

## Chapter 2 Project

### Choice in a World of Scarcity

#### Purpose

After finishing this chapter, you have learned more about how scarcity constrains choices for both societies and individuals.

**The purpose of this exercise is to help you understand budgets, opportunity costs, comparative advantage, and production possibilities in your own life.**

#### Directions

This exercise has two parts. In the first, you will consider budget choices. In the second, you will consider yourself as a producer of goods and your production possibilities.

#### Part 1 - Budget and Costs

Consider a week in your life. You could also choose to do this exercise for a day or a month, whichever seems most clear in terms of budgeting.

1. First, write down how much money you usually have to spend in a week. This is your *income*. For many students who may not work while in school, that income is fixed by grants, loans, and/or parents/guardians. If you work while in school, your weekly budget may vary based on the number of hours that you work (and of course, you may not receive your paycheck until later), but to keep things simple, just choose an average amount of income that you receive in a normal work week.
2. Then, consider what you usually choose to buy in a given week. Of course, there are many, many things that you might possibly buy, but again, to keep things simple, choose three major categories, like your favorite foods, entertainment choices, and things you need, like gasoline (if you have a car). What is the average price of each of these goods?
3. Now, think about your budget constraint. Since we are choosing between more than two goods, we cannot graph a budget constraint as you did in the chapter. But you can still find the endpoints of your constraint, the maximum amount of each good that you could buy if you spent all of your income on that good.
4. You can also calculate the relative price of each good in terms of other goods. For example, if Good A costs \$10, Good B costs \$5, and Good C costs \$1, for every Good A you buy, you could have purchased 2 units ( $10/5$ ) of Good B or 10 units ( $10/1$ ) of Good C. Find these relative prices for all of the combinations of goods that you have.
5. Then, consider the amount of each good that you typically consume in a week. In a short answer, explain how the relative prices of each good and your budget help to determine your choice. If your budget doubled, how would that change your choices?

In the coming chapters, you will learn about how your tastes and preferences, as well as the prices of goods and income, determine your best choices.

#### Part 2 - Production Possibilities, Comparative Advantage, and Opportunity Costs

In the first part, you considered income to be fixed. However, you can think of yourself as a producer of “goods,” such as income, studying/grades, and recreation.

You have 24 hours a day, or 168 hours in a week, that you can spend on whatever you choose to do. Those choices determine your output of goods. We’re going to assume that there are only two things that you can do with your time. Studying/attending class produces grades. Leisure (which could include such things as sleeping and hanging out with friends) produces happiness.

1. Draw a graph. Label the horizontal axis “Grades” and the vertical axis “Happiness.” (Of course, great grades are likely to bring you happiness, too, but we are not going to consider that factor.) What do you think the shape of your production possibilities frontier (*PPF*) is for these two goods? Are there diminishing returns in the production of these two goods? (*Hint*: for most people, there are diminishing returns.) How does your graph show you the opportunity cost of grades, and how does that opportunity cost change as you study more and more?
2. Now, suppose that you have a friend who is much better or much worse at studying than you are. Assume that your friend is just as good at producing happiness as you are. Draw possible *PPFs* for each of you on a graph. How is the opportunity cost of grades different for each of you for a given amount of happiness production?
3. Now, explain (a) why your *PPFs* have the shapes that they have, (b) what you can say about opportunity cost and comparative advantage between you and your friend, and (c) what combination of happiness and grade production you might choose.
4. Finally, suppose that you have an increase in productive efficiency that makes you better at producing happiness but not at producing grades. Carefully explain how this might affect your *PPF*, the opportunity cost of grades, and your production choice.

**BONUS:** Sometimes we waste time, which in this case means that we spend time that produces neither happiness nor better grades. If you waste time, where is your choice relative to the *PPF*?

## Checklist

### Part 1

- Determine your income within a normal week in your life.
- Identify your spending within that week.
- Calculate your budget constraint and spending options.

### Part 2

- Graph and answer questions pertaining to production possibilities.
- Complete the bonus question.