



**Pearson International Edition**

**8<sup>th</sup>  
Edition**

# **International Economics**

**Theory & Policy**

*Krugman • Obstfeld*

# International Economics

THEORY & POLICY

EIGHTH EDITION

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—P.K.  
*For My Family*  
—M.O.

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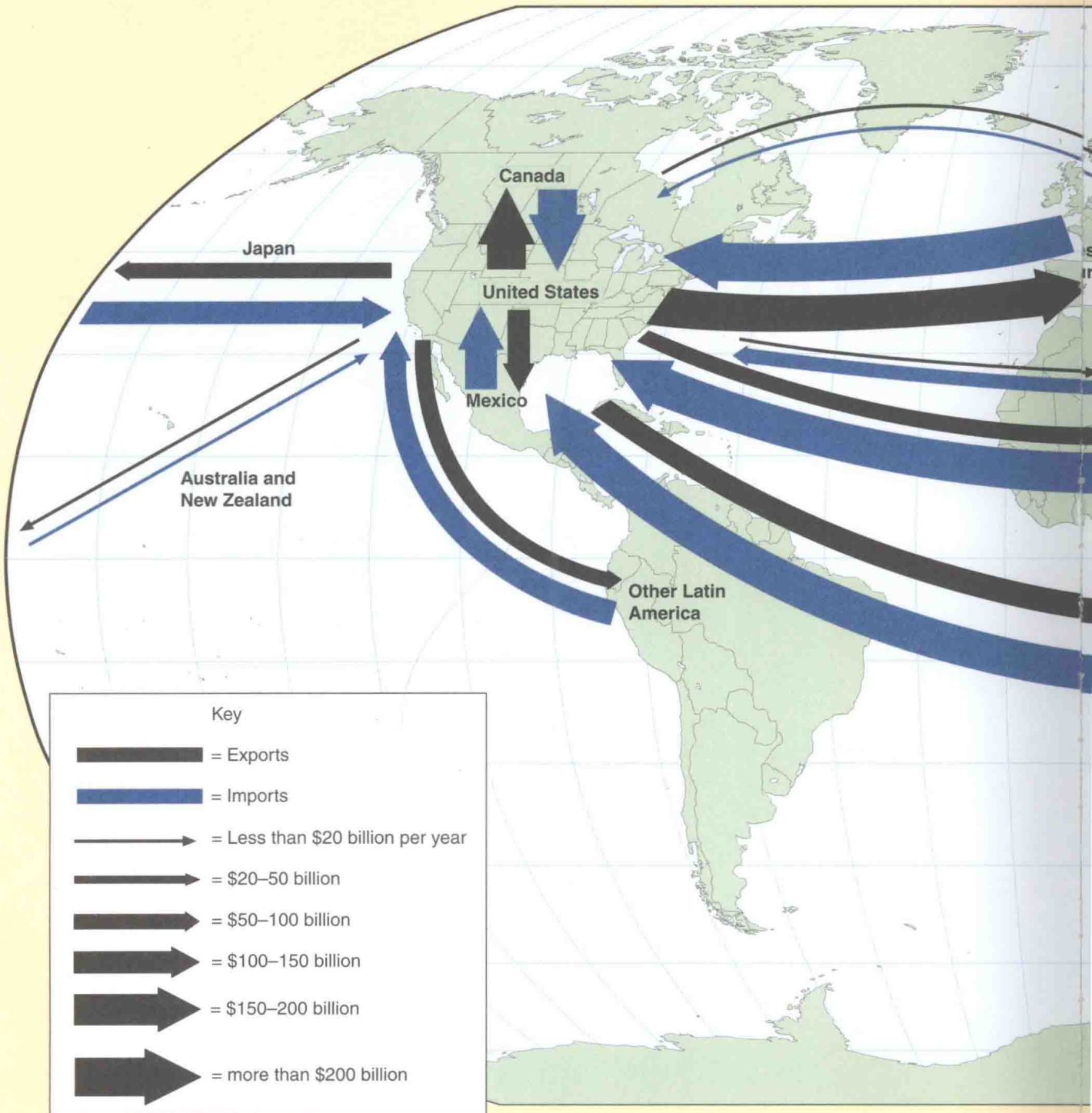
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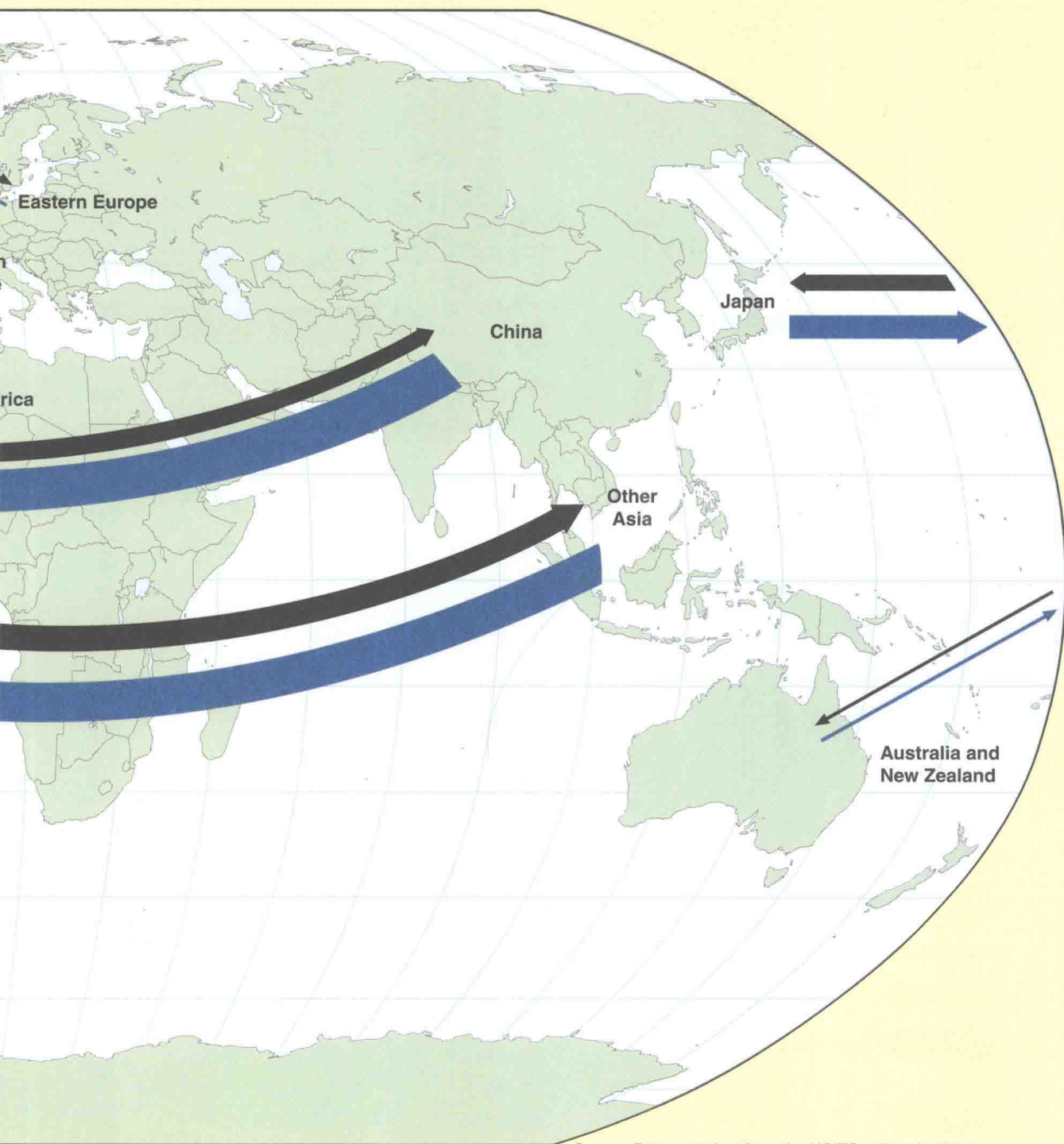
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# Trade Flows with the United States







Source: Data are taken from the USITC online database.

