable |
|---|---|---|
| **Rival** | **Private goods**<br>Examples:<br>Big Macs<br>Running shoes | **Common resources**<br>Examples:<br>Tuna in the ocean<br>Public park |
| **Non-rival** | **Quasi-public goods**<br>Examples:<br>Cable TV<br>Toll road | **Public goods**<br>Examples:<br>National defence<br>Street lighting |