

Chapter 1

# 1

## TEN PRINCIPLES OF ECONOMICS

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### **WHAT'S NEW IN THE SIXTH EDITION?**

The *In the News* box "Using Opportunity Cost to Sell" has been replaced by "Olympic Lineups and Opportunity Cost;" two of the three Quick-quizzes have changed; end-of-chapter problems 6, 10, and 17 have been replaced by problem 16.

### **LEARNING OBJECTIVES**

**By the end of this chapter, students should understand:**

- that economics is about the allocation of scarce resources.
- that individuals face tradeoffs.
- the meaning of *opportunity cost*.
- how to use marginal reasoning when making decisions.
- how incentives affect people's behaviour.
- why trade among people or nations can be good for everyone.
- why markets are a good, but not perfect, way to allocate resources.
- what determines some trends in the overall economy.

### **WHY IS THIS CHAPTER IMPORTANT TO STUDENTS?**

Chapter 1 is the first chapter in a three-chapter section that serves as the introduction to the text. Chapter 1 introduces ten fundamental principles on which the study of economics is based. In a broad sense, the rest of the text is an elaboration on these ten principles. Chapter 2 explains how economists approach problems while Chapter 3 shows how individuals and countries gain from trade.

The purpose of Chapter 1 is to lay out ten economic principles that will serve as building blocks for the rest of the text. The ten principles can be grouped into three categories: how people make decisions, how people interact, and how the economy as a whole works. Throughout the text, these ten principles are often referred to.

## **IF NOTHING ELSE, MY STUDENTS SHOULD LEARN...**

1. The fundamental lessons about individual decision making are that people face tradeoffs among alternative goals, that the cost of any action is measured in terms of forgone opportunities, that rational people make decisions by comparing marginal costs and marginal benefits, and that people change their behaviour in response to the incentives they face.
2. The fundamental lessons about interactions among people are that trade can be mutually beneficial, that markets are usually a good way of coordinating trades among people, and that the government can potentially improve market outcomes if there is some sort of market failure or if the market outcome is inequitable.
3. The fundamental lessons about the economy as a whole are that productivity is the ultimate source of living standards, that money growth is the ultimate source of inflation, and that society faces a short-run tradeoff between inflation and unemployment.

## **WHAT CAN I DO IN CLASS?**

### I. Introduction



Begin by pointing out that economics is a subject that students must confront in their everyday lives. Point out that they already spend a great deal of their time thinking about economic issues: prices, buying decisions, use of their time, etc.

household.”

- B. This makes some sense since in the economy we are faced with many decisions (just as a household is).
- C. Fundamental economic problem: resources are scarce.



You will want to start the semester by explaining to students that part of learning economics is to understand new vocabulary. Economists generally use very precise (and sometimes different) definitions for words that are commonly used outside of the economics discipline. Therefore, it will be helpful to students if you follow the definitions provided in the text. as much as possible.

D. Definition of **scarcity: the limited nature of society's resources.**

E. Definition of **economics: the study of how society manages its scarce resources.**



Because most first-year students have limited experiences with viewing the world from a cause-and-effect perspective, do not underestimate how challenging these principles will be for the student.

As you discuss the ten principles, make sure that students realize that it is okay if they do not grasp each of the concepts completely or find each of the arguments fully convincing. These ideas will be explored more completely throughout the text.

### II. How People Make Decisions

## A. Principle #1: People Face Tradeoffs

1. "There is no such thing as a free lunch." Making decisions requires trading off one goal for another.
2. Examples include how a student spends her time, how a family decides to spend its income, how the Canadian government spends tax dollars, how regulations may protect the environment at a cost to firm owners.
3. A special example of a tradeoff is the tradeoff between efficiency and equity.
  - a. Definition of **efficiency**: the property of society getting the most it can from its scarce resources.
  - b. Definition of **equity**: the property of distributing economic prosperity fairly among the members of society.
  - c. For example, tax dollars paid by wealthy Canadians and then distributed to those less fortunate may improve equity but lower the return to hard work and therefore reduce the level of output produced by our resources.
  - d. This implies that the cost of this increased equity is a reduction in the efficient use of our resources.
4. Recognizing that tradeoffs exist does not indicate what decisions should be made.

