# Study Guide for Baumol and Blinder's
# ECONOMICS

## Principles and Policy        Second Edition

## Craig Swan

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**Principles and Policy**  **Second Edition**

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**HBJ**

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# Introduction

This study guide is designed to be used with *Economics: Principles and Policy, Second Edition,* by William J. Baumol and Alan S. Blinder. This guide is not meant to be a substitute for the basic textbook; rather, experience has shown that conscientious use of a supplemental aid such as this can lead to greater learning and understanding of the course material. It might also improve your grade.

The chapters in this book parallel those in *Economics: Principles and Policy, Second Edition.* Each chapter here is a review of the material covered in the textbook chapters. You should first read and study each chapter in the textbook and then use the corresponding chapter in this book. "Use" is the correct verb, as each chapter in this book is designed for your *active* participation.

The material with which you will be working is organized into the following elements:

LEARNING OBJECTIVES
Each chapter starts with a set of behavioral learning objectives. These indicate the things you should be able to do upon completing each chapter.

IMPORTANT TERMS AND CONCEPTS
As one of the learning objectives for each chapter states, you should be able to "define, understand, and use correctly" the terms and concepts that are listed in this section. They parallel the Concepts for Review listed at the end of the text chapter. Being able to *define* these terms is likely to be important for your grade. But to really *understand* what they mean, rather than to temporarily memorize their definition, is even better. The ultimate test of your understanding will be your ability to *use correctly* the terms and concepts in real-life situations.

## CHAPTER REVIEW

Each review section has a summary discussion of the major points of each chapter. The reviews are designed to be used actively. Frequently you will need to supply the appropriate missing term or to choose between pairs of alternative words. Some of the missing words are quite specific and can be found in the list of important terms and concepts. At other times the answers are less clear-cut, as the following hypothetical example illustrates: "If people expect inflation at higher rates than before, nominal interest rates are likely to _____." Any of the following would be correct answers: increase, rise, go up. In cases like this, do not get concerned if the answer you choose is different from the one in the back of the book.

## BASIC EXERCISE

Most chapters have one or more exercises that are designed for you to use as a check on your understanding of a basic principle discussed in the chapter. These exercises tend to use simple arithmetic or geometry. While getting the correct answers is one measure of understanding, do not mistake the arithmetic manipulations for the economic content of the problems. A four-function hand calculator may make the arithmetic less burdensome.

## SELF-TESTS FOR UNDERSTANDING

Each chapter has a set of multiple choice and true-false questions for you to use as a further check on your understanding. It is important to know not only what the correct answers are but also why other answers are wrong. Especially when considering the true-false questions, be sure you understand why the false statements are false.

## APPENDIX

Many of the chapters in the text contain an appendix, which generally is designed to supplement the chapter content with material that is either a bit more difficult or that offers further exposition of a particular economic concept. There is material in this guide for all but one appendix in the text. In some cases the review material for the appendix parallels that for the chapter, including learning objectives, important terms and concepts, and so forth. In other cases the appendix material is reviewed here in the form of an additional exercise designed to illustrate the principles discussed in the appendix.

## SUPPLEMENTARY EXERCISE

Many chapters end with a supplementary exercise, which may be either an additional mathematical exercise or some suggestions that will allow you to use what you have learned in real-world situations. Some of the exercises use more advanced mathematics. Since many of these exercises review the material in the Basic Exercise, they illustrate how economists use mathematics and are included for those students with appropriate training. The most important thing is to understand the economic principles that underlie the Basic Exercise, something that does not depend upon advanced mathematics.

Being introduced to economics for the first time should be exciting and fun. For many of you it is likely to be hard work, but hard work does not have to be dull and uninteresting. Do not look for a pat set of answers with universal applicability. Economics does not offer answers but rather a way of looking at the world and thinking systematically about issues. John Maynard Keynes said:

> The theory of economics does not furnish a body of settled conclusions immediately applicable to policy. It is a method rather than a doctrine, an apparatus of the mind, a technique of thinking, which helps its possessor to draw correct conclusions.

