

THE EMERGENCE OF CHINA

Opportunities and Challenges for Latin America and the Caribbean

Robert Devlin, Antoni Esteveordal, and Andrés Rodríguez-Clare
Editors



**David Rockefeller Center for Latin American Studies
Harvard University**

This page intentionally left blank

THE EMERGENCE OF CHINA

Opportunities and Challenges for Latin America and the Caribbean

Robert Devlin
Antoni Estevadeordal
Andrés Rodríguez-Clare
Editors

Inter-American Development Bank
David Rockefeller Center for Latin American Studies
Harvard University

©2006 Inter-American Development Bank
1300 New York Avenue, N.W.
Washington, D.C. 20577

Copyright © by the Inter-American Development Bank. All rights reserved. No part of this book may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, recording, or by information storage or retrieval system, without permission from the IDB.

Produced by the IDB Office of External Relations

To order this book, contact:

IDB Bookstore

Tel: (202) 623-1753

Fax: (202) 623-1709

E-mail: idb-books@iadb.org

www.iadb.org/pub

The views and opinions expressed in this publication are those of the authors and do not necessarily reflect the official position of the Inter-American Development Bank.

Cataloging in Publication data provided by the
Inter American Development Bank
Felipe Herrera Library

The emergence of China : opportunities and challenges for Latin America and the Caribbean / Robert Devlin, Antoni Estevadeordal, Andrés Rodríguez-Clare, editors.

p. cm.

Includes bibliographical references.

ISBN: 1597820229

LCCN: 2006921516

1. Competition, International. 2. Economic integration. 3. Investment, Foreign. 4. Textile industry—Latin America. 5. China—Economic planning. 6. Argentina—Economic planning. 7. Brazil—Economic planning. 8. Chile—Economic planning. 9. Mexico—Economic planning. I. Devlin, Robert. II. Estevadeordal, Antoni. III. Rodríguez-Clare, Andrés. IV. Inter-American Development Bank. Integration and Regional Programs Dept. V. Title.

338.6048 E447--dc22

Acknowledgments

Robert Devlin was Deputy Manager of the Integration and Regional Programs Department of the Inter-American Development Bank at the time of writing; Antoni Estevadeordal is Principal Advisor of the Integration and Regional Programs Department; and Andrés Rodríguez-Clare was a Consultant in the Research Department at the time of writing. As editors of the book, we organized and wrote the study, but also drew on inputs and support from colleagues in our respective departments of the Bank as well as on background papers we contracted especially for the study. When material in a background paper has been drawn upon in a particular chapter, the author and paper are cited in the references for the part of the book in which the chapter appears.

Among our Bank colleagues we would like to thank a number of people. In the Integration and Regional Programs Department, we appreciated the support of María de la Paz Covarrubias, Andrew Crawley, Jaime Granados, Ernesto López Córdova, Alexandra Olmedo, Marcolo Paiva Abreu, Matthew Shearer, Mariana Sobral de Elia, Kati Suominen, Ricardo Vera, and Christopher Vignoles. A special thanks goes to Mauricio Mesquita Moreira, who provided us with extensive material on China's sources of competitiveness. In the Research Department, we would like to thank Paul Auerbach, Eduardo Lora, Carolina Mandalaoui, Alejandro Micco, Danielken Molina, and Ernesto Stein. Manuel Agosin from Regional Department 2 of the Bank is also to be thanked. The Office of External Relations was in charge of the editorial production of the book.

We also want to thank a number of authors outside the Bank for their helpful background papers: Rogelio Arellano, Shahid Javed Burki, Sebastián Claro, Arturo Condo, Luis Figueroa, Carlos Galperin, Gustavo Girado, John Hewitt, David Hummels, Marcos Jank, Mario Jales, Mauricio Jenkins, Valeria Lentini, Ricardo Monge Gonzalez, Luis Morales, Barry Naughton, Luis Obando, Luis Reyes, Pablo Rodas, Eduardo Rodríguez Diez, Neandro Saavedra, Peter Schott, Gangadhar P. Shukla, Joseph Tham, and Shunli Yao.

Nohra Rey de Marulanda and Guillermo Calvo, Managers of the Integration and Regional Programs Department and the Research Department, respectively, were very supportive of this effort. Much is owed to Enrique V. Iglesias, who was President of the Bank during the preparation of the study, for his foresight in timely anticipating the importance of China's emergence for Latin America and the Caribbean and requesting that the study be undertaken.

A first draft of the study was presented in a conference at the Bank's headquarters in October 2004 with the participation of the Governor of China's central bank and then again in Beijing in December 2004 in a conference jointly organized with the China Development Research Foundation and the Asian Development Bank Institute.

Finally, the opinions expressed in this book are the editors' and not necessarily those of the Bank.

Robert Devlin
Antoni Estevadeordal
Andrés Rodríguez-Clare
Washington, D.C.

Contents

Index of Topics by Chapter	vii
Introduction	xv
Overview of the Book	xxi
I Background on China's Economy	
1 A Snapshot of China's Economic Performance	3
2 An Overview of Policies behind China's Performance.	17
II Competing with China in Global Trade	
3 Some Stylized Facts on China's Trade	63
4 Why China's Trade Performance Is So Exceptional.	89
5 How China and Latin America Compete in the Global Marketplace	109
III Foreign Direct Investment	
6 The Surge of FDI to China: Should Latin America Be Concerned?	151
IV The Case of Textiles and Apparel	
7 China and the Future of Latin America's Textile Sector.	175
V Conclusion	
8 Where Does Latin America Go from Here?	195
Appendix: Country Case Studies.	231

This page intentionally left blank

Index of Topics by Chapter

Introduction	xv
Overview of the Book	xxi
Overview of China's Economy	xxi
Adapting a Strategic Vision to the Marketplace	xxi
China's Trade Performance Is Going Upscale	xxiii
Assets Driving China's Bottom-Line Performance	xxiii
How China and Latin America Compete in the Global Marketplace	xxiv
Is China's FDI Gain a Latin American Loss?	xxv
China and the Future of Latin American Textiles	xxvi
Latin America Looks Forward	xxvii
I Background on China's Economy	
1 A Snapshot of China's Economic Performance	3
2 An Overview of Policies behind China's Performance	17
Initial Conditions	18
The Reforms	19
Strategic Characteristics of Policy Implementation	26
Stress, Problems, and Challenges	37
Annex I.1 Productivity Growth	43
Annex I.2 Savings Patterns	47
Annex I.3 Foreign-Invested Enterprises in Industrial Production and Value Added	51
References	57
II Competing with China in Global Trade	
3 Some Stylized Facts on China's Trade	63
China's Trade in Comparative Perspective	63
An Overview of China's Trade over the Past Two Decades	64
A Highly Dynamic and Diversified Export Pattern	77
The Rising Technology Content of Exports and the Pattern of Production	82
Implications of China's Changing Export Basket	86

4	Why China's Trade Performance Is So Exceptional	89
	Comparative Advantage: The Role of Factor Endowments	89
	The Comparative Advantage of Size	93
	The Costs of Distance	94
	China's Trade Policy Regime	101
5	How China and Latin America Compete in the Global Marketplace	109
	Market Share and Product Penetration	109
	Similarity in Export Baskets	117
	Growing Bilateral Trade Linkages between Latin America and China	125
	Annex II.1 Export Promotion Policies in China	131
	Annex II.2 Pro-competitiveness Institutions in China	137
	Annex II.3 China's WTO Accession Commitments	141
	References	145
 III Foreign Direct Investment		
6	The Surge of FDI to China: Should Latin America Be Concerned?	151
	Introduction	151
	The Evolution of FDI in Latin America: A Qualitative Exploration . . .	154
	Are China and Latin America Competing in a Zero-Sum Game for FDI?	156
	Can Costa Rica Keep Its Export-Processing Zones from Unraveling? . .	164
	References	171
 IV The Case of Textiles and Apparel		
7	China and the Future of Latin America's Textile Sector	175
	The Textile Sector in Mexico and the Caribbean Basin	180
	The China Challenge	182
	Why Is China So Competitive?	185
	Latin American Advantages: Geography and Market Access to the United States	187
	References	191
 V Conclusion		
8	Where Does Latin America Go from Here?	195
	The Starting Point: What Is the Future Evolution of the Chinese Economy?	195
	What China's Emergence Means for Latin America	197
	Is Latin America Prepared to Cope with Chinese Competition?	209
	Toward a Renewed Policy Framework to Compete	213
	Some Policy Areas That Support Competitiveness and Upgrading . . .	217
	References	227

Appendix: Country Case Studies

Implications of China's Emergence in the Global Economy for

Latin America: The Cases of Argentina, Brazil, Chile, and Mexico . . .	233
The Case of Argentina	233
The Case of Brazil	238
The Case of Chile	242
The Case of Mexico	246
References	251

Boxes

2.1 China's Opening to Foreign Direct Investment and Accession to the World Trade Organization	23
2.2 The Physical Infrastructure Boom	30
2.3 Evolution of China's Industrial Policy	32
2.4 Evolution of China's Technological Policy	34
5.1 A Closer Look at Trade Competition between China and Mexico	124
5.2 Brazil–China Relations in Agriculture	128
6.1 Chinese Foreign Direct Investment in Latin America	165
7.1 Textile Sector	190
8.1 Some Policies Specific to Textiles and Apparel	223

Figures

1.1 A Narrowing Output Gap between China and Latin America, 1970s–2003	3
1.2 Money and Quasi Money in China and Latin America, 1970s–2003	7
1.3 Domestic Credit by the Banking Sector in China and Latin America, 1990–2003	7
1.4 Tax Revenue in China and Latin America, 1990–2001	8
1.5 Trade Openness in China and Latin America, 1970s–2003	9
1.6 Trade and Current Account Balances in China and Latin America, 1970s–2003	10
1.7 Composition of Net Capital Flows in China and Latin American Countries, 1990–2002	11
1.8 FDI Flows in China and the World, 1980–2003	12
1.9 Ranking of Total FDI Flows to Host Economies, 2000–2003	13
1.10 Growth in China's Gross Domestic Product, 2000–2004	15
1.11 Change in Chinese Consumer Prices, 2000–2004	15
1.12 Growth of Fixed-Asset Investments in China, 2000–2004	16
2.1 China: Ownership of Town and Village Enterprises, 1985–2002	20
2.2 China: Physical Infrastructure Investment, 1981–2002	29
2.3 Public Education Expenditure Per Student, 1990s	31

I.1.1	China, Brazil, and Mexico: Labor Productivity in Manufacturing, 1990–2002	44
I.1.2	China, Brazil, and Mexico: Labor Productivity at the Firm Level	44
I.2.1	Savings, Investment, and Growth	49
I.2.2	Private and Government Savings, and FDI	49
I.3.1	Growth of Industrial Value Added in China	53
I.3.2	Rates of Growth of Industrial Value Added in Brazil, China, and India . . .	54
3.1a	Comparative Growth of Chinese and World Trade, 1970–2004	64
3.1b	China's Export Performance versus the East Asian Experience	64
3.2a	Chinese Exports by Broad Economic Sectors, 1987–2003	65
3.2b	Chinese Imports by Broad Economic Sectors, 1987–2003	65
3.3	Chinese Exports by Selected Industries, 1987–2003	66
3.4	Chinese Imports by Selected Industries, 1987–2003	67
3.5	Chinese Total Exports by Region, 1987 and 2003	71
3.6	Chinese Sectoral Exports by Region, 1987 and 2003	72
3.7	Chinese Total Imports by Region, 1987 and 2003	75
3.8	Chinese Sectoral Imports by Region, 1987 and 2003	75
3.9	Export Composition by Dynamism of Demand in 1987 and 2001, by Country/Region	77
3.10a	China's Growth and Market Share in World Trade's Most Dynamic Exports, 1991–2001	79
3.10b	Mexico's Growth and Market Share in World Trade's Most Dynamic Exports, 1991–2001	80
3.10c	Growth and Market Share of Latin America (Excluding Mexico) in World Trade's Most Dynamic Exports, 1991–2001	81
3.11	Export Concentration in China, Latin America, and the OECD, 1995 and 2002	82
3.12a	Technology Content of Chinese Exports, 1987–2003	83
3.12b	Technology Content of Latin American Exports, 1987–2003	84
3.13a	Chinese Exports by Final Use, 1995–2003	84
3.13b	Latin American Exports by Final Use, 1995–2003	85
3.14a	Chinese Imports by Final Use, 1995–2003	85
3.14b	Latin American Imports by Final Use, 1995–2003	86
4.1	China and Latin America in Inter- and Intra-national Specialization Cones	90
4.2	Ad Valorem Shipping Costs in Latin America Relative to China, 1990–2002	98
4.3	Average Number of Country Memberships in Selected Free Trade Agreements and Regional Trade Agreements in 2001	102
4.4	Structure of Chinese Most-Favored-Nation Tariffs, 1997 and 2001	104
4.5	Tariff Profiles for China, the United States, the European Union, Japan, Brazil, and Mexico, 2001	104

4.6	Sectoral Frequency of International and Domestic Tariff Peaks in China, 2001	105
5.1	U.S. Market Export Similarity Index between China and Selected Regions and Countries, 1972–2001	119
5.2	Export Similarity between Selected Latin American Countries and East Asia in the U.S. Market, 1992–2002	123
5.3	Latin American Trade with China, 1985–2003	126
5.4	Top Three Products Exported to China by Argentina, Brazil, and Chile in 2003	127
6.1	FDI Inflows from OECD Countries, 1980–2001	152
6.2	FDI Stock, 1982–2002	152
6.3	FDI Flows Per Capita, 1980–2001	153
6.4	FDI Flows, 1980–2003	153
6.5	Changing Sources of FDI, 1986–2000	158
6.6a	Cumulative FDI Flows by Source to China as of 2000	159
6.6b	Cumulative FDI Flows by Source to Latin America, 1997–2001	159
6.7	FDI Source Coincidence Index for China, 1997–2001	160
6.8	Trends in Japanese FDI Flows to Latin America and China and Hong Kong, 1990–2001	160
6.9	Trends in U.S. FDI Flows to Latin America and China and Hong Kong, 1990–2001	161
6.10	Composition of U.S. FDI Flows by Sector to Latin America and China, 1998–2003	162
6.11	U.S. FDI Sector Coincidence Index	162
6.12	Evaluation of Labor Variables in Costa Rica versus China	167
6.13	Most-Influential Elements Affecting FDI Location Decisions	168
7.1	Central American Exports, 1980–2001	175
7.2	Textiles and Apparel Share of Countries' Total Merchandise Exports, 2001	176
7.3	Textiles and Apparel Employment Share of Total Manufacturing Employment in China and Six Latin American Countries, 2003	177
7.4	Textiles and Apparel Employment in Eight Latin American Countries, 2003	177
7.5	Shares of Textiles and Apparel Exports to the United States, 2001	178
7.6	Latin American Countries' Preference-Applied Textile Exports to the United States, 2003	182
7.7	Effects of Quota Elimination for U.S. Imported Brassieres	183
7.8	Labor Force Cost for Clothing, Including Benefits, 2002	186
7.9	Labor Force Cost for Textiles, Including Benefits, 2002	186
7.10	Electricity Costs in China and Eight Latin American Countries, 2002–03	187
8.1	Historical Estimates of China's GDP Relative to That of Others	196
8.2	GDP Per Capita Annual Growth in China, East Asia, and Latin America	198

8.3	Average Nominal Annual Manufacturing Wages in China, Brazil, and Mexico	203
8.4	Educational Attainment of People Aged 25 and Over in Latin America, China, and East Asia in 2000	205
8.5	Knowledge Index for Latin America and Selected Countries, 1995 and 1998–2002	206
8.6	Real Average Lending Rates for Selected Countries, 1990–2003	209
8.7	Latin America’s Competitive Assets	210

Tables

1.1	GDP Growth in China and Selected Developing Regions, 1970s–2003	4
1.2	GDP Composition in China and Latin America, 1970s–2003	5
1.3	Composition of Aggregate Demand in China and Latin America, 1970s–2003	5
1.4	Domestic Savings in China and Latin America, 1970s–2003	6
1.5	Consumer Price Changes in China and Latin America, 1980s–2003	6
1.6	Comparative Annual Export and Import Growth of Goods and Services, 1970s–2003	9
1.7	Direction of Chinese Trade by Regions and Countries, 1980s–2003	10
1.8	Foreign Direct Investment in China and Latin America, 1970s–2003	12
1.9	External Debt and International Reserves in China and Latin America, 1970s–2003	13
2.1	Funds Raised in China’s Domestic Financial Market, 2000–2002	25
I.2.1	Gross Domestic Investment and Savings for Selected Countries, 1965 and 2002	47
I.3.1	Select Infrastructure and Technology Parameters from China, Brazil, and India	53
3.1	Total Shares and Growth Rates of Products in the Four Fastest-Growing Chinese Export Sectors, 1990–2003	68
3.2	Total Shares and Growth Rates of Products in the Five Fastest-Growing Chinese Import Sectors, 1990–2003	70
3.3	China’s Leading Export Partners in 1985, 1995, and 2002	73
3.4	China’s Leading Import Sources in 1985, 1995, and 2002	76
4.1	Relative Endowments for Country Groupings and China	91
4.2	China’s Position within Country-Grouping Relative Endowment Distributions	92
4.3	Interregional Endowment Disparities within China	93
4.4	Liner Vessel Itineraries (Examples)	101
5.1a	U.S. Import-Value Market Share by Region and Year, 1972–2001	111
5.1b	U.S. Import-Value Market Share by Country, Industry, and Year, 1972–2001	112

5.2	Sample of Products by Industry, Using the Standard International Trade Classification	113
5.3	U.S. Trading Partners with Largest Gains in Manufacturing Market Share, 1972–2001	114
5.4a	Product Penetration by Country Groupings and Year, 1972–2001	115
5.4b	Product Penetration by Country, Industry, and Year, 1972–2001	116
5.5	U.S. Trading Partners with Largest Gains in Manufacturing Product Penetration, 1972–2001	118
5.6	Regional and OECD Export Similarity with China, 1972–2001	119
5.7	Manufacturing Sector Contributions to Total Manufacturing Export Similarity with China, 1972–2001	120
6.1	FDI from Source Countries to El Salvador, Honduras, and Nicaragua	169
7.1	Export Concentration by Stage of U.S. Quota Elimination	184
7.2	Clothes Manufacturing Cost by Country	185
7.3	Comparative Shipping Costs to the United States, 2003	188
7.4	Maritime Travel Days to the United States	188

This page intentionally left blank

Introduction

Southeast Asia has been an important hub of economic growth and export development in the world economy since the mid-1960s. Japan led the way with its post-Second World War transformation into an economic powerhouse, and was soon joined by a group of developing countries commonly called the “Asian Tigers.” The original Tigers, including the Republic of Korea, Hong Kong, Singapore, and Taiwan, were followed by a second wave of East Asian countries as Malaysia, Indonesia, and Thailand emerged to post impressive economic growth and export records. China loomed in the background, undergoing many transformations that began to attract wider notice in the 1990s. Since 2000, China’s economy has been the focus of worldwide attention. Barely a day passes without a major world newspaper reporting on economic developments in China.

Except for a few countries, Latin America and the Caribbean’s economic links with East Asia traditionally have been unremarkable, easy to overlook in considering the region’s international economic profile. This is changing quickly since China’s emergence globally has significant implications for the world economy and for virtually all Latin American economies.

China’s size, rapid growth, external openness, and trade performance are being felt everywhere in Latin America but perceived differently. South American commodity producers see China mostly as a new market lifting export volumes and world prices. Mexico and the Caribbean Basin, on the other hand, perceive a potent competitor at home and in third markets for many of the goods they produce and export. And everyone wonders whether China’s massive attraction of foreign direct investment (FDI) will siphon off flows to the region.

This book makes a first and necessarily preliminary assessment of the strategic implications—the opportunities and the challenges—that China’s economic performance has for growth and development in Latin America, now and in the near term. A vast array of topics could be broached. Here the focus is mostly on trade and investment, which are the areas of most immediate potential impact. Other important areas of interest that could affect the region, such as the sustainability of China’s macroeconomic policy and growth, exchange rates, external finance, and so on, are not addressed in great detail.

The book is divided into five parts. Part I provides contextual background with an overview of the Chinese economy and the country’s economic policy and strategy for development. Part II extensively analyzes the key question of whether China’s grow-

ing penetration of world markets threatens or benefits Latin American countries. In particular, it examines trade links between China and Latin America, identifies areas of competition and complementarity in third markets, and assesses sources of trade competitiveness. It also reviews selected Latin American trade policy responses to the opportunities and challenges of China’s new prominence. Part III examines the implications for flows of FDI to the region and whether diversion of capital is a serious problem. Data on FDI flows are analyzed, as are survey results of foreign investors in a Central American country on the factors deemed to be important in locating in China versus Latin America. Part IV zeroes in on China’s potential impact on one sector with elimination of the Agreement on Textiles and Clothing in 2005, an issue of critical importance to countries in Central America and the Caribbean. Part V offers some conclusions, spotlighting the challenges China poses and the strengths Latin America commands. A framework for developing strategic policy responses to address weaknesses is outlined. Finally, the Appendix presents digests of several case studies on the impact of and response to China by individual countries.

It should be noted that although Hong Kong is now part of China, all data and analysis in this study, unless otherwise indicated, refer only to mainland China. Another caveat concerns data quality. Much discussion is being raised about the accuracy of some data on China as continuing improvements are made in data collection that prompt closer evaluation. This study does not enter that debate; it draws largely on official national or multilateral data sources.



China, P. R.
Mainland: Basic Indicators

	1990–94	1995–99	2000	2001	2002	2003
National accounts						
	Annual percentage change					
GDP	12.4	8.3	8.0	7.5	8.0	9.1
GDP per capita	10.7	7.3	7.3	6.7	7.3	8.4
Exports goods and services	15.6	10.8	30.6	9.6	29.4	22.7
Imports goods and services	24.3	9.2	24.5	10.8	27.5	31.0
Consumer prices ^a	10.4	5.2	0.3	0.5	–0.8	1.2
National accounts						
	Share of GDP (%)					
Final consumption	60.3	57.9	61.0	59.1	56.6	56.8
Household consumption	47.4	46.0	47.9	45.7	43.4	44.1
General government consumption	12.8	11.9	13.1	13.4	13.2	12.7
Gross domestic savings	39.7	42.1	39.0	40.9	43.4	43.2
Gross fixed capital formation	31.5	34.8	36.5	37.8	40.2	42.2
Exports goods and services	19.8	22.5	25.9	25.5	28.9	34.4
Imports goods and services	18.1	19.1	23.2	23.1	25.9	31.8
Exports, net	1.7	3.4	2.7	2.4	3.0	1.0
External current account	1.4	2.1	1.9	1.5	2.8	3.3
Fiscal stance						
Overall fiscal balance	–1.0	–2.4	–3.6	–2.9	–3.0	–2.5
Central government fiscal balance	1.9	1.9	1.8	3.3	3.5	3.8
Bank money and finance^a						
Money	42.6	46.4	61.0	62.6	71.0	74.1
Quasi money	50.5	77.2	91.1	96.1	111.5	117.5
Bank claims on government	3.0	5.0	8.2	13.1	14.8	13.3
Bank claims on other sectors	92.1	103.9	124.7	123.7	139.7	148.0
National accounts						
	Billions of dollars					
GDP (constant 1995)	504.9	833.4	1,041.2	1,119.3	1,208.9	1,318.9
GDP per capita ^b	433.5	676.8	825.0	880.0	944.0	1,024.0
Exports goods and services	85.6	195.1	279.6	299.4	365.4	485.0
Imports goods and services	78.8	164.9	250.7	271.3	328.0	448.9
External sector^a						
Balance on goods	3.9	33.3	34.5	34.0	44.2	44.7
Balance on services	0.7	–3.9	–5.6	–5.9	–6.8	–8.6
Balance on current account	5.4	19.7	20.5	17.4	35.4	45.9
Balance on cap. and fin. account ^c	–5.4	–19.7	–20.5	–17.4	–35.4	–45.9
Direct investment, net	13.6	38.3	37.5	37.4	46.8	47.2
Gross reserves (excluding gold)	33.8	126.4	168.3	215.6	291.1	408.2
Total external debt	74.9	137.9	145.7	170.1	171.3	193.6
Total FDI inward stock ^d	52.7	222.3	348.3	396.7	447.9	501.5

(continued on next page)

China, P. R. Mainland: Basic Indicators						
	1990–94	1995–99	2000	2001	2002	2003
Memorandum						
Internal reserves (in months of imports)	6.3	8.5	7.4	8.8	10.2	10.8
External debt/GDP	17.5	15.9	13.5	14.5	13.6	13.7
External debt/exports goods and services ^e	92.6	72.9	52.1	56.8	46.0	39.9
Short-term debt/ total external debt	17.8	16.4	9.0	24.5	32.6	39.8
Long-term debt/ total external debt	82.0	83.6	91.0	75.5	67.4	60.2
Debt service/exports goods and services	10.8	9.5	9.3	7.8	8.2	6.9
Unemployment rate (%) ^{a e}	2.5	3.0	3.1	3.6	4.0	4.3
REER (2000 = 100; inc. = appreciation) ^a	82.3	94.9	100.0	104.3	102.6	96.4
Population (millions)	1,164	1,230	1,263	1,272	1,280	1,288

Sources: IDB Integration and Regional Programs Department using World Bank data, except as otherwise indicated.

