



ECONOMICS IN ONE VIRUS: CHAPTER 6

Why was I banned from going fishing?

GRADE LEVEL: 6-8 (INTERMEDIATE)
TIME ESTIMATE: 60-90 MINUTES

Lesson Overview

Students will use cost-benefit analysis to evaluate government policies that prevented the spread of COVID-19. Students will experience marginal cost and marginal benefit in order to better understand marginal thinking that economists employ to better craft policies. Students will apply marginal thinking to COVID-19 policies. Students will conclude by creating a policy using marginal thinking.



Objectives

- Students will be able to apply cost–benefit analysis to public policy.
- Students will be able to explain marginal analysis.
- Students will be able to apply marginal thinking to public policy.

Vocabulary

- Marginal benefit
- Marginal cost
- Thinking on the margin

Materials

- Warm-Up Cost–Benefit Hypothetical
- Vocabulary Graphic Organizer
- Policy Reading 1
- Peer Effect Reading/Check for Understanding
- Policy Analysis Worksheet
- Marginal cost/marginal benefit token rewards
- Marginal Thinking Reading
- Marginal Thinking Readings Graphic Organizer
- Exit Ticket

Pework (if applicable)

Students should have an understanding of cost–benefit analysis prior to the lesson. If there is a token economy in place, you may want to use it for the marginal cost/marginal benefit simulation. Alternately, you could use candy, school supplies, or even extra credit points as the marginal benefit.

Warm-Up

- Distribute the warm-up hypothetical photo.
 - Ask students to do determine what they see, think, and wonder about the picture.
 - Ask students to determine what might be happening in the picture and why that might be happening
 - Discuss student answers.
- Distribute the Warm-Up Hypothetical situation (or have students turn the paper over if you used a single sheet of paper).
 - Discuss the hypothetical:
 - A TikTok trend has led to the destruction of middle school bathrooms all over the country, and your middle school is no different. Cleaning and fixing the bathrooms has turned out to be very costly for the school district, so a board meeting was held to decide what should be done to address the problems. At the meeting, teachers

and administrators expressed concern that the bathrooms are becoming a problem for other reasons. Assaults, drug and alcohol use, and bullying also occur in the bathrooms of the middle school. Furthermore, hallway traffic is a problem, especially when students leave the classroom presumably to use the bathroom but end up skipping class, disrupting other classrooms, or creating other problems. The board has decided that student bathrooms will be locked all day and that all students must be escorted to and from the bathrooms. Hall monitors, deans, and administrators with keys will be in charge of escorting students. Identify at least three costs and three benefits of this policy. Compare your list with a friend.

- Give students time to generate costs and benefits individually, and then allow them to share in pairs before reporting out.
- Record what students report on a white board or a piece of chart paper.
 - i. Some costs might include the following:
 - a. Students will now ONLY be able to use the bathroom during class time and not in between classes.
 - b. The number of administrators and the amount of time it takes to escort people will limit trips to the bathroom.
 - c. Students who have an emergency will be barred from the bathrooms.
 - d. Students cannot do something as simple as wash their hands without a bathroom escort.
 - e. Students will be too upset or distracted by this process to focus in class.
 - f. The teacher will have to waste time calling escorts.
 - g. Students may feel as if this is an invasion of privacy.
 - i. Some benefits might include the following:
 - a. Damage will not occur to bathrooms.
 - b. If damage does occur, it will be clear who did it.
 - c. Assaults will not occur in the bathroom.
 - d. Drug use will occur less in the bathroom.
 - e. Hallways will be more orderly during classes.
- Ask students to generate a better policy and to explain why there should be exemptions to the binary policy. Some suggestions are below:
 - i. Administrators could be posted near bathrooms during class periods to limit access and to monitor behavior.
 - ii. The school could limit the number of students allowed to use the bathroom at any given time.
 - iii. The school could monitor the amount of time students are spending in the bathroom.
 - iv. The school could prohibit certain students who are known to cause trouble from going to the bathroom.
- Ask students to consider the fairness of their policies and discuss.