Bertrand Russell, the distinguished British philosopher and mathematician, had considered studying economics but decided it was too easy. The Nobel prize-winning physicist Max Planck also considered studying economics but decided it was too hard. Whether, like Russell, you find economics easy or, like Planck, you find it hard, I trust that with the use of this guide you will find it relevant and exciting!

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# Contents

## Part 3  The Price System and the Invisible Hand

## Part 4  Big Business and Market Power

# What Is Economics All About?
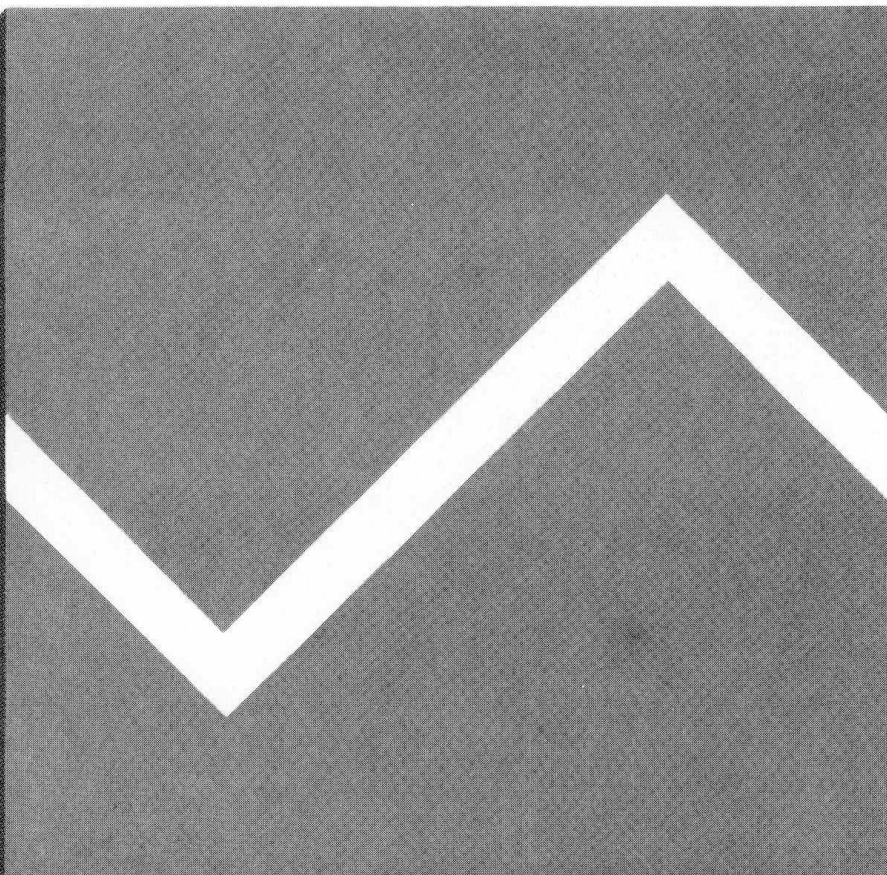
# 1

# What Is Economics?

1

## LEARNING OBJECTIVES

After completing the material in this chapter you should be able to:

- define, understand, and use correctly the terms and concepts listed below.
- explain the role of abstraction, or simplification, in economic theory.
- explain the role of theory as a guide to understanding real-world phenomena.
- explain why imperfect information and value judgments will always mean that economics cannot provide definitive answers to all social problems.

## IMPORTANT TERMS AND CONCEPTS

Comparative advantage
Marginal analysis
Marginal costs
Speculation
Abstraction and generalization
Theory
Model
Rationality
Opportunity cost
Money
Income

## CHAPTER REVIEW

Chapter 1 accomplishes two objectives: It introduces some of the types of problems economists concern themselves with; and it discusses the methods of economic analysis, in particular the role of theory in economics.

