Chapter 02 Thinking Like an Economist

- This chapter discusses the field's methodology.

2.1 The Economist as Scientist

- Economists try to address their subject with a scientist's objectivity.
- Scientific method
  - The dispassionate development and testing of theories about how the world works

2.1.1 The Scientific Method: Observation, Theory, and More Observation

- In economics, conducting experiments is often impractical.
- Economists pay close attention to the natural experiments offered by history.
- Historical episodes
  - Give us insight into the economy of the past
  - Allow us to illustrate and evaluate economic theories of the present.

2.1.2 The Role of Assumptions

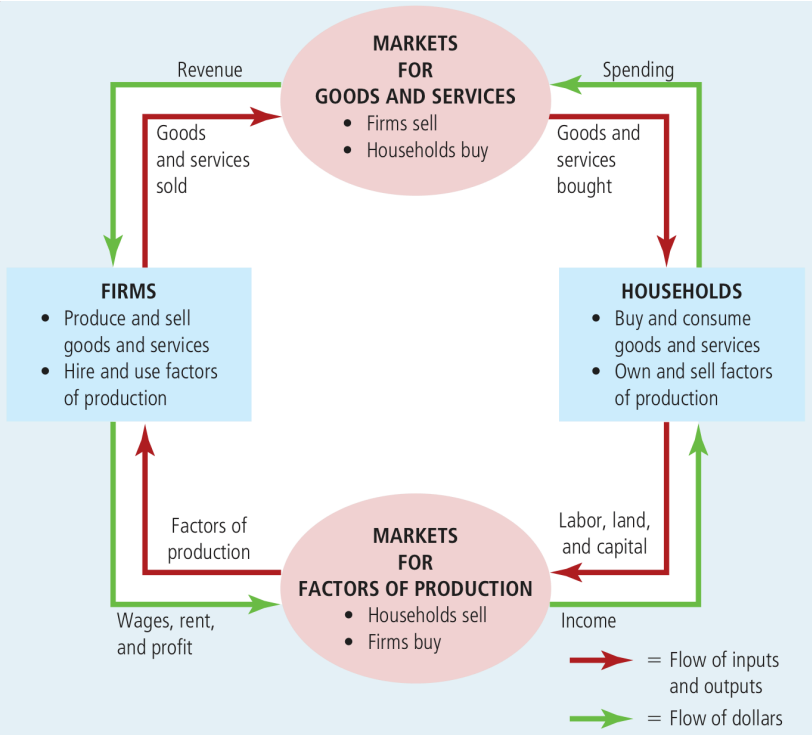
- Assumptions can simplify the complex world and make it easier to understand.
- Economists use different assumptions to answer different questions.
  - Just as a physicist uses different assumptions when studying falling marbles and falling beach balls, economists use different assumptions when studying the short-run and long-run effects of a change in the quantity of money.

2.1.3 Economic Models

- Mostly consist of diagrams and equations
- Omit many details to allow us to see what is truly important