Lesson Activities

• Vocabulary preview

- Distribute the Vocabulary Graphic Organizer. Ask students to come up with the definition for each word in their own words.
- Marginal benefit
 - i. The additional benefit from a unit change in activity
 - ii. Example: When I was working on my paper, I was able to write four pages in the first hour, but I only wrote three pages in the second hour.
- Marginal cost
 - i. The additional cost from a unit change in activity
 - ii. Ex: At cross country practice, the first mile was difficult, the second was easier, but the third was nearly impossible!
- Thinking on the margin
 - i. Weighing the costs and benefits of each additional change or action rather than basing decisions on past events or broad rules of behavior
 - ii. Ex: After school, I went to the snack shack and got two bags of Takis. I wasn't hungry enough for two, but since one bag was \$2 and two bags were \$3, I figured I could just save the second bag for later.
- Have students write short dialogues in which they use marginal thinking.
- Have some volunteer students perform their dialogues.

• Reading and policy analysis

- Tell students that you are going to discuss marginal thinking and government policies meant to stop the spread of COVID-19.
- Have students read each excerpt and briefly discuss.
 - Excerpt A:
 - i. Yet in many states, stay-at-home or shelter-in-place orders explicitly or implicitly banned going fishing. Despite the activity being extremely low-risk in terms of spreading the virus (given you can safely socially distance and undertake it on your own or just with fellow household members), politicians often made no such exemptions from the broader orders to stay home.
 - Excerpt B:
 - i. Fishing is not the only activity it made little sense to ban. In California, a man paddleboarding alone in the Pacific Ocean was tracked down by lifeguards and subsequently arrested for breaching the state's stay-at-home orders, even though he clearly posed an infinitesimally small risk to other while in the sea. In fact, his

arrest itself was infinitely more risky than the activity he was arrested for in terms of transmitting the disease.

- Excerpt C:

- i. Yet we can find other absurd examples of regulations related to COVID-19 that suggest politicians' propensity to ban things is not just driven by fear of people being more willing to travel or socialize. In Michigan, for example, the state governor's executive order effectively banned the sale of goods not thought to be essential within large grocery and department stores. Famously, customers quickly posted pictures online of aisles containing seeds for gardening that had been roped off from purchase.

- Excerpt D:

- i. But daft rules that didn't help the public health effort did not end with seeds. Lockdowns across the country, at least in principle, stopped people visiting their empty second homes, from using their boats or jet-skis in solitude, and from having people visit at a safe distance in their gardens or yards.


- **Policy Analysis Worksheet**

- Have students work in pairs and use the readings to fill out the graphic organizer. You may decide to assign each pair to a single policy and then have students jigsaw or report out to complete the organizer. Answers will vary and may include the following:

Policy	Why politicians thought it was a good idea	Why the author thought it might have been a bad idea	Better Idea
Prohibiting single-person watersports	People might infect others, too many people might go fishing, people might think its OK to do other things	Fishing is a low-risk activity that is good for mental health	Limit numbers of boats in an area, reduce the number of fishing licenses, etc., require wearing masks on shore, limit numbers of people in launch areas
Prohibiting nonessential grocery items	People might go to the store unnecessarily, people might crowd areas in the store	Once people are in the store, it doesn't make sense to restrict what they can buy	Limit the number of people in the store, require wearing masks
Prohibiting travel over state lines	Keep people from crowding into transit systems or visiting tourist destinations where they will spread the virus	It prevented people from going on road trips to socially distanced locations	Allow road trips with your own family to socially distanced locations
Prohibiting socially distanced outdoor gatherings	Keep people from gathering in large numbers and spreading the virus	Socially distanced outdoor gatherings were unlikely to spread the virus	Allow limited numbers of people to gather in outdoor spaces, require masks at gatherings