^a Source is International Monetary Fund.

^b In constant 1995 dollars.

^c Includes net errors and omissions.

^d Source is United Nations.

^e Source is National Bureau of Statistics of China.

China, P. R. Hong Kong: Basic Indicators						
	1990–94	1995–99	2000	2001	2002	2003
National accounts	Annual percentage change					
GDP	6.0	1.9	10.2	0.5	2.3	3.3
GDP per capita	4.7	0.1	9.2	−0.4	1.3	2.9
Exports goods and services	16.1	0.2	15.6	−4.7	9.3	12.7
Imports goods and services	17.7	−1.4	16.9	−4.8	7.1	11.3
Consumer prices ^a	7.5	4.0	−3.7	−1.6	−3.0	−2.6
National accounts	Share of GDP (%)					
Final consumption ^a	66.5	70.3	68.3	70.4	68.9	68.4
Household consumption	58.7	61.5	59.0	60.2	58.4	57.8
General government consumption	7.8	8.8	9.3	10.1	10.5	10.7
Gross domestic savings	—	30.6	31.7	29.6	31.8	32.3
Gross fixed capital formation	27.6	30.4	27.0	26.2	23.2	22.3
Exports goods and services	136.5	134.1	145.5	140.8	150.8	170.0
Imports goods and services	130.8	134.7	141.9	137.1	142.5	160.6
Exports, net	4.8	−1.5	3.6	3.7	8.3	9.4
External current account ^b	—	4.5	4.3	6.1	8.5	11.0
Fiscal stance						
Overall fiscal balance	—	—	—	—	—	—
Central government fiscal balance	—	—	—	—	—	—
Bank money and finance^a						
Money	15.4	13.6	14.3	16.6	19.3	26.6
Quasi money	153.3	172.7	218.6	219.1	222.0	235.6
Bank claims on government, net	−8.4	−12.2	−17.0	−13.3	−5.6	−2.8
Bank claims on other sectors	144.0	162.7	156.1	155.0	151.5	150.6
National accounts	Billions of dollars					
GDP (constant 1995)	121.9	149.0	168.2	168.9	172.8	178.5
GDP per capita ^c	20,875.0	23,115.0	25,230.0	25,122.0	25,456.0	26,189.0
Exports goods and services	141.2	213.3	240.6	229.4	243.6	269.6
Imports goods and services	135.6	214.1	234.7	223.3	230.2	254.7
External sector^a						
Balance on goods ^b	—	−5.5	−8.2	−8.3	−5.1	−5.8
Balance on services ^b	—	9.4	14.2	14.8	18.5	20.7
Balance on current account ^b	—	6.4	7.1	9.9	12.6	16.2
Balance on cap. and fin. account ^{b,d}	—	−6.4	−7.1	−9.9	−12.6	−16.2
Direct investment, net	—	1.5	2.6	12.4	−7.8	9.8
Gross reserves (including gold)	36.2	79.6	107.6	111.2	111.9	118.4
Total external debt	—	—	—	—	—	—
Total FDI inward stock ^e	209.1	269.0	455.5	419.3	433.1	—

(continued on next page)

China, P. R. Hong Kong: Basic Indicators						
	1990–94	1995–99	2000	2001	2002	2003
Memorandum						
Internal reserves (in months of imports) ^b	—	4.5	4.5	5.0	5.0	4.9
External debt/GDP	—	—	—	—	—	—
External debt/exports goods and services	—	—	—	—	—	—
Short-term debt/ total external debt	—	—	—	—	—	—
Long-term debt/ total external debt	—	—	—	—	—	—
Debt service/exports goods and services	—	—	—	—	—	—
Unemployment rate (%) ^a	1.8	3.8	5.0	5.1	7.3	7.9
REER (2000 = 100; inc. = appreciation)	—	—	—	—	—	—
Population (millions)	5.8	6.4	6.7	6.7	6.8	6.8

Sources: IDB Integration and Regional Programs Department using World Bank, except as otherwise indicated.

^a Source is International Monetary Fund.

^b Period average is for 1998–99 only.

^c In constant 1995 dollars.

^d Includes net errors and omissions.

^e Source is United Nations.

Overview of the Book

This book offers a preliminary assessment of the strategic implications—the opportunities and challenges—that China’s economic performance has for growth and development in Latin America, now and in the near term. Although a vast array of topics could have been broached, the focus here is primarily on trade and investment, which are the areas of most immediate potential impact.

Overview of China’s Economy

China’s economy has expanded dramatically since 1978, with annual growth of gross domestic product (GDP) averaging more than 9 percent. The Latin America and Caribbean region still surpasses China in absolute economic size, but the gap has been closing rapidly since the 1970s. China’s performance in capital formation has also been strong, fed by impressive rates of domestic savings estimated at more than 40 percent of GDP. The country’s annual inflation rate averaged just 1 percent between 1996 and 2003, a period punctuated by episodes of slight deflation despite soaring output.

Externally, an expanding share of international trade has been one of the most notable aspects of China’s mounting significance in the global economy. Chinese exports grew by an average 5.7 percent in the 1980s, 12.4 percent in the 1990s, and 20.3 percent between 2000 and 2003. Yet since China’s imports have also grown rapidly, large trade surpluses are not being run up like those accumulated by Japan during its post–World War II economic expansion. By 2003 there was a sevenfold gap between Chinese and world export growth rates. Foreign direct investment flows to China also have risen dramatically and now stand at more than \$1 billion a week, while external debt is modest at the equivalent of 40 percent of exports and 14 percent of GDP. As a result of this remarkable performance, China is no longer a low-income developing country. It has lifted more than 400 million people out of poverty since the late 1970s. (See Chapter 1 for more background on China’s economy.)

Adapting a Strategic Vision to the Marketplace

China’s recent economic performance can be described as a “triple transformation,” from a centrally planned to a market economy, from rural agriculturally based activity

to manufacturing and services, and from an extremely closed to a relatively open economy. Three factors fuel the process: favorable initial conditions for growth, structural reforms, and strategic characteristics of policy implementation (see Chapter 2).

Numerous favorable *initial conditions* combined with the launch of *market-oriented* reforms to build momentum. At the outset of reforms, potential for “catch-up” gains in efficiency, and therefore growth, was considerable. China had the world’s largest population, a low-wage labor market, and a productive workforce with social indicators more associated with middle-income countries. Its size and location were also beneficial, giving China leverage in generating public goods, attracting FDI, achieving economies of scale, agglomerating production and transport, and reaping spillovers from neighboring East Asian economies.

Meanwhile, the state had a tradition of formulating strategic development policy and a durable presence in most aspects of economic and social life. The first major reform took place in the late 1970s with “quasi-privatization” of commune-based agriculture that provided private incentives to boost productivity and output. This was followed by a policy allowing rural household savings to be invested in local commerce, manufacturing, and transport, giving rise to Town and Village Enterprises (TVEs). Trade reforms included creation of an expanding export-processing segment in the economy, followed by unilateral tariff liberalization, and accession to the World Trade Organization (WTO). Initially, foreign investment was steered to the special export zones, but restrictions were progressively relaxed. At first the reform process affected state enterprises only gradually, but the pace has accelerated since 1998. The goal has been to mix incentives with consolidation and privatization to enhance efficiency, productivity, and competitiveness. Fiscal reforms were initiated to open up and de-bureaucratize financial markets.

Implementation of China’s reforms and transformations has had some defining and interrelated strategic characteristics that are worth highlighting. Policy making is attuned to a long-term vision in which sustained high rates of growth are seen as essential to facilitating reallocation of labor to market-oriented activities. The strategy is ambitiously goal-driven, with policy and incentives at the central and local levels aimed at continuously upgrading the international position of the economy. The pillars supporting this effort include sustained macroeconomic stability, anticyclical macro policy, very robust fixed investment, preservation of a strong state economic presence, a proactive industrial and technological policy, ready access to domestic credit, higher education, control of urban migration, and a single-party political system. The reform process has been gradual, introduced in progressive stages that pragmatically build on and adjust to development of greater market forces in the economy. In this spirit, Chinese authorities have practiced the art of dualism, instituting market-oriented reforms alongside the ancien régime and using programs to soften the blow by offering compensation to potential losers.

While China’s economic achievement has been impressive, responses to structural problems often have generated new problems and challenges over the medium term.

First, rapid growth has increasingly skewed income at the national level. Second, the relatively strong fiscal position obscures substantial emerging burdens from nonperforming loans. Third, the effectiveness of China's industrial policy is intensely debated by experts. Fourth, WTO accession requires implementation of complex disciplines in a short time in a rapidly diversifying economy. Finally, questions of good governance and an overheating economy must be dealt with.

China's Trade Performance Is Going Upscale

China has experienced a trade boom in the past two decades. Chinese exports surged from \$25 billion in 1984 to \$383 billion in 2003, increasing China's share of world exports from 1.5 to 5.8 percent. Chinese imports mirror this pattern, totaling \$295.7 billion in 2002, up more than 10-fold from the \$26.2 billion recorded in 1980. The country's share of global imports surged from 1.5 to 4.8 percent. Though exceptional, China's export dynamism is not unprecedented in either speed or scope. Japan's and Korea's export growth and market penetration rates upon their industrialization and integration into the global economy exceeded those being recorded by China.

China's export pattern can be defined as highly *dynamic and diversified*. In 1987, roughly one-quarter of its exports were classified as products with growing world demand. In 2002, the share rose to 60 percent or roughly the same as the U.S. distribution. Looking at an index of export concentration reveals that China has high product diversity relative to other countries. The country's changing export composition also suggests a *rise in the technological content* of goods, that is, advancement from less-complex manufactures to more-sophisticated products. Almost 90 percent of China's exports in the mid-1980s were primary products or resources and low-tech manufactures. By 2002, this share was down to 50 percent, while the share of high-tech exports had risen from less than 5 percent to 30 percent over the same period. (See Chapter 3 for fuller discussion.)

Assets Driving China's Bottom-Line Performance

The pattern and direction of Chinese trade (the composition of exports and imports and the selection of trade partners) will depend not only on traditional comparative advantages such as *relative endowments* but also on economic size, overall commercial transaction costs, and the trade policy regime (see Chapter 4). Since China is extremely abundant in labor, the theory of relative factor endowments suggests it will compete with other low-wage countries endowed with labor. A regional assessment of China's economy, however, shows a diversity of endowments, with coastal areas and urban centers such as Shanghai on a comparable footing with the capital- and skill-abundant Asian Tigers or the more developed countries in Latin America.

Geography and trade costs also yield insights into China's remarkable trade performance. On one hand, China's proximity to Asia and its vast industrial supplies provide potential production cost advantages, while on the other, the relatively long distance to a major export market in the United States is a disadvantage. The distance from Guangdong, China, to Los Angeles, California, is roughly 11,700 kilometers, while it is roughly 8,800 kilometers from the southern tip of South America to Miami, Florida. Latin American exports to the United States thus should be protected from Chinese growth at least up to the differential in trade costs implied by these distances.

The degree of protection, however, depends on the real cost differential measured by shipping expenses and travel time. China is overcoming its geographical disadvantage through measures to cut shipping costs. Containers significantly reduce loading and unloading expenses and ease the movement of cargo from one mode of transport to another. Some 95 percent of China's waterborne exports to the U.S. market were containerized in 2001, compared to 45 percent for Latin America. And even though China's shipping costs per kilogram are much higher than Latin America's, its *ad valorem* cost (shipment cost per value) is comparable to or even lower than Latin America's. In other words, any proximity advantage that Latin America enjoys in shipping is lost as a result of specializing in heavy, low-value products. Fortunately, timeliness in international trade also matters. Latin America's proximity to the U.S. market confers advantage for products with high replenishment rates (for example, some apparel). However, shipping times are determined not only by distance, but by operational scale. Smaller-scale Latin American exports to the United States usually stop at many ports en route, while shipments between China and the United States are much more direct.

China's performance has also been influenced by profound changes in its *trade policy regime*. Until recently China was only loosely integrated into the global economy, with high tariffs and a host of nontariff barriers shielding critical sectors of the domestic economy. In terms of traditional trade liberalization, China has opened up its external sector dramatically by dismantling tariffs, reducing its unweighted average tariff from over 50 percent in the early 1980s to 10.4 percent in January 2004. Accession to the WTO has been a major tool in opening the economy, and there has been movement more recently to pursue free trade areas. China has also used a wide array of instruments and institutions for export promotion, including exchange rate policies, duty drawback for exporters, sectoral policies, tax rebates and exemptions, and free trade zones.

How China and Latin America Compete in the Global Marketplace

What does China's export growth mean for other exporters, particularly in Latin America? Assessing the competitive threat requires (1) comparison of China's international market penetration with Latin America's and (2) measurement of head-to-head

competition between Chinese and Latin American products in the global marketplace (see Chapter 5).

Analysis of *international market penetration* reveals that both Asia and Latin America have increased their market shares in the United States at the expense of the developed economies in the Organisation for Economic Co-operation and Development (OECD). Between 1972 and 2001, the OECD fell from a 73 percent share of the U.S. market to 51 percent, while Asia (including China) rose from a 10 percent share to 25 percent and Latin America went from a 10 percent share to 17 percent. China and Mexico have been the main market share drivers in the performance of their respective regions. Further analysis shows that Asia has relatively high product penetration in manufacturing industries and relatively low penetration in resource industries, while Latin America's pattern is the reverse.

After surveying the playing field, this book next examines the Latin American and Chinese export baskets to determine how much these two players actually are *competing in world markets* with each other. Measurement of trade overlap is calculated using the export similarity index. There are four main conclusions. First, China's overall export overlap is greater with other Asian economies than with countries in other regions. Second, miscellaneous manufacturing, particularly apparel, is the primary arena of export competition between China and Latin America. Third, China competes by region most directly with Mexico in Latin America, the Dominican Republic in the Caribbean, and Taiwan in Asia. Finally, China's export similarity with the OECD has increased substantially over the sample period, reflecting a growing sophistication of its export basket.

In the past two decades, bilateral trade linkages between China and Latin America have increased. Efforts to forge closer economic ties to benefit from accelerating Chinese demand have already borne fruit, with some Latin American countries becoming important suppliers. Although most of these exports are raw materials and commodities, China could start absorbing higher-value-added products as per capita incomes and consumption rise. Demand for more-sophisticated and more-varied products is also likely to grow, increasing the possibilities for intra-industry commerce in bilateral trade. (See the Appendix for four Latin American country case studies.)

Is China's FDI Gain a Latin American Loss?

Foreign direct investment has flooded into China during the past decade. In 1990, the share of global FDI going to China was only 2 percent; by 2003 it had reached 6.3 percent. In 2004, China supplanted the United States as the world's leading destination for foreign investment. This surge has been facilitated by Chinese reforms that opened the economy to outside investment seeking access to abundant and disciplined low-cost labor and a huge untapped domestic market. Given additional reforms from WTO accession, China is likely to become even more attractive to foreign investors, includ-

ing in the newly opened service sectors that have previously attracted much of Latin America's foreign investment. Should Latin America be concerned?

FDI competition arises essentially because worldwide savings are scarce. Given the increased outside investment in China, estimates surprisingly indicate a very small marginal fall (roughly 4 percent) in flows to Latin America. The effects may not be felt evenly, however. Given imperfect capital markets and direct trade competition, some countries may experience greater pressure than others. In particular, countries benefiting from similar investment sources or receiving FDI in sectors similar to China's are likely to see sharper declines in flows. A comparison of FDI sources reveals very large differences: investment flows to China come mainly from Asia, while Latin America's come mainly from the United States and Europe. Hence, Asian countries like India and the Republic of Korea should be more concerned than Latin America about China's impact on investment. The FDI sector coincidence index meanwhile shows little similarity in the composition of flows to China and Latin America. FDI outflows from the United States to China are concentrated in manufacturing industries, while other sectors predominate in those to Latin America. Mexico has the greatest similarity and thus faces the biggest problem.

In sum, the direct effects of China's emergence on capital flows to Latin America appear small. The main effect is related to trade. Countries like Mexico and those benefiting from the Caribbean Basin Initiative face tough competition from China and therefore could see some diversion of foreign direct investment. The story is very different for South America, where exports of primary products are increasing. Expansion of the Chinese market could attract investment to these countries, even from China itself. (For fuller discussion of FDI and a case study about attracting investment to export processing, see Chapter 6.)

China and the Future of Latin American Textiles

One of the most salient examples of economic success in Latin America during the past two decades has been the rise of the textiles and apparel sector (Chapter 7). From 1989 to 2002, Latin America's textiles and apparel exports to the United States increased by a factor of 6.6, raising the region's share from 11 percent of total U.S. imports for the sector to 27 percent. Unfortunately, this growth is not wholly attributable to an emerging comparative advantage in this region. Rather than being "organic" and self-sustaining, it has thrived in the hothouse of preferential U.S. trade policies. In 2002, the United States eliminated quotas on 29 apparel categories (as part of the Uruguay Round of the General Agreement on Tariffs and Trade), and China's share of the U.S. market mushroomed from 9 percent to 65 percent of total sales. The United States eliminated all remaining quotas under the Multifiber Agreement (MFA) in January 2005, although the effect has been temporarily attenuated by safeguard action. What are the Latin American industry's prospects going forward?

A snapshot of the current situation is revealing. The textile industry is a prime source of exports and jobs in the region (Mexico, Central America, and the Dominican Republic). It is heavily oriented toward the U.S. market and is primarily a *maquila* system with little vertical integration and low wages. China poses a challenge since it has tremendous competitive advantages in this sector, not only paying lower wages, but also having access to a greater variety of high-quality specialized inputs from production clusters in Asia and paying less for some key inputs such as electricity.

Many analysts have argued that textiles and apparel producers in the region, despite higher costs, can survive Chinese competition because of two advantages: geography and market access to the United States. Although savings may not come in the form of lower transport costs—due to inefficient port facilities—real advantage exists in the region’s ability to deliver goods that require “speed to market.” This proximity enables quick response to changing market conditions and special demands. The region’s main exporters also have a trade preference through duty-free access to the United States. However, this advantage does not offset the region’s cost disadvantage with China. More importantly, free trade agreements with the United States encourage foreign and domestic investment in the industry by securing the “rules of the game” and by relaxing somewhat the rules of origin for regional exports.

Latin America Looks Forward

In drawing conclusions about Latin America’s future relationship with China, one should start by assessing where the Chinese economy is heading because China today may not be the China of tomorrow. By most estimates, China has not exhausted policies for catch-up growth, and a consensus is forming that the country can—despite the risk of volatility—sustain growth rates of 7–8 percent annually for the immediate future. Moreover, given the country’s ambitious goal-driven development strategy, growth is likely to include continuous upgrading and diversification. So a Latin American policy response must be grounded in the prospects for China’s evolution.

For Latin America, China’s emergence as a major player in world markets involves at least four equally important dimensions. There is (1) China the successful growth story and potential source of policy lessons, (2) China the market of 1.3 billion consumers and low-cost source of goods and services, (3) China the partner, and (4) China the strong competitor in markets for Latin American goods and services. Perhaps the main challenge to Latin American policy makers is to reconcile the findings from all these dimensions to forge an effective policy response to the Chinese phenomenon (see Chapter 8).

China the success story offers important lessons for policy makers. In the late 1950s, Latin America’s per capita income was much higher than Asia’s and growing faster than China’s and only somewhat more slowly than the rest of East Asia, recovering from an era of wars. However, Latin America’s dynamism faltered in the late 1960s and 1970s,



exactly when East Asia began taking off through export-led industrialization. Later on China began following in the footsteps of its successful neighbors. During the past two decades the growth gap has remained considerable relative to East Asia and has even widened with respect to China. This story is about more than growth rankings, however; it is about one region's ability to lift many people out of poverty and the other region's inability to grow fast enough to do so despite efforts at reform. This contrasting history would seem to be rich in policy lessons.

China the market is important given China's role as a new engine of world economic growth. China's sustained high rates of expansion, coupled with a relatively high trade-to-GDP ratio, has stimulated economic recovery in Asia, pushed up commodity prices in the face of sluggish demand from some developed economies, and provided cost-effective finished goods and inputs to others. Latin America is well positioned in various respects to benefit from these trends. First, as aggregate consumption in China rises with growth in national income, Latin America is a competitive supplier of agricultural products, processed food and drink, and services like tourism. Second, China is an attractive and large domestic market for Latin American investors and a potential source of FDI for Latin American industry.

China the partner is also important in assessing future relationships. Working with China in one sphere has spillover effects in others, from diplomacy to trade. Indeed Latin America is already opening up this frontier through collaboration in international forums to promote multilateralism. Examples can be seen in the United Nations Security Council; in the Doha Round by the formation of the Group of 20 (G-20) countries pushing for trade liberalization in agricultural products; and in Brazil, Argentina, and Chile granting China "market economy" status. The two regions' economic experiences can also be a source of exchange about policy formation. China offers a rich development experience to draw on, while Latin American countries have much experience (good and bad) in managing implementation of WTO accession, regional integration, cleaning up systemic nonperforming loan portfolios, capital account opening, privatization, exchange rates, and many other issues that China will confront now and in the future. Free trade areas with China are another way to forge partnerships.

China the competitor has emerged from the shadows of autarky to play a prominent role in the world economy. With its continental scale, extraordinary economic growth, and accelerating social transformation, it is not easily ignored. Several factors favor Chinese competitiveness vis-à-vis Latin America in the global marketplace. First, China's endowment structure gives it huge comparative advantages in labor-intensive goods. Second, although China's education record is as mixed as Latin America's, it benefits from the concentration on engineering and science in tertiary enrollments, the large number of college graduates (1.3 million per year), and the recent drive to expand tertiary education. Third, China is moving fast to become a technological leader. China leads Latin America in the number of scientists engaged in research and development, U.S. patent applications, and total R&D expenditures as a percentage of GDP. Fourth, a substantial part of Chinese investment has been in infrastructure.

Under a stable macroeconomic environment, this is believed to promote growth and competitiveness by (1) reducing production costs, (2) opening opportunities for diversification, (3) providing access to knowledge, and (4) raising the returns to labor by improving health and reducing time lost in nonproductive activities. Fifth, China's large size gives it standard advantages in provision of public goods and an important edge in capital- and technology-intensive industries. Finally, despite China's financial sector being widely touted as the Achilles' heel of the Chinese economy, it seems to have been very effective in mobilizing and pooling savings and in granting Chinese firms and government ample access to low-cost capital.

The China "phenomenon" has raised concern over current and future competition everywhere in Latin America. Even though the effects of China's emergence vary across countries, one thing is clear: China's emergence is a "wake-up call" for Latin America to rethink its development policy, building on strengths and addressing weaknesses. Fortunately, Latin America does not face this challenge unarmed. It has its own stock of endowments and geographical advantages. And during the reform process several important economic and noneconomic assets were amassed or strengthened that can now be used, including democracy, an energetic private sector, and economic integration. Equality and government institutions and policy remain weaknesses and should be the focus of further development. The former has been studied extensively, so the rest of the report will focus on the latter.

In *rethinking the region's policy framework for competition*, decision makers should consider three important issues: public-private alliances, a strategic national social process for constructing the alliance, and horizontal and vertical policies for competing strategically.

Public-Private Alliances

Latin American governments have relatively weak capacity to design and implement strategic forward-looking policies that enable their countries—or private sectors—to compete better. The answer is not just stronger government, but a government that engages in constructive partnerships with the private sector to formulate policy. Interest in this issue has revived in Latin America as a result of the unmet expectations of the Washington Consensus reforms and the success that East Asian governments, including China, have been working closely with firms and sectors to develop incentives for a medium- and long-term strategic focus, learning, industrial diversification and upgrading, and growth.

A Strategic National Social Process

Renewing government as a proactive force in market development requires, among other things, creating a space for collaboration between the public and private sectors. A structured (formal or informal) "national social process" is needed to create a

more focused policy framework than has previously been the case in most of the region. This social process would bring together major stakeholders in competitiveness to identify competitive strengths, weaknesses, and opportunities to build consensus for a set of incentives and interventions to increase economic diversification and upgrade the economy internationally. The social process must be inclusive, allowing competing domestic interests, visions, and capacities to be discussed and weighed, with governments acting as arbitrators in forging a workable consensus. But they must do this with predictability, transparency, and accountability, using technical criteria and performance in the international marketplace as tools to refine forward-looking policies. Given the weakened state of most Latin American public sectors, capacities must be raised for them to lead credible national social processes with scope and depth.

Horizontal and Vertical Policies

The consensus emerging from the national social process should promote formation and implementation of horizontal policies that provide incentives for new activities and sectors and vertical policies in which the government targets specific activities/sectors. Horizontal policies are relatively uncontroversial, but vertical policies arouse debate because they involve making choices. Some selectivity can in principle be efficient in a second-best world, since activities/sectors are not homogeneous in their makeup and have differing needs, and governments lack the human and fiscal resources to intervene effectively across the board. It is important to stress, however, that neither horizontal nor vertical policies are a substitute for ongoing structural reform. Rather they are complementary instruments for working at the margin of reforms to consolidate a sound overall market-based economic framework.

