

1.3 OPPORTUNITY COST AND CHOICE

Learning Objectives

- LO1** Define opportunity cost.
- LO2** Follow guidelines for making choices.
- LO3** Analyze the opportunity cost of attending college.

Key Terms

opportunity cost 21
sunk cost 23

In Your World

Think about a decision you just made: the decision to read this chapter rather than study for another course, hang out with friends, play sports, play video games, watch TV, go online, get some sleep, or do something else. Suppose your best alternative to reading this now is getting some sleep. The cost of reading this chapter is passing up the opportunity to sleep. Because of scarcity, whenever you make a choice, you must pass up another opportunity. You experience an opportunity cost.

OPPORTUNITY COST

LO1 Define opportunity cost.

What do you mean when you talk about the cost of something? Isn't it what you must give up or go without to get that thing? The **opportunity cost** of the chosen item or activity is *the value of the best alternative you must pass up*. You can think of opportunity cost as the *opportunity lost*. Sometimes opportunity cost can be measured in dollar terms. However, as you shall see, money usually captures only part of opportunity cost.

Nothing Better to Do?

How many times have you heard people say they did something because they “had nothing better to do”? They actually mean they had no alternative more attractive than the one they chose. Yet, according to the idea of opportunity cost, people *always* do what they do because they had nothing better to do. The choice selected seems, at the time, preferable to any other possible alternative. You are reading this page right now because you have nothing better to do.

Estimate Opportunity Cost

Only the individual decision maker can select the most attractive alternative. You, the chooser, seldom know the actual value of the best alternative you gave up, because that alternative is “the road not taken.”

If you give up an evening of pizza and conversation with friends to work on a term paper, you will never know exactly what you gave up. You know only what you *expected*. You expected the value of working on that paper to exceed the value of the best alternative.

opportunity cost The value of the best alternative passed up for the chosen item or activity

Opportunity Cost Varies

Your opportunity cost depends on your alternatives. This is why you are less likely to study on a Saturday night than on a Tuesday night. On Saturday night, the opportunity cost of studying is higher because your alternatives are more attractive than they are on a Tuesday night when there's less to do.

What if you go to a movie on Saturday night? Your opportunity cost is the value of the best alternative you gave up, which might be attending a basketball game. Studying on Saturday night might rank well down the list of alternatives for you—perhaps ahead of cleaning your room but behind watching TV.

Opportunity cost is a personal thing, but in some cases, estimating a dollar cost for goods and services may provide a good measure. For example, the opportunity cost of a personal DVD player is the benefit of spending that \$100 on the best alternative. In other cases, the dollar cost may omit some important elements, particularly the value of the time involved. For example, going to a movie costs not just the ticket price but the time and travel expense to get there, watch the movie, and get home.



What is opportunity cost, and why does it vary with circumstances?

CHOOSE AMONG ALTERNATIVES

LO2
Follow
guidelines
for making
choices.

You now have some idea what opportunity cost is and how it can vary depending on the situation. To apply this concept to the specific economic decisions you make, follow these guidelines: calculate opportunity cost, consider your time involved, and ignore sunk costs.

Calculate Opportunity Cost

Economists assume that your rational self-interest will lead you to select the most valued alternative. This does not mean you must calculate the value of all possible alternatives. Because acquiring information about alternatives is costly and time-consuming, you usually make choices based on limited or even faulty information. Indeed, some choices may turn out to be poor ones: You went for a picnic but it rained. Your new shoes pinch your toes. The movie was terrible.

Regret about lost opportunities is captured in the common expression “coulda, woulda, shoulda.” At the time you made the choice, however, you believed you were making the best use of all your scarce resources, including the time required to gather information and assess your alternatives. You assess alternatives as long as the expected marginal benefit of gathering more information about your options exceeds the expected marginal cost. In other words, you try to do the best you can for yourself.

Consider Your Time

The sultan of Brunei is among the world's richest people, with wealth estimated at \$20 billion based on huge oil revenues that flow into his tiny country. He built two palaces, one for each wife. Supported by his great wealth, the sultan appears

to have overcome the economic problem caused by scarcity. However, although he can buy just about whatever he wants, his time to enjoy these goods and services is scarce. If he pursues one activity, he cannot at the same time do something else. Each activity he undertakes has an opportunity cost. The sultan must choose from among the competing uses of his scarcest resource, time. You, too, face a time constraint, especially when term papers and exams claim your time.