- If students are struggling with why politicians thought these were good ideas, you can try to play up the costs by indicating that the person going to do the forbidden activity may interact with someone who has an elderly grandparent at home who is at high risk of having serious complications from COVID-19.
- You can also introduce the concept of peer effects, which students often understand easily. If some people are allowed to do some things, then other people will want to do them, meaning more people will be out and about than under normal conditions.
- **Marginal Cost/Marginal Benefit simulation**
 - Tell all students you are going to do an experiment. Tell students that you will give them a reward for holding a plank for a full minute. Students who do not want to participate can help time or record. You can decide how much extra credit or candy or tokens you will award to each student who completes the challenge.
 - After 50 seconds, tell students that if they hold a plank for another 30 seconds, they will receive an additional reward equal to half the original reward. If students accept and complete that challenge, ask them to hold for 30 more seconds for an additional quarter of the original reward. (If the original offer was 20, the second offer should be 20, and the third should be 10. If the student insists on continuing, the third offer should be five.)
 - Discuss with the students how they decided that it was time to stop.
 - Review the concepts of costs and benefits from the vocabulary preview.
- **Marginal Thinking Readings (jigsaw opportunity)**
 - Distribute the Marginal Thinking Readings.
 - Have students read and annotate excerpts and discuss. This can be turned into a jigsaw so that groups of students are closely reading and annotating one excerpt with check-ins from the teacher:
 - Have students read and annotate Excerpt A:
 - i. We could likewise eliminate lots of pollution by banning all industrial activity, most travel, and the burning of various fuels. But the cost of doing so would be huge. On the margin, it would soon become clear that reintroducing some activity, such as a power system to prevent many people from dying of hypothermia, would be very, very good, on net, for society. Or, as another example, we might believe that providing government support for education has some positive impacts on society. But mandating another additional two years of formal schooling on top of existing mandates might have vastly higher marginal costs than societal marginal benefits.
 - a. For the first read, have students circle words they think are important and then transfer these words to the graphic organizer.
 - b. For the second read, have students summarize the reading in their own words and write the summary in the graphic organizer.

- c. For the third read, have students determine what they learned about marginal thinking.
 - Have students read and annotate Excerpt B:
 - i. What happened after the initial, crude lockdowns was an implicit admission that the developers of these lockdowns did not think enough on the margin. Most reopenings occurred in stages. Lower-risk activities were allowed first, such as eating in outdoor restaurants with strict social distancing protocols. Mass gatherings, including concerts and sports events, were banned for much longer—these are, it is now believed, highly likely to have been the sources of superspreader events that possibly propelled infection rates. The marginal social costs of such gatherings are therefore highly likely to exceed the benefits.
 - a. For the first read, have students circle words they think are important and then transfer these words to the graphic organizer.
 - b. For the second read, have students summarize the reading in their own words and write the summary in the graphic organizer.
 - c. For the third read, have students determine what they learned about marginal thinking.
 - Have students read Excerpt C:
 - i. Not that all marginal thinking points in favor of looser public health guidance or mandates, however. For many weeks during the initial lockdown, the most risky activity most people undertook each week was a visit to the grocery store. But at that time here in Washington, DC, there were no initial requirements from government or the retailers to wear facemasks or coverings within the stores, or indeed limits on how many people could enter. The requirements by stores that came later, however, almost certainly had marginal social benefits that exceeded the marginal social costs. Having to wait outside for a short time or cover your face while inside would usually be a relatively small cost imposition on each individual relative to the potential benefits of stopping the spread of the disease.
 - a. For the first read, have students circle words they think are important and then transfer these words to the graphic organizer.
 - b. For the second read, have students summarize the reading in their own words and write the summary in the graphic organizer.
 - c. For the third read, have students determine what they learned about marginal thinking.
- **Exit Ticket**
 - Distribute the Exit Ticket.
 - Discuss how marginal thinking would have changed government policy meant to stimulate the economy.
 - Review the hypothetical situation from the warm-up.
 - Have students imagine that the school board is going to meet again to discuss alternate proposals. Have students develop their own alternate proposals to the policy



and prepare a short speech to the board to get the board to adopt their new policy. Students should use the vocabulary words in their responses.