The need for selectivity raises the problem of how to choose activities and sectors for incentives and support. First, the selection must be the outcome of a national social process with technical foundations. Second, the focus cannot be on the failed industrial policy of “picking winners.” Rather the focus must be on overcoming binding constraints to diversification and upgrading, with a view to stimulating new private sector activities that are socially beneficial but unlikely to happen without public support. Third, the selection process must actively engage the organizational and entrepreneurial interest and partnership of sector-level associations in identifying needs and designing and implementing interventions. And finally, a successful program will require the following: (1) interventions that do not dull competition, (2) a gradual introduction of policies that converge with public capacities and the ability to strengthen them (hence initial ambitions must be cautious and realistic, pursuing more-complex interventions only over the medium term), (3) vigilance to avoid rent seeking, (4) exposure to regular checks and balances and monitoring in order to make timely adjustments, and (5) a public sector with appropriate fiscal space. (For a more complete explanation see Chapter 8.)

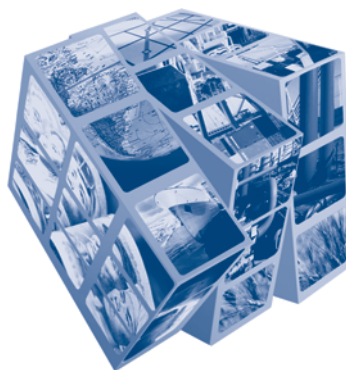
A government's space for proactive policy expands the more solid the macro-economic setting is, the higher domestic savings and the deeper domestic financial markets are, and the lower the foreign debt burden is. Since most Latin American economies are still fragile in these areas, consolidation of reforms remains a central priority.

To upgrade the economy and make it more competitive in the context of potential market failures and public-private alliances cum horizontal and vertical policies to overcome them, the following policy considerations should be kept in mind:

- *Dutch disease* is a classic market failure faced by raw material producers. If high commodity prices are a cyclical issue (for example, a rise in oil prices), an effective policy would be a stabilization fund; if they are systematic, an option would be to tax the commodity to finance support for diversification (for example, an innovation fund for competitiveness).
- Interventions are needed to overcome classic coordination problems in *the supply of public goods and services* critical for growth.
- Secondary and higher *education* need more attention, not only through more resources, but by implementation of policies that upgrade curricula, improve information about future job opportunities, and provide incentives for universities to expand courses in high demand. Science and engineering curriculums need special attention.
- *Export diversification* and investment promotion are crucial development policies. Mechanisms that provide grants and credit access for new exports, new markets, or new firms are important, as are competitive real exchange rates and predictable rules to attract investment and business facilitation.
- *Innovation* activities generate significant externalities that benefit firms located in the vicinity of the original innovation. Policy should (1) shift attention toward promoting demand-driven innovation; (2) support universities and research centers—rather than private R&D—where several firms can benefit; and (3) aim for collaborative innovation activities in potential clusters.
- *Regional and global integration* are big assets that can assist Latin America in meeting the competitive challenge of China's emergence in the global economy. Regional markets facilitate scale, agglomeration, FDI attraction, and cooperation, and by reducing distance, they cut costs. The WTO will also be important in leveling the playing field between Latin America and China.

This page intentionally left blank

BACKGROUND ON CHINA'S ECONOMY



This page intentionally left blank

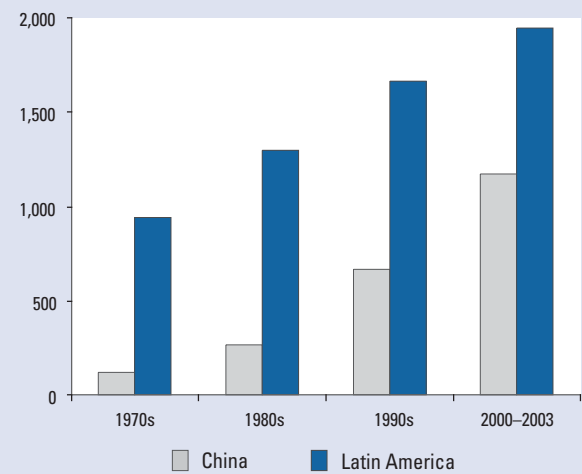
A Snapshot of China's Economic Performance

China's economy has expanded dramatically since 1978, with annual growth of gross domestic product (GDP) averaging 9.4 percent. Latin America and the Caribbean, as a region, still surpasses China in terms of absolute economic size, but the gap has been closing relentlessly since the 1970s (Figure 1.1). At market exchange rates, China is now the world's sixth-biggest economy. In purchasing-power parity, it ranks behind only the United States in size.

Table 1.1 shows average growth rates for China and other developing regions from the 1970s to 2003. It is evident that China's growth only slightly surpassed that of Latin America in the 1970s and that both were outpaced by East Asia and the Pacific. Since the onset of a series of reforms in the late 1970s, however, China's growth rates

have substantially outstripped those of the other regions. In Latin America's "lost decade" of the 1980s, when annual average output growth for the region as a whole was just 1.3 percent, China's grew by almost 10 percent. Its growth was higher still in the 1990s, and Chinese GDP since 2000 has risen by an annual average of about 8 percent while Latin America's has stalled at an average of 3 percent (World Bank, 2004b). Output growth in 2004 should be more than 9 percent for China, while in Latin America growth is estimated at above 5 percent (ECLAC, 2004b), driven to a

FIGURE 1.1 A Narrowing Output Gap between China and Latin America, 1970s–2003
(constant 1995 US\$ billions)



Source: World Bank (2004b).

TABLE 1.1

GDP Growth in China and Selected Developing Regions, 1970s–2003
(percent)

	1970s	1980s	1990s	2000	2001	2002	2003
China	6.0	9.9	10.3	8.0	7.5	8.0	9.1
East Asia and the Pacific ^a	6.6	7.4	7.8	7.1	5.6	6.7	7.7
Latin America	5.8	1.3	3.3	3.7	0.3	−0.8	1.6
Sub-Saharan Africa	3.4	1.8	2.1	3.0	3.3	3.3	3.4

Source: World Bank (2004b).

Note: Rates for decades are yearly averages.

^aExcludes developed countries.

large extent by external demand for raw materials in which China's growth played a significant role.

China's GDP per capita has increased sevenfold since 1978, while Latin America's has risen by only 10 percent. China as a whole is now a middle-income country, having reached a per capita GDP of \$1,000 in 2003. The aggregate figure for Latin America is about \$3,770. However, per capita income varies greatly in China. Per capita output in Shanghai, the wealthiest part of China, stands at about \$4,900, a level that would rank a little above that of Costa Rica and below that of Mexico. By contrast, China's poorest province, Guizhou, has a per capita GDP of \$380; this is below the level of Haiti, the poorest country in the Americas. The composition of China's GDP has shifted notably in the past three decades, as has that of Latin America. In the 1970s, agriculture accounted for about a third of the country's output. That share has fallen consistently since then, and the agricultural sector now accounts for only a sixth of GDP. Industry's share has expanded from 45 percent of GDP to 53 percent in the same period. While industry now provides over half of the country's output, manufacturing alone accounts for over 40 percent. There has been a parallel shift in services, which accounted for less than a quarter of output in the 1970s but now account for roughly one-third.

In Latin America, too, agriculture's share of regional GDP has almost halved since the 1970s, from 13 percent to 7 percent. Unlike China, however, the industrial sector's contribution to output has fallen. It now provides a quarter of Latin American GDP, and the contribution of manufacturing is only around 15 percent. The main gain has been in services, which accounted for less than half of output in the 1970s but provide over two-thirds of GDP today (Table 1.2).

Forty-four percent of China's aggregate demand is accounted for by household consumption. This share, however, has been declining since the 1970s, when household consumption accounted for 60 percent of demand. In parallel, the proportion of demand represented by gross domestic investment has increased steadily, from an average of 30 percent in the 1970s to over 40 percent today—an unusually high level. Demand in Latin America is much less investment-driven: household consumption's share has fallen, but it still accounts for more than 60 percent of aggregate demand.

TABLE 1.2

GDP Composition in China and Latin America, 1970s–2003
(value-added percent)

	1970s	1980s	1990s	2000	2001	2002	2003
China							
Agriculture	32	29	21	16	16	15	15
Industry	45	45	47	50	50	51	53
Manufacturing	37	36	34	35	35	35	44
Services	23	26	32	33	34	34	32
Latin America							
Agriculture	13	10	8	7	6	7	7
Industry	38	40	33	29	25	26	25
Manufacturing	28	28	21	18	16	15	—
Services	49	49	59	64	68	67	68

Source: World Bank (2004b).

Investment's share has declined steadily since the 1970s in Latin America (Table 1.3). Fixed capital formation has clearly been a factor behind the strong increases in labor productivity and growth in China. Meanwhile, growth of total factor productivity in China has been at least respectable, if not better, and compares favorably to the performance in Latin America (see Annex I.1).

China's strong performance in capital formation is fed by impressive rates of domestic savings. The country's *gross domestic savings* rate is among the highest in the world, estimated at about 43 percent of GDP in 2003. This is more than double the rate in Latin America. In general terms, moreover, the trend in China has been upward

TABLE 1.3

**Composition of Aggregate Demand in China
and Latin America, 1970s–2003**
(percent)

	1970s	1980s	1990s	2000	2001	2002	2003
China							
Household final consumption	60.5	51.8	46.7	47.9	45.7	43.4	44.1
Government final consumption	9.0	13.5	12.4	13.1	13.4	13.2	12.7
Gross capital formation	30.6	35.4	38.4	36.3	38.5	40.4	42.2
Net exports	−0.1	−0.7	2.5	2.7	2.4	3.0	1.0
Latin America							
Household final consumption	68.4	66.3	65.8	64.7	65.2	62.6	62.0
Government final consumption	10.4	10.6	14.4	15.8	16.0	15.7	16.0
Gross capital formation	23.2	20.9	20.6	20.6	19.8	18.9	19.0
Net exports	−1.3	2.1	−0.9	−1.0	−1.0	2.8	3.0

Source: World Bank (2004b).

Note: Figures are percentages of GDP by expenditure, using simple averages.

TABLE 1.4

Domestic Savings in China and Latin America, 1970s–2003
(percent of GDP)

	Gross domestic savings						
	1970s	1980s	1990s	2000	2001	2002	2003
China	30.5	34.7	40.9	39.0	40.9	43.4	43.2
Latin America	21.9	23.0	19.8	19.6	18.8	21.7	—

Source: World Bank (2004b).

since the 1970s, while that in Latin America has generally been flat (see Table 1.4). High rates of domestic savings in China are primarily a household phenomenon (see Annex I.2).

Annual *inflation* in China has averaged just 1 percent since the mid-1990s, a period punctuated by episodes of slight deflation despite soaring output. Prices had risen sharply in the 1980s (the decade's average was almost 15 percent) and peaked in 1994 at 24 percent. Consumer prices then dropped rapidly, and in early 1998 the country entered a period of deflation that lasted for about two years (hence the decade average was only 8 percent despite the 1994 peak). Price rises remained negative or low in 2000–2003.

The contrast with Latin America is marked, in large part because of very high inflation rates in some Latin American countries during the 1980s that persisted in places at significant levels in the 1990s. In the latter half of the 1980s, when China's consumer prices rose by 14.6 percent, inflation in Argentina was running at 588 percent and in Brazil at over 615 percent. Since 2000, inflation in Latin America as a whole has fluctuated between a high of 10.8 percent (in 2003) and a low of 6.3 percent (in 2001). In China, the range has been between deflation at a rate of –0.8 percent in 2002 and inflation of just 1.2 percent in 2003 (see Table 1.5). Price performance, as will be seen

TABLE 1.5

Consumer Price Changes in China and Latin America, 1980s–2003
(percent)

	1980s ^a	1990s	2000	2001	2002	2003
China	14.6	7.5	0.3	0.5	–0.8	1.2
Latin America	100.0	95.5	8.1	6.3	9.1	10.8
Argentina	588.1	58.2	–0.9	–1.1	25.9	13.4
Brazil	615.6	319.2	7.0	6.8	8.4	14.7
Chile	17.2	11.5	3.8	3.6	2.5	2.8
Mexico	81.3	20.1	9.5	6.4	5.0	4.5

Source: IMF (2004c).

Note: Changes are average annual rates.

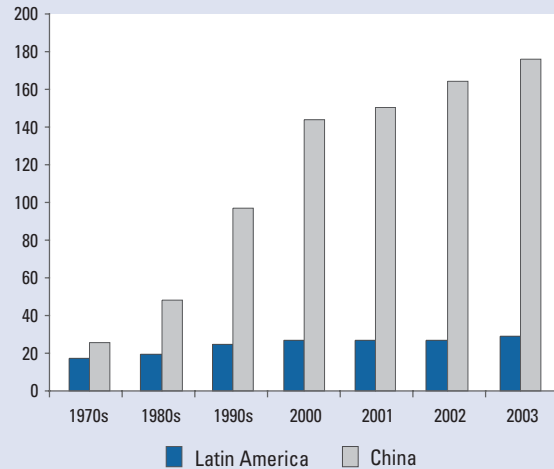
^aIncludes only 1987–89.

shortly, showed signs of some deterioration in 2004, but inflation was still quite low by Latin American standards.

The Chinese economy also has greater financial depth. Quasi money (M2) is high relative to GDP, at 176 percent in 2003, dwarfing the 29 percent rate in Latin America (see Figure 1.2). *Domestic credit* provided by the banking sector has been over 100 percent of GDP since 1997 and now stands at about 179 percent (Figure 1.3). In Latin America this indicator has surpassed 100 percent only once in the past three decades (in 1989), and domestic credit now stands at about 46 percent of GDP. The very substantial liquidity in China's economy in recent years has not been reflected in undue price pressures, in part because investment-driven demand has also expanded capacity. As mentioned earlier, however, inflation was rising in 2004.

FIGURE 1.2

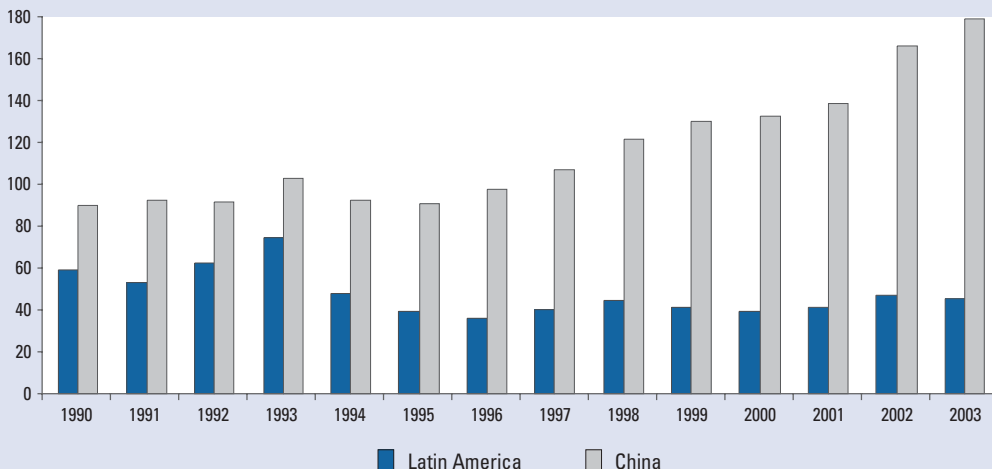
Money and Quasi Money in China and Latin America, 1970s–2003
(percent of GDP)



Source: World Bank (2004b).

FIGURE 1.3

Domestic Credit by the Banking Sector in China and Latin America, 1990–2003
(percent of GDP)



Source: World Bank (2004b).

China's *fiscal accounts* are fairly sound. Its budget deficit stands at 2.5 percent of GDP, and the ratio of government debt to GDP is quite low at 26 percent. These levels compare relatively well with those of other emerging economies. Revenue has risen in the last five years, though less so than spending. Consolidated government revenue has been estimated at almost 19 percent of GDP in 2003, mainly from an increased tax take, especially from a value-added tax (VAT) and income tax. Tax income in China is less than that recorded by some of the larger Latin American economies (Figure 1.4).

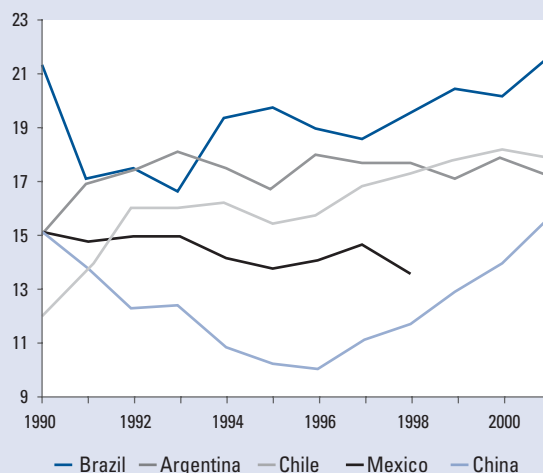
Externally, China's expanding share of international trade has been one of the most notable aspects of its mounting significance in the global economy (Rumbaugh and Blancher, 2004). The country is now a commercial superpower. Its total goods trade stood at \$851 billion in 2003, equivalent to about 6 percent of world trade. Latin America as a whole, by contrast, accounted for about 5 percent of international commerce in 2003.

In the 1980s, on average, China's exports grew by 5.7 percent, less than a percentage point above world export growth (5 percent). In the 1990s, however, the country's overseas sales grew at twice the rate of world exports (12.4 percent to 6.2 percent, respectively). In 2000, Chinese export growth exceeded the growth rate of world sales by nearly 2.5 times, and by 2002 the gap was more than sevenfold. A broadly similar pattern prevailed for the country's imports (Table 1.6). By contrast, Latin America's exports and imports have fluctuated substantially more, relative to world trade, since the 1980s, and in absolute terms its growth pales in comparison to the Chinese performance.

Figure 1.5 reveals that trade openness has increased in both China and Latin America. The region remains relatively less open to trade, however, and the gap with China has tended to widen since the 1990s. Indeed, in this respect China is more integrated into the world economy than some large countries in the developed world (such as the United States) and the developing world (such as Brazil or India). It should be remembered, moreover, that China is a very substantial importer as well as exporter

FIGURE 1.4

Tax Revenue in China and Latin America, 1990–2001
(percent of GDP)



Source: ECLAC (2003); National Bureau of Statistics of China (2003).

Note: Tax revenue is for general government, excluding social security.

TABLE 1.6

**Comparative Annual Export and Import Growth of Goods and Services,
1970s–2003**

	1970s	1980s	1990s	2000	2001	2002	2003
Exports							
China	—	5.7	12.4	30.6	9.6	29.4	22.7
Latin America	5.9	5.4	8.5	10.4	1.4	2.5	2.5
Korea, Rep. of	21.8	11.7	15.1	19.1	−2.7	13.3	15.7
Malaysia	8.3	9.7	12.0	16.1	−7.5	4.5	6.3
World	6.2	5.0	6.2	13.0	0.3	4.1	—
Imports							
China	—	10.2	15.5	24.5	10.8	27.5	31.0
Latin America	7.4	−1.1	10.4	13.5	−0.6	−6.4	0.4
Korea, Rep. of	17.3	10.7	9.9	20.1	−4.2	15.2	9.7
Malaysia	9.2	7.5	10.1	24.4	−8.6	6.3	5.0
World	5.7	4.7	5.8	12.5	0.1	3.2	—

Source: World Bank (2004b).

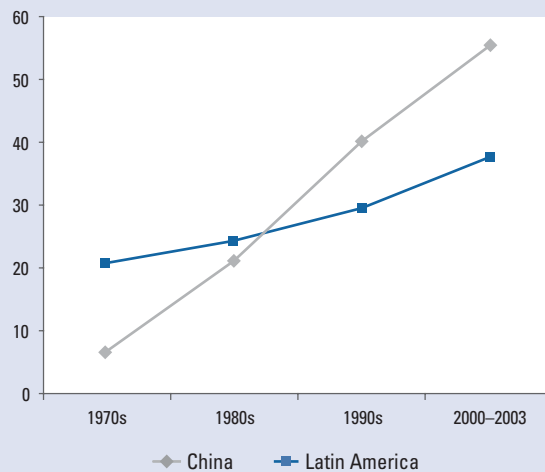
Note: Rates for decades are annual averages; all rates are based on 1995 constant dollars.

and posts no great trade surplus (Figure 1.6). The leading imbalances are with North America (a surplus with the United States) and Asia (a deficit), making the imbalances geographic rather than a function of China's global trade accounts as such.

Table 1.7 shows that China's growing trade has been accompanied by a shift in its geographical direction and product composition. The direction of trade has changed substantially, evidenced by an increase in imports from Asia and a corresponding growth in exports to developed economies, especially the United States and Europe. Overall, since the 1980s there has been a significant decline in the share of China's imports coming from the United States, Canada, and the European Union. Latin America's share of the country's imports also fell substantially but recovered

FIGURE 1.5

**Trade Openness in China and Latin America,
1970s–2003**
(trade as percentage of GDP, simple averages)



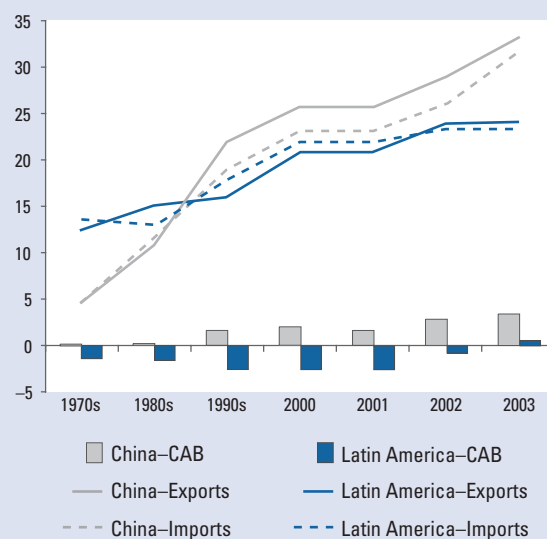
Source: World Bank (2004b).

sharply in 2003 given China's strong demand for raw materials. Recent data show there was a further gain in 2004.

On the export side, the industrialized countries' share of China's exports has generally grown since the 1990s. The United States' share has climbed from about 8 percent to about 21 percent, while the European Union's share has risen from 11 percent to more than 16 percent. Latin America's share doubled to almost 3 percent over the period.

As to *product composition* (which is discussed in more detail in Part II), initially China relied heavily on exports

FIGURE 1.6 Trade and Current Account Balances in China and Latin America, 1970s–2003
(percent of GDP)



Sources: World Bank (2004b); ECLAC (2004b).

TABLE 1.7

Direction of Chinese Trade by Regions and Countries, 1980s–2003
(percentage share)

	1980s	1990s	2000	2001	2002	2003
Exports						
United States	7.8	17.2	22.7	20.4	21.5	21.1
Canada	0.9	1.1	1.5	1.3	1.3	1.3
Latin America	1.4	2.1	2.5	3.0	2.8	2.6
Japan	18.6	17.1	15.8	16.9	14.9	13.6
Asia (excluding Japan) ^a	41.7	40.2	33.6	32.9	34.0	33.1
European Union	10.8	13.2	15.0	15.4	14.8	16.5
Rest of world	18.8	9.1	8.9	10.2	10.7	11.8
Imports						
United States	13.9	11.7	9.6	10.8	9.2	8.2
Canada	3.5	1.8	1.6	1.7	1.2	1.1
Latin America	3.7	2.1	2.1	2.7	2.8	3.6
Japan	25.1	20.2	17.8	17.6	18.1	18.0
Asia (excluding Japan) ^a	20.6	36.5	39.7	35.4	37.9	37.9
European Union	16.5	15.0	13.3	14.7	13.1	12.9
Rest of world	16.7	12.8	15.9	17.2	17.7	18.4

Source: IMF (2004b).

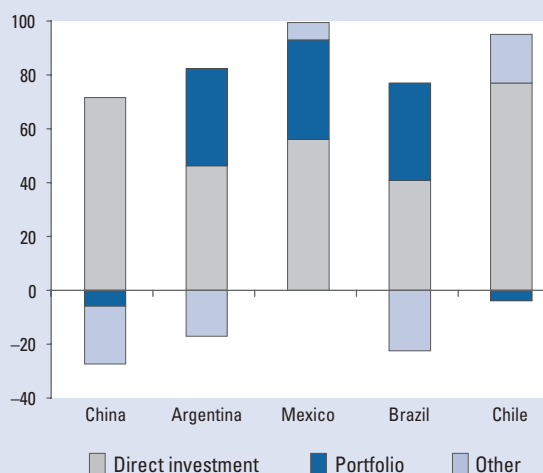
^a Includes Central, East, and Southeast Asian countries, as well as China–Hong Kong.

of textiles and light manufactures. The latter accounted for more than 40 percent of exports a decade ago, while other manufactures, machinery, and transport made up much of the rest. More recently, however, the country's exports have diversified into other categories, including more-sophisticated goods like electronics, furniture, travel goods, and industrial supplies. Sales of machinery and transport equipment (including electronics) increased from 17 percent of total exports in 1993 to 41 percent in 2003. The share of miscellaneous manufacturing fell from 42 percent to 28 percent in the same period (Prasad and Rumbaugh, 2004).

China and Latin America both had very significant access to *international capital*, but a much higher proportion of China's net capital inflows, compared to some larger Latin American countries, has consisted of foreign direct investment. Argentina, Brazil, and Mexico accessed portfolio markets to a considerable degree. Only Chile—one of Latin America's most consistent performers—shares with China the pattern of establishing links with international capital, including a high proportion of FDI in its capital account (Figure 1.7).