## B. Principle #2: The Cost of Something Is What You Give Up to Get It

1. Making decisions requires individuals to consider the benefits and costs of some action.
2. What are the costs of going to college or university?
  - a. We cannot count room and board (at least all of the cost) because the person would have to pay for food and shelter even if he or she was not in school.
  - b. We would want to count the value of the student's time since he could be working for pay instead of attending classes and studying.
3. Definition of **opportunity cost**: whatever must be given up to obtain some item.



One of the hardest ideas for students to grasp is that "free" things are not truly free. Thus, you will need to provide students with numerous examples of such "free" things with hidden costs, especially the value of time.

1. Many decisions in life involve incremental decisions: Should I remain in school this semester? Should I take another course this semester? Should I study an additional hour for tomorrow's exam?

2. Definition of **marginal changes**: small incremental adjustments to a plan of action.
3. Definition of **rational people**: people who systematically and purposefully do the best they can to achieve their objectives, given the opportunities they have.
4. Example: Suppose that flying a 200-seat plane across the country costs the airline \$100,000, which means that the average cost of each seat is \$500. Suppose that the plane is minutes from departure and a passenger is willing to pay \$300 for a seat. Should the airline sell the seat for \$300? In this case, the marginal cost of an additional passenger is very small.
5. Marginal decision making can help explain puzzling economic phenomena.
  - a. Why is water so cheap while diamonds are so expensive?
  - b. The reason is that a person's willingness to pay for any good is based on the marginal benefit that an extra unit of the good would yield. The marginal benefit, in turn, depends on how many units a person already has.
6. A rational decision maker takes an action if and only if the marginal benefit of the action exceeds the marginal cost.

D. Principle #4: People Respond to Incentives

1. Definition of **incentive**: something that induces a person to act.
2. Because people make decisions by weighing costs and benefits, they respond to incentives.
  - a. When the price of a good rises, consumers will buy less of it because its cost has risen.
  - b. When the price of a good rises, producers will allocate more resources to the production of the good because the benefit from producing the good has risen.
3. Sometimes policymakers fail to understand how policies may alter incentives and behaviour.
4. Example: Seat belt laws increase use of seat belts and lower the incentives of individuals to drive safely. This leads to an increase in the number of car accidents. This also leads to an increased risk for pedestrians.



If you include any incentive-based criteria on your syllabus, discuss it now. If you reward class attendance (or penalize students who do not attend class), explain to students how this change in the marginal benefit of attending class can be expected to alter their behaviour.

III. How People Interact

A. Principle #5: Trade Can Make Everyone Better Off

1. Trade is not like a sports competition where one side gains and the other side loses.
2. Consider trade that takes place inside your home. Certainly the family is involved in trade with other families on a daily basis. Most families do not build their own homes, make their own clothes, or grow their own food.
3. Just like families benefit from trading with one another, so do countries.
4. This occurs because it allows for specialization in areas that countries (or families) can do best.

### Activity 1—Getting Dressed in the Global Economy

<b>Type:</b>	In-class assignment
<b>Topics:</b>	Specialization, interdependence, self-interest, consumer choice, international trade
<b>Materials needed:</b>	None
<b>Time:</b>	20 minutes
<b>Class limitations:</b>	Works in any class size

#### Purpose

The advantages of specialization and division of labour are very clear in this example. The worldwide links of the modern economy are also illustrated. We depend on thousands of people we don't know, won't see, and don't think of in order to get dressed each morning. Self-interest follows naturally from interdependence. Wages, profits, and rents give people the incentive to perform these varied tasks. We depend on them to clothe us and they depend on our purchases for their incomes.

#### Instructions

Ask the class to answer the following questions. Give them time to write an answer to each question, then discuss their answers before moving on to the next question. The first question can be answered with a brief phrase. The second question is the core of the assignment and takes several minutes. Ask them to list as many categories of workers as possible. The third question introduces demand concepts; most of the determinants of demand can be introduced during this discussion. For the fourth question, ask the class to look at the country-of-origin tags sewn in their garments.

1. Where did your clothes come from?
2. Who worked to produce your clothes?
3. What things do you consider when buying a garment?
4. Where were your clothes produced (what countries)?

#### Common Answers and Points for Discussion

1. Where did your clothes come from?

There are many possible ways to answer, but many students will say "the mall" or another retail outlet. Some may say "a factory," "a sweatshop," or "a foreign country."

