

## Contents

	Preface	11
1	Introduction	19
	What Is International Economics About?	
	The Gains from Trade	
	The Pattern of Trade	
	Balance of Payments	
	Exchange Rate Determination	
	International Policy Coordination	
	The International Capital Market	26
	International Economics: Trade and Money	27
PART 1	International Trade Theory	28
	144 LLT L A O	0.0
2	World Trade: An Overview	28
	Who Trades with Whom?	
	Size Matters: The Gravity Model	
	Using the Gravity Model: Looking for Anomalies	
	The Changing Pattern of World Trade	
	Has the World Gotten Smaller?	
	What Do We Trade?	
	Service Offshoring	38
	Do Old Rules Still Apply?	39
	Summary	40
3	Labor Productivity and Comparative Advantage: The Ricardian Model	42
	The Concept of Comparative Advantage	
	A One-Factor Economy	
	Production Possibilities	
	Relative Prices and Supply	
	Trade in a One-Factor World  Determining the Relative Price after Trade	
	BOX: Comparative Advantage in Practice: The Case of Usain Bolt	
	The Gains from Trade	
	A Note on Relative Wages	
	BOX: Economic Isolation and Autarky Over Time and Over Space	54
	Misconceptions about Comparative Advantage	
	Productivity and Competitiveness	
	BOX: Do Wages Reflect Productivity?	
	The Pauper Labor Argument	
	Exploitation  Comparative Advantage with Many Goods	57
	Setting Up the Model	
	Relative Wages and Specialization	58 58
	Determining the Relative Wage in the Multigood Model	

	Empirical Evidence on the Ricardian Model	
4	Specific Factors and Income Distribution	69
	The Specific Factors Model	70
	BOX: What is a Specific Factor?	
	Assumptions of the Model	
	Production Possibilities	
	Prices, Wages, and Labor Allocation	
	Relative Prices and the Distribution of Income	79
	International Trade in the Specific Factors Model	81
	Income Distribution and the Gains from Trade	82
	The Political Economy of Trade: A Preliminary View	85
	The Politics of Trade Protection	86
	Trade and Unemployment	87
	CASE STUDY: U.S. Manufacturing Employment and Chinese Import Competition	88
	BOX: The Trump Trade War	
	International Labor Mobility	
	CASE STUDY: Wage and Social Benefits Convergence: Migrant Mobility in China	93
	CASE STUDY: Immigration and the U.S. Economy	
	Summary	
	APPENDIX TO CHAPTER 4: Further Details on Specific Factors	
	Marginal and Total Product	
	Relative Prices and the Distribution of Income	
5	Resources and Trade: The Heckscher-Ohlin Model	105
	Model of a Two-Factor Economy	
	Prices and Production	
	Choosing the Mix of Inputs	
	Factor Prices and Goods Prices	
	Resources and Output	
	Effects of International Trade between Two-Factor Economies	
	Relative Prices and the Pattern of Trade	
	Trade and the Distribution of Income	
	CASE STUDY: North-South Trade and Income Inequality	
	Skill-Biased Technological Change and Income Inequality	
	BOX: The Declining Labor Share of Income and Capital-Skill Complementarity	
	Factor-Price Equalization	
	Empirical Evidence on the Heckscher-Ohlin Model	
	Trade in Goods as a Substitute for Trade in Factors: Factor Content of Trade	
	Patterns of Exports between Developed and Developing Countries	
	Implications of the Tests	
	Summary	
	APPENDIX TO CHAPTER 5: Factor Prices, Goods Prices, and Production Decisions	137
	Choice of Technique	137
	Goods Prices and Factor Prices	
	More on Resources and Output	139
6	The Standard Trade Model	141
	A Standard Model of a Trading Economy	147
	Production Possibilities and Relative Supply	
	Relative Prices and Demand	
	The Welfare Effect of Changes in the Terms of Trade	146