FDI flows to China have risen dramatically in the last two decades. As Table 1.8 shows, inflows now stand at more than \$1 billion per week; although, as discussed in Chapter 6, there is a significant statistical issue of "round-tripping" that contributes to overstatement of foreign direct investment. Inflows were low in the 1980s, both in absolute terms and relative to world flows (Figure 1.8). FDI then soared in the early 1990s and was curbed only temporarily by the 1997 Asian crisis. At the national level China is a case apart among developing countries. By the early 2000s it was attracting higher FDI flows than France, Holland, Canada, and Spain, and very substantially more than Brazil and Mexico, the leading Latin American investment targets (Figure 1.9). Moreover, according to the United Nations Economic Commission for Latin America and the Caribbean (ECLAC) (2004a), FDI flows to Latin America declined for four successive years after 1999. A decline in 2003 made Latin America the world's worst-performing region. Note, nonetheless, that the aggregate figures mask disparities within Latin America:

FIGURE 1.7 Composition of Net Capital Flows in China and Latin American Countries, 1990–2002 (percent)



Source: IMF (2004a).

Note: Includes only financial flows, as defined by the IMF.

TABLE 1.8

Foreign Direct Investment in China and Latin America, 1970s–2003
(US\$ millions)

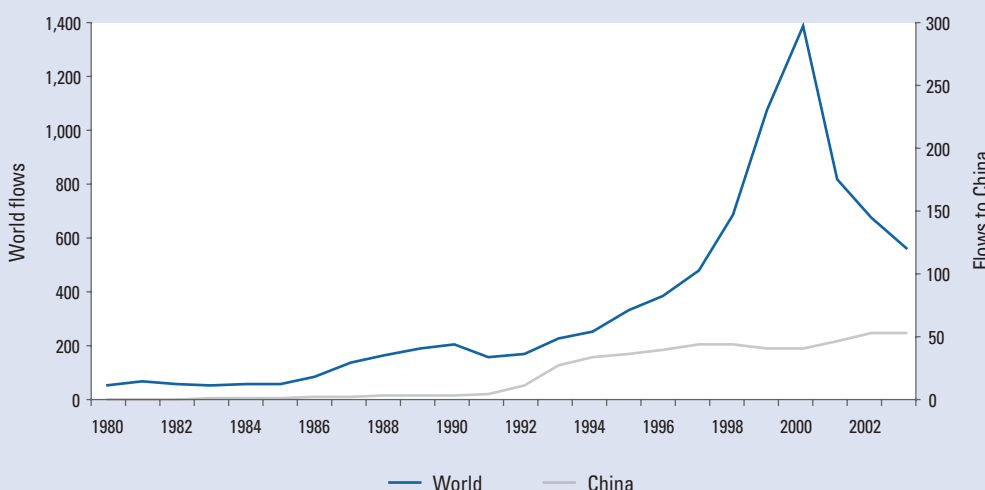
	1970s	1980s	1990s	2000	2001	2002	2003
Latin America							
FDI inflows	3,239	7,120	43,569	97,537	88,139	51,358	49,722
FDI outflows	154	844	11,245	13,738	11,971	6,009	10,666
China							
FDI inflows	—	1,508	28,465	40,715	46,878	52,743	53,505
FDI outflows	—	453	2,323	916	6,884	2,518	1,800

Source: UNCTAD (2004).

Note: Figures for decades are annual averages.

FIGURE 1.8

FDI Flows in China and the World, 1980–2003
(US\$ billions)



Source: UNCTAD (2004).

South America was worst affected; inflows fell less in Mexico and the Caribbean Basin. Within South America the hardest-hit subregion was Mercosur and especially Brazil. Preliminary data for 2004 suggest a partial recovery of flows to Latin America, with inflows reaching some US\$52 billion, still well below the peak levels of 2000–2001. Inflows to China are estimated at US\$62 billion.

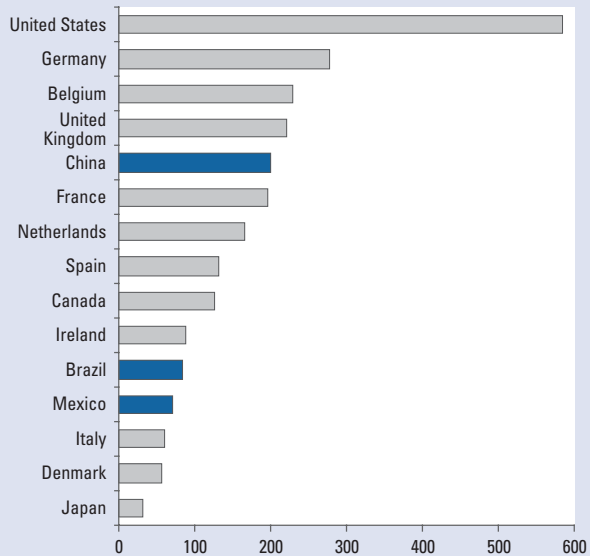
China's external debt is very modest, equivalent to only 40 percent of exports and 14 percent of GDP. Latin America, by contrast, is heavily burdened by external debt, with corresponding figures of 184 percent and 44 percent, respectively. China also has

a comfortable international reserve cover, equivalent to 11 months of imported goods and services. Latin America's cover is about half that (Table 1.9).

As a result of the remarkable economic growth outlined above, China is no longer a low-income developing country. According to the United Nations Human Development Index, no province is now in the "low" development category (an index below 0.5). The whole country is in the "high" or "medium" category. Indeed, a salient feature of China's economic development in the reform period is its very impressive *poverty reduction*. More than 400 million people in China have emerged from poverty since the late 1970s

FIGURE 1.9

**Ranking of Total FDI Flows to Host Economies, 2000–2003
(US\$ billions)**



Source: UNCTAD (2004).

TABLE 1.9

**External Debt and International Reserves in China and Latin America,
1970s–2003**

	1970	1980	1990	2000	2001	2002	2003
Total external debt (as a percentage of exports of goods and services)							
China	—	71.7	75.8	52.1	56.8	46.0	39.9
Latin America	207.0	322.6	233.6	183.1	184.4	182.0	184.2
Total external debt (as a percentage of GDP)							
China	—	7.7	16.4	13.5	14.5	13.6	13.7
Latin America	25.5	47.7	37.0	38.0	38.1	42.8	44.0
Total reserves (in months of imports)							
China	—	7.3	7.4	7.4	8.8	10.2	10.8
Latin America	8.5	5.7	6.2	4.9	4.6	5.1	6.6

Source: World Bank (2004b).

Note: Debt figures for Latin America use weighted averages.

according to World Bank (2003b) measures.¹ Estimates of poverty incidence in China vary widely, but the World Bank puts it at about 17 percent in 2001. Most of the progress was recorded in the 1980s. A comparable figure for poverty in Latin America is 10 percent (World Bank, 2004a).

Rapid economic growth in the more recent period in China, however, has been accompanied by increasing income disparities at the national level between rural and urban groups, among provinces, and between the coast and inland. The growth of income inequality has been swift: the Gini coefficient has been estimated at 0.45 for 2002, up from 0.40 in 1998. The clearest disparities are evident in the urban-rural divide since the countryside is disadvantaged in all areas of development. Schooling is three years less than in the towns, and the under-five mortality rate is almost five times higher (UNDP, 2004). The rural-urban income ratio, at 32 percent in 2002, was below the levels recorded at the outset of reforms (National Bureau of Statistics of China, 2003). Rural households, which had average disposable income of 2,620 yuan per person in 2003, still spend almost half their earnings on food. Town dwellers are relatively more affluent, with per capita disposable incomes of 8,500 yuan. The differentials have spurred internal migration from rural to urban areas. In 2003 alone by some estimates, 26 million people migrated within China—largely from the countryside to towns.

In Latin America, too, recent trends in income distribution have been discouraging. In the period between 1999 and 2001–02, according to ECLAC, the Gini coefficient in most Latin American countries stagnated or worsened. It stagnated in Brazil, the Dominican Republic, Ecuador, El Salvador, Nicaragua, Paraguay, and Venezuela. In other countries it rose by at least 0.01 (Argentina, Bolivia, Costa Rica, Honduras, and Uruguay). The coefficient was least favorable in Brazil and Bolivia in 2002, where the indices of 0.64 and 0.61, respectively, suggest substantially greater levels of inequality than in China (ECLAC, 2003).²

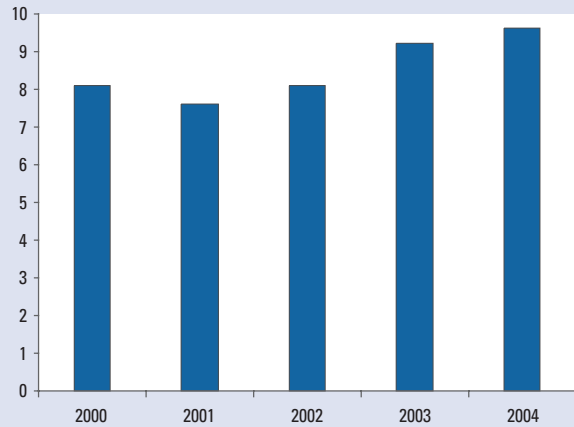
Disparities in China are also reflected in *employment* patterns. China's rate of open unemployment has been increasing steadily over the past three decades, from a decadal average of 2.7 percent in the 1980s to 4.3 percent in 2003, though this is quite low in light of the very high rates of labor market participation (about 85 percent). Some analysts, however, believe that the unemployment rate is underestimated (Oxford Analytica and Oxford Economic Forecasting, 2004). Moreover, a significant share of the rural population is under- or unemployed (Rumbaugh and Blancher, 2004). Meanwhile, unemployment has also been rising in Latin America, from a decadal average of 5.7 percent in the 1980s to 10.5 percent in 2003. In Latin America, the aggregate figures have been drawn upward by persistently high rates in some countries.

¹ The World Bank's standard is a US\$1 per day consumption measure at 1993 purchasing-power parity. The poverty figure is the international baseline of World Bank (2004b).

² Among the caveats here is the comparability of data.

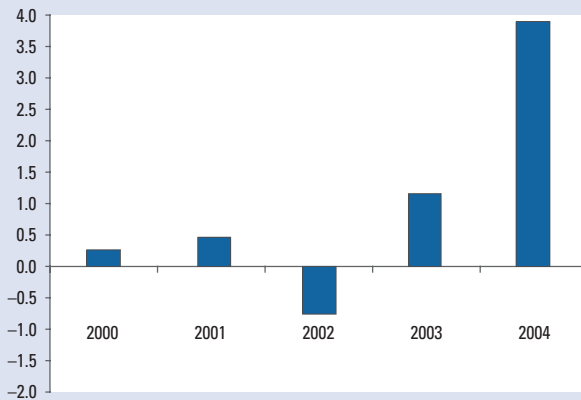
Finally, in 2004, concern surfaced that the Chinese economy might be *overheating*. GDP growth in 2004 (more than 9 percent) was considerably stronger than many observers had expected (Figure 1.10), while domestic price increases have accelerated (Figure 1.11). Driving the economy forward are levels of fixed investment that have persistently grown despite authorities' efforts to contain them through administrative directives and other means. However, preliminary data for 2004 suggest that restraints did eventually impact the growth rate of fixed investment (Figure 1.12). It remains to be seen whether this signals that overheating is effectively being tamed.

FIGURE 1.10 Growth in China's Gross Domestic Product, 2000–2004 (percent)



Source: National Bureau of Statistics of China (2003, 2004, Web site).

FIGURE 1.11 Change in Chinese Consumer Prices, 2000–2004 (percent)



Source: National Bureau of Statistics of China.



An Overview of Policies behind China's Performance

China's recent economic performance, described in the first chapter, has captured much attention. Moreover, the magnitude of its global impact has made China a strategic focus for many countries—including those in Latin America and the Caribbean—as they think about their own growth and development.

As pointed out by the World Bank (2003b), China's performance reflects a remarkable “triple transformation”—from a centrally planned to a market economy, from rural-agriculture-based activity to manufacturing and services, and from an extremely closed to a relatively open economy. What are the elements that explain this complex transformation and the dynamic performance that it led to?

First, dedicated market-oriented economic reforms were clearly central to the takeoff. For 30 years, the Chinese government employed comprehensive central planning, along with socially costly experimentation. The reforms, which began in the late 1970s, pointed China toward a market economy. The starting point of the Chinese reforms has parallels to the process in the former Soviet countries. But from there, the parallel largely ends. Among other reasons, the Chinese approach to introducing investment incentives and more efficient production has been more pragmatic and gradualist.

A second factor relates to the initial conditions into which the Chinese reforms were spliced. On the whole, the initial conditions arising from the planned economy were liabilities. Yet some important assets were embedded within them, and these have contributed to the success of the ongoing transition process. Third, China devised intelligent methods for implementing policy reforms and transformation. Their strategies built upon the tactical flavor of their East Asian neighbors, but they also displayed considerable home-grown originality.

The interactions among these three factors have stimulated remarkable growth and significant transformation. Yet “success” has also been accompanied by economic and social stress, serious problems, and emerging policy challenges. China's management of these downsides will be decisive in determining the sustainability of economic growth and smoothness of the transition toward a more market-driven economy.

Initial Conditions

Favorable interaction between initial conditions and the launch of market-oriented reforms helps to explain much of the dynamism of China's economic performance.

- At the outset of the reform process, rigid central planning and administration of a closed, primarily rural economy led to serious economic backwardness. Consequently, the economy produced far less than its potential steady-state level of income. Hence, institutional introduction of more market action induced “catch-up” gains in efficiency, and therefore growth, as the country moved up toward its production frontier.
- At the outset of the reforms, China's population of 963 million and its industrial labor force of 406 million were the world's largest, while there was a more limited amount of natural resources and other endowments (National Bureau of Statistics of China, 2003). The abundant population helped give rise to a low-wage labor market, providing the country with a significant comparative advantage in producing labor-intensive goods.
- For all their excesses and unnecessary costs, the Great Leap Forward and the Cultural Revolution between 1949 and 1979 nevertheless left a legacy—relatively egalitarian income distribution, education and healthcare for the masses, greater female participation, a slowing of the explosive birth rates, and a reduced mortality rate. Between 1960 and 1980, birth and death rates fell by half, from 40 to 21 per 1,000 and from 14 to 8 per 1,000, respectively. China entered the 1980s with a 65 percent literacy rate. While the country is still very poor, by the early 1980s China's social indicators were equivalent to those of middle-income countries. That strength in human capital in turn significantly contributed to the productivity of its labor force.
- Despite the country's poverty, the sheer size of the Chinese market—and its implicit full potential—were key strategic factors. China is vast geographically. It is a densely populated continent-sized country that is the third largest in the world. It offered inherent economic advantages in generating public goods as well as economies of scale and agglomeration in production, transport, and marketing. A market of this magnitude also attracted foreign investors seeking to meet the full potential of domestic demand.
- A primarily rural population offered opportunities for growth through urbanization, concomitant economies of agglomeration, and the development of sectoral clusters.
- The state owned agricultural land. But in contrast to the Soviet Union, farming was not fully collectivized. Family farming was preserved, facilitating reforms that supported private exploitation of the land.

- China's extremely high marginal savings rate could possibly have cultural determinants, although many might dispute this.¹
- China's governmental capacity was strong and durable, reaching into most dimensions of economic and social activity.
- The state bureaucracy prioritized medium- and long-term strategic thinking in economic policy making.
- China is geographically contiguous with the East Asian Tigers. As their production processes gradually fragmented under the pressures of global competition, China was able to benefit from spillovers (Lall and Albaladejo, 2003). Moreover, the entrepreneurial class in many neighboring countries was strongly of Chinese descent, so cultural links were significant.

The Reforms

Over the past 25 years, China's market-oriented reforms have evolved through stages along with the economy and the changing consensus in policy making. These complex, comprehensive reforms are broad in scope—and they are ongoing. The purpose of this chapter is not to review them in detail, yet some stylized facts will help to provide a flavor of what has been done to create the conditions for the country's remarkable growth and transformation.

Agriculture

Under the rubric of the Household Responsibility System, agriculture was one of the first major reform sectors in the late 1970s. Commune-based agriculture was “quasi-privatized.” In effect, the state assigned plots of land to the families that worked them. Moreover, under the planning system, after official production targets were met, farming units could produce what they wanted, sell it at market-determined prices, and retain the income. Hence, microeconomic incentives and allocative efficiency were enhanced without eroding state income. Coupled with earlier investments in rural infrastructure and R&D (Qian, 2002), agricultural productivity and output significantly improved. Between 1980 and 1988, agricultural output increased at nearly 7 percent a year, compared with less than 3 percent between 1965 and 1980. Moreover, increasing percentages of output were outside planning mandates (Qian, 2002). Rural income reaped substantial benefits, with the rural-urban income ratio rising from 40 to 55 percent between 1978 and 1984 (World Bank, 2003b).

¹ The contribution of culture to savings rates is controversial. For the argument that “Confucian work dynamism” might be a factor in China, see Webley and Nyhus (1999).

Rural Enterprise

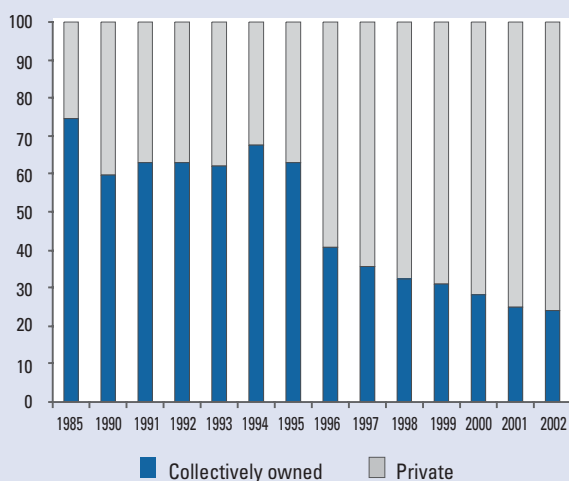
Bolstered by the agricultural reform, a new policy in the 1980s permitted rural households to invest their savings in locally based commerce, manufacturing, and transport. This gave rise to Town and Village Enterprises (TVEs), small-scale collective enterprises built upon the existing commune structure and controlled by local government. The TVEs produced for and serviced local demands.

The TVEs grew in parallel to the national economy dominated by large state enterprises. TVEs were not tightly subject to the planning process or to the extensive regulatory frameworks for employment stability and social welfare that were part of the mandate of the big state enterprises. Output and employment in TVEs grew very rapidly until the mid-1990s. The expansion of rural enterprise helped explain the corresponding fall in agriculture's share of total employment. During the period 1978–85 that share declined from 70 percent to 62 percent, while TVE employment rose from 7 percent to 14 percent (National Bureau of Statistics of China, 2003). After 1995, the production and employment dynamism slowed for several reasons, including emerging competition, low management capacity, and financial stress (World Bank, 2003a). By the mid-1990s, employment was about 100 million each in both the TVEs and the state sector.

The dynamic of the TVEs gradually gave way to a private sector marked by multiple forms of ownership. Figure 2.1 illustrates the rise of private TVEs. This became quite explosive in the 1990s—in part, as discussed below, because state sector reforms

included privatization.² More generally, there were just over 100,000 nonstate firms at the start of the reform process in 1978. Today, private estimates put the figure at several million (*Economist*, March 20, 2004). The private sector now accounts for about a third of nonagricultural gross domestic product (World Bank, 2003a).

FIGURE 2.1 China: Ownership of Town and Village Enterprises, 1985–2002 (percent)



Source: National Bureau of Statistics of China (2003).

² While privatized, the firms' performance tended to lag because of difficult access to credit and a legacy of low management skills.

Trade Liberalization

China's opening to world trade is among the more spectacular reforms and structural changes of its economy. As early as 1978, firms in Hong Kong were allowed to offer export-processing contracts to workshops in contiguous Guangdong province on a small scale. Export processing grew substantially, aided by currency appreciation in neighboring Asian Tigers that spurred incentives to fragment production in search of lower-wage labor. This stimulated investments in China that increasingly integrated the country into East Asia's dynamic production chains. By the mid-1980s, China had a clear, two-tiered export regime—a very open export processing segment and a domestic export segment that operated under the aegis of central planning and was afforded considerable domestic protection.

Export processing allowed for unencumbered imports for processing and export of finished goods. Initially, it was largely restricted to a few authorized special export-processing zones along China's southern coast, but by the mid-1980s, export processing was widely available. Moreover, intense competition among localities attracted export-processing investments. The special export-processing zones enabled China to rapidly exploit its comparative advantage in low-wage labor. Export processing accounted for almost two-thirds of export growth over the 10-year period to 1996. Its share of total exports rose from less than 20 percent in the mid-1980s to close to 60 percent in 2003. As will be examined in greater detail, technological sophistication rose steadily at the same time—from items like garments and toys to more complex electronics.³

The domestic export segment did not enjoy the liberal environment of the export-processing areas. Domestic rights to export were easily secured, though not with duty-free imports. Indeed, the domestic market was sheltered by high protection through tariffs and multilayered nontariff measures such as import planning and licensing. In the reform process, however, the authorities have pursued serious domestic trade liberalization. The unweighted average tariff fell from 55 percent in 1982, to 24 percent in 1996, to 12 percent in 2003 (Rumbaugh and Blancher, 2004).

While tariff reduction was impressive, the most dramatic trade reform took place in December 2001 with China's accession to the World Trade Organization (WTO). By 2006, within five years of accession, the average weighted tariff is expected to fall to around 6 percent. Nontariff measures will be phased out. Deep liberalization commitments have been made for services, many heretofore virtually closed to the outside world. Additionally, China has adopted the WTO's Trade-Related Aspects of Intel-

³ Chinese exports were facilitated by real currency depreciation and current account convertibility in the early to mid-1990s. The exchange rate had been fixed at a rate of 8.28 renminbi to the U.S. dollar since 1998. However, in August 2005 the exchange rate regime was reformed to include the use of a currency basket and a moderate degree of flexibility. An initial 2 percent appreciation was introduced, with variation (plus or minus) of 0.3 percent permitted each day.

lectual Property Rights (TRIPS) and Trade-Related Investment Measures (TRIMS) agreements. These commitments, discussed in more detail in Part II, will greatly broaden and accelerate China's trade liberalization process and its integration with the world economy.

Foreign Direct Investment

As Chapter 1 points out, China has become a powerful magnet for foreign direct investment. While China is receptive to foreign investors and providing competitive incentives for location in the country, initial investments were largely confined to export processing. Foreign investment, moreover, contributed substantially to the rapid growth of China's exports and to the increasing value added in industrial production (Annex I.3). Foreign-invested export processing as a share of total export processing rose from "marginal" in 1985 to 55 percent in 2003. Meanwhile, foreign access to the domestic market remained limited and steeped in negotiation with the state. Wholly owned subsidiaries were generally allowed only for export processing. Beginning in 1992, restrictions on foreign direct investment in the domestic market were substantially reduced, and the limitations on wholly owned subsidiaries were relaxed. Foreign firms have thus obtained broader access to the huge domestic market (see Box 2.1).

State Enterprises

State enterprises are important players in the economy. In 2002, they accounted for about half of industrial output and more than a third of urban employment (National Bureau of Statistics of China, 2003). Traditionally, they have played a significant role in social welfare by providing their workers with education, housing, and healthcare. Industry and state enterprises also serve as an important source of fiscal revenue. In the mid-1960s, state enterprises accounted for 75 percent of consolidated budgetary revenue. Even in the mid-1990s, industry accounted for 50 percent of revenue (Young, 2000).

The reform process has directly affected state enterprises gradually but increasingly since 1998. At the outset of the reforms in the late 1970s, state enterprises were given contracts specifying that surpluses were to be divided between the government and the firm. This ended the practice of full handover of surpluses, which had created strong disincentives for maximization and efficiency. The intense focus on reform in the late 1990s was made more feasible politically through strong growth in the non-state sectors and through tax reforms. However, the capacity of the nonstate sector to absorb labor was limited, conditioning the pace of state enterprise reform.

The goal has been to enhance the efficiency, competitiveness, and effectiveness of state enterprises through consolidation and public listing in equity markets. Restructuring, sell-offs of majority stakes, the demonopolization of certain public services,

BOX 2.1

China's Opening to Foreign Direct Investment and Accession to the World Trade Organization

The rise in foreign direct investment flows has made China one of the world's leading FDI destinations—and the undisputed leader among developing countries. How did China achieve this?

China's FDI inflows were practically zero in the early 1980s. With the United Nations having boycotted China in the aftermath of the Korean War and with the deterioration of relations with the Soviet Union in the 1960s, China was in a state of near autarky. Trade represented less than 5 percent of GDP in 1970, and FDI was even lower. In light of the nationalization of domestic companies that took place in the 1950s, prospective foreign investors deemed the risk of expropriation to be high.

The first legislation allowing joint ventures between Chinese nationals and foreigners was adopted in July 1979. However, not only was the opening process gradual, it was strategically planned so that selective policies promoted specific sectors and activities. Channeling resources to productive investment and upgrading of technology were the main goals. FDI began to arrive, mainly from Hong Kong, as four special economic zones were established in 1980. Together with Macao, these zones accounted for more than 60 percent of the early FDI flows into China.

As concerns about the sustainability of reforms were put to rest after the political transition from Deng Xiaoping to Jiang Zemin in the early 1990s, FDI flows began the meteoric rise that is described in Chapter 1.

China's encouragement of FDI did not mean that foreign capital was necessarily greeted with open arms. FDI policy involved significant restrictions. Until the mid-1980s, foreign companies were prohibited from setting up independent wholly owned companies. Rather, FDI was limited to joint ventures. Restrictions also applied to certain sectors. The government divided foreign investment industries into four categories: encouraged (eligible for preferential tax treatment), allowed, restricted, and prohibited. More importantly, it established requirements regulating export performance and local content.

