Chapter 1

The Challenge of Economics
The goal of this chapter is to see how the economy works. Specifically:

- What are the basic goals?
- How does a market economy address these goals?
- What role should government play?
Learning Objectives

After completing this chapter, you should know:

1. The meaning of *scarcity*.
2. What opportunity cost is.
3. Society’s three basic economic questions.
5. The nature of market and government failures.
Scarcity

• Lack of available resources to satisfy all desired uses of those resources.
• Central problem of economics.
• Economics:
  – The study of how best to allocate scarce resources among competing uses in the best possible way.
Opportunity Cost

- Opportunity Cost:
  - The most desired goods and services that are foregone in order to obtain something else.
  - The next best alternative that is sacrificed for the chosen alternative.
Rational Action

• Weigh the benefits you expect to get from a choice against the opportunity cost and then decide whether or not to make the choice.
Factors of Production

• Resource inputs used to produce goods and services.

• These four resources are the basic ingredients of production:
  — Land, labor, capital, and entrepreneurship.
Three Basic Questions

- WHAT to produce?
- HOW to produce?
- FOR WHOM to produce?
Question 1: WHAT to Produce?

• There aren’t enough resources in an economy to produce all the goods and services desired by society.
• We have to decide *what* we want most.
• We have to sacrifice less-desired activities and goods.
Production Possibilities Curve

• Describes the alternative combinations of goods and services that can be produced in a given time period with all available resources and technology.
Figure 1.1

A: Maximum output of consumer goods

Limited resources necessitate choices about WHAT to produce.

B: Maximum output of military goods
A nation must choose what to do with its scarce resources during war or periods of military buildup.

Produce military goods ("guns") or consumer goods ("butter")?

Every time we increase missile production, housing construction must be reduced.
• There is only one optimal (best possible) mix of output at any given time.
• The first economic goal of any society is to produce that optimal mix of output—the optimal combination of goods and services.
Present versus Future Consumption

• We could use our resources and technology to produce for present or for future consumption.
  – Future? – added resources expand production in the future.

• Investment: Producing new plant and equipment (capital), plus changes in inventories.
Economic growth:

- An increase in output (real GDP).
- An expansion of production possibilities outward.
- Due to increased capital and technology.
Figure 1.5

Production possibilities increase with more resources and better technology.

- Production possibilities in 2013
- Production possibilities in 1900
Question 2: HOW to Produce?

• The second economic goal for every society is to find an optimal method of producing goods and services.
The FOR WHOM question focuses on how an economy’s output is distributed across members of society.
• The economic pie can be divided in several ways:
  – Distribution based on productive contributions.
  – Distribution based on need.
  – Some combination of productive contributions and need.
Incentives

- Distribution based on need rather than work effort may result in less work effort.
- There will be less output to distribute.
- The size of the pie will be smaller.
• There are conflicts and trade offs with every choice.
• Basic economic decisions can be made through the political process and using the market mechanism.
The Market Mechanism

• The use of market prices and sales to signal desired outputs (or resource allocations).

• Market sales and prices send a signal to producers about what mix of output consumers want.
• *Laissez faire* is the doctrine of “leave it alone.”
  – The market alone makes the basic economic decisions.
  – Nonintervention by government in the market mechanism.

• Adam Smith’s *The Wealth of Nations* (1776) promoted *laissez faire*. 
Central Planning

• The government decides what goods are produced, at what prices they are sold, and who gets them.

• This mechanism of choice is associated with Karl Marx.
Mixed Economies

• Economies that use *both* market and non-market signals to allocate goods and resources are *mixed* economies.

• This represents a combination of the other two systems.

• Most nations today are mixed economies.
Market Failure

• Markets don’t always produce the “right” mix of output.

• Market Failure:
  – The market mechanism does not generate the optimal (best possible) answers to the WHAT, HOW, and FOR WHOM questions.
Government Failure

• Occurs when government intervention fails to improve economic outcomes.
• Government will *not* necessarily offer better answers to the WHAT, HOW, and FOR WHOM questions than the market mechanism does.
• Government intervention might worsen the mix of output.
• It might even reduce the total amount of output through over-regulation.
• There is no guarantee that the visible hand of government will be any cleaner than the invisible hand of the marketplace.
Macro versus Micro

• **Macroeconomics** is the study of aggregate economic behavior, of the economy as a whole.

• **Microeconomics** is the study of individual behavior in the economy, of the components of the larger economy.
Theory versus Reality

• Reality is too complex to describe and explain in one course.

• Economists focus on basic relationships and use these to predict economic events and formulate economic policies.
Ceteris Paribus

• It is the assumption that nothing else is changing.
• It is an important part of “thinking like an economist.”
Politics versus Economics

• All policy decisions are ultimately a mix of politics and economic theory.
• President Obama has made it clear that he believes more government intervention and less market reliance is need to attain the right WHAT, HOW, and FOR WHOM answers.
There Is No Free Lunch

- Everything you get “for free” still has an opportunity cost.
- The resources it consumed could have been used to produce something else.
What We Learned

1. Scarcity results when our wants exceed our resources.

2. All products have an opportunity cost. We can produce more of A only if we produce less of B.

3. Every nation confronts the three basic questions: WHAT, HOW, and FOR WHOM to produce.
What We Learned

4. Market economies answer these questions by individual choice of consumers and producers; command economies answer by central planning.
5. Markets do not always produce optimum outcomes (market failure), but government intervention may not do any better (government failure).
Appendix: Using Graphs

• Graphs illustrate the relationship between two *variables*. 
• **Slope** can show the relationship between changes in study time and changes in grade-point average.

\[
\text{Slope} = \frac{\text{vertical distance between two points}}{\text{horizontal distance between two points}}
\]

\[
\text{Slope} = \frac{\text{the rise}}{\text{the run}}
\]
• When a curve *shifts*, the underlying relationship between the two variables has changed.
Figure A.2

A graph showing the relationship between study time (hours per week) and grade point average (GPA). The graph compares two grading systems: the old grading system and the new grading system. The old grading system is represented by a dashed line, while the new grading system is represented by a solid line. Key points on the graph include:

- Point S: (0, 0) representing 0 hours of study time and an F grade (GPA of 0).
- Point R: (8, 2) representing 8 hours of study time and a C grade (GPA of 2).
- Point T: (16, 4) representing 16 hours of study time and an A grade (GPA of 4).

The graph illustrates that as study time increases, GPA increases in both grading systems, but the new system offers a steeper gradient, indicating a more significant improvement in GPA for a given increase in study time.
Linear versus Nonlinear Curves

• A linear curve has a constant slope and is represented by a straight line.
• A nonlinear curve has a slope that changes.
Causation

• A graph is only a summary of empirical observations.
• It says nothing about cause and effect.
• The relationship shown in a graph, however, may be used to support a particular theory.