

Lesson Four: Fire Protection - A Public Good Problem?

Introduction and Discussion Questions

Read Introduction (read along as your teacher reads this aloud):

Today we will use the topic of fire protection and fire fighting services to explore the ideas of security infrastructure, public goods, free riding, and externalities. In the past few years there have been several news stories about people either forgetting or refusing to pay fire-protection taxes (usually around \$75 per year), then having their homes burn down because local fire departments would not assist them when their homes caught fire.

Definition of Infrastructure:

The organized network needed to provide particular goods and/or services to a large group of people.

Please review the following:

Discussion Question:

With the person next to you, discuss the following question: fire protection is a form of security infrastructure; in what ways is security infrastructure different from physical infrastructure?

- Are there other types of infrastructure that provide protection and safety or otherwise help to preserve other forms of infrastructure?

Review of Key Terms

Review the Definitions of Public Goods, Free Riding, and Externalities: Go back to your notes or your textbook to review the definitions of the following terms.

Define Public Goods: _____

To be a public good, a good must have these two qualities:

Define non-rival:

Define non-excludable:

Give an example or two of a public good:

Define Free-Riding: _____

If everybody free-rode and nobody paid, what would happen to production of that good?

Define Externalities: _____

What's the difference between a positive externality and a negative externality?

Give an example of each kind:

Positive Externality: _____

Negative Externality: _____

CHECK YOUR DEFINITIONS WITH THE PERSON NEXT TO YOU

Read the following (read along as your teacher reads this aloud):

The public (i.e., government) provision of a good or service is often a clue that the good might qualify as a public good. Fire protection is often provided by local governments and funded through county property taxes and other surcharges. Those funds also help pay for schools, streets and roads, police, and other services. In rural areas, fire protection is sometimes funded through special fire protection district taxes.

Group Brainstorm

Begin Thinking About Fire Protection Infrastructure with a Small Group Brainstorm:

What components of infrastructure (equipment, materials, etc.) are associated with the delivery of fire protection? See how many you can come up with. At the end, consider which components are hard infrastructure and which are soft infrastructure.

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Main Activity

Read the Main Story:

There have been several stories in the last few years of people either forgetting or refusing to pay fire taxes (usually around \$75), then watching their houses burn down because the fire department would not assist them when their homes caught fire.

David lives in a rural county that does not have its own fire department. Residents of that county are offered the option of paying a \$75 annual fee to the neighboring county to get fire protection from that county's fire department. Residents who do not pay the fee are not eligible to receive protection, but the opportunity to participate in this option is widely publicized to all residents of David's county. David decides not to pay the fee.

One day, David's house catches fire and he calls the neighboring county's fire department, but they will not respond to the fire. First, he tells them that he will pay the fee on the spot, and when they refuse, he then offers to pay whatever it would cost to put the fire out, but the department still won't go to his house. As the fire gets larger and threatens to spread to the house next door, the fire department comes out to protect that house since David's neighbor paid the annual fee. Nonetheless, they will not put the fire out at David's house, and his home burns to the ground.

Whole Class Discussion Questions:

Should people be able to pay for fire departments to put these fires out, if they have not paid the tax?

- How does this relate to whether or not fire protection is a public good?
- What kind of free-riding might be taking place here?
- If people were allowed to pay on the spot, what incentives might be set up?
- Should the fire departments have to put out the fires even if people do not pay?
- What kinds of externalities come into play here?
 - Positive externalities? Negative externalities?

Small Group Discussion

Discuss the Following in Small Groups:

Which of the following options would you endorse if you were faced with a decision about fire protection for your home and how that protection should be funded?

1. All residents are required to pay an annual \$75 fire-protection fee. It is not optional, and all residents receive fire protection.
2. All residents are invited to pay an annual \$75 fire-protection fee. It is optional, but if you do not pay the fee and your house catches fire, the fire department will respond and you will be required to pay the full cost of that service (which may be many thousands of dollars). There is no cap on how much it could cost.
3. All residents are invited to pay an annual \$75 fee to a private fire protection company. It is optional, and if you do not pay the fee but later call the fire protection company for assistance, you are required to pay \$50,000 (no matter what the actual cost of putting out the fire).

What are the strengths and weakness of each approach to fire protection?