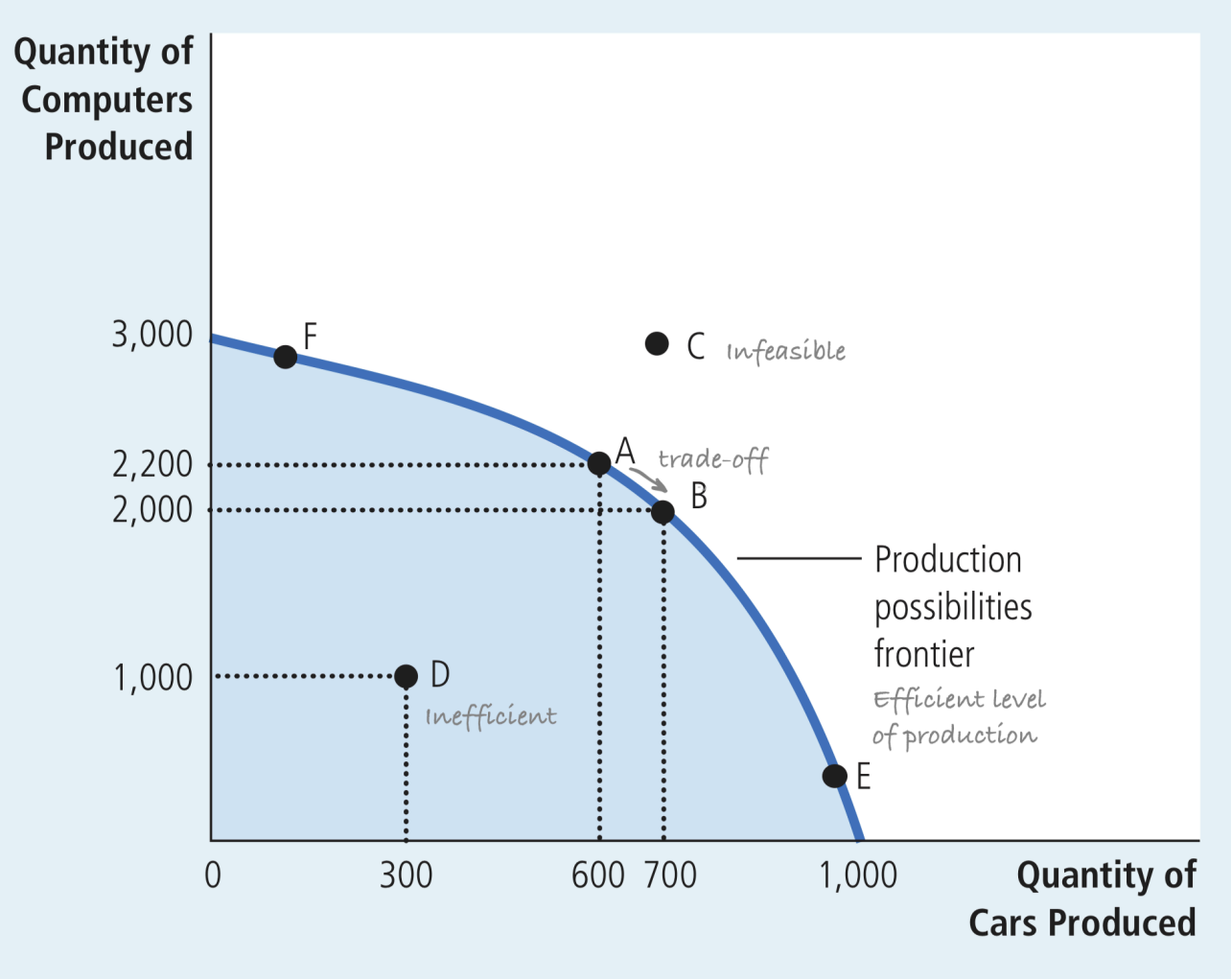
2.1.4 Our First Model: The Circular-Flow Diagram

- A visual model of the economy that shows how dollars flow through markets among households and firms.



2.1.5 Our Second Model: The Production Possibility Frontier

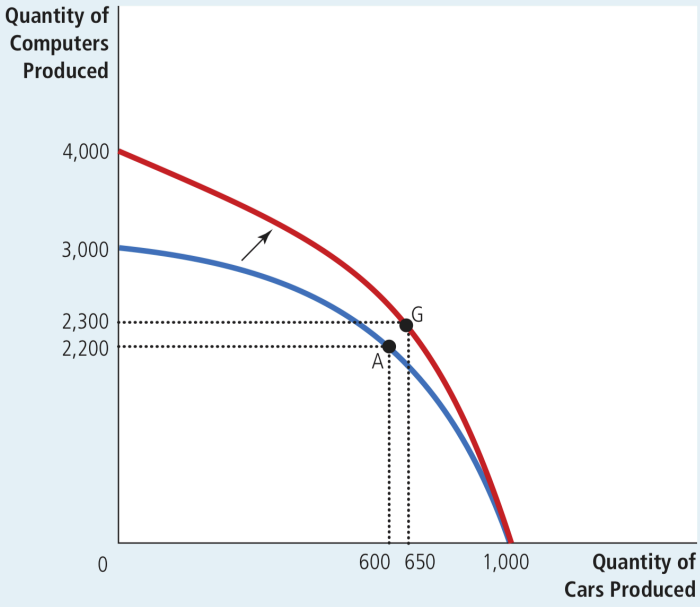
- The production possibilities frontier is a graph that shows the various combinations of output that the economy can possibly produce given the available factors of production and the available production technology.