As with any gradual liberalization, restrictions have relaxed over the years. Wholly owned subsidiaries were permitted, and the composition of FDI by ownership shifted rapidly in its favor. Additionally, changes in government policy led to an increase in the number of encouraged industries.

In December 2001, China acceded to the WTO, reinforcing the trend toward elimination of remaining restrictions. FDI inflows can be expected to continue their dramatic expansion over the next decade.

privatizations, mergers, and outright closures have reduced the number of state-owned or state-controlled enterprises—from 262,000 in 1997 to 159,000 in 2002.⁴ Over that period, an estimated 25–30 million state workers were made redundant. Of these, perhaps two-thirds have found new employment (DFID, 2003; World Bank, 2003b).

⁴ One common way of carrying out reforms is to place a firm in a holding company which exercises control and assumes responsibility for the social obligations of that firm.

The reform has focused primarily on small and medium-sized state firms, where duplication among provinces and insufficient scale economies are common.⁵ Some 80 percent of county-level small firms and 60 percent of city-level firms have been privatized. As noted above, ownership of TVEs consequently underwent a marked transformation. The authorities have identified 2,500 medium-sized and large state firms with five million employees as targets for bankruptcy and closure (Oxford Analytica and Oxford Economic Forecasting, 2004; *Economist*, March 20, 2004).

In 2003, the authorities set up the State Asset Supervision and Administration Commission. The commission's goal is to secure a legal framework for orienting state ownership rights in a way that lessens direct public intervention. It has control over about 200 large state companies with assets in excess of 100 percent of GDP.

The legacy of bureaucratic state enterprises is an inefficiency that the reforms were designed to correct. Traditionally, loss making has been a very serious problem (DFID, 2003). In terms of performance, the revenue and profits of the top 500 state firms during the first 11 months of 2003 were officially reported to have risen by 25 and 33 percent, respectively. Eighty-seven firms were reported to have suffered losses. Although accounting issues blur the analysis of state enterprise performance, the bulk of the financial gains are clearly concentrated in a group of large firms (*Economist*, March 20, 2004).

Financial Markets

Until 2003, only one private bank conducted business other than foreign branches restricted to international services. Today, four large banks dominate—the Bank of China, the China Construction Bank, the Industrial and Commerce Bank of China and the Agricultural Bank of China. These Chinese state banks provide about three-quarters of the funds raised in formal capital markets.⁶ The stock market, meanwhile, is still at an incipient stage (Table 2.1).

Reforms have focused on driving the commercial banking system from a bureaucratically planned framework serving the state sector to a modern commercial concern responsive to the market. The traditional priority given to the state sector has handicapped an expanding private sector, including privatized firms relegated to self-financing and informal markets. Reforms have included Federal Reserve-like bank districts in 1995 to reduce bureaucratic links between local banks and local governments; strengthening the central bank's discipline of commercial banks; listing some

⁵ A reason for consolidation was a legacy of duplication among industries at the local level. This stemmed partly from a policy of local self-sufficiency during the prereform period and robust competition among localities to establish high-margin industries (and revenue sources) during the relaxation of central planning (Young, 2000).

⁶ Informal financial markets are extremely important but difficult to quantify.

TABLE 2.1**Funds Raised in China's Domestic Financial Market, 2000–2002**
(percent)

	Bank lending	Treasury bonds	Corporate bonds	Stocks
2000	72.8	14.4	0.5	12.3
2001	75.9	15.7	0.9	7.6
2002	79.3	15.3	1.3	4.0

Source: People's Bank of China (2002).

large state banks in security markets; and the establishment of policy banks to remove noncommercial activities from commercial banks. (Together, these two kinds of banks account for approximately 60 percent of total domestic lending.)

Joint-stock banks were established in the 1980s. They were mostly owned by the government, but with diversified public stakeholders and some minority nongovernmental participation. The joint-stock banks enjoyed somewhat more freedom of action. Recently, their share of the lending market has sharply increased, reaching 25 percent in 2002.

The most significant development, however, is WTO accession. Unprecedented competition is being introduced, as foreign banks have unrestricted access as of 2006, with a gradual phase-in already underway even before that. In 2003, foreign banks began to offer services to companies in local currency. In 2006, the same services will become available for individuals. Geographical restrictions are also being relaxed. According to the People's Bank of China, foreign banks will account for some 10 percent of the domestic lending market by 2010 (Oxford Analytica and Oxford Economic Forecasting, 2004).

The domestic equity market consisted of about 1,300 listed firms in 2003. State enterprises dominate the listings, however, and about two-thirds of the shares are untraded.

Fiscal and Other Reforms

Fiscal reform has also been significant. Beginning in the early 1980s, the country moved from a system of unified revenue and expenditure, with control at the center, toward devolution of spending authority to local governments. Moreover, local revenue sources were shared with the central government through a fiscal contract, allowing local authorities to keep revenue at the margin of the contract terms. This was designed to promote local development, since new activities were a source of revenue that could be retained (Qian, 2002).

In mid-1994, a major tax reform strengthened the central government's fiscal stance. The package included improved tax administration and income measures, with a reformed revenue-sharing system (which favored the center) and the introduction

of a value-added tax to replace the multilayered system. In conjunction with strong economic growth, the reforms prompted a sharp rise in the government's tax take. Overall, government revenue increased from 11 percent of GDP in 1995 to 19 percent by 2003 (Fedelino and Jan Singh, 2004).⁷

There have also been expenditure reforms. In 1994, central bank overdrafts were abolished. In 1999, a restructuring of the ministry of finance created a dedicated treasury department and a central budget account, which began to include formerly extrabudgetary items (Fedelino and Jan Singh, 2004).

In addition to fiscal reforms, there have been other important areas of reform. These include liberalization of the housing and real estate market, social security and pension reforms, and efforts to improve governance and combat corruption. A stable environment for private entrepreneurship has gradually been signaled through a progressive widening of domestic and foreign private sector access to the market and by recent accession to the WTO. An amendment of the national constitution fully recognizes the right to own private property, giving it the same standing as state-owned property (Oxford Analytica and Oxford Economic Forecasting, 2004).

Strategic Characteristics of Policy Implementation

Rodrik (2003) has pointed out that successful growth spurts come from pursuing economic first principles—such as market competition, incentives, fiscal solvency, sound money, and property rights. However, these are usually pursued by developing local institutional arrangements that adapt to the specific circumstances and constraints that a country faces. There is no unique formula for such arrangements, which typically can combine conventional and nonconventional approaches to policy. Rodrik argues that degrees of freedom in policy design are greater during the transitional growth phase than when growth is consolidated. The demands for solid, more permanent market-based institutional arrangements are greatest during the latter phase, when productivity gains and stability must be ensured in the face of external shocks. Finally, winning formulas have a degree of uniqueness that hampers their “migration” to other countries.

The foregoing suggests that successful growth experiences have a strategic component that draws upon local capacities, creativity, and innovation. China follows the pattern, especially through gradual generalization of pilot programs. Indeed, the implementations of reform and subsequent transformations have generally shared several defining characteristics. These interrelated strategic characteristics are worth highlighting.

⁷ As a percentage of GDP, the central government's tax take more than tripled from the prereform period through 2002, while local government tax income declined by some 30 percent (World Bank, 2003b).

A Long-Term Strategic Commitment to Development and High Rates of Growth

The reforms emerged from an era of central planning geared to achieving autarky. In the transition to markets, the forward-looking development focus of government authorities migrated to the era of market-oriented reforms.

Both at the central and local levels, the Chinese authorities have systematically honed policy on a strategic long-term development perspective. Those perspectives can only be characterized by the word “ambition.” Concrete goals and related incentives are set out by central and local authorities—not necessarily in coordinated fashion and often with a view to directly or indirectly upgrading the international position of the economy, sectors, or firms. Success allows little time for celebration. Rather, incentive structures tend to serve as a call for establishing new goals to upgrade. Failures induce adjustments and further experimentation. In effect, the Chinese economy is very much in constant forward motion at the macro, micro, and meta levels, with a consistently strong projection to the international market across the board.

A second related characteristic of overall policy is a mission to achieve very high rates of growth. These have been seen as essential to facilitating the reallocation of labor employment to market-oriented activities and to poverty reduction. Indeed, as the market economy expands its reach and weight in the national economy, the incentives to reform the remnants of the planned economy increase, and the global “cost” of carrying out the reform falls. The strategy has also been a vehicle to attempt to “grow away” from problems such as bad loans, unemployment, international recession, and fiscal shortfalls.

Key Elements in the Long-Term Strategy

Aside from the reforms discussed, the following elements have contributed to the success of China's long-term development strategy:

- *Sustained macroeconomic stability.* As seen earlier, the authorities have kept global budget deficits in the 2–3 percent range. After a dangerous spurt of 27 percent inflation in mid-1994, inflation fell sharply. The external accounts are strong: there is a surplus on the current account, the capital account is subject to controls, levels of international reserves are quite high, and external debt is relatively low. Exchange rate management is cautious. As mentioned, the exchange rate was fixed de facto to the U.S. dollar, but in 2005, the regime was reformed to include a basket of currencies and moderate flexibility.⁸

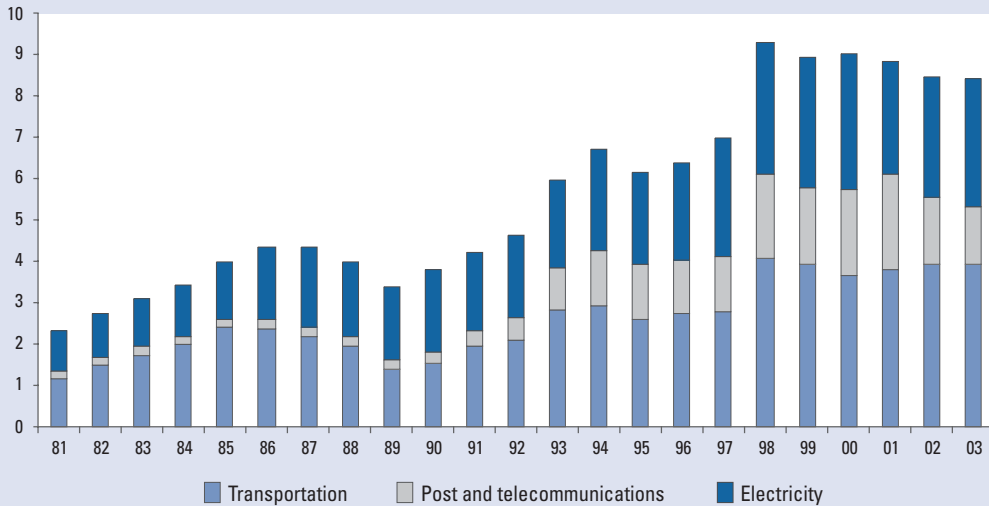
⁸ Prasad and Rumbaugh (2004) have argued that the currency is significantly undervalued and in need of appreciation. As noted earlier, a peg to the U.S. dollar was abandoned in the summer of

- *Anticyclical macroeconomic policy.* This began to appear more explicitly in the mid-1990s. The Asian crisis and world economic slowdown of the late 1990s coupled with state enterprise restructuring, threatening to curb domestic growth. The government adopted proactive fiscal and monetary policy to expand credit, lower interest rates, and boost spending. This particularly encouraged vigorous growth of fixed investment and infrastructure. A strong external balance and the fiscal reform of the mid-1990s helped provide the revenue that made an anticyclical policy feasible. Meanwhile, symptoms of overheating started appearing in 2004—for example, energy and raw material shortages and signs of renewed inflationary pressures. The authorities took selective measures to slow the economy down—such as restricting bank lending and investment in the overheated sectors. In October 2004, they also raised interest rates by 27 basic points, the first such increase in a decade.
- *Competition.* Although China's domestic economy has been highly regulated and protected, market reforms introduced important competition at the margin. Activities to attract export and foreign investment have been highly competitive among localities for many years now. External opening and WTO accession were the broadest expression of the value of competition to the Chinese development strategy.
- *Robust fixed investment.* Robust rates of fixed investment have been a hallmark of the Chinese development policy. Infrastructure investment has been exceptional since the 1990s, reflecting a strategy to both support and lead growth (Figure 2.2). Progress has been impressive. For example, China now has 30,000 kilometers of motorways, second only to the United States (see Box 2.2). The fiscal reform of the mid-1990s facilitated more proactive investment in public goods.
- *Attraction of foreign direct investment.* China clearly recognizes the need for foreign capital. Yet it has been highly selective in how foreign capital is tapped. In effect, FDI flows have been the preferred mechanism. This may be because of the relative stability of FDI and its ability to directly deliver technology, know-how, and international market access. Through joint ventures and “reverse engineering” strategies, China has relentlessly exploited FDI to develop indigenous know-how and capacity. Recently wholly owned FDI has gained a strong foothold in the economy.
- *Preservation of a strong state economic presence.* The state is a proactive strategic player, even in the face of official promotion of an expanding market economy. Reforms are not designed to weaken or privatize the state's central entrepreneurial role as such. Rather, the goal is to foster consolidation into larger units. In an era of increasingly global competition, the effort is to improve the force and effectiveness of that role and its contribution to growth and transformation.

2005. Political pressure, especially from U.S. authorities, which pointed to a large Chinese trade surplus with that country, probably contributed to the new exchange rate policy.

FIGURE 2.2

China: Physical Infrastructure Investment, 1981–2002 (percent of GDP)



Source: National Bureau of Statistics of China (2003, 2004).

- *Proactive industrial and technological policy.* In this area, the state's strongly proactive posture has changed markedly over time. Policy has tended to favor more general sectoral and advanced technological activities. In 2000, R&D expenditures exceeded 1 percent of GDP for the first time, close to the average level for East Asia and nearly twice that of middle-income countries (World Bank, 2004b). In absolute value terms, expenditures exceeded outlays by Brazil (the leader in Latin America) by 70 percent, and they are close on the heels of those recorded in South Korea (see Boxes 2.3 and 2.4).
- *High domestic savings feed ready access to cheap domestic credit.* As discussed, the Chinese economy is awash in capital, and its banking sector is the main source of formal domestic funding. The financial market is fed by China's high savings rate, driven basically by household savings. To some extent, this savings behavior could have cultural determinants, though one notes that rates increased after the introduction of market reforms. To encourage savings, the government has long ensured slightly positive real returns within the banking system, a practice that has been the main formal vehicle for household savings even during bouts of high inflation. A high degree of public confidence stems from the government's practice of keeping real deposit rates positive and avoiding banking crises.⁹ On the other hand, the public has limited choices for placing its savings, since domestic equity markets are thin and capital controls limit op-

⁹ In the face of inflation, deposit rates were increased in October 2004 from 1.98 percent to 2.25 percent, partially offsetting the prevailing erosion of the real rate.

BOX 2.2

The Physical Infrastructure Boom

Until 20 years ago, China's transport, communications, and energy infrastructure were far below the standard of Latin America's most developed countries. Although serious deficiencies persist—and despite the difficulty in meeting the rapidly growing demand for infrastructure services of all kinds—recent improvements have been truly noteworthy. This includes roads, ports, telecommunications, and electricity. In China, government investment in public works has grown faster than the economy as a whole, rising from 2.6 percent of GDP in 1991 to 3 percent in 2002.

The railways, the backbone of the transport system, have received large investments in recent years, including a second line from Beijing to Kowloon (Hong Kong) and the extension of the network to distant areas such as Kashgar in Xinjiang and Tibet. In the 2001–05 period, the plan was to extend the network by 6,000 kilometers and to double the track along 3,000 kilometers of existing lines. On roads, progress has been even more remarkable. In only 12 years, interprovincial expressways increased from zero to 12,000 kilometers. In the 1996–2000 period, 216,900 kilometers of new roads were built, an 18 percent expansion of the network. In the medium term, 200,000 additional kilometers are planned. Port facilities have improved appreciably in recent years. China has 200 ports, including some of the 10 largest in the world. Because many ports are too shallow for large container ships, further expansion is underway. The most important project is the expansion of Shanghai's port, expected to take nearly 20 years to complete.

China's electricity infrastructure suffers from serious limitations, but these are being addressed. The government plans to increase installed capacity from 290 gigawatts in 2000 to 550 gigawatts by 2010. The important Three Gorges project is only one small part of the vast expansion plans underway. Furthermore, the telecommunications sector is going through an unprecedented boom. China has more cable television subscribers (100 million) and more mobile telephones (145.2 million at the end of 2001) than the United States. China also has more than 180 million fixed telephone lines (16 for every 100 inhabitants) and 36.6 million Internet subscribers. According to the government, the extension of the optical fiber network will bring broadband multimedia to every urban home by 2010.

portunities for external placements. In any event, ready access to formal credit has been very strongly oriented toward the state, though institutional reforms of the banking system may eventually widen the reach of bank lending to the private sector, which heretofore has had limited access. Finally, it should be mentioned that capital controls, coupled with high domestic savings, have also contributed to the country's low foreign debt.

- *Higher education.* China's literacy rate is now 85 percent, and there is educational attainment of eight years for those in the 15–64 age group (World Bank, 2003b). This is significantly below the average for East Asia but close to the average for Latin America. Reflecting the strategic focus on high-tech development and efforts to meet the demand for more skilled labor, China has made a significant commitment to higher education: per-student expenditure ratios for tertiary-secondary-primary education are 10-2-1, extremely high compared to other countries (see Figure 2.3). Enrollment rates in higher education rose by a factor of four in the 10-year period ending in 2002, to 13 percent (World Bank, 2004b). This

is still low by middle-income standards, but in absolute terms, it is generating a very large number of college graduates. China graduated 1.3 million students from schools of higher learning in 2002, about 40 percent from China's manufacturing and technology heartlands (home to a third of the national population). Moreover, nearly 45 percent of the country's graduates in higher education were in science and engineering (National Bureau of Statistics of China, 2003).¹⁰

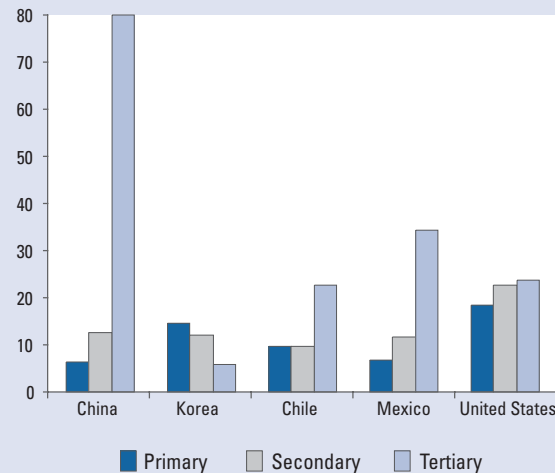
- *Control of urban migration.* The fast growth of urban areas, employment, and income has been a magnet for rural-urban migration. By 2003, there were 120 million migrants from rural areas, 26 million of whom were registered in that year alone. Authorities have used a *hukou* household registration system of urban permits (which provide access to social services) to influence the volume of migration flows.¹¹ The system has been gradually relaxed (DFID, 2003). This and the slowdown in TVE growth partly explain the large migration flow. Some 800 million people still live in rural areas; thus the potential for future migration is enormous.
- *Single-party political system.* The status quo has been maintained in terms of the basic institutional arrangement for political management of the country.

The Art of Pragmatic Implementation

In contrast to the prominence of ideology and the great leaps of the planned-economy era, the reform process has been gradual and pragmatically introduced. Progressive

FIGURE 2.3

Public Education Expenditure Per Student, 1990s
(percent of GDP per capita)



Source: World Bank (n.d.).

¹⁰ Of the 1.3 million graduates, about half came from regular colleges and the other half from three-year specialized programs.

¹¹ Restrictions concerning land rights and stricter limits on births per household in urban areas may also affect the pace of rural to urban migration.

BOX 2.3**Evolution of China's Industrial Policy**

At the creation of the People's Republic in 1949, China's industrial capacity was in desolate condition. Only Shanghai played an important role. With assistance from the Soviet Union, a substantial number of heavy industries were created, primarily in the northeast provinces, where Japanese control had previously developed coal and mineral resources. The Soviet Union provided substantial on-site assistance and brought a large number of Chinese engineers to study at its universities. This large-scale industrial development assistance ended in the late 1950s, when the two countries' political views seriously diverged. Meanwhile, China attempted a forced industrialization, the Great Leap Forward, which was almost completely based on domestic resources and indigenous technologies. These efforts resulted in an economic catastrophe—particularly in agriculture, in which farmers were forced to leave their fields to engage in industrial work.

The Cultural Revolution of 1966 disrupted the subsequent recovery. Later, a major relocation and expansion of industrial activities was carried out—to interior mountainous regions, where they would be shielded from military attack. Many of the new industrial locations lacked serviceable infrastructure. They were located far from major economic centers. Although “self-reliance” remained cherished as a slogan, China continued to buy its major industrial equipment—such as large fertilizer plants—abroad, but was then unable to continuously update the necessary imported technology. Rural industrial and small-scale process plants flourished during this period, providing broad diffusion of manufacturing technologies, yet major industries were stagnant under complete state control. The self-imposed autarky stifled technological and industrial development, though China at the prototype level was able to maintain a certain affinity with the industrial landscape in advanced countries.

When the Open Door Policy was announced in 1978, China's industrial structure was in miserable shape. China made a bold decision in 1978 when it decided to enter the global economy in a major way. The transition was implemented gradually, from 1978 onward, with industrial development receiving strong state support. In many respects, China's industrial policy took on the flavor of approaches of its neighboring Tigers. A first step was the TVEs, which initially received access to low-interest credit, tax holidays, and special allocations in the budget of communes.

In the early 1990s, investment in energy, basic materials, and related infrastructure was prioritized. In the mid-1990s, the policy focus shifted to capital-intensive “pillar industries” with scale economies—machinery, automobiles, electronics, and petrochemicals among others. These were expected to have high income elasticities of demand, generating increased demand for skilled labor. The identification of pillar industries was meant to guide priorities in the allocation of investment and bank lending and to build specific state enterprises as national champions for global competition. Simultaneous reforms of state enterprises were generally undertaken in a complementary spirit.

In the late 1990s industrial policy shifted toward a technological policy to support all technologically advanced enterprises, including small-scale private start-ups and foreign-invested firms. Formal industrial policy now applies to three sectors: software, integrated circuits, and automobiles. The first two programs have been implemented. They seem to suggest a shift in emphasis from efforts to pick winners to across-the-board sectoral support.

In the meantime, China attracted a stream of industrial foreign direct investment into special economic zones. Initially, these were in specific sectors, often organized through joint-venture formulas in collaboration with state-owned enterprises. Beginning in the late 1980s—and especially since the mid-1990s—the stream of industrial foreign direct investment cascaded into a flood, though mainly limited to China's coastal enterprise zones.

(continued on next page)

BOX 2.3 (Continued)

As described, the government maintained a classification system for FDI attraction. It includes a special list for encouragement of foreign investment in high-tech areas. In export-processing activity, foreign investment was encouraged by means of duty-free imports and tax breaks to make export processing competitive with that in the rest of the world. Implicit subsidies also emerged from competition among localities to attract foreign capital. Aggressive encouragement for joint ventures—coupled with tough negotiations on conditions—were aimed at bringing about technology transfers and significantly expanded export market shares.

While encouraging industrial foreign direct investment, China's traditional industrial structure has undergone an almost complete transformation. The state sector has been reduced from some 80 percent to less than 40 percent of GDP (2003). Most earlier state-owned companies have been corporatized and listed on the stock exchange in Shanghai, Shenzhen, Hong Kong, and occasionally New York (although state equity shares are generally still high). Manager buyout schemes have become significant for a number of companies.

State companies have been merged into industrial groups—a development that was partly inspired by the earlier successful *chaebols* in South Korea. Nearly 1,900 companies and industrial groups are directly controlled by the State-Owned Assets Supervision and Administration Commission (SASAC). Most are considered pillar industries and will stay under state influence for the foreseeable future. Others could emerge as global companies.

China's industrial structure has undergone two fundamental changes during recent years. In combination with the increasing sophistication of its technological fields, China's rapid expansion of higher education, which focuses on science and engineering, has attracted foreign direct investment in research and development as well as in industrial production. Beijing is already the home for more than 160 R&D centers and laboratories established by foreign companies.

Another important change is mergers and acquisitions by Chinese companies to acquire advanced technology, recognized brand names, and channels for international marketing, often with the technical support of world-class investment and consulting firms. In 2003, for example, the Chinese information technology company TCL acquired the television division (and the RCA brand) from Thomson in France, thereby becoming the world's largest television producer. The following year saw TCL take over the mobile handset division from Alcatel, also in France. The Ssangyong carmaker in the Republic of Korea was acquired in 2004 by an automobile company in Shanghai. Meanwhile, in late 2004 the Chinese computer manufacturer Lenovo reached an agreement with IBM to take over the personal computer division, incorporating some 10,000 people and related R&D.

The approach of Beijing Oriental Enterprise (BOE), an information technology company that acquired a flat-panel display division from Hyundai in the Republic of Korea, reflects underlying principles of the Chinese strategy. BOE had made a major investment in the next generation of displays for laptop computers, and it is already a supplier both to Lenovo and to IBM. Since the takeover, four batches of 100 staff have been sent for six-month stints to the Republic of Korea to acquire in-depth knowledge of technology and production processes. Simultaneously, BOE brought 120 engineers from the Republic of Korea to train their own staff in Beijing.

