



**INTERNATIONAL ECONOMICS**

**THEORY AND POLICY**

*Fourth Edition*

**Paul R. Krugman**

**Maurice Obstfeld**

# International Economics

Theory and Policy

**Fourth Edition**

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 **ADDISON-WESLEY**

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An imprint of Addison Wesley Longman, Inc.

Reading, Massachusetts • Menlo Park, California • New York • Harlow, England  
Don Mills, Ontario • Sydney • Mexico City • Madrid • Amsterdam

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Printer and Binder: RR Donnelley & Sons Company  
Cover Printer: The Lehigh Press, Inc.

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## Library of Congress Cataloging-in-Publication Data

Krugman, Paul R.

International economics : theory and policy / Paul R. Krugman,  
Maurice Obstfeld. -- 4th ed.

p. cm.

Includes index.

ISBN 0-673-52497-3

1. International economic relations. 2. International finance.

I. Obstfeld, Maurice. II. Title.

HF 1359.K78 1996

337--dc20

96-25542

CIP

ISBN 0-673-52497-3

5678910—DOC—9998

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# Preface

The years since 1980 have brought a steady sequence of upheavals in economic relations among countries. Newly industrializing developing countries have seized from developed countries an important share of the world market for manufactured exports; a booming international capital market has forged new links among the world's financial centers but also raised new unease about global financial stability; wide swings in exchange rates and structural shifts in trade patterns have generated political pressures that gravely threaten the open international trading system built up so painstakingly after World War II; and, most recently, the countries of the former Soviet bloc have shaken off communist rule in the hope of establishing market economies open to international flows of commodities and capital. Even in the United States, which is more self-sufficient than nations with smaller economies, problems of international economic policy have assumed primacy and moved decisively to the newspapers' front pages.

Recent general developments in the world economy raise concerns that have preoccupied international economists for more than two centuries, such as the nature of the international adjustment mechanism and the merits of free trade compared with protection. As always in international economics, however, the interplay of events and ideas has led to new modes of analysis. Three notable examples of recent progress are the asset market approach to exchange rates; new theories of foreign trade and industrial location based on increasing returns and market structure rather than comparative advantage; and the intertemporal analysis of international capital flows, which has been useful both in refining the concept of "external balance" and in examining the determinants of developing country borrowing and default.

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 cur-

rent 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 the 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 or policy questions.

## **THE PLACE OF THIS BOOK IN THE ECONOMICS CURRICULUM**

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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 understood 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 23. 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 AND POLICY***

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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 23) 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”; 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**

After discussing the role of comparative advantage in promoting trade and gains from trade, we move to the frontier of recent research (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 intra-industry 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. We have also included in this chapter much of the material on regional economics that in the previous edition was placed in Chapter 8; reviews of that chapter indicated that a focus on agglomeration effects was helpful in explaining the nature of external economies but that the material did not seem to work well as a separate chapter.

## **POLITICS AND THEORY OF TRADE POLICY**

Starting in Chapter 3, 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 is focused on the currently popular notion that governments should adopt “strategic” trade policies aimed at encouraging sectors of the economy seen as crucial. The chapter also includes a theoretical discussion of strategic trade policy based on simple ideas from game theory.

## **INTERNATIONAL MACROECONOMIC POLICY COORDINATION**

Our discussion of international monetary experience (Chapters 18, 19, and 20) 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. Chapter 19 presents a detailed discussion of this very topical problem in the current system.

## **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 recent problems of prudential supervision of offshore financial institutions. Chapter 22 is devoted to the specific macroeconomic stabilization and liberalization problems of industrializing and newly industrialized countries. The chapter places in historical perspective the interactions among developing country borrowers, developed country lenders, and official financial institutions such as the International Monetary Fund. In addition, students will find a structured approach to the recent efforts at inflation and budgetary control 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 FOURTH EDITION**

For this fourth edition of *International Economics: Theory and Policy*, we have extensively redesigned several chapters. These changes 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** The effects of international trade on income distribution have moved in recent years from a largely academic question to an important policy issue: the simultaneous growth of exports from low-wage countries and income inequality in advanced countries has led to widespread concern that these phenomena are linked. The new version of the chapter offers a new approach to the factor proportions model that is organized around the debate over trade and income distribution.

**Chapter 5** While the growth of newly industrializing countries has primarily raised concerns about income distribution in the advanced nations, some observers have also argued that it has an adverse impact on overall real income. This dispute offers a useful way to motivate the discussion of trade and growth.

**Chapter 7** The policy discussion of international factor mobility has altered substantially in the United States, thanks mainly to two developments: growing concern about immigration and the reemergence of large-scale capital movements to developing countries. The revised chapter emphasizes both issues.

**Chapter 9** The most important development in trade policy since the third edition has been the completion of the Uruguay Round of trade negotiations. The chapter now contains an extended discussion of the round's achievements as well as its limitations. The chapter's discussion of the political economy of trade policy has also been updated to reflect the burgeoning theoretical literature in this area.

**Chapter 10** Discussion of trade policy and development is increasingly dominated by two facts: the continuing extraordinary growth in East Asia and the equally extraordinary shift toward free trade policies throughout the developing world. The new chapter is thus oriented toward this "post-import-substitution" world.