- Because resources are scarce, not every conceivable outcome is feasible.
  - The economy cannot produce the amount of cars and computers represented by point C.
- Notice that the opportunity cost of a car equals the slope of the production possibilities frontier.
  - When the economy is using most of its resources to make cars, such as at point E, the resources best suited to making cars are already at work in the car industry. Producing an additional car means moving some of the best computer technicians out of the computer industry and turning them into autoworkers. As a result, producing an additional car requires a substantial loss of computer output. The opportunity cost of a car is high, and the frontier is steep.

FIGURE 3

A Shift in the Production Possibilities Frontier
A technological advance in the computer industry enables the economy to produce more computers for any given number of cars. As a result, the production possibilities frontier shifts outward. If the economy moves from point A to point G, then the production of both cars and computers increases.



2.1.6 Microeconomics & Macroeconomics

- Economics is studied on various levels.

1. Microeconomics

- The study of how households and firms make decisions and how they interact in specific markets

2. Macroeconomics

- The study of economy-wide phenomena, including inflation, unemployment, and economic growth

3. Links & Differences

- Intertwined
  - Changes in the overall economy arise from the decisions of millions of individuals
- Distinct
  - Address different questions ⇒ each field has its own set of models

2.2 The Economist as Policy Advisor

- When economists are trying to explain the world, they are scientists. When they are trying to help improve it, they are policy advisers.

2.2.1 Positive v. Normative Analysis

1. Positive statements

- Claims that attempt to *describe* the world as it is
- "How the world *is*".

2. Normative statements

- Claims that attempt to *prescribe* how the world should be
- "How the world *ought to be*".

3. Positive v. Normative Analysis

- Deciding what is good or bad policy is not just a matter of science. It also involves our views on ethics, religion, and political philosophy.

- Positive views about how the world works affect normative views about what policies are desirable.

2.2.2 Economists in Washington

- As advisors
  - The U.S. president receives advice from the Council of Economic Advisers (created in 1946).
- Their research and writings often affect policy indirectly.
  - Keynes' study often influences public policy now.

2.2.3 Why Economists' Advice Is Not Always Followed

- The process by which economic policy is made differs from the idealized policy process assumed in textbooks.
- Economists offer crucial input to the policy process, but their advice is only one ingredient of a complex recipe.

2.3 Why Economists Disagree

- Economists as a group are often criticized for giving conflicting advice to policymakers.
  - Economists may disagree about the validity of alternative positive theories of how the world works.
  - Economists may have different values and therefore different normative views about what government policy should aim to accomplish.

2.3.1 Differences in Scientific Judgements

- Science is an ongoing search to understand the world around us. It is not surprising that as the search continues, scientists sometimes disagree about the direction in which truth lies.
- Economists may disagree about the validity of alternative positive theories or about the size of important parameters that measure how economic variables are related.

2.3.2 Differences in Values

- Economists give conflicting advice because they have different values

2.3.3 Perception v. Reality

- Policies such as rent control and trade barriers persist even if the experts are united in their opposition
  - The realities of the political process stand as immovable obstacles.
  - Economists have not yet convinced enough of the public that these policies are undesirable.