- Have student share out if time allows.

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Warm-Up Hypothetical

Directions: Look at the picture and indicate what you see, think, and wonder about the picture.



Photo by Surrey Royal Canadian Mounted Police. Story at Aaron Hinks, "Devious Licks' TikTok Trend May Be Connected to Surrey Public Bathroom Vandalism," Mission City Record, December 7, 2021.

What I see	What I think	What I wonder

- What do you think is happening in the picture? What might cause this to happen?

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Warm-Up Hypothetical

A TikTok trend has led to the destruction of middle school bathrooms all over the country, and your middle school is no different. Cleaning and fixing the bathrooms has turned out to be very costly for the school district, so a board meeting was held to decide what should be done to address the problems. At the meeting, teachers and administrators expressed concern that the bathrooms are becoming a problem for other reasons. Assaults, drug and alcohol use, and bullying also occur in the bathrooms of the middle school. Furthermore, hallway traffic is a problem, especially when students leave the classroom presumably to use the bathroom but end up skipping class, disrupting other classrooms, or creating other problems. The board has decided that student bathroom will be locked all day and that all students must be escorted to and from the bathroom. Hall monitors, deans, and administrators with keys will be in charge of escorting students. Identify at least three costs and three benefits of this policy. Compare your list with a friend.

Directions: Read the excerpt and use the information to answer the question below:

Costs	Benefits

- Can you think of a better policy? Why is your policy better? Be prepared to discuss.

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Vocabulary Graphic Organizer

<p>Marginal benefit: the additional benefit from a unit change in activity</p> <p>Ex: When I was working on my paper, I was able to write 4 pages in the first hour, but I only wrote 3 pages in the second hour.</p> <p>In my own words:</p>	<p>Marginal cost: the additional cost from a unit change in activity</p> <p>Ex: At cross country practice, the first mile was difficult, the second was easier, but the third was nearly impossible!</p> <p>In my own words:</p>
<p>Thinking on the margin: weighing the costs and benefits of each additional change or action rather than basing decisions on past events or broad rules of behavior</p> <p>Ex: After school, I went to the snack shack and got two bags of Takis. I wasn't hungry enough for two, but since one bag was \$2 and two bags were \$3, I figured I could just save the second bag for later.</p>	<p>Thinking on the margin</p> <p>In my own words:</p>

- With a partner, write a two-person dialogue of just a few lines that will illustrate the use of marginal thinking to avoid peer effects. Be prepared to perform your brief scene.

Student 1:

Student 2:

Student 1:

Student 2:

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Policy Reading 1

Excerpt A

Yet in many states, stay-at-home or shelter-in-place orders explicitly or implicitly banned going fishing. Despite the activity being extremely low-risk in terms of spreading the virus (given you can safely socially distance and undertake it on your own or just with fellow household members), politicians often made no such exemptions from the broader orders to stay home.

—*Economics in One Virus*, pp. 87

Excerpt B

Fishing is not the only activity it made little sense to ban. In California, a man paddleboarding alone in the Pacific Ocean was tracked down by lifeguards and subsequently arrested for breaching the state's stay-at-home orders, even though he clearly posed an infinitesimally small risk to other while in the sea. In fact, his arrest itself was infinitely more risky than the activity he was arrested for in terms of transmitting the disease.

—*Economics in One Virus*, pp. 87-88

Excerpt C

Yet we can find other absurd examples of regulations related to COVID-19 that suggest politicians' propensity to ban things is not just driven by fear of people being more willing to travel or socialize. In Michigan, for example, the state governor's executive order effectively banned the sale of goods not thought to be essential within large grocery and department stores. Famously, customers quickly posted pictures online of aisles containing seeds for gardening that had been roped off from purchase.

