

# CHAPTER 1

*Modern Principles of Economics:*

## The Big Ideas

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### Facts and Tools

1. A headline in the *New York Times* read: “Study Finds Enrollment Is Up at Colleges Despite Recession.” How would you rewrite this headline now that you understand the idea of opportunity cost?

#### Solution

1. The easiest change is to switch “despite” to “because of.” Ordinary people focus on the fact that when times are tough, people can’t afford college. Economists, on the other hand, see that there is an opposing effect: when times are tough the price (or opportunity cost) of attending college is low.

There’s some truth to both viewpoints. It’s tough for you or your parents to pay for tuition when jobs are hard to come by and income is low, but, as you learned, in the real world it’s actually quite common for students to flood colleges during recessions. That means that the price effect usually dominates.

2. When bad weather in India destroys the crop, does this sound like a fall in the total “supply” of crops or a fall in people’s “demand” for crops? Keep your answer in mind as you learn about economic booms and busts later on.

#### Solution

2. It sounds like a fall in supply.

3. How much did national output fall during the Great Depression? According to the chapter, which government agency might have helped to avoid much of the Great Depression had it acted more quickly and appropriately?

#### Solution

3. Output fell by about 30 percent and much of the blame belongs to the Federal Reserve for failing to act.

4. The chapter lists four things that entrepreneurs save and invest in. Which of the four are actual objects, and which are more intangible, like concepts or ideas or plans? Feel free to use Wikipedia or some other reference source to get definitions of unfamiliar terms.

#### Solution

4. Physical capital is the object, while human capital (education), innovation, and efficient organization are more like concepts, ideas, or plans.

5. Who has a better incentive to work long hours in a laboratory researching new cures for diseases: a scientist who earns a percentage of the profits from any new medicine she might invent, or a scientist who will get a handshake and a thank you note from her boss if she invents a new medicine?

**Solution**

5. The scientist who gets a share of the profits will have a stronger incentive to invent more new drugs.

6. In the discussion of Big Idea Five, the chapter says that “self-sufficiency is death” because most of us would not be able to produce for ourselves the food and shelter that we need to survive. In addition to *death*, however, one could also say that self-sufficiency is *boredom* or *ignorance*. How does specialization and trade help you to avoid boredom and ignorance?

**Solution**

6. Just as each of us could not produce enough food and shelter to survive, we also could not produce enough entertainment or educational/informational services to keep us from boredom or ignorance. Under total self-sufficiency, one would have to produce any TV show one watched, and gather any news one is interested in, and so on. Clearly, this is not possible, especially because everyone would be too busy just trying to survive.

**Thinking and Problem Solving**

7. In recent years, Zimbabwe has had hyperinflation, with prices tripling (or more!) every month. According to what you learned in this chapter, what do you think the government can do to end this hyperinflation?

**Solution**

7. It can stop printing so much money.

8. Some people worry that machines will take jobs away from people, making people permanently unemployed. Only 150 years ago in the United States, most people were farmers. Now, machines do almost all of the farm work and fewer than 2% of Americans are farmers, yet that 2% produces enough food to feed the entire country while still exporting food overseas.

a. What happened to all of those people who used to work on farms? Do you think most adult males in the U.S. are unemployed nowadays, now that the farm work is gone?

b. Some people say that it’s okay for machines to take jobs, because we’ll get jobs fixing the machines. Just from looking around, do you think that most working Americans are earning a living by fixing farm equipment? If not, what do you think most working people are doing instead? (We’ll give a full answer later in this book.)

**Solution**

8. a. They are mostly employed in other industries. Farm states don’t have tens of millions of people searching for jobs.

b. Very few people fix farm equipment for a living. Instead, they work in offices, warehouses, and factories. The demand for more goods and services is almost limitless so when innovations make it possible to produce a good with fewer resources, other resources (including labor) are freed up to produce other goods.

9. Let's connect Big Ideas Six and Nine: Do you think that people in poor countries are poor because they don't have enough money? In other words, could a country get richer by printing more pieces of paper called "money" and handing those out to its citizens?