Adding Transport Costs and Nontraded Goods.......62

	BOX: U.S. Consumer Gains from Chinese Imports	147
	Determining Relative Prices	147
	Economic Growth: A Shift of the RS Curve	
	Growth and the Production Possibility Frontier	
	World Relative Supply and the Terms of Trade	
	International Effects of Growth	151
	CASE STUDY: Has the Growth of Newly Industrialized Economies Hurt Advanced	
	Nations?	153
	BOX: The Exposure of Developing Countries to Terms of Trade Shocks and	
	the COVID-19 Pandemic	
	Tariffs and Export Subsidies: Simultaneous Shifts in RS and RD	
	Relative Demand and Supply Effects of a Tariff	
	Effects of an Export Subsidy	157
	Implications of Terms of Trade Effects: Who Gains and Who Loses?	157
	International Borrowing and Lending	
	Intertemporal Production Possibilities and Trade	
	The Real Interest Rate	
	Intertemporal Comparative Advantage	
	Summary	162
	APPENDIX TO CHAPTER 6: More on Intertemporal Trade	166
_		
7	External Economies of Scale and the International Location of Production	
	Economies of Scale and International Trade: An Overview	
	Economies of Scale and Market Structure	
	The Theory of External Economies	, 172
	Specialized Suppliers	172
	Labor Market Pooling	173
	Knowledge Spillovers	174
	External Economies and Market Equilibrium	
	External Economies and International Trade	176
	External Economies, Output, and Prices	
	External Economies and the Pattern of Trade	
	Trade and Welfare with External Economies	179
	BOX: Holding the World Together	180
	Dynamic Increasing Returns	
	Interregional Trade and Economic Geography	182
	BOX: The City and the Street	184
	Summary	185
5	Firms in the Global Economy: Export and Foreign Sourcing Decisions and	
5		100
	Multinational Enterprises	188
	The Theory of Imperfect Competition	
	Monopoly: A Brief Review	
	Monopolistic Competition	
	Monopolistic Competition and Trade	
	The Effects of Increased Market Size	197
	Gains from an Integrated Market: A Numerical Example	
	The Significance of Intra-Industry Trade	
	CASE STUDY: Automobile Intra-Industry Trade within ASEAN-4: 1998-2002	
	Firm Responses to Trade: Winners, Losers, and Industry Performance	
	Performance Differences across Producers	
	The Effects of Increased Market Size	
	Trade Costs and Export Decisions	209

	Dumping	212
	CASE STUDY: Antidumping as Protectionism	213
	Multinationals and Foreign Direct Investment	214
	Patterns of Foreign Direct Investment Flows around the World	
	CASE STUDY: COVID-19 and Foreign Direct Investment Flows around the World	
	Foreign Direct Investment and Foreign Sourcing Decisions	
	The Horizontal FDI Decision	
	The Foreign Sourcing Decision	
	The Outsourcing Decision: Make or Buy	
	BOX: Whose Trade Is It?	224
	CASE STUDY: Shipping Jobs Overseas? Offshoring and Labor Market Outcomes	
	in Germany	
	Consequences of Multinationals and Foreign Outsourcing	
	Summary	
	APPENDIX TO CHAPTER 8: Determining Marginal Revenue	233
PART 2	International Trade Policy	234
9	The Instruments of Trade Policy	234
	Basic Tariff Analysis	234
	Supply, Demand, and Trade in a Single Industry	
	Effects of a Tariff	
	Measuring the Amount of Protection	
	Costs and Benefits of a Tariff	
	Consumer and Producer Surplus	
	Measuring the Costs and Benefits	
	CASE STUDY: Winners and Losers of the Trump Trade War	
	BOX: Tariffs and Retaliation	
	Other Instruments of Trade Policy	
	Export Subsidies: Theory	
	BOX: The Unfriendly Skies: Settling the Longest Running Trade Dispute	
	Import Quotas: Theory	
	CASE STUDY: Tariff-Rate Quota Origin and its Application in Practice with Oilseeds	
	Voluntary Export Restraints	
	Local Content Requirements	
	BOX: Healthcare Protection with Local Content Requirements	258
	Other Trade Policy Instruments	
	The Effects of Trade Policy: A Summary	259
	Summary	260
	APPENDIX TO CHAPTER 9: Tariffs and Import Quotas in the Presence of Monopoly	264
	The Model with Free Trade	
	The Model with a Tariff	
	The Model with an Import Quota	266
	Comparing a Tariff and a Quota	266
10	The Political Economy of Trade Policy	268
	The Case for Free Trade	269
	Free Trade and Efficiency	
	Additional Gains from Free Trade	
	Rent Seeking	
	Political Argument for Free Trade	271

