Chapter 11

Public Goods and Common Resources

The Different Kinds of Goods

- Excludability
  - Property of a good whereby a person can be prevented from using it
- Rivalry in consumption
  - Property of a good whereby one person's use diminishes other people's use

The Different Kinds of Goods

- Private goods
  - Excludable & Rival in consumption
- Public goods
  - Not excludable & Not rival in consumption
- Common resources
  - Rival in consumption & Not excludable
- Club goods
  - Excludable & Not rival in consumption
  - One type of natural monopoly

Figure 1 Four Types of Goods

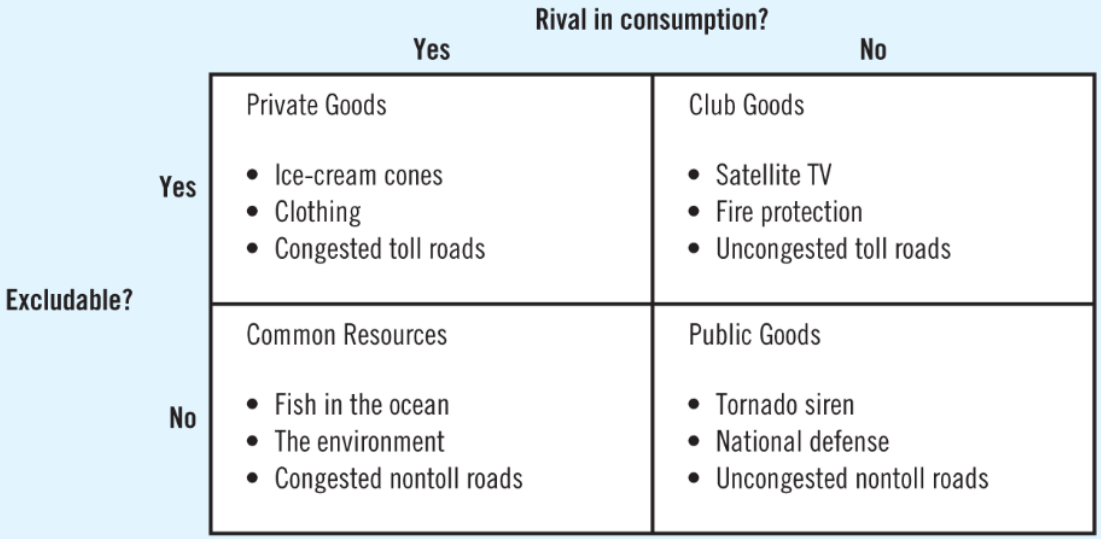

FIGURE 1

Four Types of Goods

Goods can be grouped into four categories according to two characteristics: (1) A good is *excludable* if people can be prevented from using it. (2) A good is *rival in consumption* if one person's use of the good diminishes other people's use of it. This diagram gives examples of goods in each category.

The Different Kinds of Goods

- Public goods and common resources
  - Not excludable
    - People cannot be prevented from using them
    - Available to everyone free of charge
  - No price attached to it
  - External effects
    - Positive externalities (public goods)
    - Negative externalities (common resources)

The Different Kinds of Goods

- Public goods and common resources
  - Private decisions about consumption and production
    - Can lead to an inefficient allocation of resources
  - Government intervention
    - Can potentially raise economic well-being

Public Goods

- Free rider
  - Person who receives the benefit of a good but avoids paying for it
- The free-rider problem
  - Public goods are not excludable
  - Prevents the private market from supplying the goods
  - Market failure

Public Goods

- Government can remedy the free-rider problem
  - If total benefits of a public good exceeds its costs
  - Provide the public good
  - Pay for it with tax revenue
  - Make everyone better off

"I like the concept if we can do it with no new taxes."

Public Goods

- Some important public goods
  - National defense
    - Very expensive public good
    - $744 billion in 2017
  - Basic research
    - General knowledge
    - Subsidized by government
    - The public sector fails to pay for the right amount and the right kinds

Public Goods

- Some important public goods
  - Antipoverty programs financed by taxes
    - Welfare system (Temporary Assistance for Needy Families program, TANF)
      - Provides a small income for some poor families
    - Food stamps (Supplemental Nutrition Assistance Program, SNAP)
      - Subsidize the purchase of food for those with low incomes
    - Government housing programs
      - Make shelter more affordable

Public Goods

- The difficult job of cost–benefit analysis
  - Government
    - Decide what public goods to provide
    - In what quantities
  - Cost–benefit analysis
    - Compare the costs and benefits to society of providing a public good
    - Doesn't have any price signals to observe
    - Government findings: rough approximations at best

Common Resources

- Common resources
  - Not excludable
  - Rival in consumption
- The tragedy of the commons
  - Parable that shows why common resources are used more than desirable
    - From society's standpoint
  - Social and private incentives differ
  - Arises because of a negative externality

Common Resources

- The tragedy of the commons
  - Negative externality
    - One person uses a common resource diminishes other people's enjoyment of it
    - Common resources tend to be used excessively
  - Government can solve the problem
    - Regulation or taxes to reduce consumption of the common resource
    - Turn the common resource into a private good

Common Resources

- Some important common resources
  - Clean air and water
    - Negative externality: pollution
    - Regulations or corrective taxes
  - Congested roads
    - Negative externality: congestion
    - Corrective tax: charge drivers a tool
    - Tax on gasoline

Common Resources

- Some important common resources
  - Fish, whales, and other wildlife
    - Oceans: the least regulated common resource
      - Needs international cooperation
      - Difficult to enforce an agreement
    - Fishing and hunting licenses
    - Limits on fishing and hunting seasons
    - Limits on size of fish
    - Limits on quantity of animals killed

Importance of Property Rights

- Market fails to allocate resources efficiently
  - Because property rights are not well established
  - Some item of value does not have an owner with the legal authority to control it

Importance of Property Rights

- The government can potentially solve the problem
  - Help define property rights and thereby unleash market forces
  - Regulate private behavior
  - Use tax revenue to supply a good that the market fails to supply

Wednesday class

Voluntary contributions toward a public good

Setting

Amy and Deborah are considering contributing toward the creation of a botanical garden. Each can choose whether to contribute $200 to the botanical garden or to keep that $200 for a new suit.

Since a botanical garden is a public good, both Amy and Deborah will benefit from any contributions made by the other person. Specifically, every dollar that either one of them contributes will bring each of them $0.60 of benefit.

$200*0.6=$120 each

Voluntary contributions toward a public good

Setting

Since a new suit is a private good, if Amy chooses to spend $200 on a new suit, Amy would get $200 of benefit from the new suit and Deborah wouldn't receive any benefit from Amy's choice. Hence, the **combined** benefits of Amy and Deborah:

		Deborah	
		Contributes	Doesn't contribute
Amy	Contributes	$480	$440
	Doesn't contribute	$440	$400

Voluntary contributions toward a public good

Setting

Now consider the **individual** benefit data for **Amy:**

		Deborah	
		Contribute	Doesn't contribute
Amy	Contribute	$240, --	$120, --
	Doesn't contribute	$320, --	$200, --

Free rider problem!