

AAE101: Intro to Ag. & Applied Econ.

Discussion Section 5

Professor: Siwan Song

TA: Erick F Molina *

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Dept. of Agricultural & Applied Economics
Taylor Hall 520, 427 Lorch St, Madison, WI 53706

✉ molinaperez@wisc.edu

Today's goal

Public Goods, Government's Role and Government failure.

Public goods

Demand-Side Market Failure: Occurs when it is not possible to charge consumers for the product. Some can enjoy the benefits of a product without paying. Firms are therefore not willing to produce because they cannot cover the costs.

Private Goods: Goods produced in the market by firms. They are offered for sale. Their two main characteristics are **rivalry** and **excludability**.

- **Rivalry:** It means that when one person buys and consumes it, it is no longer available for another person to buy and consume it.
- **Excludability:** It means that the sellers can keep people who do not pay for a product from obtaining its benefits.

*This handout is based on the corresponding handouts from previous years by Felipe Parra Escobar, Matt McKetty & Talita Silva. Modifications and additions in this version by Erick.

Public Goods: Goods provided by the government. Their main characteristics are:

- **Non-rivalry:** This refers to when a person consumes a good, she is not precluding another person from consuming it.
- **Nonexcludability:** The case where there is no effective way of preventing/excluding individuals from consuming a good.
- **Free-Rider Problem:** This is the situation where once a producer has provided a public good, everyone, including nonpayers, can obtain the benefit.

Quasi-Public Goods could be provided through the market system. Because of positive externalities the government provides them. We can think of examples like education, streets, and museums.

Public Choice Theory is the economic analysis of government decision making, politics, and elections.

The **Median-Voter Model** suggests the median voter is likely to determine the outcome of the election. The median voter is the voter holding the middle position on an issue. At any point, people may be dissatisfied with the median preference. People may "vote with their feet" by moving to political jurisdictions where the median voter's preferences are closer to their own. Median preferences can change over time.

Government Failure: refers to economically inefficient outcomes caused by shortcomings in the public sector.

Political Corruption is the abuse of entrusted powers for personal gain.

The Lighthouse Problem

In this activity, your team represents a small village on an island. The exercise will help you understand the nature of public goods and the challenges associated with them.

Your village depends on fishing for its livelihood, but the waters around the island are dangerous due to hidden rocks. To make fishing safer, the island needs to build a **lighthouse**. The lighthouse will help every village by making fishing safer, allowing all villages to catch more fish.

Your goal: Decide as a village how many of your **10 gold coins** to contribute to building the lighthouse. Each village can contribute any amount between 0 and 10 coins.

- If the total contributions from all villages **reach 20 coins or more**, the lighthouse will be built, and everyone will gain **5 additional coins** due to increased fish catches.
- If the total contributions are **less than 20 coins**, the lighthouse will **not** be built, and no village will gain additional coins from safer fishing.

Rules:

1. You can use your **10 gold coins** in two ways:
 - **Donate to the Lighthouse:** Contributing to the lighthouse helps build it for the entire island.
 - **Buy Fishing Equipment:** Investing in your own village's fishing equipment will increase your own village's catch. Every 1 coin you spend on equipment yields 1 additional coin for your village (e.g., spend 5 coins, gain 5 extra coins).
2. Each village will discuss internally and decide how many coins to contribute to the lighthouse and how many to spend on equipment.
3. Your decision is private. Write down your contribution on a sheet of paper and submit it when ready.

Outcome:

- If the lighthouse is built (total contributions ≥ 20 coins):
 - Every village gains 5 extra coins, plus the returns from any coins they kept for fishing equipment.
- If the lighthouse is not built (total contributions < 20 coins):
 - No one gains the extra 5 coins. Villages only receive the returns from their own equipment investments.

Debrief

After the exercise, we will discuss:

- **Did the lighthouse get built? Why or why not?**
- **Were you tempted to invest more in your own village's equipment instead of donating to the lighthouse?**
- **What strategies could help ensure the lighthouse is built in future rounds?**

Good luck, and may your village prosper!