**Chapter 11** Both the language and, to a lesser extent, the content of calls for government intervention in trade have altered since earlier editions. The old debate over industrial policy has been replaced by a related but somewhat distinct debate about "competitiveness"; The debate has also to some extent shifted away from arguments about principles to a focus on the numbers. This chapter has been revised to reflect the changed language and tone of the discussion.

**Chapter 12** The treatment of national income accounting has been reorganized and condensed to allow students to move immediately to the open-economy case without loss of comprehension.

**Chapter 16** The chapter now describes how a government's attempts to exploit a short-run output-inflation trade-off can lead to an inflationary bias in its monetary policies. Also included is a new appendix linking the aggregate demand model in the chapter to the intertemporal analysis of borrowing and lending in Chapter 7.

**Chapter 18** Now covered in depth is the role of the international gold standard in spreading the Great Depression worldwide.

**Chapter 22** This heavily revised chapter puts less emphasis on the 1980s developing-country debt crisis than in previous editions. Instead the focus is on recent efforts by developing countries to restrain inflation, including the use of pegged exchange rates as "nominal anchors" in those efforts.

**Chapter 23** Events have moved along considerably in the transition economies since our last edition. Surprise developments include the failure of large-scale capital inflows to materialize for most transition economies and the massive "dollarization" of the Russian economy. We offer analysis of these new phenomena, with an emphasis on the interaction between political uncertainty and economic disappointments.

In addition to these structural changes, we have updated the book in other ways to maintain current relevance. Thus we link the discussion of the Ricardian model to the critiques of free trade by influential writers like Sir James Goldsmith; we track the surprising results of European integration (French consumers buying English sliced bread!); and we have revised the discussion of the politics of trade policy to reflect the surge of interesting new research in that area. We discuss the effect of Mexico's 1994 peso devaluation on its trade with the United States (Chapter 16); and we look at the advisability of currency-board monetary systems for developing countries (Chapter 22).

## **LEARNING FEATURES**

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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. 59 and 544); the surprising potential importance of NAFTA's effect on California's demand for water (p. 229); the astonishing ability of disputes over banana trade to generate acrimony among countries far too cold to grow any of their own (p. 244); the story of the Bolivian hyperinflation (p. 390); and the 1994 speculative attack on the Mexican peso (p. 470).

### **CAPTIONED DIAGRAMS**

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

### **SUMMARY AND KEY TERMS**

Each chapter closes with a summary recapitulating the major points. Key terms or 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've 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 which includes established classics as well as up-to-date examinations of recent issues.

## **STUDY GUIDE, INSTRUCTOR'S MANUAL, AND READER**

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*International Economics: Theory and Policy* is accompanied by a Study Guide written by Linda S. Goldberg of the Federal Reserve Bank of New York and Michael W. Klein of Tufts University. The Study Guide aids students by providing a review of central concepts from the text, further illustrative examples, and additional practice problems. An Instructor's Manual, also by Linda S. Goldberg and Michael W. Klein, includes chapter overviews, answers to the end-of-chapter problems, and suggestions for classroom presentation of the book's contents. The Study Guide and Instructor's Manual have been updated to reflect the changes in the fourth edition.

Also recommended for use with *International Economics: Theory and Policy* is *Current Issues in the International Economy: A Reader*, compiled by Linda Goldberg and Michael Klein. Along with topical readings in trade and finance, this reader includes a valuable supplementary section that contains information on the Uruguay Round negotiations and international data on key macroeconomic variables.

## **ACKNOWLEDGMENTS**

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Our primary debts are to Jane E. Tufts, the development editor, and Bruce Kaplan, the economics editor in charge of the project. Jane's judgment and skill have been reflected in all four editions of this book; we cannot thank her enough for her contributions. Bruce has been a valued adviser and advocate through three editions. Melonie Salvati's efforts as project manager are greatly appreciated. We thank the other editors who helped make the first three editions as good as they were.

We owe a special debt of gratitude to Matthew Jones, who painstakingly updated data, checked art proofs, and critiqued chapters. Annie Wai-kuen Shun provided sterling assistance. For constructive suggestions we thank Jaime Marquez of the Federal Reserve Board, Larry Schembri of Carleton University, Federico Sturzenegger of UCLA, and Giuseppe Tattara of the University of Venice.

Very helpful comments were received from the following reviewers:

Jaleel Ahmad, Concordia University  
Richard Ault, Auburn University  
George H. Borts, Brown University  
Francisco Carrada-Bravo, American Graduate School of International Management  
Ann Davis, Marist College  
Gopal C. Dorai, William Paterson College  
Gerald Epstein, University of Massachusetts at Amherst  
JoAnne Feeney, University of Colorado, Boulder  
Robert Foster, American Graduate School of International Management  
Diana Fuguitt, Eckerd College  
Byron Gangnes, University of Hawaii at Manoa  
Ranjeeta Ghiara, California State University, San Marcos  
Bodil Olai Hansen, Copenhagen Business School  
Henk Jager, University of Amsterdam  
Arvind Jaggi, Franklin & Marshall College

Mark Jelavich, Northwest Missouri State University  
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Dick vander Wal, Free University of Amsterdam

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.

*Paul Krugman*  
*Maurice Obstfeld*

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