#### **Solution**

9. No. If a country printed more money, prices would rise, but the country would not get richer.

10. Nobel Prize winner Milton Friedman said that a bad central banker is like a "fool in the shower." In a shower, of course, when you turn the faucet right now, it won't show up in the showerhead for a few seconds. So if a "fool in the shower" is always making big changes in the temperature based on how the water feels *right now*, the water is likely to swing back and forth between too hot and too cold. How does this apply to central banking?

#### **Solution**

10. It takes a few months for the central banker's actions to affect the economy. So if he or she is always making today's decisions based on how the economy looks right now, he or she might make the economy swing back and forth between too "hot" and too "cold."

11. According to the United Nations, there were roughly 300 million humans on the planet a thousand years ago. Essentially all of them were poor by modern standards: They lacked antibiotics, almost all lacked indoor plumbing, and none traveled faster than a horse or a river could carry them. Today, between 1 and 3 billion humans are poor out of about 7 billion total humans. So, over the last thousand years, what has happened to the *fraction* of humans who are poor: Did it rise, fall, or stay about the same? What happened to the total *number* of people living in deep poverty: Rise, fall, or no change?

#### **Solution**

11. The fraction of poor people has fallen: almost 100 percent were poor in 1000 AD, while much less than 50 percent are poor now. The number of poor has risen: We went from about 300 million poor people to 1 to 3 billion today, depending on your definition of poverty. The number of poor people has increased, partly because fewer poor people starve to death today than in the past; in this sense today's poor are marginally better off than the poor of the past.

### **Challenges**

12. We claim that part of the reason the Great Depression was so destructive is because economists didn't understand how to use government policy very well in the 1930s. In your opinion, do you think that economists during the Great Depression would have agreed? In other words, if you had asked them why the Depression was so bad, would they have said, "Because the government ignored our wise advice," or would they have said, "Because we don't have any good ideas about how to fix this?" What does your answer tell you about the confidence of economists and other experts?

#### **Solution**

12. They probably would have been very confident. That's what experts tend to do: Project confidence even when they aren't entirely sure. Today, most economists think that the Great Depression could have been avoided. Even if they are right, that doesn't mean that economists today know enough to avoid future depressions, since many things have changed since the 1930s. Economic knowledge and the economy both continue to grow.

13. Some problems that economists try to solve are easy as *economic problems* but hard as *political problems*. Medical doctors face similar kinds of situations: Preventing most deaths from obesity or lung cancer is easy as a *medical problem* (eat less, exercise more, don't smoke), but hard as a *self-control problem*. With this in mind, how is ending hyperinflation like losing 100 pounds?

**Solution**

13. Losing 100 pounds requires a lot of self-control. Similarly, ending hyperinflation requires a lot of self-control: The government must stop using the printing press to pay for things.

14. As Nobel prize winner and *New York Times* columnist Paul Krugman has noted, the field of economics is a lot like the field of medicine: They are fields where knowledge is limited (both are new as real scientific disciplines), and where many cures are quite painful (opportunity cost), but where regular people care deeply about the issues. What are some other ways that economics and medicine are alike?

**Solution**

14. There are many possible answers, but one possible one is that it's hard in both fields to run good experiments: When people are sick or economies are in trouble, you want to help them, but you can't just say, "No, we're going to help half of the economies the best we can and leave the others alone." Both fields have a lot of phonies, snake-oil salespeople, and amateurs who offer their very-confident opinions about how to fix things. And, the person-on-the-street often has strong opinions about both fields—They are often more confident than the experts. On the other hand, hopefully, they are both fields that we will know a lot more about in the future!

15. Economics is sometimes called "the dismal science." Of the Big Ideas in this chapter, which sound dismal—like bad news?

**Solution**

15. These are often a matter of judgment (as are many of the Challenge questions). Here are the most obvious examples:

1. Big Idea Three, that trade-offs are everywhere.
2. Big Idea Eight, that you have to live with the boom–bust cycle.
3. Big Idea Ten, that central banking is hard, so even the best might fail.