	National Welfare Arguments against Free Trade	
	The Terms of Trade Argument for a Tariff	272
	The Domestic Market Failure Argument against Free Trade	273
	How Convincing Is the Market Failure Argument?	
	Income Distribution and Trade Policy	
	Electoral Competition	277
	Collective Action	
	BOX: Politicians for Sale: Evidence from the 1990s	279
	Modeling the Political Process	280
	Who Gets Protected?	280
	International Negotiations and Trade Policy	282
	The Advantages of Negotiation	282
	International Trade Agreements: A Brief History	
	The Uruguay Round	286
	Trade Liberalization	
	Administrative Reforms: From the GATT to the WTO	287
	Benefits and Costs	288
	BOX: Settling a Dispute—and Creating One	289
	CASE STUDY: Testing the WTO's Metal	290
	The End of Trade Agreements?	291
	BOX: Do Agricultural Subsidies Hurt the Third World?	
	Preferential Trading Agreements	
	BOX: Free Trade Area Versus Customs Union	
	BOX: Brexit	
	CASE STUDY: Trade Diversion in South America	
	The Trans-Pacific Partnership	
	Summary	
	2	
	APPENDIX TO CHAPTER 10: Proving That the Optimum Tariff Is Positive  Demand and Supply	
	The Tariff and Prices	
	The Tariff and Domestic Welfare	
	The faint and Domestic Wenate	505
11	Trade Policy in Developing Countries	305
	Import-Substituting Industrialization	
	The Infant Industry Argument	
	Promoting Manufacturing through Protection	
	CASE STUDY: Export-Led Strategy	310
	Results of Favoring Manufacturing: Problems of Import-Substituting	
	Industrialization	311
	Trade Liberalization since 1985	312
	Trade and Growth: Takeoff in Asia	
	BOX: India's Boom	316
	Summary	317
12	Controversies in Trade Policy	319
12		
	Sophisticated Arguments for Activist Trade Policy	
	Technology and Externalities	320
	Imperfect Competition and Strategic Trade Policy	
	BOX: A Warning From Intel's Founder	
	CASE STUDY: When the Chips Were Up	
	Globalization and Low-Wage Labor	
	The Anti-Globalization Movement	
	Trade and Wages Revisited	329

Labor Standards and Trade Negotiations	331
Environmental and Cultural Issues	331
The WTO and National Independence	332
CASE STUDY: A Tragedy in Bangladesh	333
Globalization and the Environment	334
Globalization, Growth, and Pollution	334
The Problem of "Pollution Havens"	336
The Carbon Tariff Dispute	337
Trade Shocks and Their Impact on Communities	338
Summary	339
Mathematical Postscripts	342
Postscript to Chapter 5: The Factor-Proportions Model	342
Factor Prices and Costs	
Goods Prices and Factor Prices	344
Factor Supplies and Outputs	345
Postscript to Chapter 6: The Trading World Economy	346
Supply, Demand, and Equilibrium	
Supply, Demand, and the Stability of Equilibrium	348
Effects of Changes in Supply and Demand	
Economic Growth	351
A Transfer of Income	352
A Tariff	353
Postscript to Chapter 8: The Monopolistic Competition Model	354
Merchandise Trade Flows with the United States (in 2018 U.S. dollars)	356
Gross National Product per Capita (in 2019 U.S. dollars)	
r	
Index	360



## Preface

Nothing illustrates better than the COVID-19 pandemic how movements of people, flows of data, and commerce connect our interdependent world. Because pathogens do not respect national borders, the SARS-CoV-2 virus caused a global economic shock and a worldwide downturn, sending governments throughout the world scrambling for policies to stop the spread of the disease while supporting their economies. As this book went to press, the crisis was still underway, with the arrival of several effective vaccines giving hope of a road back to normalcy. Many lessons will be drawn from the recent pandemic experience, but one is the importance of an international perspective for analyzing events of worldwide economic significance and countries' responses. The purpose of this book is to equip students with intellectual tools for understanding the economic implications of global interdependence.

## What's New in the Twelfth Edition

We have thoroughly 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 2, World Trade: An Overview The world attained a high degree of economic interdependence by the eve of World War I over a century ago, but governments retreated behind trade barriers amid the Great Depression of the interwar period. A renewed trend toward economic opening—the "second great globalization"—commenced after World War II. This revised chapter uses new data to provide a better picture of long-term trends in globalization, highlighting how the world reached historically unprecedented levels of economic interconnection only after 1990.
- Chapter 4, Specific Factors and Income Distribution Import competition from developing countries—especially from China—is often singled out both in the press and by politicians as the main culprit for declines in manufacturing employment in the United States. This chapter updates our case study on the potential links between these two trends. It also updates our discussion of the politics of restrictions on trade in sugar. A new box introduces our coverage of the restrictive trade policies of the U.S. Trump administration starting in 2017—President Trump's trade war.
- Chapter 6, The Standard Trade Model The chapter includes a new case study on the gains to U.S. consumers from Chinese imports. A new box covers the impact of terms of trade shocks on developing countries and in particular the experience during the COVID-19 pandemic.
- Chapter 7, External Economies of Scale and the International Location of Production
  Featured in this revised chapter is a new emphasis on financial centers (notably
  New York and London), along with discussion of the impacts of Brexit and COVID-19.
- Chapter 8, Firms in the Global Economy: Export and Foreign Sourcing Decisions, and Multinational Enterprises Increasingly, the goods we consume are produced in "Global Value Chains" that stretch around the world. The chapter features an extended firm-level trade model that describes how firms make global sourcing decisions. A related new empirical box details the foreign sourcing decisions of U.S. manufacturing firms.