2.4 Let's Get Going

> Economics is an easy subject at which very few excel. (John Maynard Keynes)

- With practice, you will become more and more accustomed to thinking like an economist.

Appendix: Graphing - A brief Review

A.1 Purpose of graphing

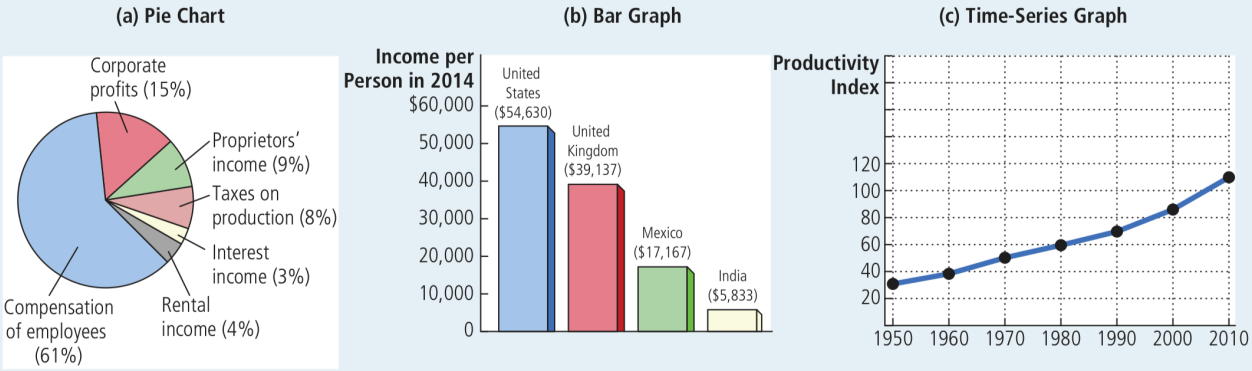
- When developing economic theories, graphs offer a visual way to express ideas that might be less clear if described with equations or words.
- When analyzing economic data, graphs provide a powerful way of finding and interpreting patterns
- An effective economist chooses the type of graph that best suits the purpose at hand.

A.2 Single-Variable Graphs

FIGURE A-1

Types of Graphs

The pie chart in panel (a) shows how U.S. national income is derived from various sources. The bar graph in panel (b) compares the average income in four countries. The time-series graph in panel (c) shows the productivity of labor in U.S. businesses over time.



- Useful in showing how a variable changes over time or across individuals

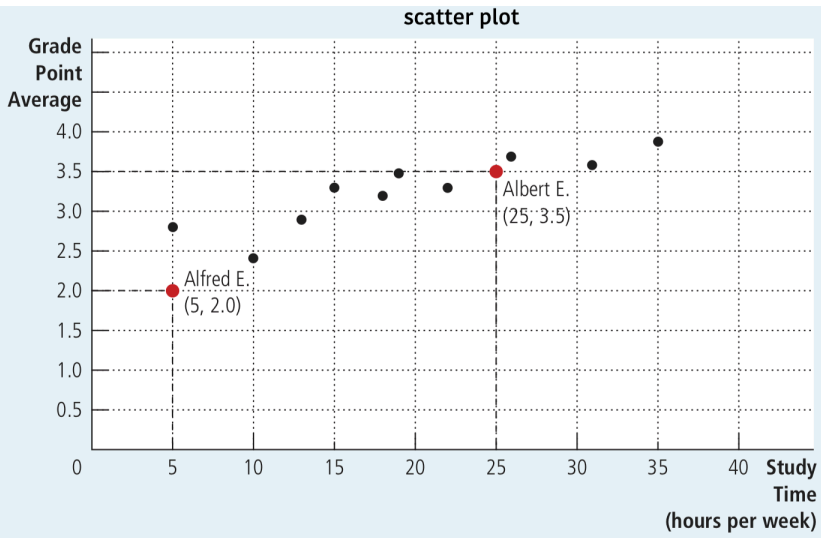
A.3 Two-Variable Graphs - The Coordinate System

- Economists are often concerned with the relationships between variables.