Chinese companies are also developing their own companies independently. Huawei Technologies, a privately owned company, has emerged as an outstanding success in its ability to challenge CISCO, Motorola, Ericsson, and Nokia in advanced telecommunications equipment in many parts of the world. The company is based in Shenzhen, with major laboratories in Shanghai and Hangzhou. In late 2004, it landed its first major contract in the Netherlands, the heartland for the next generation of mobile telecommunications.

BOX 2.4**Evolution of China's Technological Policy**

A major university reform was implemented in 1952. Basically, all universities were transformed into teaching universities, while most research was organized into research institutes directly controlled by line ministries. Many ministries organized their own research institutes and activities, which were referred to as “academies”—for example, the Academy of Telecommunications. While industrial and technological development was implemented under formal five-year plans, specific long-term plans were formulated on several occasions to develop science and technology.

Following the Soviet model, the Chinese Academy of Sciences (CAS) had already been established in 1949. It soon evolved as the bastion for advanced scientific research, with more than 120,000 persons eventually employed. A large number of service functions were included.

During a short period, 1958–59, the planned economy was completely disrupted by China's frantic effort to industrialize under the Great Leap Forward. A similar disruption occurred at the outset of the Cultural Revolution in 1966. This led to nearly complete closure of all universities. Normal operations did not resume until the Open Door Policy in 1978. A bit earlier, in 1976, the Chinese Academy of Social Sciences was established. This was formed partly from institutions comprising the Academy of Sciences—and came to serve as a cluster of think tanks for the government.

The new post-1978 era involved several far-reaching reforms, although the concept of five-year plans remained and continued to influence significant sectors of the economy—for example, production of grain and exploitation of mineral resources. First, the line ministries shed their direct control of a majority of their enterprises. These were corporatized and were often introduced on stock exchanges in Shenzhen, Shanghai, and Hong Kong. In most cases, control of major equity shares was retained by the state at national, provincial, or municipal levels.

Second, the university system underwent a complete reform reversing most of the changes from 1952. Universities, or parts of them, were merged to create comprehensive universities. These were given major responsibility for research. They were instructed to develop new curricula for key disciplines, particularly in new and emerging technologies. Undergraduate teaching expanded rapidly. While China initially relied on foreign universities, primarily in the United States, to provide master's and doctoral training, 100 universities were selected for special attention. Ten were tasked with the obligation to become internationally recognized.

Third, R&D, which had until the late 1980s been completely controlled and carried out within state institutions, underwent gradual and very substantial changes. This was partly a reflection of the government's giving up its direct control of state enterprises. Many industrial research institutes were simultaneously transferred to manufacturing plants. In other instances, well-performing research institutes of the Academy of Sciences and similar institutions set up their own commercial high-technology companies. Lenovo, formerly Legend, is among the most striking examples. Spun off from the Academy of Sciences in early December 2004, Lenovo acquired control of the personal computer division of IBM. Several well-known universities, including Tsinghua University, Peking University, and Fudan University in Shanghai, have successfully established their own high-tech companies. The recent ascent of China's capability in high-performance computers can substantially be traced to knowledge transfer from the Institute of Computer Technology of the Academy of Sciences.

In recent years, the commercialization of technology activities has changed. Leading universities have become more involved in basic research. Their role as incubators has come to be recognized. They are no longer simply vehicles for commercialization of existing technologies.

Line ministries are providing less direct support for R&D development. Their newer role is to formulate and implement policies. The Ministry of Science and Technology (MOST)—formerly a

(continued on next page)

BOX 2.4 (Continued)

commission—has come to play a key role. MOST has formulated five major national programs, beginning with the Key Technology R&D Program in 1982. The Spark Program (initiated in 1986) has the ambitious mandate of stimulating technological change in rural areas. The program once known by the numeric designation 863 (as it was initiated in March 1986) should be understood as a direct response to the Star Wars initiative in the United States. Its focus is to support high-technology development for the military sector.

In 1988, MOST formulated the Torch Program, a broad-based initiative to develop China's industrial high-technology. A major component of the program is 53 new high-technology Economic Development Zones. These zones shelter the domestic and foreign companies that are responsible for most of China's high-tech exports. Finally, the 973 programs, initiated in March 1997, are primarily focused on basic research to provide foundational knowledge for future economic progress.

In all, MOST has created five major national programs. Although direct funding is limited, major financial resources come from banks, local agencies, companies, and research institutions. MOST receives funding based on decisions made by the state council, which also allocates funds to the Academy of Sciences, the Ministry of Education, and the military sector. The China National Science Foundation plays an increasingly important role through support for individual projects in basic research.

China's funding for research and development has increased even more rapidly than its rate of economic growth, reaching 1.3 percent of GDP in 2003. Though impressive, this figure may somewhat exaggerate the country's actual R&D capability. Nearly two-thirds of reported R&D is carried out in the corporate sector, and many state-owned enterprises are still too poorly organized to efficiently exploit R&D results. Shanghai and Beijing retain their dominance as the major research centers. Shanghai has set the objective of 2.5 percent of its GDP to be used for R&D by 2005.

In March 2005, China decided on its long-term science and technology trajectory, laying out a plan to cover the 15 years until 2020. The information technology sector is defined as a pillar industry and the semiconductor industry will receive special support. Biotechnology will also receive substantial additional support. The development of these and other sectors will greatly benefit from an expanded talent pool, the fruit of China's rapid expansion of higher education.

China's technological prowess will require efficient use of its R&D resources in engineering and scientific fields in order to capture substantial intellectual property rights. Chinese companies remain weak in mature or maturing technologies, because they lack intellectual property rights with consequent brand name recognition. Nevertheless, the vastness of its domestic market and its position as "the world's workshop" give China considerable influence in the setting of standards—for example, for future communication technologies.

China will strongly benefit from returnees who have been educated and received advanced training abroad, primarily in the United States. The country is simultaneously attracting substantial R&D from industrialized countries. China may turn out to be the first developing country to capture the entire range of R&D functions from multinational companies—from rudimentary upgrading of manufacturing technology to basic research at the frontiers of new knowledge. Global information technology companies may be embarking on a process of creating a global innovation system—with China playing an increasingly important role.

stages have built upon and adjusted to the development of market forces within the economy. This incrementalism involves the interaction of initial conditions (good and bad) with transitional policies (that is, bridges for getting from here to there) designed

to secure fuller market action. In a search for feasible paths of institutional change, pilot experiments often preceded more general applications of new policies, and even general applications have been only transitions to effecting more market-oriented institutional change. Examples of pilot experiments that evolved into broadly based transitional policies (which in turn have served as a foundation for the development of markets) are TVEs and the export-processing phenomenon (Qian, 2002).

China has taken care to ensure that short-run reforms do not disrupt growth, create politically destabilizing labor displacements, spark major political unrest, or undermine the central role of the socialist state in economic activity and political life.¹² “Dualism” has evolved into a major tactic in the Chinese strategy. There is a tendency to “create” market-oriented processes alongside the ancien régime, reforming the latter only when the former has taken firm hold.

The aforementioned coexistence of economic planning and market liberalization is the broadest expression of China’s dualism, which is very evident in external liberalization. First, trade liberalization of the domestic market advanced only after the initially limited opening through the circumscribed export-processing program and the amassing of a very large cushion of international reserves to face potential import surges. Second, capital account opening is selective and concentrated on foreign direct investment flows, not on more volatile private financial markets.¹³ Pressure on the exchange rate in 2003–04 encouraged some cautious relaxation of controls on outflows of capital. Third, exchange rate overvaluation in the early 1990s was corrected using a temporary two-tier exchange rate. The official rate was paralleled by a relatively free domestic swap market, which helped determine the value of a unified regime in 1994 and prevails today. Dualism also seems to characterize the backloading of the major reforms of state enterprises in the overall timing of the market reform process—to minimize disruption of labor markets—and it was central in agricultural pricing reforms at the outset of reforms.

Chinese authorities have instituted programs to soften the blow of incremental reforms through several forms of compensation for potential losers. For example, market purchases of foodstuffs began in 1980, but prereform urban food coupons were kept in circulation until gradually being phased out in the early 1990s. As coupons were withdrawn, users received temporary compensation from the provinces. Another example: when the foreign exchange market was made convertible in 1994, subsidies

¹² China’s measured reform process contrasts quite sharply with the “big bang shock” as Russia attempted to take a single leap to the market and democracy in the aftermath of the Soviet-era economy and political regime.

¹³ Interestingly, this followed the consensus academic prescription for sequencing external market opening, which emerged following the disastrous experience with simultaneous current and capital account opening in the Southern Cone of Latin America during the late 1970s. See ECLAC (1995).

were given for three years to organizations that had depended on the old planned allocation of foreign exchange. Meanwhile, workers laid off because of state enterprise reform received transitional income for three years while searching for new work.

Others have argued more broadly that dualism was partly designed to obviate the emergence and minimize the number of losers, thereby deterring organized opposition (Qian, 2002; Rodrik, 2003).

Stress, Problems, and Challenges

China's economic success is undeniable. Nonetheless, responses to structural problems, particularly transitional difficulties, frequently raise new problems in combination with old ones. Several issues must be addressed in the medium term if growth is to be sustained.

Inequality Has Worsened

As pointed out in Chapter 1, China's growth and development have contributed to an impressive reduction of poverty. Rapid growth, however, has been accompanied by increasingly serious income disparities at the national level, between rural and urban groups, among provinces, and between the coast and inland. Broadly speaking, this follows empirical patterns found elsewhere in the process of economic development. The relationship between development and equity is U-shaped, with higher degrees of equality at the two poles of the process. Moving between poles, the faster the growth, the more income shifts toward higher income groups (Kuznets, 1955; Adelman, 1975; Acemoglu and Robinson, 2002). China may be no exception to this pattern.

Income disparities are also reflected by social indicators. At the end of the 1990s, for example, infant mortality in inland provinces was three times higher than on the coast, while maternal mortality was as much as six times higher.

The rural-urban divide is particularly challenging because 60 percent of the population—that is, 800 million people—live in rural areas. Maintaining China's rapid growth, moreover, will require their fluid absorption into more productive activities. Containing unemployment (which is rising, and could be as high as 25 percent in the industrial northeast) is another imperative that will depend on sustained growth. Twenty million jobs a year will be needed to keep unemployment levels flat (DFID, 2003).

Real estate prices, rising wages, and bottlenecks in infrastructure services are inducing some firms in the traditional coastal export centers to look to the western and northern hinterland for relocation of the most labor-intensive activities. If efforts to improve infrastructure and social services in the hinterland are persistent and successful—and if the institutional forces behind serious market segmentation among localities are tamed—the geographical diversification of China's dynamic

export sector and growth may help to mitigate income and regional disparities.¹⁴ Rural conditions would also be improved by more stable land rights and by modern social safety networks to take up the slack as traditional state sector networks are dismantled.

The Size of Contingent Public Liabilities

A relatively strong fiscal position has been important for macroeconomic stability and for the state's proactive role in development. Behind the formal fiscal accounts, however, hidden claims could emerge into a sizable burden.

The flip side of ample bank credit, coupled with the dominance of bureaucratic banking intermediation, and a state bias in credit allocations are two manifest problems. On the one hand, the private sector has been relatively disadvantaged in its access to formal credit. On the other, there is a large overhang of bad loans. According to official estimates, nonperforming loans (NPLs) in the banking system were equivalent to 25 percent of GDP at the end of 2003 (Barnett, 2004).¹⁵ They were estimated to be about 13 percent in 2004, and by some private estimates, significantly higher—for example, Standard & Poor's put NPLs at 35 percent (*Business Week*, December 13, 2004). The problem is heavily concentrated in the major state banks.

In any event, the preponderance of NPLs in the banking system has fallen because of aggressive public policy efforts to clean up the system. To reduce the overhang of bad loans, the government has taken them out of the system and recapitalized banks. This has been costly. A capital injection equivalent to 3.5 percent of GDP was undertaken in 1998. In 1999–2000, additional nonperforming assets equivalent to 14 percent of GDP were purchased (Barnett, 2004). Recently, two large state banks received an injection of US\$45 billion in foreign currency reserves to support a listing on international equity markets (Oxford Analytica and Oxford Economic Forecasting, 2004), and the country's largest lender (the Industrial and Commercial Bank of China) was being targeted to receive an injection of US\$30 billion to prepare for an overseas listing (*Financial Times*, January 4, 2005).

A sustained solution to the bad debt overhang, however, consists of accelerated reform of banking practices in order to attain competitive and international standards in the prudential supervision, risk management, and internal corporate governance of state banks. To aid the transfer of management know-how, the authorities permitted

¹⁴ The central government has supported programs to accelerate development of the western interior and revitalize the north-east rust belt (Wall, 2004). Meanwhile, provincial industrial centers on the coast are contemplating a broader regional development policy that looks west in order to deal with labor shortages, congestion, and pollution problems (*Economist*, November 30, 2004).

¹⁵ This statistic does not include other assets that were nonperforming.

minority international partners for smaller commercial banks. As noted earlier, the presence of foreign banks in the market should increase substantially because of WTO accession, as will pressure to enhance the competitiveness of local banks.

China has an aging population profile not dissimilar to that of an industrialized country, but with a fraction of the income. China's traditional pay-as-you-go pension system operates in parallel to the growth of individual accounts emerging from the reform process, company schemes, and a social safety fund. The former is running deficits that are projected to increase as the number of contributors declines. For every person over 60 years of age, China has six working-age people, but this is expected to fall to two working-age people by 2040. Some estimates of the transition cost to a fully funded system are very high (net present value of 70 percent of GDP over 75 years) in the absence of reforms. Fortunately, the problem is likely to become more manageable with reasonable reforms (Fedelino and Jan Singh, 2004). Meanwhile, China's rural population is largely left out of the formal security network.

State enterprise restructuring has led to the transfer of a growing number of social services to local governments, which already account for some 70 percent of public expenditure. These localities are highly dependent on raising extrabudgetary revenue to sustain their accounts. If they are unable to successfully absorb new social responsibilities, they could become a liability of the central government.

Finally, other fiscal burdens are emerging. There is a need to improve a national health system already under stress, and the inevitable outlays will be needed to tackle the serious, unaddressed environmental costs of rapid growth. China's environmental degradation is evident in severe urban air pollution (China has 16 of the World Bank's 20 worst cases), expanding deserts, and contaminated water supplies, with accompanying disease (*New York Times*, September 12, 2004; *Washington Post*, September 19, 2004). Environmental problems also emerged in the development of industrialized economies, but China is reaching threshold levels that require urgent remedial action at a much lower per capita income level.

How Successful Is Industrial Policy?

The state has driven growth, but there is much debate about the effectiveness of its industrial policy. Given China's size, it makes sense for the country to attempt to conquer technologically sophisticated markets—successes are clearly evident. China has a capacity in commercial space technology. It is a leading supplier in electronic goods. China provides about half the world's DVDs and digital cameras, a third of DVD-ROM units and desktop and notebook computers, and a quarter of the mobile phones and color televisions.

On the other hand, China's industrial policy has been criticized in many independent assessments. This is a difficult area to appraise objectively, because an ideological cloud often hangs over debates about industrial policy. Since successful industrial expansion and diversification have been hallmarks of China's economic experience,

something positive has indisputably happened. Yet more work is needed to evaluate the effectiveness of policies involving trade protection, sectoral incentives, FDI directives, higher education, R&D funding, and other efforts.

The performance of large state enterprises is one area in which there is relative consensus. Overall, these enterprises have had a checkered performance. Most analysts view them as a drag on the economy, even with reforms. Insufficient competition, welfare programs, overly elastic budget constraints, and difficulty in finding a formula for efficient state corporate governance¹⁶ are frequently cited as the major shortcomings.

Fiscal devolution to localities in the 1980s achieved sought-after incentives for local industrial development, but it also gave rise to serious duplication of investment and to barriers that segment the domestic market. This circumstance creates inefficiencies in domestic trade and contributes to inequalities among provinces. Meanwhile, some experts believe that state support for technological parks has worked best when applied generally or to spontaneous processes already underway. In any event, recent WTO accession should encourage horizontal industrial policies in China.

Finally, inefficiencies are perhaps inevitable given the inherent difficulty of industrial policy and the vast scale of China's effort. But that same scale also improves the likelihood that a certain critical mass of effective action will occur. Assume, for instance, that half of all R&D expenditures are ineffective. What remains—both in absolute terms and as a percentage of GDP—still greatly exceeds typical outlays in Latin America. Or assume that half of the graduates of higher education receive low-quality training. Even so, that still leaves 250,000 competent scientists and engineers generated by the schools each year.

Good Governance at a Faster Pace?

A strong state apparatus has been important to China's reform process. But since private incentives are increasingly critical to the future evolution of the economy, pressures are mounting to hasten progress in good governance. Judicial professionalism, transparency, and stable property rights (including rural rights and corporate governance) will all require more attention as market forces continue to grow. Meanwhile, although dualism has facilitated market-oriented reforms and perhaps mitigated their social costs, potential arbitration between bureaucratic arrangements and market forces has greatly amplified the opportunities for rent seeking and corruption, which seems widespread.

¹⁶ A common critique is that incentives are asymmetrical: they are positive for undertaking ventures, but there is less accountability for failures.

Overheating: Will There Be a Soft Landing?

China's rush for growth has strained its economy, including pressure on prices. In order to cool the economy while avoiding a destabilizing slump in growth (say, to less than 7 percent), the authorities have generally eschewed broad corrective macroeconomic measures—such as increased interest rates, fiscal retrenchment, or exchange rate appreciation. During 2004, China tried to slow down strained sectors of the economy by taking selective administrative measures instead—for example, directives to state banks on the allocation of lending and restrictions on land access for certain investment. More recently, macro approaches have been tried, such as the modest adjustment of domestic interest rates, limited opening for capital outflows, and a small appreciation cum modest flexibility in the exchange rate. It remains to be seen how well this approach will work, although as pointed out in Chapter 1, inflationary pressure receded in 2004–05.

The Implementation Challenges of WTO Accession

WTO accession and the need to implement complex disciplines relatively quickly is a major challenge facing the economy. The state-based economy will experience a sharp rise in domestic competition. Moreover, some of the strategic aspects of China's incrementalism and dualism will be pressed to undergo modification. On the one hand, the liberalization schedules are tight. On the other hand, rules such as national treatment, most-favored-nation status, and other disciplines will edge policy toward a more unified approach. Meanwhile, the WTO's rules for TRIMS and TRIPS will place some limits on the types of industrial policy that can be pursued. Implementing and monitoring the agreement will create demands for new institutions and legal frameworks. Finally, China faces pressure from WTO trade partners withholding "market economy" status, a situation that makes it easier to apply antidumping measures to Chinese exports. In short, Chinese policy is becoming and will become far more accountable to its trade partners.

Political Transition

Can a one-party state sustain a thriving capitalist economy? That is a question that only time will answer. To date, monolithic party structures have notably survived within some Asian miracle economies. But as the Chinese economy deepens and widens, pressures may well intensify for more diverse forms of political participation and dialogue. The smoothness of this transition—if it occurs—could certainly affect the future performance of the Chinese economy.

This page intentionally left blank

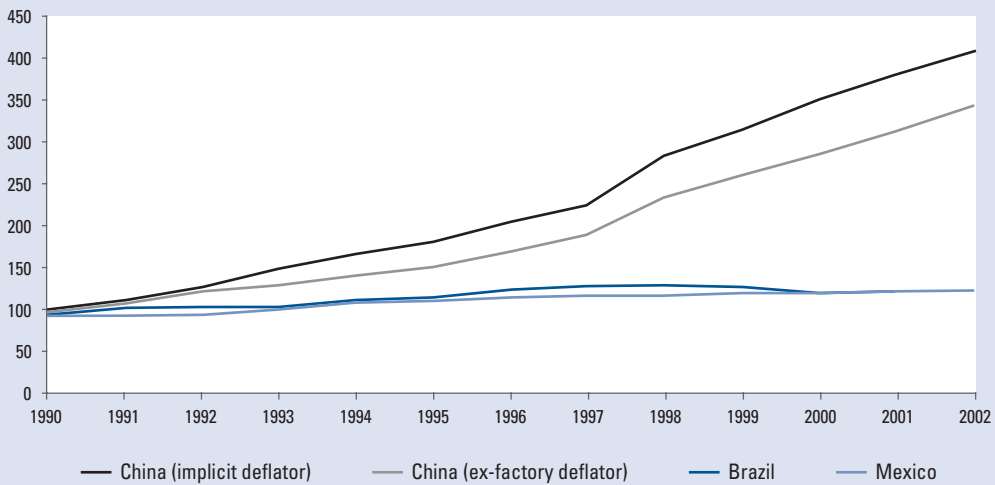
Productivity Growth

How fast is productivity growth in China? What is behind it? What is its contribution to economic growth? A proper understanding of China's breakneck growth requires answers to these questions. Economists emphasize that productivity is the main driver behind long-term sustainable growth. A pattern of growth based solely on the accumulation of capital and labor is bound to end, if only because the population can absorb only so many machines. Knowing more about China's productivity performance is also important for other regions, such as Latin America, which face fierce Chinese competition in world markets and need to know where they stand. Are they lagging behind? If so, why? What are the implications for their position in world markets, and how does that affect their growth prospects?

Measuring productivity is fraught with methodological and data difficulties everywhere in the world. For countries like China, which is undergoing a transition from a socialist to a market economy, differences and radical changes in accountancy procedures make the task particularly difficult. Performance estimates range from spectacular to moderate. For instance, looking first at the simplest concept (labor productivity), national account data for manufacturing suggest an impressive 12.5 percent average annual growth in 1990–2002, well above the mark achieved by Latin America's largest economies (see Figure I.1.1). However, some analysts (for example, Young, 2003; Jefferson et al., 1999) argue that national account figures overestimate productivity growth because they systematically underestimate the effects of inflation (a problem related to how data are generally reported by provinces). Use of an alternative (and arguably more reliable) deflator reduces the productivity growth to 10.9 percent per year. Yet this adjustment still leaves China with a remarkable performance, particularly by Latin American standards. China's impressive productivity performance is also confirmed by firm-level data, usually a more reliable source of information (see Figure I.1.2).

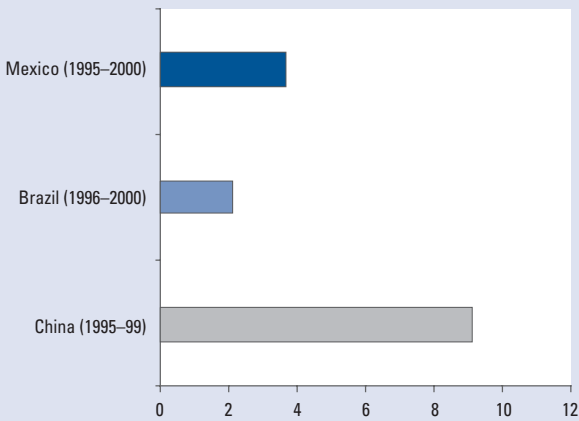
Labor productivity, however, does not reveal the whole story. Because this measure does not take into account all the inputs used in production, it can lead to misinterpretations—for example, labor productivity growth being read as improvements in efficiency, when it actually reflects more machines per worker. This risk is particularly relevant for a country like China, which has been investing some 40 percent of its GDP. In search of a more accurate measure, economists usually turn to the concept of to-

FIGURE 1.1.1 China, Brazil, and Mexico: Labor Productivity in Manufacturing, 1990–2002
(value added per worker, 1990 = 100)



Sources: National Bureaus of Statistics of China, Brazil, and Mexico.

FIGURE 1.1.2 China, Brazil, and Mexico: Labor Productivity at the Firm Level
(annual average, percent)



Sources: López-Cordóva and Moreira (2004); Hu et al. (2003).

tal factor productivity (TFP), defined as the ratio of output to all inputs combined. Yet greater accuracy comes with a price. This indicator requires information that is more detailed. Moreover, it is highly sensitive to the choice of methodology and the quality of the data used, characteristics that hardly facilitate its application to transitional economies such as China.

A number of TFP estimates are nonetheless available, suggesting a range of possible results at the least. Young (2003), for instance, uses official national accounts data

to estimate an impressive 3.0 percent TFP growth per year in 1978–98. The author argues, however, that the use of alternative and arguably more reliable deflators brings this result to a moderate 1.4 percent per year. To put these figures into perspective,

some of the TFP estimates for Latin America (for example, IDB, 2002; Loayza, Fajnzylber, and Calderón, 2002) point to an average negative growth in the 1980s and 1990s, notwithstanding significantly high variance among countries. The best performers in the region, Chile and Argentina, reached close to 2 percent TFP growth, but only in the 1990s. Young's result of 1.4 percent appears to be at the bottom of the range of available estimates. Other authors, such as Wang and Wei (2004), also use national accounts data. They estimate a 2.3 percent TFP growth per year, a considerably better result given that it includes the pre-1978 reform years (1952–98). Li (2003), who uses both national and provincial data, reaches an even higher estimate—TFP growth at 3.4 percent in the postreform years.

Both Young's and Wang and Wei's estimates suggest that despite the “respectable”—to use Young's term—productivity performance, it was labor that made the main contribution to growth in the postreform years. This occurred through rising participation rates, the transfer of labor out of agriculture, and improvements in educational attainment. Despite the high investment ratios, capital deepening is attributed as having made a secondary contribution.