97254121

The Addition of a New Country to the World Economy

# International Economics

## THEORY & POLICY



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# Preface



This eighth edition of *International Economics: Theory & Policy* comes out at a time when events in the global economy have more influence over national policies and political debate than ever before. The world that emerged from World War II was one in which trade, financial, and even communication links between countries were limited. One decade into the 21st century, however, the picture is very different. Globalization has arrived, big time. International trade in goods and services has expanded steadily over the past six decades thanks to declines in shipping and communication costs, globally negotiated reductions in government trade barriers, the widespread outsourcing of production activities, and a greater awareness of foreign cultures and products. International trade in financial assets such as currencies, stocks, and bonds has expanded at a much faster pace even than international product trade—creating benefits for owners of wealth, but also risks of contagious financial instability. New and better communications technologies, notably the Internet, have revolutionized the way people in all countries obtain and exchange information. But perhaps the biggest recent change on the international scene is the emergence of China—a development that promises to redefine the international balance of economic and political power in the coming century.

Although the shape of the world economy today would have astounded people had they learned about it at the mid-point of the 20th century, the economic concerns that continue to cause international debate have not changed that much since they were first analyzed by economists more than two centuries ago. What are the merits of free trade among nations compared with protectionism? What causes countries to run trade surpluses or deficits with their trading partners, and how are such imbalances resolved over time? What causes banking and currency crises in open economies, and how should governments handle such convulsions? As always in international economics, the interplay of events and ideas has led to new modes of analysis. In turn, these analytical advances, however abstruse they may seem at first, ultimately do end up playing a major role in governmental policies, in international negotiations, and in people's everyday lives. Globalization has made citizens of all countries much more aware than ever before of the worldwide economic forces that influence their fortunes.

The idea of writing this book came out of our experience in teaching international economics to undergraduates and business students since the late 1970s. We perceived two main challenges in teaching. The first was to communicate to students the exciting intellectual advances in this dynamic field. The second was to show how the development of international economic theory has traditionally been shaped by the need to understand the changing world economy and analyze actual problems in international economic policy.

We found that published textbooks did not adequately meet these challenges. Too often, international economics textbooks confront students with a bewildering array of special models and assumptions from which basic lessons are difficult to extract. Because many of these special models are outmoded, students are left puzzled about the real-world relevance of the analysis. As a result, many textbooks often leave a gap between the somewhat antiquated material to be covered in class and the exciting issues that dominate current research and policy debates. That gap has widened dramatically as the importance of international economic problems—and enrollments in international economics courses—have grown.

This book is our attempt to provide an up-to-date and understandable analytical framework for illuminating current events and bringing the excitement of international economics



into the classroom. In analyzing both the real and monetary sides of the subject, our approach has been to build up, step by step, a simple, unified framework for communicating the grand traditional insights as well as the newest findings and approaches. To help the student grasp and retain the underlying logic of international economics, we motivate the theoretical development at each stage by pertinent data and policy questions.

## The Place of This Book in the Economics Curriculum

Students assimilate international economics most readily when it is presented as a method of analysis vitally linked to events in the world economy, rather than as a body of abstract theorems about abstract models. Our goal has therefore been to stress concepts and their application rather than theoretical formalism. Accordingly, the book does not presuppose an extensive background in economics. Students who have had a course in economic principles will find the book accessible, but students who have taken further courses in microeconomics or macroeconomics will find an abundant supply of new material. Specialized appendices and mathematical postscripts have been included to challenge the most advanced students.

We follow the standard practice of dividing the book into two halves, devoted to trade and to monetary questions. Although the trade and monetary portions of international economics are often treated as unrelated subjects, even within one textbook, similar themes and methods recur in both subfields. One example is the idea of gains from trade, which is important in understanding the effects of free trade in assets as well as free trade in goods. International borrowing and lending provide another example. The process by which countries trade present for future consumption is best explained in terms of comparative advantage (which is why we introduce it in the book's first half), but the resulting insights deepen understanding of the external macroeconomic problems of developing and developed economies alike. We have made it a point to illuminate connections between the trade and monetary areas when they arise.

At the same time, we have made sure that the book's two halves are completely self-contained. Thus, a one-semester course on trade theory can be based on Chapters 2 through 11, and a one-semester course on international monetary economics can be based on Chapters 12 through 22. If you adopt the book for a full-year course covering both subjects, however, you will find a treatment that does not leave students wondering why the principles underlying their work on trade theory have been discarded over the winter break.