The problems discussed in the first part of the chapter have been chosen specifically to illustrate 12 basic economic issues to be remembered beyond the final exam. You should not only read this material now, but make sure to reexamine the list at the end of the course. Understanding the economic principles that underlie these 12 basic issues is the real final examination in economics as contrasted with the final examination for this course.

The methods of economic inquiry are perhaps best described as "eclectic," meaning that they are drawn from many sources and selected according to their usefulness to the subject matter. Economists borrow from all the social sciences in order to theorize about human behavior. They borrow from mathematics in order to express those theories concisely. And, finally, they borrow from statistics in order to make inferences from real-world data about hypotheses suggested by economic theory.

Economists are interested in understanding human behavior not only for its own sake, but also because of the policy implications of this knowledge. How can we know what to expect from changes resulting from public policy or business decisions unless we understand why people behave the way they do? As an example of all this, consider the 12 ideas discussed in the first part of this chapter. Each idea derives from economic theory. As you will learn, each idea also offers important insights into actual historical experience and is an important guide to the evaluation of future changes.

As in other scientific disciplines, theory in economics is an abstraction, or simplification, of innumerable complex relationships in the real world. When thinking about some aspects of behavior, say a family's spending decisions or why the price of wheat fluctuates so much, economists will build a model that attempts to explain the behavior under examination. The elements of the model are derived from economic theory. Economists study the model to see what hypotheses, or predictions, are suggested by the model. These can then be checked against real-world data. An economist's model will typically be built not with hammer and nails, but with pencil, paper, and computers. The appropriate degree of abstraction for an economic model is, to a large extent, determined by the problem at hand and is not something that one can specify in advance for all problems.

(1)     An important part of most economic models is the assumption that people's behavior is *rational*. Economists use the assumption of rationality to characterize (ends/means), not _____.
People's ultimate desires are determined by their own preferences. Economists do not make judgments about the rationality or irrationality of these preferences. But given these desires, economists usually assume that people act in an efficient and rational manner to satisfy these desires, subject of course to the information and resources available to them.

(2)     Economists clearly believe that they can make a significant contribution to the discussion and resolution of many important social issues. It is hoped that by the time you finish this course you will agree with this belief. At the same time you should realize that the contribution of economics is that it offers a way of looking at questions rather than a comprehensive set of answers to all questions. Economists will always have differences

of opinion when it comes to final policy recommendations because of incomplete _____

and different _____ judgments.

## SELF-TEST FOR
## FOR UNDERSTANDING

Circle T or F for True or False as appropriate.

1. Economic models are no good unless they include all the detail that characterizes the real world.
                                    T   F

2. Material in this text will reveal to you the true answer to many important social problems.
                                    T   F

3. Economists use the concept of rationality to characterize the means people use to achieve objectives, rather than the objectives themselves.
                                    T   F

4. Opportunity cost is measured by considering the next best alternative.
                                    T   F

**5.** Economists always try to build models of behavior that include as much detail as possible.      **T  F**

**6.** Economists' policy prescriptions will always differ because of incomplete information and different value judgments.      **T  F**

**7.** Theory and practical policy have nothing to do with each other.      **T  F**

# 2

# The Use and Misuse of Graphs

## LEARNING OBJECTIVES

After completing the material in this chapter you should be able to:

- define, understand, and use correctly the terms and concepts listed below.
- interpret various graphs:
    use a two-variable graph to determine what combinations of variables go together.
    use a three-variable graph to determine what combinations of the X and Y variables are consistent with the same value for the Z variable.
    use a time series graph to determine how a variable of interest has changed over time.
- construct two-variable, three-variable, and time series graphs given appropriate data.

- compute the slope of a straight line and explain what it measures.

- explain how to compute the slope of a curved line.

- explain how a 45° line can divide a graph into two regions, one in which the Y variable exceeds the X variable, and another in which the X variable exceeds the Y variable.

- explain the implication of each of the following:
    failure to adjust variables for changes in prices and/or population
    omitting the origin
    the use of different units
    the use of short time periods with unique features

## IMPORTANT TERMS
## AND CONCEPTS

Two-variable diagram

Horizontal and vertical axes

Origin of a graph

Slope of a straight or a curved line

Negative, positive, zero, and infinite slope

Tangent to a curve

Y-intercept

Ray through the origin

45° line

Contour maps

Time series graph

## CHAPTER REVIEW

Economists like to draw pictures, primarily various types of *graphs*. Your textbook and this study guide also make extensive use of graphs. There is nothing very difficult about graphs, but being sure you understand them from the beginning will help you avoid mistakes later on.

All the graphs we will be using start with two straight lines defining the edges of the graph, one on the bottom and one on the left side. These edges will usually have labels to indicate what is being measured in both

**(1)** the vertical and horizontal directions. The line on the bottom is called the (horizontal/vertical) axis, and the line

running up the side is called the _____ axis. The point at which the two lines meet

is called the _____. The variable measured along the horizontal axis is often called the X variable, while the term Y variable is often used to refer to the variable measured along the vertical axis.

Some graphs show the magnitude of something at different points in time, say gross national product, college enrollment, or grade point averages of college students. Such a graph will measure time along the hori-

**(2)** zontal axis and dollars, people, or grade point averages along the vertical axis. This sort of graph is called a

_____ _____ graph.

One does not always have to measure time along the horizontal axis. One could draw a picture plotting any two variables by measuring one variable on one axis and another variable on the other axis. Figure 2-1 is a two-variable diagram plotting expenditures on alcoholic beverages and ministers' salaries. Does this graph imply that wealthier clergymen are responsible for more drinking or does it imply that more drinking in general is increasing the demand and hence the salaries of clergymen? Most likely neither interpretation is correct; just because you can plot two variables together does not mean that one caused the other.

Many of the two-variable diagrams that you will encounter in introductory economics use *straight lines*, primarily for simplicity. An important characteristic of a straight line is its *slope*, which is measured by comparing differences between any two points. Specifically one measures the slope of a straight line by dividing the

**(3)** (horizontal/vertical) change along the line by the corresponding _____ change as we move to the right along the line. One can use the changes between any two points to compute the slope

because the slope of a straight line is _____. If the straight line shows that both the horizontal and vertical variables increase together, then the line is said to have a (positive/negative) slope; that is, the line slopes up to the right. If one variable decreases as the other variable increases, then the line is

said to have a _____ slope. A line with a zero slope shows

_____ change in the Y variable as the X variable changes.

There is a special type of straight line that passes through the origin of a graph. This is called a

**(4)** _____ through the origin. Its slope is measured in exactly the same way as the slope of any other straight line. A special type of ray is one that connects all points where the vertical and hori-

zontal variables are equal. If the vertical and horizontal variables are measured in the same units, then this line

has a slope of +1 and is called the _____ line.

(5)     Like straight lines, curved lines also have slopes, but the slope of a curved line is not constant. We measure the slope of a curved line at any point by the slope of the one straight line that just touches, or is

_____ to, the curved line at the point of interest.

       A third type of graph is used by economists as well as cartographers. Such a graph can represent three

(6)     dimensions on a diagram with only two axes by the use of _____ lines. A traditional application of such a graph in economics is a diagram that measures different inputs along the horizontal and vertical axes and then uses contour lines to show what different combinations of inputs can be used to produce the same amount of output.
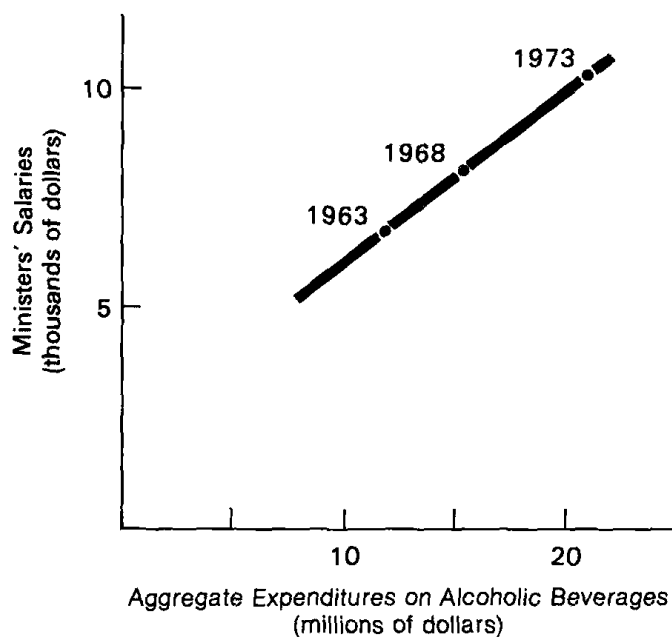


## FIGURE 2-1

### Ministers' Salaries and Expenditures on Alcohol

Source: National Council of Churches of Christ in the U.S.A.;
U.S. Commerce Department.

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## BASIC EXERCISES

### 1. Reading Graphs

The demand curve in Figure 2-2 represents the demand by colleges and universities for new Ph.D. economists in 1979.

a. What quantity will colleges and universities demand if they must pay a salary of $18,000?

_____

b. What happens to the quantity demanded if salaries decrease to $14,000? It (increases/

decreases) to _____.

c. What happens to the quantity demanded if salaries increase to $20,000? It (increases/

decreases) to _____.

### 2. Growth Trends

a. Look at Table 2-1, which has data on personal income after taxes. The data clearly show that between 1950 and 1980 aggregate personal income after taxes increased almost ninefold (1821.8 ÷ $206.6 = 8.82). Do you agree that individuals in 1980 were nine times richer than they were in 1950? Could they buy nine times as many goods and services as they could in 1950?
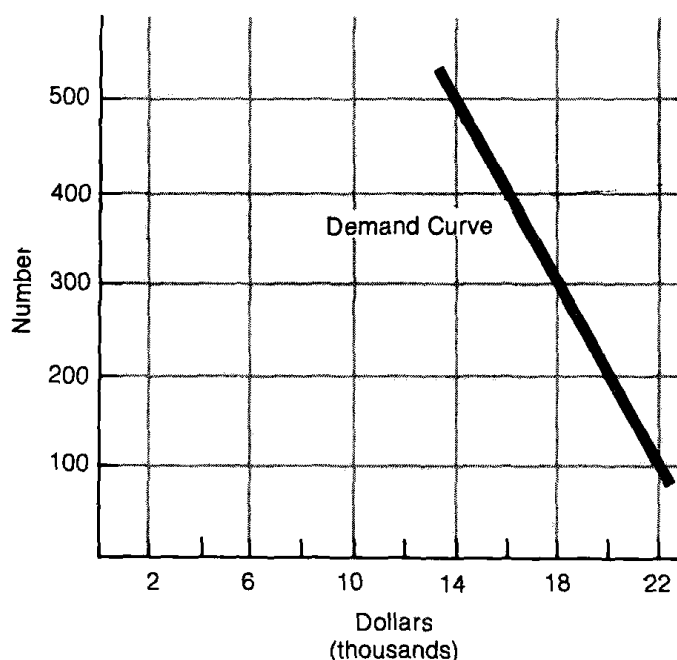


## FIGURE 2-2

### THE DEMAND FOR NEW Ph.D. ECONOMISTS

Source: This figure is based on research reported by W.L. Hansen et al., "Forecasting the Market for New Ph.D. Economists," American Economic Review, March 1980, pp. 49-63 and data provided by Professor Francis Boddy.