The estimates based on sectoral or firm-level data usually point to higher levels of TFP growth. For instance, Jefferson et al. (1999) estimate a 2.5 percent TFP growth per year for state and 3.4 percent for collective enterprises in 1980–92. Jefferson et al. (2000) also use firm-level data. They estimate a 2.8 percent TFP growth per year in 1980–96. With a few exceptions, roughly comparable estimates for Latin America usually suggest a more modest performance. For Mexico, Tybout and Westbrook (1995), covering the first period of the trade liberalization (1986–90), put the TFP annual growth at 1.8 percent. López-Córdova and Moreira (2004) put it at 1.1 percent for the North American Free Trade Agreement (NAFTA) period (1993–99). For Brazil, Muendler (2004) estimates a 0.4 percent annual growth of TFP during 1986–98, which covers most of Brazil's trade liberalization, and López-Córdova and Moreira (2004) find annual increases of 2.7 percent for the second half of the 1990s. Finally, Pavcnik's (2000) estimates for Chile point to a 2.8 percent annual growth of TFP after the country's radical trade reforms (1979–86).

Taken together, the available evidence for productivity growth in China—whether labor or total factor productivity—confirms a very favorable picture. At the very least, China's performance is “respectable.” And based on that assessment, at least two immediate implications can be derived. First, China's impressive postreform growth can hardly be dismissed as “Soviet”—that is, mere accumulation of inputs. Driven by industrialization, foreign direct investment, and market-oriented reforms, productivity seems to be playing an important role. Second, despite improvements in the 1990s, Latin America is lagging behind China, not only in economic growth, but also in productivity growth. This weakness signals trouble. Latin America may not be able to maintain, much less expand, its presence in world markets.

This page intentionally left blank

Savings Patterns

The phenomenal economic growth in China has been marked by two outstanding features: an exceptionally high rate of domestic savings and very sizable foreign direct investment.

International comparison. Table I.2.1 shows domestic investment and savings ratios as percentages of GDP for selected developing and developed countries during the past four decades. It compares 2002 with 1965 as the benchmark. What stands out is that by 2002 China had the highest gross domestic savings and gross domestic investment rate among this group of middle- and high-income countries. Also, these ratios

TABLE I.2.1

Gross Domestic Investment and Savings for Selected Countries, 1965 and 2002

Country	Gross domestic investment as percentage of GDP (1965)	Gross domestic investment as percentage of GDP (2002)	Gross domestic savings as percentage of GDP (1965)	Gross domestic savings as percentage of GDP (2002)	Resource gap (1965)	Resource gap (2002)
China	25	40	25	43	0	-3
India	18	22	14	21	4	1
Japan	32	25	33	26	-1	-1
Korea, Rep. of	15	29	7	30	8	-1
Malaysia	20	23	24	41	-4	-8
Honduras	15	29	15	13	0	16
Bolivia	22	15	13	16	9	-1
Peru	34	18	27	17	7	1
Brazil	25	21	27	20	-2	1
Argentina	19	14	23	16	-4	-2
Mexico	22	21	21	20	1	1
U.K.	20	17	19	15	1	2
Germany	28	20	29	22	-1	-2
U.S.	20	15	21	19	-1	-4

Source: World Bank (2004b).

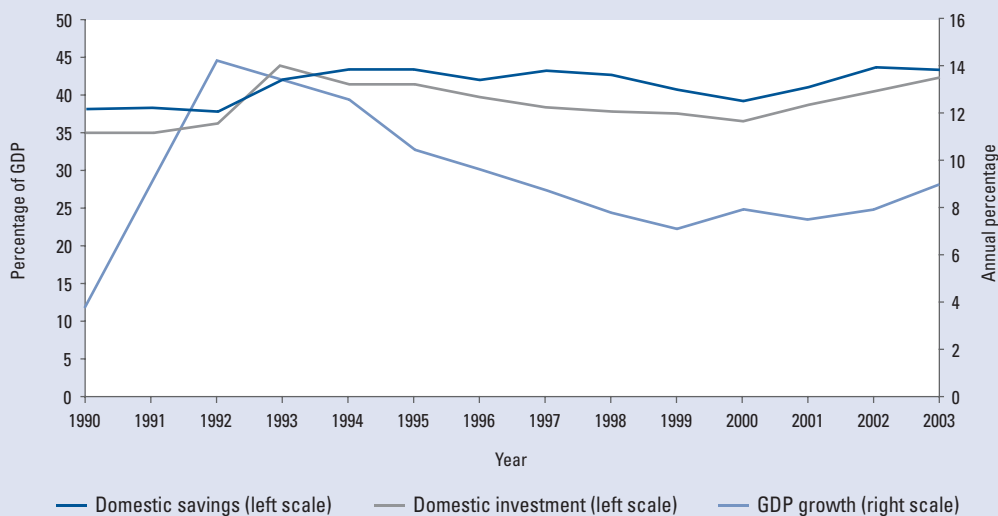
Note: The resource gap is the difference between investment and domestic savings, funded by foreign savings; a negative gap implies net capital outflow.

in China have increased substantially since 1965, while they have either declined or stayed about the same in upper-income countries such as Japan, the United Kingdom, Germany, and the United States, as well as in upper-middle-income countries such as Brazil, Mexico, and Argentina.

Public versus private savings. A split of domestic savings between public (government and public enterprises) and private (households, unincorporated businesses, and corporations) savings for various countries shows that private savings consistently dominate. In general, government savings are either small or negative, with some unusual features in Honduras (5 percent of GDP) and Brazil (an acute fluctuation from +18 percent in 1975 to +5.7 percent in 1997–98). While corporate sector savings generally constitute about 25 percent of the gross private savings in industrialized countries, their share in developing countries has been quite small, with the major part of savings coming from households and unincorporated businesses. In government savings, the contribution of public sector enterprises during the 1980s and 1990s has been negligible or negative (receiving budgetary subsidies). In most countries, this has led to closure or privatization of many of these enterprises. The trend in China has been similar to that in other countries inasmuch as private savings constitute the bulk of domestic savings. In the prereform period, as in other centrally planned economies, almost all the saving was government savings. The trend has completely reversed since the early 1980s. Today, the greater part of the saving is from the private sector. Government saving has hovered around 1.5 percent of GDP. Again, the share of public enterprises in government savings has been negligible. Until 1997, most large and medium-sized state enterprises were loss making and were on the verge of insolvency. The situation began to change in 1999 following a series of restructuring initiatives such as mergers, bankruptcy, reorganization, debt-to-equity swaps, debt and tax forgiveness, and improved management. Nonviable public enterprises still exist, however, and public enterprise reform remains a central plank for structural reform in the country. This implies a declining contribution of public enterprises to government savings in the future.

Foreign sources. These include both official and private savings. Most official savings are on concessional terms made available through grants or soft loans. As a percentage of GDP, the net receipt of official assistance by China has been close to zero. China's foreign private savings mainly comprise foreign direct investment, mostly by multinationals. Portfolio investment, commercial bank lending, and exports credits have played less important roles.

Figure I.2.1 shows the levels of gross domestic savings, gross domestic investment, and economic growth in the country, while Figure I.2.2 displays domestic savings compared with government capital formation and net foreign direct investment inflows in China since 1990.

FIGURE I.2.1 Savings, Investment, and Growth

Source: World Bank (2004b) on National Bureau of Statistics of China (1994–2000).

FIGURE I.2.2 Private and Government Savings, and FDI

Source: National Bureau of Statistics of China (2003, 2004).

Savings behavior of Chinese households. High household saving rates are an important feature of the Chinese economy that has held steady over the years. During the past six years, the renminbi-denominated deposit rate has declined from 7.5 percent to 2 percent. But in response to the change in money supply and interest rates, households are more likely to adjust their portfolios of stocks and bonds rather than increase their propensity to consume. This behavior conforms to an overall low interest rate elasticity of savings observed in most countries, ranging from zero in developed countries to 0.1 in developing countries. The cuts in interest rates have encouraged funds to flow into government and public corporation bond markets. Surprisingly, even when interest rates on government bonds have been low, Chinese households have queued up to buy them. A somewhat similar trend has been observed in neighboring Japan, where the public is still ready to buy government bonds despite a low yield of 2 percent on a 10-year government bond.

Demographic transformation and household savings. The demographic transformation in China is likely to have significant implications for household savings in the coming decades. The Chinese population is still predominately rural. Before 1985, the urban savings rate was substantially lower than the rural savings rate, partly because the urban labor force had better access to social safety nets than the rural population. The urban savings rate, however, doubled during the 1990s; the rural savings rate declined slightly. The increase in the urban savings rate may be largely attributed to the rapid rate of increase in urban household income. On the other hand, the changing demographic composition—a larger elderly population with fewer children—means that the higher elderly dependency ratio (that is, the population over 65 relative to the population 15–64) may negatively affect savings rates, particularly in rural areas. A reduced youth dependency ratio (that is, the population under 15 relative to the population 15–64) pushes in the other direction. The demographic transition with deceleration in the rate of future income growth is likely to decrease household savings.

Foreign-Invested Enterprises in Industrial Production and Value Added

Manufacturing stood at 35 percent of GDP in 2002. The growth in the industrial value added in the recent past has been primarily led by foreign-invested enterprises. These include all industrial enterprises with at least 10 percent foreign-funded equity.

The basic issue. While the inflow of foreign investment continues, one wonders about its nature. Is this vast investment attracted simply by cheap labor in the eastern coastal regions of China? Or is it due to some economic fundamentals unique to the Chinese economy that attracted the foreign-invested enterprises once the country decided to adopt market-oriented reforms and an opening-up policy? Has investment taken root in the country, or does it mainly reflect assembly operations? Here are some facts to provide perspective on these important questions.

Sectoral distribution of foreign investment in China. The largest portion of foreign investment still goes to the manufacturing sector, accounting for about 60 percent of the total investment. Manufacturing is followed by real estate at 24 percent, then distribution systems, such as transport, wholesale, and retailing, at 6 percent. In the manufacturing sector, about a quarter is directed toward labor-intensive industries such as textiles, clothing, food processing, and furniture. Capital-intensive manufacturing—such as petroleum refining and chemicals—and technology-driven industries—such as medical and pharmaceuticals, electrical machinery and equipment, and electronics—account for the rest.

Many early ventures during the 1980s were predominately labor intensive. In many instances, they were simply assembly operations, so-called screwdriver operations that pieced together parts made elsewhere. In 1983–84, about 80 percent of the foreign-invested manufacturing enterprises (for example, garments, footwear, leather, and furniture) and the automobile sector were of this category. Over time, however, the nature of the foreign-invested enterprises has dramatically changed. By the late

1990s, the share of labor-intensive and low-value-added industries fell to 23 percent, with the remaining 77 percent going to capital- and technology-driven industries. As a result, high-technology exports as a share of manufacturing exports in 2001 stood at 20.6 percent in China compared to 5.4 percent in India and 12.1 percent in Brazil. These include industries with high R&D components—for example, electrical machinery, electronic goods, pharmaceuticals, computers, and scientific instruments.

Evolution in the ownership pattern of foreign direct investment. In the early reform period, the government permitted only joint ventures as the entry form for foreign investment. The ownership pattern has gradually evolved from contractual joint ventures, in which foreign investors enter into short-term contracts with local enterprises, mainly for assembly operations. Today, three other forms reflect the changing regulatory and legal environment as well as the steady deepening of the foreign equity base: *equity joint ventures*, with equity participation by foreign enterprises; *equity joint ventures* between foreign enterprises and cooperatives or collectives; and *wholly owned foreign enterprises*. By 2000, investment in wholly foreign-owned enterprises accounted for about half of investment; investment in joint ventures, about 30 percent; and investment in cooperative joint ventures, the remainder. This diversification of investment modes has been accompanied by massive expansion plans among foreign firms.

Factors influencing the investment inflow in China. What are the main factors attracting investment? Although low wages have clearly played an important role, it would be a mistake to ignore other crucial factors such as highly developed infrastructure and preferential policies (see Chapter 6). Empirical studies confirm that Chinese regions with the best infrastructure have received more investment, which partly explains the concentration of foreign-invested enterprises in the eastern coastal regions. Indeed, local governments have vigorously competed to provide better infrastructure in their jurisdictions, and they have been rewarded with positive results. Table I.3.1 compares the decade-long transformation in the infrastructure sector (power, transport, communication) in China with comparable parameters from the infrastructure and the technology sectors of Brazil and India in the year 2001.

Value added in foreign-invested enterprises. A study of industrial value added over the years in China shows that the value added in foreign-invested firms exceeds the national average and is growing steadily. In the first half of 2004, foreign-invested firms accounted for more than 28 percent of China's total industrial value added, a substantial increase from the previous year's share of 20 percent.

Overall, the value added in this sector tripled from 405 billion yuan in 1998 to 1,160 billion yuan in 2003. Figure I.3.1 shows the year-on-year percentage change in the growth of various industrial sectors in China during 2000–04, and Figure I.3.2 compares rates of growth of value added per worker in the industrial sector as a whole (year-on-year increase) in China, Brazil, and India during 1990–2002. It is interesting

TABLE I.3.1

**Select Infrastructure and Technology Parameters from
China, Brazil, and India**

Indicator	China 1990	China 2001	India 2001	Brazil 2001
Electric power consumption (kWh per capita)	471	893	365	1,728
Air transport freight (million tons–km)	818	4,232	518	1,467
Container port traffic (TEU)		44,726,080	2,764,757	2,323,801
Roads (per 100 km ² land area)	1.26	1.82		
Mobile phones (per 1,000 persons)	0.02	110	6	167
Internet users (per 1,000 persons)		26	7	47
TV sets (per 1,000 persons)	156	312	82	349
Cable TV (per 1,000 persons)	10	69	40	14

Source: Tseng and Zebregs (2002).

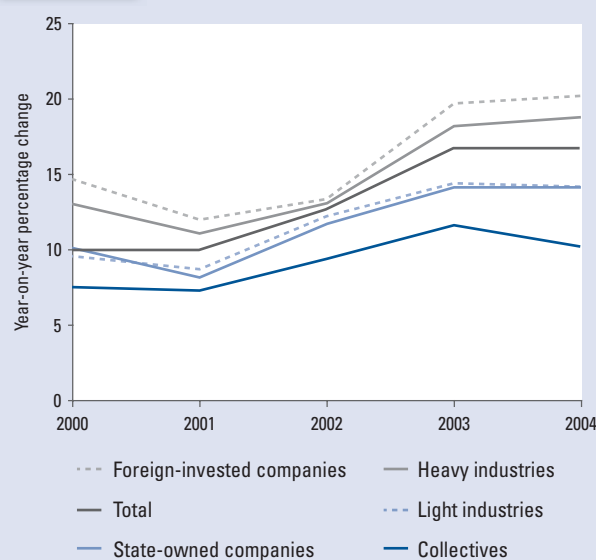
Note: Blank cells indicate the lack of uniform data across countries; kWh signifies kilowatt hours; TEU refers to standard 20-foot-equivalent units for ocean cargo container shipping.

to see how the value added in the industrial sector in China has steadily grown at a much faster pace during the past 12 years (average growth rate at 12.2 percent) compared to average growth rates of 3.7 percent in India and 1.6 percent in Brazil.

Deepening of production structure—Tales of several enterprises. It is natural to ask whether foreign-invested firms significantly benefit domestic industries through knowledge spillovers and input-output linkages. Backward linkages, in particular, can benefit both the foreign-invested firms and the local firms. If foreign-invested

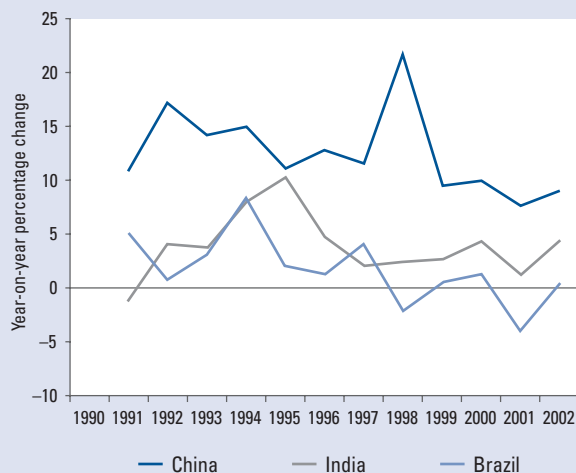
firms are able to procure inputs locally, they can further lower their production costs and better adapt technologies to local conditions and domestic markets. These linkages serve as powerful channels for diffusing knowledge and skills. They operate as a two-way street, benefiting domestic firms on the one hand and helping foreign firms to deepen their local roots on the other.

FIGURE I.3.1 Growth of Industrial Value Added in China



Source: Economist Intelligence Unit (2003).

Note: Figures for 2004 are the average of the first seven months.

FIGURE 1.3.2 Rates of Growth of Industrial Value Added in Brazil, China, and India

Source: World Bank (2004b).

International experience generally confirms that foreign firms are less likely to source locally than domestic firms. The local supply chains of three firms—Nestle, Motorola, and General Motors' joint venture with Shanghai Automotive Industry Corporation Group (SAIC)—tell a different story and illustrate how successfully foreign firms have developed backward linkages with the economy. On the other hand, Procter and Gamble (P&G) and Unilever in China tell a story of aggressive localization of inputs, products, and personnel.

Nestle operates 18 factories in China. Initially, it faced major difficulties in procuring raw materials locally (mainly agricultural and dairy produce) and high-quality packaging. In the early 1990s, these items were mostly imported. By 2001, however, almost 98 percent of all packaging was procured locally. Nestle worked with local suppliers to help them meet quality standards. It supplied product information, technical assistance, and sometimes finances. Today, Nestle has 109 local suppliers, some of whom export to Russia and the Republic of Korea. As of 1991, Nestle imported all the green coffee that it used in production. It undertook major efforts to develop local coffee growers. To promote local coffee cultivation and facilitate the switch to local producers, the company set up the Agricultural Technical Assistance Service (ATAS). ATAS created a department to train growers, agronomists, civil servants, and local entrepreneurs who want to enter the business.

Motorola came to China in 1987. It is now one of the largest investors, with a US\$3.4 billion direct investment, two wholly owned subsidiaries, eight joint ventures, and 18 R&D centers. Motorola started the Center for Enterprise Excellence, a program to provide advanced training to selected state-owned enterprises. Its main objective is to develop a supplier base by strengthening quality, production, and productivity. Under the program, professors from major universities in Beijing and Tianjin are also trained to teach courses in leadership, quality control, marketing, strategic planning, and finance. By 2001, 449 enterprises from 23 provinces covering 1,516 professionals had participated. The program has been extended to the interior of western China; approximately 400 executives from 85 enterprises have participated. By the end of

2003, Motorola had more than 700 Chinese suppliers. The average percentage of locally manufactured parts and components in a cellular phone manufactured in Motorola plants in China now exceeds 65 percent.

Measured by sales, SAIC is the largest automotive producer in China today, with its flagship model accounting for about half of all passenger cars sold annually. As recently as 1990, SAIC was one of several automotive firms trying to capture the domestic market. Its cars were rated particularly low in terms of reliability. Nevertheless, the firm quickly turned the corner, surpassing its competitors in revenue generation. Two developments accompanied the rise of SAIC to the industry's leadership position. First, it relied heavily on the financing and technological capabilities of its multinational partner General Motors; and second, it aggressively created a component supply base in Shanghai through expensive, systematic backward integration. As a result, by 1997 the local supply network consisted of 248 firms, and the output value of automotive components manufactured in and around Shanghai rose from 8 percent to 20 percent of national production. This replaced imports not only from foreign countries, but also from other regions in China. By 1998, the domestic content rate of the flagship model had reached 92.7 percent.

Procter and Gamble entered China in the early 1980s as a joint venture with Guangzhou Soap Factory as its Chinese partner. US\$10 million was available for start-up capital. By the mid-1990s, not only had P&G expanded its production lines to include new brands of shampoo, detergent, and sanitary napkins, but it had expanded in the north and midwestern regions of China by starting other joint ventures in Beijing, Tianjin, and Chengdu. By 1998, five of P&G's joint ventures were listed among the top 500 industrial units in the country. Two factors were critical to this phenomenal success: technological innovation and localization of products. While introducing products that had been successful in other markets, P&G also actively undertook R&D in consumer and product quality research, which greatly helped to adapt its products to local needs. In 1998, P&G opened P&G Technology Beijing Ltd., its eighteenth research center in the world. It also launched a joint research and development project with Tsinghua University of Beijing. Finally, localization of management staff has been systematically adopted as a component of P&G's investment strategy. Staff members are recruited locally, trained abroad, and gradually promoted to replace the expatriates in top managerial positions.

Unilever reentered China in the early 1980s through a large number of joint ventures. In the initial stages, the effort failed to earn profits or integrate with the mainstream economy. In response, Unilever consolidated its operations in 1999 by integrating the disparate units into a single holding company. It adopted an aggressive localization strategy by hiring local employees. It set up R&D units. It planned for a stock market listing. These efforts enabled the company to develop a portfolio of global and local brands that incorporated traditional Chinese science and medicine practices. The replacement of expatriates in high management positions with local employees has greatly improved communication with Unilever's consumers. Today, about

90 percent of Unilever's managers are Chinese. Finally, in 2002 the Unilever European establishment (Unilever Plc.) set up its global procurement unit in Shanghai, enhancing opportunities for Chinese raw-material providers to enter international markets.

Why couldn't Chinese companies do on their own what the foreign-invested firms have achieved? A particular feature of the industrial environment in China is that less efficient state-owned enterprises are favored legally and financially at the expense of more efficient private firms. As a result, domestic firms are less competitive. Performance of the state-owned enterprises has been poor despite this support. When China opened up, foreign-invested firms easily filled the vacuum created by a handicapped domestic industrial sector. They rapidly carved out a significant niche in the Chinese economy. Today, the government still frowns upon the privatization of state-owned enterprises, and Chinese nonstate firms cannot acquire state enterprises. However, through formal joint-venture acquisition, foreign-invested enterprises can acquire state enterprises, thereby reshaping the nature of the market. This unique feature of the Chinese political and economic system has been a major factor in foreign-invested firms' gaining a position of advantage within the domestic economy.

References

- Acemoglu, D., and J. Robinson. 2002. "The Political Economy of the Kuznets Curve." *Review of Development Economics* 6.
- Adelman, I. 1975. "Growth, Income Distribution and Equity-Oriented Development Strategies." *World Development* (February–March).
- Barnett, S. 2004. "Banking Sector Developments." In *China's Growth and Integration into the World Economy: Prospects and Challenges*, ed. E. Prasad. Washington, D.C.: International Monetary Fund.
- Blázquez-Lidoy, J., J. Rodríguez, and J. Santiso. 2004. "Angel or Devil? Chinese Trade Impact on Latin American Emerging Markets." Working paper, Banco Bilbao Vizcaya Argentaria (BBVA), Buenos Aires (June).
- DFID (Department for International Development). 2003. "China's Continuing Economic Growth and Its Global Impact." DFID, London (November).
- ECLAC (United Nations Economic Commission for Latin America and the Caribbean). 1995. *Policies to Improve Linkages with the Global Economy*. Santiago, Chile: ECLAC.
- . 2003. *Social Panorama of Latin America and the Caribbean, 2002–2003*. Santiago, Chile: ECLAC.
- . 2004a. *Foreign Direct Investment in Latin America and the Caribbean*. Santiago, Chile: ECLAC.
- . 2004b. *Preliminary Overview of the Economies of Latin America and the Caribbean 2004*. Santiago, Chile: ECLAC.
- Economist Intelligence Unit. 2003. *China Country Profile 2003*. London: Economist Intelligence Unit.
- Fedelino, A., and R. Jan Singh. 2004. "Medium-Term Fiscal Challenges." In *China's Growth and Integration into the World Economy: Prospects and Challenges*, ed. E. Prasad. Washington, D.C.: International Monetary Fund.
- Hu, A. G. Z., G. H. Jefferson, G. Xiaojing, and Q. Jinchang. 2003. "R&D and Technology Transfer: Firm-Level Evidence from Chinese Industry." Working Paper No. 582, William Davidson Institute, University of Michigan Business School, Ann Arbor (June).
- IDB (Inter-American Development Bank). 2002. *Beyond Borders: The New Regionalism in Latin America*. Washington, D.C.: IDB.
- . 2004. *Integration and Trade in the Americas*. Periodic Note, IDB, Washington, D.C. (May).