## Some Distinctive Features of *International Economics: Theory & Policy*

This book covers the most important recent developments in international economics without shortchanging the enduring theoretical and historical insights that have traditionally formed the core of the subject. We have achieved this comprehensiveness by stressing how recent theories have evolved from earlier findings in response to an evolving world economy. Both the real trade portion of the book (Chapters 2 through 11) and the monetary portion (Chapters 12 through 22) are divided into a core of chapters focused on theory, followed by chapters applying the theory to major policy questions, past and current.

In Chapter 1 we describe in some detail how this book addresses the major themes of international economics. Here we emphasize several of the newer topics that previous authors failed to treat in a systematic way.

## Asset Market Approach to Exchange Rate Determination

The modern foreign exchange market and the determination of exchange rates by national interest rates and expectations are at the center of our account of open-economy macroeconomics. The main ingredient of the macroeconomic model we develop is the interest parity relation (augmented later by risk premiums). Among the topics we address using the model are exchange rate “overshooting”; inflation targeting; behavior of real exchange rates; balance-of-payments crises under fixed exchange rates; and the causes and effects of central bank intervention in the foreign exchange market.

## Increasing Returns and Market Structure

Even before discussing the role of comparative advantage in promoting international exchange and the associated welfare gains, we visit the forefront of theoretical and empirical research by setting out the gravity model of trade. We return to the research frontier (in Chapter 6) by explaining how increasing returns and product differentiation affect trade and welfare. The models explored in this discussion capture significant aspects of reality, such as intraindustry trade and shifts in trade patterns due to dynamic scale economies. The models show, too, that mutually beneficial trade need not be based on comparative advantage.

## Politics and Theory of Trade Policy

Starting in Chapter 4, we stress the effect of trade on income distribution as the key political factor behind restrictions on free trade. This emphasis makes it clear to students why the prescriptions of the standard welfare analysis of trade policy seldom prevail in practice. Chapter 11 explores the popular notion that governments should adopt activist trade policies aimed at encouraging sectors of the economy seen as crucial. The chapter includes a theoretical discussion of such trade policy based on simple ideas from game theory.

## International Macroeconomic Policy Coordination

Our discussion of international monetary experience (Chapters 18, 19, 20, and 22) stresses the theme that different exchange rate systems have led to different *policy coordination* problems for their members. Just as the competitive gold scramble of the interwar years showed how beggar-thy-neighbor policies can be self-defeating, the current float challenges national policymakers to recognize their interdependence and formulate policies cooperatively.

## The World Capital Market and Developing Countries

A broad discussion of the world capital market is given in Chapter 21, which takes up the welfare implications of international portfolio diversification as well as problems of prudential supervision of offshore financial institutions. Chapter 22 is devoted to the long-term growth prospects and to the specific macroeconomic stabilization and liberalization problems of industrializing and newly industrialized countries. The chapter reviews emerging market crises and places in historical perspective the interactions among developing country borrowers, developed country lenders, and official financial institutions such as the International Monetary Fund. Chapter 22 also reviews China’s exchange-rate policies and recent research on the persistence of poverty in the developing world.

## International Factor Movements

In Chapter 7 we emphasize the potential substitutability of international trade and international movements of factors of production. A feature in the chapter is our analysis of international borrowing and lending as *intertemporal trade*, that is, the exchange of present consumption for future consumption. We draw on the results of this analysis in the book's second half to throw light on the macroeconomic implications of the current account.

## New to the Eighth Edition

For this eighth edition of *International Economics: Theory & Policy*, we have updated the content and extensively revised several chapters. These revisions respond both to users' suggestions and to some important developments on the theoretical and practical sides of international economics. The most far-reaching changes are the following:

**Chapter 4, Resources, Comparative Advantage, and Income Distribution** The new version of this chapter incorporates the results of recent empirical work that dramatically confirms the relevance of the Heckscher-Ohlin model both to understanding trade between advanced and developing countries and to understanding trends in the patterns of trade of newly industrializing economies.

**Chapter 7, International Factor Movements** Immigration policy has become a key political issue in the United States; the new version of this chapter addresses the main economic issues in the U.S. immigration debate.

**Chapter 9, The Political Economy of Trade Policy** The new edition addresses the reasons for the apparent failure of the Doha Round and the implications of that failure for world trade policy.

**Chapter 10, Trade Policy in Developing Countries** A new box addresses the controversy over the role of trade liberalization in India's dramatic acceleration in economic growth.

**Chapter 11, Controversies in Trade Policy** A new section analyzes the major issues raised by growing concern over the relationship between globalization and the environment.

**Chapter 14, Money, Interest Rates, and Exchange Rates** This chapter now covers the practice of inflation targeting by central banks. Building on that discussion, the chapter analyzes recent evidence on how surprises in inflation affect exchange rates.

**Chapter 17, Fixed Exchange Rates and Foreign Exchange Intervention** Recent years have seen a sharp increase in countries' holdings of official international reserves, especially the reserves of emerging economies. In this revised edition, we bring new insights to an old topic that has returned to center stage, the demand for international reserves by national central banks.

**Chapter 19, Macroeconomic Policy and Coordination Under Floating Exchange Rates** This chapter now discusses the emergence of large global current-account imbalances in the 2000s, along with the implications for real-world interest rates and exchange rates.



**Chapter 22, Developing Countries: Growth, Crisis, and Reform** We have added to this chapter a detailed discussion of China's exchange rate policies and their macroeconomic implications. The exposition builds on the analysis of internal and external balance in Chapter 18.

In addition to these structural changes, we have updated the book in other ways to maintain current relevance. Thus we examine the role of external economies in interregional trade (Chapter 6); we discuss Asian markets for nondeliverable forward foreign exchange (Chapter 13); we analyze Canada's difficulty in functioning as an "optimum currency area" in the face of commodity price increases in world markets (Chapter 20); and we describe the global financial crisis that erupted in August 2007 as a result of subprime mortgage lending problems in the United States (Chapter 21).

## Learning Features

This book incorporates a number of special learning features that will maintain students' interest in the presentation and help them master its lessons.

### Case Studies

Theoretical discussions are often accompanied by case studies that perform the threefold role of reinforcing material covered earlier, illustrating its applicability in the real world, and providing important historical information.

### Special Boxes

Less central topics that nonetheless offer particularly vivid illustrations of points made in the text are treated in boxes. Among these are the political backdrops of Ricardo's and Hume's theories (pp. 76 and 510); the astonishing ability of disputes over banana trade to generate acrimony among countries far too cold to grow any of their own bananas (p. 241); Britain's reluctance to join the euro zone (p. 580); and the rapid accumulation of foreign exchange reserves by developing countries (p. 638).

### Captioned Diagrams

More than 200 diagrams are accompanied by descriptive captions that reinforce the discussion in the text and help the student in reviewing the material.

### Learning Goals

A list of essential concepts sets the stage for each chapter in the book. These learning goals help students assess their mastery of the material.

### Summary and Key Terms

Each chapter closes with a summary recapitulating the major points. Key terms and phrases appear in boldface type when they are introduced in the chapter and are listed at the end of each chapter. To further aid student review of the material, key terms are italicized when they appear in the chapter summary.

### Problems

Each chapter is followed by problems intended to test and solidify students' comprehension. The problems range from routine computational drills to "big picture" questions



suitable for classroom discussion. In many problems we ask students to apply what they have learned to real-world data or policy questions.

### Further Reading

For instructors who prefer to supplement the textbook with outside readings, and for students who wish to probe more deeply on their own, each chapter has an annotated bibliography that includes established classics as well as up-to-date examinations of recent issues.

## Student and Instructor Resources



**MyEconLab** is the premier online assessment and tutorial system, pairing rich online content with innovative learning tools. The MyEconLab course for the eighth edition of *International Economics* includes *all* end-of-chapter problems from the text, which can be easily assigned and automatically graded.

### Students and MyEconLab

This online homework and tutorial system puts students in control of their own learning through a suite of study and practice tools correlated with the online, interactive version of the textbook and other media tools. Within MyEconLab's structured environment, students practice what they learn, test their understanding, and then pursue a study plan that MyEconLab generates for them based on their performance on practice tests.

### Instructors and MyEconLab

MyEconLab provides flexible tools that allow instructors to easily and effectively customize online course materials to suit their needs. Instructors can create and assign tests, quizzes, or homework assignments. MyEconLab saves time by automatically grading all questions and tracking results in an online gradebook. MyEconLab can even grade assignments that require students to draw a graph.

After registering for MyEconLab instructors have access to downloadable supplements such as an instructor's manual, PowerPoint lecture notes, and a test bank. The test bank can also be used within MyEconLab, giving instructors ample material from which they can create assignments.

For advanced communication and customization, MyEconLab is delivered in CourseCompass. Instructors can upload course documents and assignments, and use advanced course management features. For more information about MyEconLab or to request an instructor access code, visit [www.myeconlab.com](http://www.myeconlab.com).

Additional **MyEconLab** resources include:

- *Animated Figures*. Key figures from the textbook are presented in step-by-step animations with audio explanations of the action.
- *eThemes of the Times*. Archived articles from *The New York Times*, correlated to each chapter of the textbook and paired with critical thinking questions.
- *Research Navigator* (CourseCompass version only). Extensive help on the research process and four exclusive databases of accredited and reliable source material including *The New York Times*, *The Financial Times*, and peer-reviewed journals.

The enhanced MyEconLab problems for *International Economics* were created by Galina Hale at the Federal Reserve Bank of San Francisco; Woo Jung at the University of Colorado, Denver; and Noel Lotz at the University of Tennessee, Knoxville. The animations were written by Thomas Bishop at California State University, Channel Islands. For more information, go to [www.myeconlab.com/krugman](http://www.myeconlab.com/krugman).

## Additional Supplementary Resources

A full range of additional supplementary materials to support teaching and learning accompanies this book.

- The *Study Guide*, written by Linda S. Goldberg of the Federal Reserve Bank of New York, Michael W. Klein of Tufts University, and Jay C. Shambaugh of Dartmouth College, aids students by providing a review of central concepts from the text, further illustrative examples, and additional practice problems.
- The *Online Instructor's Manual*—written by Linda S. Goldberg, Michael W. Klein, and Jay C. Shambaugh—includes chapter overviews, answers to the end-of-chapter problems, and suggestions for classroom presentation of the book's contents.
- The *Online Test Bank* offers a rich array of multiple-choice and essay questions, plus mathematical and graphing problems, for each textbook chapter. It is available in Word, PDF, and TestGen formats. This Test Bank was prepared by Mitchell H. Kellman of the City College of New York and Yochanan Shachmurove of the University of Pennsylvania, and carefully reviewed by Hyeongwoo Kim of Auburn University and Vera A. Tabakova of East Carolina University.
- The *Computerized Test Bank* reproduces the Test Bank material in the TestGen software that is available for Windows and Macintosh. With TestGen, instructors can easily edit existing questions, add questions, generate tests, and print the tests in variety of formats.
- The *Online PowerPoint Presentation with Art, Figures, & Lecture Notes* was revised by Thomas Bishop of California State University, Channel Islands. This resource contains all text figures and tables, and can be used for in-class presentations or as transparency masters.
- The *Instructor's Resource CD-ROM* contains electronic files of all Instructor's Resources, including the Instructor's Manual, Test Bank, Computerized Test Bank, and PowerPoint slides. A PowerPoint viewer is provided for those who do not have the full software program. The CD-ROM also holds the Computerized Test Bank in the TestGen-EQ and QuizMaster-EQ software programs, allowing for the easy creation of multiple-choice tests.
- The *Companion Web Site* at [www.aw-bc.com/krugman](http://www.aw-bc.com/krugman) offers Web Applications that link to Internet sites where students can read further on topics covered in the textbook, as well as chapter-by-chapter self-test quizzes.

Instructors can download supplements from a secure, instructor-only source via the Addison-Wesley Web Page ([www.pearsonhighered.com/irc](http://www.pearsonhighered.com/irc)).

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Although we have not been able to make each and every suggested change, we found reviewers' observations invaluable in revising the book. Obviously, we bear sole responsibility for its remaining shortcomings.

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