—*Economics in One Virus*, pp. 88

Excerpt D

But daft rules that didn't help the public health effort did not end with seeds. Lockdowns across the country, at least in principle, stopped people visiting their empty second homes, from using their boats or jet-skis in solitude, and from having people visit at a safe distance in their gardens or yards.

—*Economics in One Virus*, pp. 88-89

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Policy Analysis Worksheet

Policy to prevent the spread of COVID-19	Why politicians thought the policy was a good idea	Why the author thinks it was not a good idea	What might be a better idea
People are not allowed to go fishing, paddleboarding, or jet-skiing (pp. 87–88)			
People are not allowed to buy nonessential items in grocery stores (p. 89)			
People cannot travel over state lines (p. 89)			
People can't have friends over for socially distanced gatherings in the backyard (p. 89)			

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Marginal Thinking Readings

Excerpt A

We could likewise eliminate lots of pollution by banning all industrial activity, most travel, and the burning of various fuels. But the cost of doing so would be huge. On the margin, it would soon become clear that reintroducing some activity, such as a power system to prevent many people from dying of hypothermia, would be very, very good, on net, for society. Or, as another example, we might believe that providing government support for education has some positive impacts on society. But mandating another additional two years of formal schooling on top of existing mandates might have vastly higher marginal costs than societal marginal benefits.

—*Economics in One Virus*, p. 92

Excerpt B

What happened after the initial, crude lockdowns was an implicit admission that the developers of these lockdowns did not think enough on the margin. Most reopenings occurred in stages. Lower-risk activities were allowed first, such as eating in outdoor restaurants with strict social distancing protocols. Mass gatherings, including concerts and sports events, were banned for much longer—these are, it is now believed, highly likely to have been the sources of superspreader events that possibly propelled infection rates. The marginal social costs of such gatherings are therefore highly likely to exceed the benefits.

—*Economics in One Virus*, p. 95

Excerpt C

Not that all marginal thinking points in favor of looser public health guidance or mandates, however. For many weeks during the initial lockdown, the most risky activity most people undertook each week was a visit to the grocery store. But at that time here in Washington, DC, there were no initial requirements from government or the retailers to wear facemasks or coverings within the stores, or indeed limits on how many people could enter. The requirements by stores that came later, however, almost certainly had marginal social benefits that exceeded the marginal social costs. Having to wait outside for a short time or cover your face while inside would usually be a relatively small cost imposition on each individual relative to the potential benefits of stopping the spread of the disease.

—*Economics in One Virus*, p. 93

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Policy Analysis Worksheet

Excerpt	Words that are important to understanding the reading	Brief summary of the reading	What the reading taught us
Excerpt A			
Excerpt B			
Excerpt C			
Excerpt D			

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Exit Ticket

Directions: Review the hypothetical situation from the warm-up. Come up with a policy that incorporates marginal thinking in order to keep bathrooms free from destruction and misbehavior while protecting the right of students to use them. Write a short statement that you can deliver during the school board meeting. Encourage the board to use marginal thinking. Try to use the following terms in your response: marginal benefit, marginal cost, and thinking on the margin.

A TikTok trend has led to the destruction of middle school bathrooms all over the country, and your middle school is no different. Cleaning and fixing the bathrooms has turned out to be very costly for the school district, so a board meeting was held to decide what should be done to address the problems. At the meeting, teachers and administrators expressed concern that the bathrooms are becoming a problem for other reasons. Assaults, drug and alcohol use, and bullying also occur in the bathrooms of the middle school. Furthermore, hallway traffic is a problem, especially when students leave the classroom presumably to use the bathroom but end up skipping class, disrupting other classrooms, or creating other problems. The board has decided that student bathroom will be locked all day and that all students must be escorted to and from the bathroom. Hall monitors, deans, and administrators with keys will be in charge of escorting students. Identify at least three costs and three benefits of this policy. Compare your list with a friend.

- My policy proposal is: _____

- In order to convince the board to accept my policy, I will say:
