Instructor's Manual with Solutions Manual

Principles of Macroeconomics

FOURTH EDITION

N. Gregory Mankiw
Harvard University

Prepared by

Linda Ghent
Eastern Illinois University

THOMSON
SOUTH-WESTERN

Australia · Brazil · Canada · Mexico · Singapore · Spain · United Kingdom · United States

THOMSON
SOUTH-WESTERN

Instructor's Manual
Principles of Macroeconomics, 4th Edition

N. Gregory Mankiw
Prepared by Linda S. Ghent

VP/Editorial Director:
Jack W. Calhoun

Editor-in-Chief:
Alex von Rosenberg

Publisher:
Steve Momper

Sr. Acquisitions Editor:
Mike Worls

Developmental Editor:
Jane Tufts

Contributing Editors:
Sarah K. Dorger
Jennifer E. Baker

Sr. Marketing Manager:
Brian Joyner

Assoc. Marketing Communications Manager:
Sarah Greber

Sr. Production Project Manager:
Emily S. Gross

Manager of Technology, Editorial:
Vicky True

Technology Project Editor:
Dana Cowden

Web Coordinator:
Karen Schaffer

Sr. Manufacturing Coordinator:
Sandee Milewski

Production House:
OffCenter Concept House

Printer:
Darby Printing
Atlanta, GA

Assistant Editor:
Erin Berger

Ancillary Coordinator:
Erin M. Donohoe

Art Director:
Michelle Kunkler

Production Artist:
Patti Hudepohl

Internal and Cover Designer:
Stratton Design

Cover Illustration:
Tate Gallery, London/Art Resource, NY

Internal Illustrator:
William Low/Cobalt Illustration Services

Printed in the United States of America
1 2 3 4 5 09 08 07 06

ISBN 0-324-31907-X

For more information about our products, contact us at:

Thomson Learning Academic Resource Center

1-800-423-0563

Thomson Higher Education
5191 Natorp Boulevard
Mason, OH 45040
USA

Preface

The instructor's material that accompanies the five versions of Mankiw's *Principles of Economics, Fourth Edition* textbooks address the needs of both novice and experienced instructors. To meet the needs of these two groups, this *Instructor's Manual with Solutions Manual* comprises both chapter outlines and teaching tips as well as solutions to all of the questions and problems found in the textbook.

Linda Ghent of Eastern Illinois University prepared the main portion of each chapter including a synopsis of what is new in this edition compared to the third edition. Her work for each chapter also includes a list of learning objectives and key points. These items are followed by detailed chapter outlines that focus on the content found in the textbook. Helpful tips and icons occasionally interrupt these outlines. The bomb icon (Warnings) indicates areas where students may have particular difficulty with the material. The light bulb icon (Bright Ideas) offers ideas for presenting the material in a new or more thoughtful way. Also included in each chapter of the *Instructor's Manual* are classroom activities, developed in part by Charles Stull of Kalamazoo College. Each activity provides important details to assist in planning as well as clear instructions for leading the activity. Recommended "Points for Discussion" connect the activity to the relevant economic concepts discussed in the chapter.

Using these resources, an instructor can quickly review the chapter learning objectives and chapter summaries to make sure their lecture notes cover everything in the text chapter. In addition, the chapter outlines are designed as a base for creating lecture notes for novice instructors. They may also be used as a complete set of notes for more experienced instructors. Therefore, this supplement is also available electronically from the product support Web site (http://mankiw.swlearning.com).

For queries and grading, the *Instructor's Manual* contains solutions to exercises from the textbook. Dean Croushore (University of Richmond) prepared many of the solutions for the "Quick Quizzes," " Questions for Review," and "Problems and Applications" found in the textbook.

Comparative Table of Contents

Core	Micro	Macro	Essentials	Brief Macro
Part 1: Introduction	**Part 1**	**Part 1**	**Part 1**	**Part 1**
1 Ten Principles of Economics	1	1	1	1
2 Thinking Like an Economist	2	2	2	2
3 Interdependence and the Gains from Trade	3	3	3	3
Part 2: How Markets Work	**Part 2**	**Part 2**	**Part 2**	**Part 2**
4 The Market Forces of Supply and Demand	4	4	4	4
5 Elasticity and Its Application	5	5	5	
6 Supply, Demand, and Government Policies	6	6	6	
Part 3: Markets and Welfare	**Part 3**	**Part 3**	**Part 3**	
7 Consumers, Producers, and the Efficiency of Markets	7	7	7	
8 Application: The Costs of Taxation	8	8	8	
9 Application: International Trade	9	9	9	
Part 4: The Economics of the Public Sector	**Part 4**		**Part 4**	
10 Externalities	10		10	
11 Public Goods and Common Resources	11		11	
12 The Design of the Tax System	12			
Part 5: Firm Behavior and the Organization of Industry	**Part 5**		**Part 5**	
13 The Costs of Production	13		12	
14 Firms in Competitive Markets	14		13	
15 Monopoly	15		14	
16 Oligopoly	16			
17 Monopolistic Competition	17			
Part 6: The Economics of Labor Market	**Part 6**			
18 The Markets for the Factors of Production	18			
19 Earnings and Discrimination	19			
20 Income Inequality and Poverty	20			
Part 7: Topics for Further Study	**Part 7**			
21 The Theory of Consumer Choice	21			
22 Frontiers of Microeconomics	22			
Part 8: The Data of Macroeconomics		**Part 4**	**Part 6**	**Part 3**
23 Measuring a Nation's Income		10	15	5
24 Measuring the Cost of Living		11	16	6
Part 9: The Real Economy in the Long Run		**Part 5**	**Part 7**	**Part 4**
25 Production and Growth		12	17	7
26 Saving, Investment, and the Financial System		13	18	8
27 The Basic Tools of Finance		14	19	9
28 Unemployment		15	20	10
Part 10: Money and Prices in the Long Run		**Part 6**	**Part 8**	**Part 5**
29 The Monetary System		16	21	11
30 Money Growth and Inflation		17	22	12
Part 11: The Macroeconomics of Open Economics		**Part 7**		**Part 6**
31 Open-Economy Macroeconomics: Basic Concepts		18		13
32 A Macroeconomic Theory of the Open Economy		19		14
Part 12: Short-Run Economic Fluctuations		**Part 8**	**Part 9**	**Part 7**
33 Aggregate Demand and Aggregate Supply		20	23	15
34 The Influence of Monetary and Fiscal Policy on Aggregate Demand		21	24	16
35 The Short-Run Trade-off between Inflation and Unemployment		22		17
Part 13: Final Thoughts		**Part 9**		**Part 8**
36 Five Debates over Macroeconomic Policy		23		18

Contents

1 TEN PRINCIPLES OF ECONOMICS

WHAT'S NEW IN THE FOURTH EDITION:

The discussion of Principle #3, "Rational people think at the margin," is more thorough and has a new example. The discussions of Principle #4, "People respond to incentives," Principle #7, "Governments can sometimes improve market outcomes," and Principle #10, "Society faces a short-run trade-off between inflation and unemployment" have been clarified. Definitions for the terms "rational," "incentives," and "property rights" have been added.

LEARNING OBJECTIVES:

By the end of this chapter, students should understand:

- that economics is about the allocation of scarce resources.
- that individuals face trade-offs.
- the meaning of opportunity cost.
- how to use marginal reasoning when making decisions.
- how incentives affect people's behavior.
- 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.

CONTEXT AND PURPOSE:

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 will develop how economists approach problems while Chapter 3 will explain 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 works as a whole. Throughout the text, references will be made repeatedly to these ten principles.

KEY POINTS:

1. The fundamental lessons about individual decisionmaking are that people face trade-offs 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 behavior 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 trade-off between inflation and unemployment.

CHAPTER OUTLINE:

I. Introduction

> Begin by pointing out that economics is a subject that students must confront in their daily 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.

A. The word "economy" comes from the Greek word *oikonomos* meaning "one who manages a household."

B. This makes some sense because 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 understanding a 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 college freshmen and sophomores 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

Table 1

A. Principle #1: People Face Trade-offs

1. "There is no such thing as a free lunch." Making decisions requires trading one goal for another.

2. Examples include how students spend their time, how a family decides to spend its income, how the U.S. government spends tax dollars, and how regulations may protect the environment at a cost to firm owners.

3. A special example of a trade-off is the trade-off between efficiency and equity.

   a. Definition of **efficiency: the property of society getting the maximum benefits 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 Americans 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 trade-offs exist does not indicate what decisions should or will 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?

a. We cannot count room and board (at least all of the cost) because the student would have to pay for food and shelter even if he was not in school.

b. We would want to count the value of the student's time because he could be working for pay instead of attending classes and studying.

3. Definition of **<u>opportunity cost</u>: whatever must be given up in order 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.

C. Principle #3: Rational People Think at the Margin

1. Economists generally assume that people are rational.

a. Definition of **<u>rational</u>: systematically and purposefully doing the best you can to achieve your objectives.**

b. Consumers want to purchase the bundle of goods and services that allows them the greatest level of satisfaction given their incomes and the prices they face.

c. Firms want to produce the level of output that maximizes the profits they earn.

2. 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?

a. Definition of **<u>marginal changes</u>: small incremental adjustments to a plan of action.**

b. 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.

c. Another example: Why is water so cheap while diamonds are expensive? Because water is plentiful, the marginal benefit of an additional cup is small. Because diamonds are rare, the marginal benefit of an extra diamond is high.

D. Principle #4: People Respond to Incentives

1. Definition of **<u>incentive</u>: something that induces a person to act.**

2. Because rational people make decisions by weighing costs and benefits, their decisions may change in response to incentives.