Mention the importance of markets here (this can be emphasized by asking "Is anyone wearing something made by themselves, a friend, or a relative?") and discuss distribution versus production.

## 2. Who worked to produce your clothes?

There is no end to the possible answers; garment and textile workers are obvious but most students will also list workers dealing with raw materials, transportation, management, design, or machinery. Some may think more broadly to investors, road crews, bankers, engineers, or accountants.

## 3. What things do you consider when buying a garment?

Most answers focus on preferences (fit, style, quality, colour). Price is cited less frequently. Ask about the importance of price until someone volunteers that income is important. Prices of substitute goods should also be discussed. Expectations of price changes may also be mentioned. Few students mention complementary goods and most students reject the idea of choosing a sweater to match a particular outfit.

## 4. Where were your clothes produced (what countries)?

A large number of countries will be represented, even in small classes. Students are usually surprised to find how many garments are domestically produced. Asia is always well represented. Latin American and European goods appear in smaller numbers. African products are conspicuously absent.

This pattern shows the limits of simple explanations such as “cheap labour.” Briefly discuss the importance of comparative advantage and specialization.

## B. Principle #6: Markets Are Usually a Good Way to Organize Economic Activity

1. Many countries that once had centrally planned economies have abandoned this system and are trying to develop market economies.
2. Definition of **market economy: an economy that allocates resources through the decentralized decisions of many firms and households as they interact in markets for goods and services.**
3. Market prices reflect both the value of a product to consumers and the cost of the resources used to produce it. Therefore, decisions to buy or produce goods and services are made based on the cost to society of providing them.



Explain to students that when households and firms do what is best for themselves, they often end up doing what is best for society, as if guided by market forces—or an invisible hand. Spend some time and emphasize the magic of the market. Use numerous examples to show students that the market most often allocates resources to their highest valued use.

4. When a government interferes in a market and restricts prices from adjusting naturally, decisions that households and firms make are not based on the proper information. Thus, these decisions may be inefficient.

5. Centrally planned economies have failed because they did not allow the market to work.
  6. *FYI: Adam Smith and the Invisible Hand*
    - a. Adam Smith's 1776 work suggested that although individuals are motivated by self-interest, an invisible hand guides this self-interest into promoting society's economic well-being.
    - b. Smith's astute perceptions will be discussed more fully in the chapters to come.
- C. Principle #7: Governments Can Sometimes Improve Market Outcomes
1. Markets work only if property rights are enforced.
    - a. Definition of **property rights: the ability of an individual to own and exercise control over scarce resources.**
  2. Government policy can be most useful when there is market failure.
    - a. Definition of **market failure: a situation in which a market left on its own fails to allocate resources efficiently.**
  3. Examples of market failure.
    - a. Definition of **externality: the impact of one person's actions on the well-being of a bystander.**
    - b. Definition of **market power: the ability of a single economic actor (or small group of actors) to have a substantial influence on market prices.**
    - c. Because a market economy rewards people for their ability to produce things that other people are willing to pay for, there will be an unequal distribution of economic prosperity.
  4. Note that the principle states that the government can improve market outcomes. This is not saying that the government always does improve market outcomes.

#### IV. How the Economy as a Whole Works

- A. Principle #8: A Country's Standard of Living Depends on Its Ability to Produce Goods and Services
1. Differences in living standards from one country to another are quite large.
  2. Changes in living standards over time are also large.
  3. The explanation for differences in living standards lies in differences in productivity.

4. Definition of **productivity: the quantity of goods and services produced from each hour of a worker's time.**
  5. High productivity implies a high standard of living.
  6. Thus, policymakers must understand the impact of any policy on our ability to produce goods and services.
- B. Principle #9: Prices Rise When the Government Prints Too Much Money
1. Definition of **inflation: an increase in the overall level of prices in the economy.**
  2. When the government creates a large amount of money, the value of money falls.
  3. Examples: Germany after World War I (in the early 1920s), and Canada in the 1970s.
- C. Principle #10: Society Faces a Short-Run Tradeoff between Inflation and Unemployment
1. The short-run effects of monetary injection:
    - a. Increasing the amount of money in the economy stimulates the overall level of spending and thus the demand for goods and services.
    - b. Higher demand may over time cause firms to raise their prices, it also encourages them to increase the quantity of goods and services they produce and to hire more workers to produce those goods and services.
    - c. More hiring means lower unemployment.
  2. Some economists still question these ideas.
  3. Over a short period of time, economic policies push inflation and unemployment in opposite directions.
  4. The policymakers face this trade-off regardless of whether inflation and unemployment both start out at high or low levels.
  5. The short-run tradeoff between inflation and unemployment is important for understanding the business cycle.
  6. Definition of **business cycle: fluctuations in economic activity, such as employment and production.**
  7. Policymakers can exploit this short-run tradeoff by using various policy instruments, but the extent and desirability of these interventions is of continuing debate.
- D. *FYI: How to Read this Book*
1. Economics is very useful to understand, but it can be a difficult subject to grasp.



2. There are five tips to make reading and understanding the material in the book easier.
  - a. Summarize, don't highlight.
  - b. Test yourself.
  - c. Practice, practice, practice.
  - d. Study in groups.
  - e. Don't forget the real world.

### Activity 2—So Many Things to Do, So Little Time

<b>Type:</b>	In-class assignment
<b>Topics:</b>	Tradeoffs, opportunity cost, thinking at the margin, incentives
<b>Materials needed:</b>	None
<b>Time:</b>	10 minutes
<b>Class limitations:</b>	Works in any class size

Give students a list of activities with corresponding time requirements: sleep, 8 hours; sleep, 6 hours; eat breakfast, 30 minutes; ride a bike, 1 hour; go hiking, 2 hours; study, 3 hours; study, 2 hours; go to class, 4 hours; go to class, 6 hours; watch TV, 2 hours; watch TV, 6 hours; take a nap, 1 hour; work, 8 hours; work, 4 hours; etc.

Make sure that there are many choices and that there are many pleasurable experiences—too much for a 24-hour period.

Ask students which Principle of Economics this illustrates.

If they do not say 1, 2, 3, and 4, help them see that this exercise has tradeoffs in the choices they make, that each choice has an opportunity cost, that deciding whether or not to sleep 4 more hours may depend on whether you have already slept for 6, and that choices may be influenced by the incentives the student faces. For example, a student who is about to be placed on academic probation has an incentive to study harder.

## **SOLUTIONS TO TEXTBOOK PROBLEMS**

### **Quick Quizzes**

1. Usually students are able to come up with standard examples of tradeoffs, such as: buy a textbook or a ticket to a favourite performance, go to a group study session instead of a birthday party, etc. Instructors may wish to point out less straightforward instances of how the principles work. For instance, when discussing incentives, instructors may point out perverse effects of incentives. An example is the invention of the seatbelt, discussed in the text. Examples of actions that have both monetary and non-monetary opportunity costs are watching a movie (time + money) and driving a car (money + pollution + traffic congestion). Parents may offer their children gifts conditional on good results in school.

2. Countries are both competitors and trade partners in the world markets. More precisely, some countries compete in some markets. Overall, however, international trade provides consumers with access to more diverse and cheap products. Thus, countries benefit from international trade.

Markets play a fundamental role in allocating resources to their most efficient use. Prices convey information about how scarce resources are, so that consumers and producers make the most efficient use of the resources. In economies where the prices are distorted by government interventions, overall well-being has proved to be lower.

Governments can improve market outcomes by providing public goods such as property rights, security, equity, and guaranteeing fair market competition.

3. The three principles that describe how the economy as a whole works are: (1) a country's standard of living depends on its ability to produce goods and services; (2) prices rise when the government prints too much money; and (3) society faces a short-run tradeoff between inflation and unemployment. A country's standard of living depends on its ability to produce goods and services, which in turn depends on its productivity, which is a function of the education of workers and the access workers have to the necessary tools and technology. Prices rise when the government prints too much money because more money in circulation reduces the value of money, causing inflation. Society faces a short-run tradeoff between inflation and unemployment that is only temporary and policymakers have some ability to exploit this relationship using various policy instruments.

### Questions for Review

1. Examples of tradeoffs include time tradeoffs (such as studying one subject over another, or studying at all compared to engaging in social activities) and spending tradeoffs (such as whether to use your last ten dollars on pizza or on a study guide for that tough economics course).
2. The opportunity cost of seeing a movie includes the monetary cost of admission plus the time cost of going to the theatre and attending the show. The time cost depends on what else you might do with that time; if it's staying home and watching TV, the time cost may be small, but if it's working an extra three hours at your job, the time cost is the money you could have earned.
3. The marginal benefit of a glass of water depends on your circumstances. If you've just run a marathon, or you've been walking in the desert sun for three hours, the marginal benefit is very high. But if you've been drinking a lot of liquids recently, the marginal benefit is quite low. The point is that even the necessities of life, like water, don't always have large marginal benefits.
4. Policymakers need to think about incentives so they can understand how people will respond to the policies they put in place. The text's example of seat belts shows that policy actions can have quite unintended consequences. If incentives matter a lot, they may lead to a very different type of policy; for example, some economists have suggested putting knives in steering columns so that people will drive much more carefully! While this suggestion is silly, it highlights the importance of incentives.
5. Trade among countries isn't a game with some losers and some winners because trade can make everyone better off. By allowing specialization, trade between people and trade between countries can improve everyone's welfare.

6. The "invisible hand" of the marketplace represents the idea that even though individuals and firms are all acting in their own self-interest, prices and the marketplace guide them to do what is good for society as a whole.
7. The two main causes of market failure are externalities and market power. An externality is the impact of one person's actions on the well-being of a bystander, such as from pollution or the creation of knowledge. Market power refers to the ability of a single person (or small group of people) to unduly influence market prices, such as in a town with only one well or only one cable television company. In addition, a market economy also leads to an unequal distribution of income.
8. Productivity is important because a country's standard of living depends on its ability to produce goods and services. The greater a country's productivity (the amount of goods and services produced from each hour of a worker's time), the greater will be its standard of living.
9. Inflation is an increase in the overall level of prices in the economy. Inflation is caused by increases in the quantity of a nation's money.
10. Inflation and unemployment are negatively related in the short run. Reducing inflation entails costs to society in the form of higher unemployment in the short run.

### Problems and Applications

1.
  - a. A family deciding whether to buy a new car faces a tradeoff between the cost of the car and other things they might want to buy. For example, buying the car might mean they must give up going on vacation for the next two years. So the real cost of the car is the family's opportunity cost in terms of what they must give up.
  - b. For a member of Parliament deciding whether to increase spending on national parks, the tradeoff is between parks and other spending items or tax cuts. If more money goes into the park system, that may mean less spending on national defence or on the police force. Or, instead of spending more money on the park system, taxes could be reduced.
  - c. When a company president decides whether to open a new factory, the decision is based on whether the new factory will increase the firm's profits compared to other alternatives. For example, the company could upgrade existing equipment or expand existing factories. The bottom line is: Which method of expanding production will increase profit the most?
  - d. In deciding how much to prepare for class, a professor faces a tradeoff between the value of improving the quality of the lecture compared to other things she could do with her time, such as working on additional research.
2. When the benefits of something are psychological, such as going on a vacation, it isn't easy to compare benefits to costs to determine if it's worth doing. But there are two ways to think about the benefits. One is to compare the vacation with what you would do in its place. If you didn't go on vacation, would you buy something like a new set of golf clubs? Then you can decide if you'd rather have the new clubs or the vacation. A second way is to think about how much work you had to do to earn the money to pay for the vacation; then you can decide if the psychological benefits of the vacation were worth the psychological cost of working.

3. If you are thinking of going skiing instead of working at your part-time job, the cost of skiing includes its monetary and time costs, which includes the opportunity cost of the wages you are giving up by not working. If the choice is between skiing and going to the library to study, then the cost of skiing is its monetary and time costs including the cost to you of getting a lower grade in your course.
4. If you spend \$100 now instead of saving it for a year and earning 5 percent interest, you are giving up the opportunity to spend \$105 a year from now. The idea that money has a time value is the basis for the field of finance, the subfield of economics that has to do with prices of financial instruments like stocks and bonds.
5. The fact that you've already sunk \$5 million isn't relevant to your decision anymore, since that money is gone. What matters now is the chance to earn profits at the margin. If you spend another \$1 million and can generate sales of \$3 million, you'll earn \$2 million in marginal profit, so you should do so. You are right to think that the project has lost a total of \$3 million (\$6 million in costs and only \$3 million in revenue) and you shouldn't have started it. That's true, but if you don't spend the additional \$1 million, you won't have any sales and your losses will be \$5 million. So what matters is not the total profit, but the profit you can earn at the margin. In fact, you'd pay up to \$3 million to complete development; any more than that and you won't be increasing profit at the margin.
6.
  - a. The provision of welfare benefits lowers an individual's incentive to save for retirement. The benefits provide some level of income to the individual when he or she retires. This means that the individual is not entirely dependent on savings to support consumption through the years in retirement.
  - b. Since a person gets fewer after-tax welfare benefits the greater is his or her earnings, there is an incentive not to work (or not work as much) after age 65. The more you work, the lower your after-tax welfare benefits will be. Thus the taxation of welfare benefits discourages work effort after age 65.
7.
  - a. The loss of benefits means that someone who can't find a job will get no income at all, so the distribution of income will become less equal. But the economy will be more efficient, since welfare recipients have a greater incentive to find jobs.
  - b. The change in the law is one that increases efficiency but reduces equity.
8. By specializing in each task, you and your roommate can finish the chores more quickly. If you divided each task equally, it would take you more time to cook than it would take your roommate, and it would take him more time to clean than it would take you. By specializing, you reduce the total time spent on chores.

Similarly, countries can specialize and trade, making both better off. For example, suppose it takes Spanish workers less time to make clothes than French workers, and French workers can make wine more efficiently than Spanish workers. Then Spain and France can both benefit if Spanish workers produce all the clothes and French workers produce all the wine, and they exchange some wine for some clothes.
9. These activities tend to lessen the efficiency of an economic system, hence reducing the economic productivity of a nation. Lower productivity means lower standards of living.

10. a. Efficiency: The market failure comes from the monopoly by the cable TV firm.
- b. Equity
- c. Efficiency: An externality arises because secondhand smoke harms nonsmokers.
- d. Efficiency: The market failure from the monopoly occurring from the merger.
- e. Equity
- f. Efficiency: There is an externality because of accidents caused by drunk drivers.
11. a. If everyone were guaranteed the best health care possible, much more of our nation's output would be devoted to medical care than is now the case. Would that be efficient? If you think that currently doctors form a monopoly and restrict health care to keep their incomes high, you might think efficiency would increase by providing more health care. But more likely, if the government mandated increased spending on health care, the economy would be less efficient because it would give people more health care than they would choose to pay for. From the point of view of equity, if poor people are less likely to have adequate health care, providing more health care would represent an improvement. Each person would have a more even slice of the economic pie, though the pie would consist of more health care and less of other goods.
- b. When workers are laid off, equity considerations argue for the unemployment benefits system to provide them with some income until they can find new jobs. After all, no one plans to be laid off, so unemployment benefits are a form of insurance. But there's an efficiency problem—why work if you can get income for doing nothing? The economy isn't operating efficiently if people remain unemployed for a long time, and unemployment benefits encourage unemployment. Thus, there's a tradeoff between equity and efficiency. The more generous are unemployment benefits, the less income is lost by an unemployed person, but the more that person is encouraged to remain unemployed. So, greater equity reduces efficiency.
12. Since average income in Canada has roughly doubled every 35 years, we are likely to have a better standard of living than our parents, and a much better standard of living than our grandparents. This is mainly the result of increased productivity, so that an hour of work produces more goods and services than it used to. Thus incomes have continuously risen over time, as has the standard of living.
13. If Canadians save more and it leads to more spending on factories, there will be an increase in production and productivity, since the same number of workers will have more equipment to work with. The benefits from higher productivity will go to both the workers, who will get paid more since they're producing more, and the factory owners, who will get a return on their investments. There is no such thing as a free lunch, however, because when people save more, they are giving up spending. They get higher incomes at the cost of buying fewer goods.
14. To make an intelligent decision about whether to reduce inflation, a policymaker would need to know what causes inflation and unemployment, as well as what determines the tradeoff between them. Any attempt to reduce inflation will likely lead to higher unemployment in the short run. A policymaker thus faces a tradeoff between the benefits of lower inflation compared to the cost of higher unemployment.

15. Increasing taxes to finance a planned increase in government spending leaves less money for people to spend, thus reducing their demand for goods and services, which may increase unemployment in the short run. In the long run, however, this solution avoids a surge in inflation. Printing money, on the other hand, reduces unemployment in the short run while increasing inflation. Which solution is better depends whether the economy is in a period of rapid growth (when taxes are the better option) or in recession (when printing money may be a better choice.)