Ignore Sunk Cost

Suppose you have just finished shopping and are wheeling your shopping cart to the checkout. How do you decide which line to join? You pick the one you think will take less time. What if, after waiting ten minutes in a line that barely moves, you notice a cashier has opened another line and invites you to check out. Do you switch to the open line, or do you think, “I’ve already spent ten minutes in this line. I’m staying here”?

The ten minutes you waited represents a **sunk cost**, which is a cost you have already incurred and cannot recover, regardless of what you do now. You should ignore sunk cost in making economic choices and should switch to the newly opened line.

Economic decision makers should consider only those costs that are affected by their choice. Sunk costs are not recoverable. Therefore, sunk costs are irrelevant and should be ignored. Likewise, you should walk out on a boring movie, even if admission cost you \$10. The irrelevance of sunk costs is underscored by the proverb,

sunk cost A cost you have already paid and cannot recover, regardless of what you do now

Math in Economics

Common Core The Number System

In most jobs, when you work more than 40 hours a week, you are paid a premium hourly rate. The overtime premium is a multiple of your regular hourly wage. You can calculate the amount you will earn for working overtime by multiplying the number of hours worked (in excess of 40) times your regular hourly wage times the overtime premium (1.5 in most situations).

EXAMPLE Calculate the total amount an employee will earn if her regular wage rate is \$12.20 per hour and she works 6 hours of overtime with an overtime premium of 1.5.

SOLUTION Multiply 6 times \$12.20 times 1.5.
 $6 \times \$12.20 \times 1.5 = \109.80

Practice the Skill Calculate the total amount earned for working overtime hours in each of the following exercises. Write answers to the nearest cent.

1. William worked 7 hours of overtime. His regular wage rate is \$9.70 per hour and the overtime premium is 1.5.
2. Tiesha worked 5.5 hours of overtime. Her regular wage rate is \$13.30 per hour and the overtime premium is 1.5.
3. How much would you need to be paid per hour to give up your Saturday and work an extra eight hours? How much would you earn? How does this question demonstrate the concept of opportunity cost?

“There’s no sense crying over spilt milk.” The milk has already spilled. What you do now cannot change that fact. Or, as Shakespeare’s Lady Macbeth put it: “Things without all remedy should be without regard: what’s done is done.” Get over it.



CHECKPOINT

Explain the guidelines for choosing among alternatives.

THE OPPORTUNITY COST OF COLLEGE

LO3
Analyze the opportunity cost of attending college.

You can apply the concepts you have learned about opportunity cost and choice in deciding whether or not to go to college. What will be your opportunity cost of attending college full-time? What will be the most valued alternative you must give up to attend college? If you already know what kind of job you can get with a high school education, you have a fair idea of the income you must give up to attend college.

Forgone Earnings

You may think that if you do not go to college, you could find a job paying \$20,000 a year, after taxes. But wait a minute. Don’t many college students also work part-time during the school year and full-time during the summer? If you do the same, suppose you could earn \$8,000 a year, after taxes.

Thus, by attending college you give up the \$20,000 you could earn from a full-time job, yet you could still earn \$8,000 from part-time and summer work. Your annual earnings would be \$12,000 lower (\$20,000 minus \$8,000) if you attend college. One part of your opportunity cost of college is the value of what you could have purchased with that additional \$12,000 in income.

Direct Costs of College

You also need to consider the direct costs of college itself. Suppose you must pay \$9,000 a year for tuition, fees, and books at a public college (paying out-of-state rates would add about \$10,000 to that, and attending a private college

would add about \$20,000). The opportunity cost of paying for tuition, fees, and books is the value of the goods and services that money could have purchased otherwise.

Other College Costs

What about room and board? Expenses for room and board are not an opportunity cost of college because, even if you did not attend college, you

NETBookmark

To examine whether college would be a sensible investment for you, try Professor Jane Leuthold’s College Choice program. This program will guide you through applying economic tools such as cost-benefit analysis to determine whether it makes economic sense to enroll in a college program of your choosing. Access the website shown below and click on the link for Chapter 1.

www.cengage.com/school/contecon

Evidently, many young people view college as a wise investment in their future, even though college is costly and perhaps even difficult for some. College graduates on average earn about twice as much per year as high-school graduates.

