Side Effects — Positive and Negative Externalities

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SUBJECT(S): Economics

GRADE LEVEL(S): 9, 10, 11, 12

OVERVIEW:

In this lesson, students are introduced to positive and negative externalities. Using the article, "Philanthro-teen Shannon McNamara: Educating Girls in Tanzania," students will think about the unintended consequences of economic choices. In particular, students will work in groups to list the positive and negative externalities of living in different communities. Finally, students will think about how government intervention might alleviate negative externalities and promote positive externalities.

NBEA STANDARD(S):

- Economics, II. Economic Systems
- Economics, VII. The Role Of Government

WHARTON GLOBAL YOUTH PROGRAM ARTICLE:

- "Philanthro-teen Shannon McNamara: Educating Girls in Tanzania"

Objectives/Purposes: The purpose of this lesson is for students to understand *positive* and *negative externalities.*

- Students will be able to define *externality.*
- Students will consider both positive and negative externalities in the same situations.
- Students will understand the relationship between externalities and government intervention.

Other Resources/Materials:

For Teachers:

- Internet Access (Outside of the Classroom)
- Printer/Copier
- Access to Chalkboard/Whiteboard

For Students:

- Chart Paper
- Markers

Activity:

The lesson is divided into four parts: (1) Guided Reading, (2) Class Discussion, (3) Exploration Activity, and finally (4) Closing

1. Guided Reading (1-5 mins)

Open the lesson by having students read through the article "Philanthro-teen Shannon McNamara: Educating Girls in Tanzania." Let students read through the article with an open mind. Don't preface any content.
After students finish reading, ask them to briefly summarize the article. Ask students what, in their reading, stood out to them as interesting or important.

2. Class Discussion (10-15 mins)

Shift from the reading to today's content by briefly touching on the previous lesson. In particular, encourage students to define *public goods*, and talk briefly about who pays for, and who benefits from, these public goods. In this discussion, it should be evident that some of the people who benefit from public goods do not bear the costs (and vice versa).

Use this discussion to introduce students to the concept of *externalities.* Start with a very broad definition. An externality is a side effect of an economic decision. An outcome that affects *other people* than those directly involved. Ask students if they can think of some examples of these types of side effects. As the discussion moves along, you can refine the definition. An *externality* is a cost or benefit that is not reflected by price, and not agreed to by the recipient. For example, when factories release pollutants into the air, there is a social cost. This social cost is a negative externality. The people who bear these costs (e.g. neighborhoods near the factory) are not reimbursed, and the cost of polluting is not reflected in the price of the products that the factory makes.

Similarly, a positive externality is one that benefits others. For example, if I buy a new fire-resistant roof, my neighbors benefit from that purchase. (The risk of their home catching fire decreases.) However, this benefit is not reflected in the cost of my roof. Throughout this discussion, remind students that we can think of externalities in terms of our senses (e.g. sight, smell, sound). This is a good way to get students thinking about noise pollution, or aesthetic beauty, etc.

Ask students to think of their own examples of *externalities.* Common answers include: smoking, littering, education, etc.

3. Exploration Activity (15-20 mins)

After this discussion, break students into groups of three or four. Give each group 5 minutes to brainstorm. Each group should think of THREE companies or situations that involve positive or negative externalities.

After each group creates their own list, have the groups trade. (For example, group #2 takes the list created by group #1). Each group will choose 1 item from the list they have just received. Write the following questions on the board for each group to answer:

1. What is the product/service?
2. Who is the buyer?
3. Who is the seller?
4. What is the externality?
5. Is it positive or negative?
6. How would you improve the situation?

After students complete the worksheet, have groups share their answers with the class.

4. Closing (5 mins)

With the remaining time, use the group discussion to think about the role of government in managing positive and negative externalities. When does government intervention make sense? When does it not? Encourage students to provide examples from their own experiences.

Building on the group reports, define the term *externality* one last time. Encourage students to think about how governments might discourage negative externalities, and how governments might encourage positive externalities.

Practice Outside of the Classroom:

Outside of the classroom, have students look for examples of government intervention. Where do you see the government forcing individuals or corporations to internalize the cost of externalities? Where do you see the government enticing individuals and corporations to create more positive externalities?

What Worked and What I Would Do Differently:

As you introduce students to the idea of externalities, it can help to use the metaphor of "spilling over." Any externality, positive or negative, represents a spilling over of costs or benefits to some third-party. If I am playing extremely loud music, that sound spills over to everyone around me. If they like the music, then it creates a positive externality. If the detest the music, it is a negative externality. In either case, the spilling-over creates the externality.