FIGURE A-2

Using the Coordinate System

Grade point average is measured on the vertical axis. Albert E., Alfred E., and their classmates are represented by various points. We can see from the graph that students who study more tend to get higher grades.



- The coordinate system makes the correlation between two variables easy to see.
  - Positive
  - Negative

A.4 Curves in the Coordinate System

- Economists prefer looking at how one variable affects another, holding everything else constant.

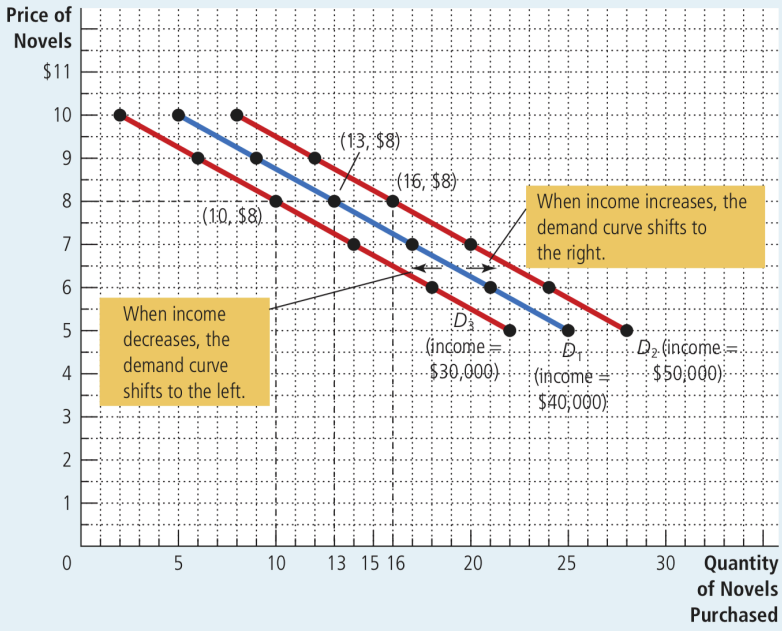


FIGURE A-4

Shifting Demand Curves

The location of Emma's demand curve for novels depends on how much income she earns. The more she earns, the more novels she will purchase at any given price, and the farther to the right her demand curve will lie. Curve D_1 represents Emma's original demand curve when her income is $40,000 per year. If her income rises to $50,000 per year, her demand curve shifts to D_2. If her income falls to $30,000 per year, her demand curve shifts to D_3.

- Important to distinguish between movements along a curve and shifts of a curve
  - When a relevant variable that is not named on either axis changes, the curve shifts.
  - When a variable on an axis of the graph changes, the curve does not shift. We read the change as a movement along the curve.

A.5 Slope

- The slope of a line is the ratio of the vertical distance covered to the horizontal distance covered as we move along the line.

$$\text{slope} = \frac{\Delta y}{\Delta x}$$

  - When answering questions about how much one variable responds to changes in another variable, we can use the concept of slope.
- A horizontal line has a slope of zero because in this case the y-variable never changes
- A vertical line is said to have an infinite slope because the y-variable can take any value without the x-variable changing at all.
- One of the properties of a straight line is that it has the same slope everywhere.

A.6 Cause & Effect

- Economists use graphs to argue about how one set of events causes another set of events.
- When graphing data from the real world, it is often more difficult to establish how one variable affects another.

1. Omitted Variables

- When you see a graph used to support an argument about cause and effect, it is important to ask whether the movements of an omitted variable could explain the results you see.

2. Reverse Causality

- We might decide that A causes B when in fact B causes A.
- It might seem that an easy way to determine the direction of causality is to examine which variable moves first.
  - Flawed because people change their behavior not in response to a change in their present conditions but in response to a change in their *expectations* of future conditions