Still, college is not for everyone. Some find the opportunity cost too high. For example, Tiger Woods, once an economics major at Stanford University, dropped out after two years to earn a fortune in professional golf. Some college athletes who believe they are ready for professional basketball leave college after their first year. Most pro tennis players and many singers and actors skip college. However, for most of you, the opportunity cost of attending college isn't nearly as high.



CHECKPOINT How do you measure the opportunity cost of attending college?



Span the Globe

Entrepreneurial Gaming

In 2007 Harvard Business School (HBS) students Daniel Kafie, Mario Schlosser, and Joshua Kushner created Vostu, a social networking site for the Latin American market, specifically Brazil. The venture was inspired by Facebook, also started by a Harvard student. Launched with an initial investment by Intel Capital, the company struggled to make a profit. Within two years, the student entrepreneurs had gone through three versions of the idea. Following their first attempt, they switched to a platform designed to host other social networks. By 2009, the company focused specifically on creating social games. Since then Vostu has grown from 12 to 400 employees, most involved in designing games in the company's Buenos Aires office. Concentrating on social games played on Orkut, the popular social networking site in Brazil and Latin America Google's equivalent of Facebook, the company now claims 22 million players.

The career goals of the three co-founders differed from those of typical HBS students. Most HBS students aspire to "taking the big job or following what other people have done," Schlosser said. For Kafie, HBS was a place "to meet really interesting people and to see if there's an opportunity to work on some sort of entrepreneurship idea." According to Kafie, "Entrepreneurship is not about being smart, analytical (or) being the best in one field. It's about being persistent."

Think Critically Was there an opportunity cost to the three founders of Vostu because they did not follow the more traditional route upon graduating from Harvard Business School? How does their persistence illustrate the concept of sunk cost?

Source: Dizik, Alina, "Entrepreneurs learn the rules of the game – Using business knowhow gained at Harvard, three alumni have founded a thriving online venture," *The Financial Times* (London, England) March 21, 2011.

1.3 ASSESSMENT

Think Critically

1. Why must there be an opportunity cost for every choice you make?
2. Why isn't the opportunity cost of using your time to do homework always the same?
3. What factor forces even people who are very wealthy to face opportunity costs?
4. Why should consumers ignore costs they have already paid when making decisions?
5. What is the greatest cost of attending college at in-state public institutions?

Graphing Exercises

6. Harold sells snowblowers at his hardware store in North Dakota. Although he never changes his price, his sales vary throughout the year. The following table shows his sales in each month of last year. Draw a line graph that demonstrates these data.

7. Explain how the graph you drew for exercise 6 shows that the value of buying a snowblower changes over time. What does this have to do with the opportunity cost of other uses for limited funds?

HAROLD'S SNOWBLOWER SALES

Month	Sales	Month	Sales
January	13	July	0
February	11	August	0
March	3	September	8
April	0	October	32
May	0	November	38
June	0	December	21

Make Academic Connections

8. **Entrepreneurship** Wilma owns a 200-acre farm. She could plant either beans or tomatoes. If the weather is sunny and there is enough rain, she can earn \$400 per acre of tomatoes. However, if it is dry or cloudy, tomatoes may earn her no profit at all. Beans are hardy and will grow well unless the weather is truly awful. Wilma can count on earning \$200 per acre from beans. Explain why Wilma cannot be sure of the opportunity cost of any decision she might make. What do you think she will choose to do? Why?
9. **Office Technology** Ms. Morra teaches classes in office technology. Her school board has approved \$10,000 to buy new computers to replace her old, outdated models. For this amount she can buy 20 low-end computers that just meet her student's current needs, or she can purchase 10 computers with greater speed and capabilities that she would like her students to learn to use. What is her opportunity cost for either of these choices?

TeamWork

Working in small teams, identify and list the opportunity cost you would pay to accept a baby-sitting job next Saturday evening. You will be paid \$30 but must give up other uses for your time. Compare the opportunity costs identified. Are they of equal value? Why are some team members likely to accept the job while others won't? Report your results to the class.