- IMF (International Monetary Fund). 2003. *World Economic Outlook (WEO)*. Washington, D.C.: IMF.
- . 2004a. *Balance of Payments Statistics Yearbook*. Washington, D.C.: IMF.
- . 2004b. *Direction of Trade Statistics Yearbook (DOTS)*. Washington, D.C.: IMF.
- . 2004c. *International Financial Statistics*. Washington, D.C.: IMF.
- Jefferson, G., I. Singh, X. Junling, and Z. Shouging. 1999. "China's Industrial Performance: A Review of Recent Findings." In *Enterprise Reform in China: Ownership, Transition and Performance*, ed. G. H. Jefferson and I. Singh. New York: Oxford University Press.
- Jefferson, G., T. Rawski, W. Li, and Z. Yukin. 2000. "Ownership, Productivity Change and Financial Performance in Chinese Industry." *Journal of Comparative Economics* 28(4).
- Kuznets, S. 1955. "Economic Growth and Income Inequality." *American Economic Review* 65.
- Lall, S., and M. Albaladejo. 2003. "China's Competitive Performance: A Threat to East Asian Manufactured Exports?" Working Paper No. 110, OEH (October).
- Li, K.-W. 2003. "China's Capital and Productivity Measurement Using Financial Resources." Discussion Paper No. 851, Economic Growth Center, Department of Economics, Yale University, New Haven, Connecticut (February).
- Loayza, N., P. Fajnzylber, and C. Calderón. 2002. "Economic Growth in Latin America and the Caribbean: Stylized Facts, Explanations and Forecasts." Photocopy, World Bank, Washington, D.C.
- López-Córdova, E., and M. Mesquita Moreira. 2004. "Regional Integration and Productivity: The Experiences of Brazil and Mexico." In *Integrating the Americas: FTAA and Beyond*, ed. A. Estevadeordal, D. Rodrik, A. Taylor, and A. Velasco. Cambridge, Massachusetts: David Rockefeller Center for Latin American Studies, Harvard University.
- Muendler, M. 2004. "Trade, Technology and Productivity: A Study of Brazilian Manufacturers, 1986–1998." Working Paper No. 1148, CESIF, Madrid.
- National Bureau of Statistics of China. 2003. *China Statistical Yearbook*. Beijing: China Statistical Press, National Bureau of Statistics of China.
- . 2004. *China Statistical Yearbook*. Beijing: China Statistical Press, National Bureau of Statistics of China.
- Oxford Analytica and Oxford Economic Forecasting. 2004. *China: A Five-Year Outlook*. Oxford: Oxford Analytica.
- Pavcnik, N. 2000. "Trade Liberalization, Exit and Productivity Improvements: Evidence from Chilean Plants." Photocopy, Department of Economics, Dartmouth College, Hanover, New Hampshire.
- People's Bank of China. 2002. *China Monetary Policy Report (CMPR)*. Beijing: People's Bank of China.

- Prasad, E., and T. Rumbaugh. 2004. "Overview." In *China's Growth and Integration into the World Economy: Prospects and Challenges*, ed. E. Prasad. Washington, D.C.: International Monetary Fund.
- Qian, Y. 2002. "How Reform Worked in China." Photocopy, Department of Economics, University of California, Berkeley.
- Rodrik, D. 2003. "Growth Strategies." Photocopy, John F. Kennedy School of Government, Harvard University, Cambridge, Massachusetts.
- Rumbaugh, T., and N. Blancher. 2004. "International Trade and the Challenges of WTO Accession." In *China's Growth and Integration into the World Economy: Prospects and Challenges*, ed. E. Prasad. Washington, D.C.: International Monetary Fund.
- Sigurdson, J. Forthcoming. *Technological Superpower China*. London: Elgar.
- Siwei, C. 2001. *Studies on Economic Reforms and Development in China*. New York: Oxford University Press.
- Tseng, W., and H. Zebregs. 2002. "Foreign Direct Investment in China: Some Lessons for Other Countries." Policy Discussion Paper No. 02/3, International Monetary Fund, Washington, D.C.
- Tybout, J. R., and M. D. Westbrook. 1995. "Trade Liberalization and the Dimensions of Efficiency Change in Mexican Manufacturing Industries." *Journal of International Economics* 39.
- UNCTAD (United Nations Conference on Trade and Development). 2004. FDI database. Available at <http://www.unctad.org/Templates/Page.asp?intItemID=1888&lang=1>.
- UNDP (United Nations Development Programme). 2004. "China Human Development Report. Human Development and Equity: Draft Concept Note." UNDP, New York.
- Wall, D. 2004. "Restructuring North East People's Republic of China." Asian Development Bank Institute, Tokyo.
- Wang, Z., and J. Wei. 2004. "Structural Change, Capital's Contribution and Economic Efficiency: Sources of China's Economic Growth between 1952–1988." Photocopy, Department of Economics, Göteborg University, Göteborg, Sweden.
- Webley, P., and E. Nyhus. 1999. "Representations of Savings and Savings Behavior." Photocopy, University of Exeter, Exeter, U.K., and Agder University College, Kristiansand, Norway.
- World Bank. 2003a. *Country Assistance Strategy*. Washington, D.C.: World Bank.
- . 2003b. *China—Promoting Growth with Equity*. Country Economic Memorandum, Report No. 24169, World Bank, Washington, D.C. (September).
- . 2004a. *Global Economic Prospects 2005: Trade, Regionalism, and Development*. Washington, D.C.: World Bank.
- . 2004b. *World Development Indicators (WDI)*. Washington, D.C.: World Bank.
- . n.d. Edstats. Available at <http://deudata.worldbank.org/edstats>.

Young, A. 2000. "The Razor's Edge: Distortions and Incremental Reform in the People's Republic of China." Working Paper No. 7828, National Bureau of Economic Research, Cambridge, Massachusetts (August).

———. 2003. "Gold into Base Metals: Productivity Growth in the People's Republic of China during the Reform Period." *Journal of Political Economy* 111.

IDB Background Reports

Burki, S. J. 2004. "China's Rise and the New Global Economic Order." Integration and Regional Programs Department, Inter-American Development Bank, Washington, D.C.

Lora, E. 2004. "Should Latin America Fear China?" Research Department, Inter-American Development Bank, Washington, D.C.

Mesquita Moreira, M. 2004. "Fear of China: Is There a Future for Manufacturing in Latin America?" Integration and Regional Programs Department, Inter-American Development Bank, Washington, D.C.

Naughton, B. 2004. "China: Development Strategies and Policy Regime." Integration and Regional Programs Department, Inter-American Development Bank, Washington, D.C.

COMPETING WITH CHINA IN GLOBAL TRADE



This page intentionally left blank

Some Stylized Facts on China's Trade

China's Trade in Comparative Perspective

China has experienced a major export boom during the past two decades. Exports surged from \$26.1 billion in 1984 to \$593.4 billion in 2004, increasing China's share from 1.5 percent of total world exports to 5.6 percent. China's share of total Organisation for Economic Co-operation and Development (OECD) imports rose from 0.6 percent in 1980 to 7.5 percent in 2003. The increased share of the U.S. market has been even more dramatic—from less than a half percent in 1980 to more than 12 percent by 2003. Indeed, as pointed out in Chapter 1, exports grew by an average of about 15.4 percent annually.

Imports mirror exports. Overall, Chinese imports grew 16.3 percent annually from 1984 to 2004, twice the 8.2 percent global rate. In dollar volume, China imported \$19.9 billion in goods and services in 1980. By 2004, the amount had increased almost 20-fold to \$560.7 billion. At that pace, China's share of total global imports rose from 1.0 percent to 6.2 percent (Figure 3.1a).

China's trade and export dynamism has certainly been exceptional, yet it is not historically unprecedented (Rumbaugh and Blancher, 2004). It resembles the industrialization and global integration of Japan and Korea, whose earlier rates of export growth and market penetration actually outstripped Chinese performance thus far (Figure 3.1b).

China's trade performance nevertheless is striking. Its blistering pace, increasing sophistication, and penetration of industrialized-country markets have been nothing short of remarkable. How has this happened? This chapter examines the trends in detail and analyzes their underlying structural causes.

FIGURE 3.1a Comparative Growth of Chinese and World Trade, 1970–2004

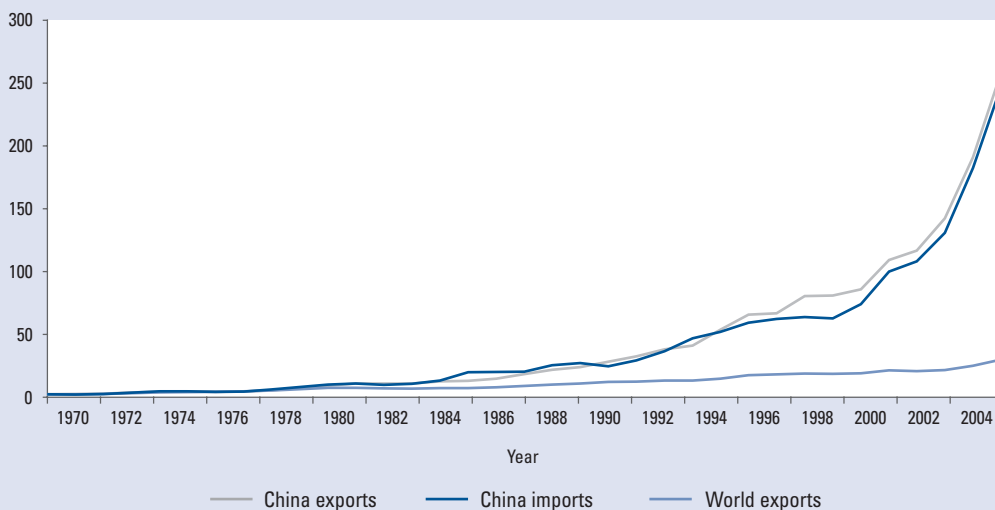
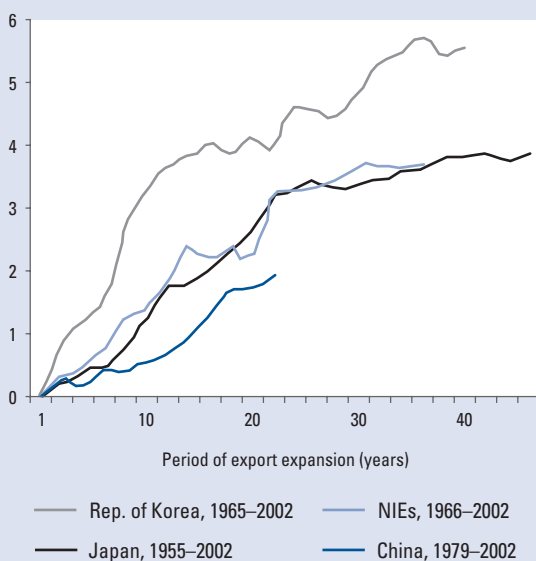


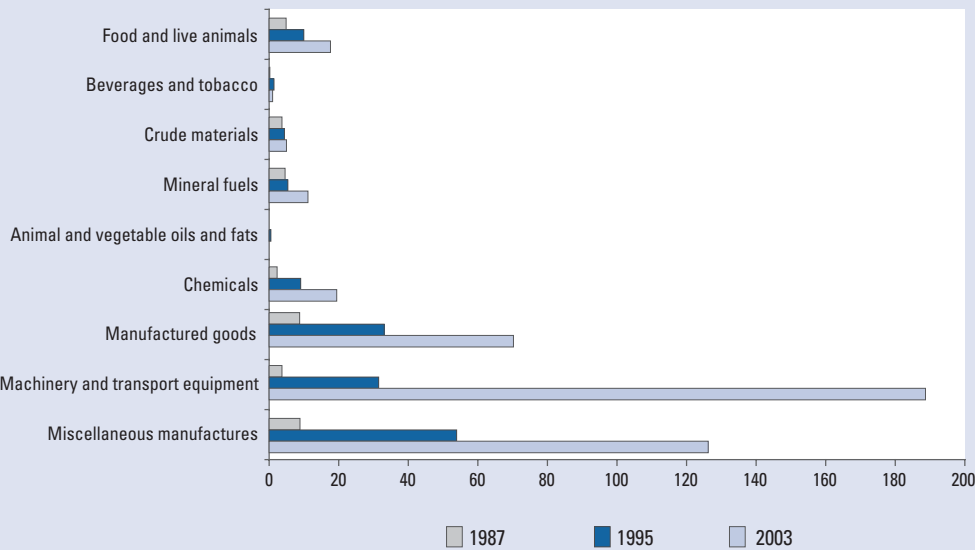
FIGURE 3.1b China's Export Performance versus the East Asian Experience
(US\$ constant prices, index, beginning of era = 1)



An Overview of China's Trade over the Past Two Decades

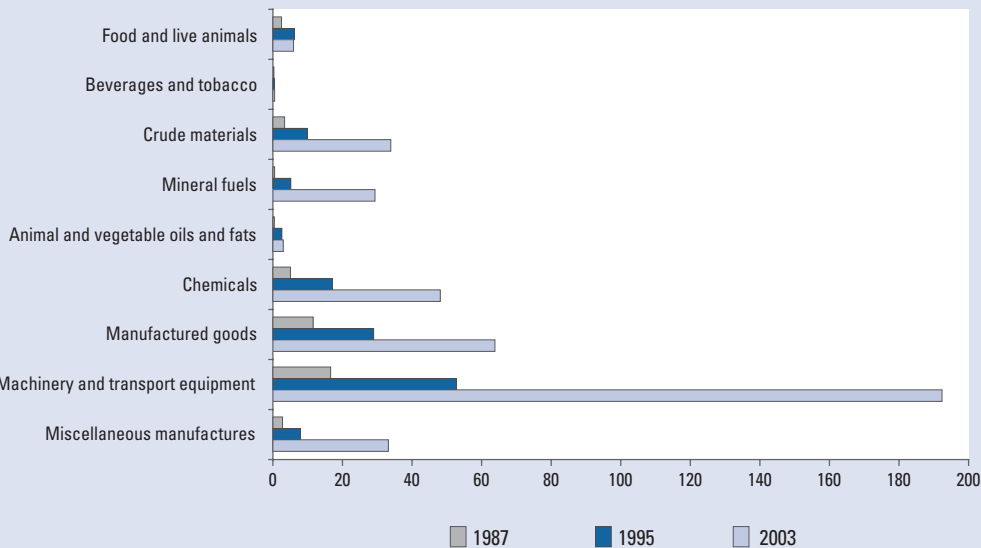
Figures 3.2a and 3.2b provide a starting point for our analysis, highlighting the sectoral breakdown of exports and imports in 1987, 1995, and 2003. The export surge is largely attributable to three sectors: manufactured goods, machinery and transportation equipment, and miscellaneous manufactures. The graphs show that the sectors accounting for the greatest increases in exports also tend to be among the most important and fastest-

FIGURE 3.2a Chinese Exports by Broad Economic Sectors, 1987–2003
(US\$ billions)



Source: IDB-INT calculations based on UN/Comtrade data.

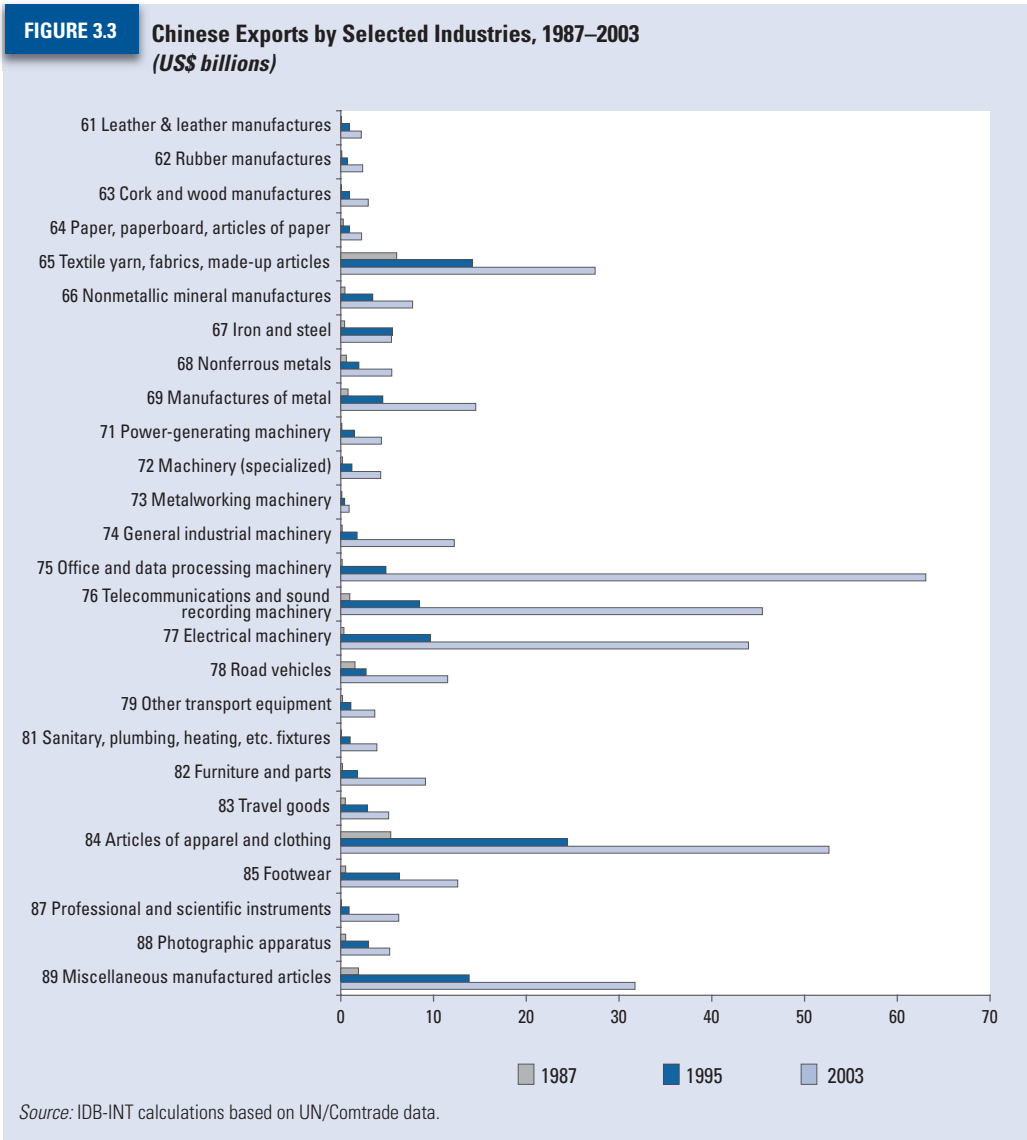
FIGURE 3.2b Chinese Imports by Broad Economic Sectors, 1987–2003
(US\$ billions)



Source: IDB-INT calculations based on UN/Comtrade data.

growing in imports. Much of the pattern can be explained by the rise in intra-industry trade—that is, intermediate products that are imported for final processing and then exported as finished goods. Also striking, however, is China’s seemingly insatiable appetite for raw materials, as reflected by the rapid growth in imported crude materials and mineral fuels.

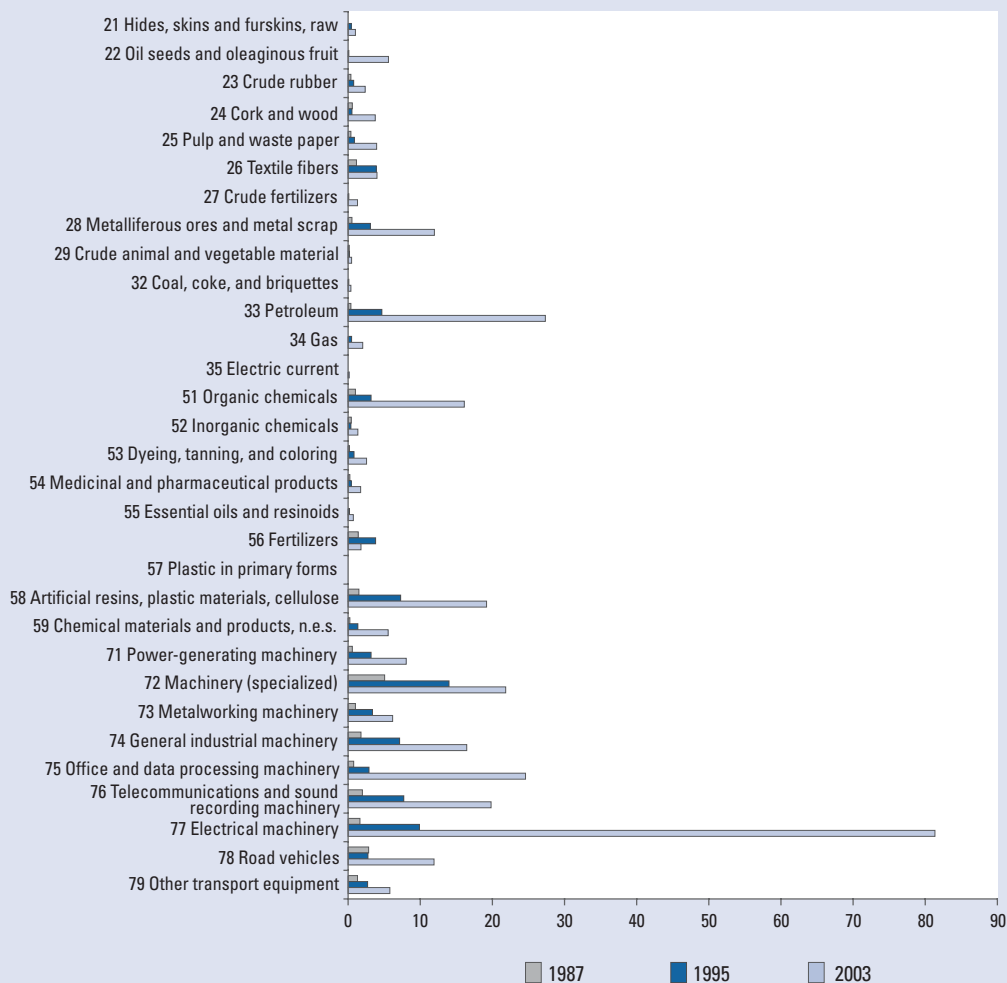
Figure 3.3 provides greater detail on exports by selected industries. It shows patterns for the fastest-growing manufacturing export sectors in 1987, 1995, and 2003. These include textiles and apparel; office, electrical, and industrial machinery; and telecommunications equipment. Interestingly, the main cross-sector growth spurts took



place in the late 1980s and early 1990s. This can be partly explained as the “kicking in” of the reforms of 1978 and the 1980s, which increased the number of companies allowed to trade and extended certain commodity trading rights to non-state-owned firms.

As with exports, a dramatic rise in imports also occurred from the mid-1980s onward. This reflects the country's steady economic growth as well as its significant reduction of tariffs, quotas, licensing, trading rights, and other nontariff barriers (Lardy, 2002). Figure 3.4 shows the comparable pattern for imports, especially prominent for raw materials, mineral fuels, chemicals, and machinery and transportation equipment.

FIGURE 3.4 Chinese Imports by Selected Industries, 1987–2003
(US\$ billions)



Source: IDB-INT calculations based on UN/Comtrade data.

Table 3.1 illustrates the same trend from a slightly different perspective. It shows the total shares and growth rates of the products in the four fastest-growing export sectors. Of the total export basket, the share of machinery and transportation equipment expanded the most, from 17.4 percent in 1990 to 42.8 percent in 2003. The share of less-sophisticated manufactured goods declined slightly.

TABLE 3.1

**Total Shares and Growth Rates of Products
in the Four Fastest-Growing Chinese Export Sectors, 1990–2003
(percent)**

Product	% of total 1990	% change 1987–90	% of total 1995	% change 1990–95	% of total 2000	% change 1995–2000	% of total 2003	% change 2000–03
5 Chemicals	6.0	66.8	6.1	141.5	4.8	32.6	4.4	61.3
51 Organic chemicals	1.4	67.6	1.5	172.6	1.2	36.3	1.2	71.0
52 Inorganic chemicals	1.4	52.4	1.5	164.1	1.1	17.7	0.8	36.4
53 Dyeing, tanning and coloring materials	0.6	108.7	0.5	98.7	0.5	55.7	0.3	32.9
54 Medicinal and pharmaceutical products	1.0	52.5	1.1	146.1	0.7	13.1	0.7	59.9
55 Essential oils and resinoids and perfume materials	0.5	134.2	0.3	20.4	0.2	20.4	0.2	109.0
56 Fertilizers	0.0	111.0	0.1	411.8	0.1	141.8	0.2	149.8
57 Plastic in primary forms	0.3	15.6	0.1	–13.7	0.1	47.8	0.1	28.1
58 Plastic in nonprimary forms	0.4	226.3	0.5	196.6	0.4	31.2	0.4	85.0
59 Chemical materials and products, n.e.s.	0.4	29.2	0.5	214.1	0.5	69.0	0.5	64.1
6 Manufactured goods	20.6	46.5	22.1	157.1	17.4	31.5	15.9	61.4
61 Leather, leather manufactures, n.e.s.	0.3	100.3	0.6	407.1	0.5	31.7	0.5	80.3
62 Rubber manufactures, n.e.s.	0.3	91.2	0.5	258.8	0.6	110.5	0.5	60.2
63 Cork and wood manufactures (excluding furniture)	0.4	208.4	0.6	239.6	0.7	79.4	0.7	75.6
64 Paper, paperboard, articles of paper	0.5	16.4	0.6	211.9	0.5	48.9	0.5	64.0
65 Textile yarn, fabrics, made-up articles	11.6	21.2	9.4	94.7	6.5	16.1	6.2	66.6
66 Non-metallic mineral manufactures	2.1	199.5	2.3	160.0	1.9	37.2	1.7	63.1
67 Iron and steel	2.1	204.0	3.7	330.0	2.0	–10.8	1.2	10.0
68 Non-ferrous metals	1.0	1.5	1.3	223.1	1.3	74.2	1.2	62.1
69 Manufactures of metal, n.e.s.	2.3	80.4	3.0	213.3	3.3	83.5	3.3	74.7
7 Machinery and transportation equipment	17.4	193.5	21.0	189.0	33.1	163.4	42.8	127.7
71 Power generating machinery	0.4	171.6	1.0	430.3	1.2	108.2	1.0	45.4
72 Machinery specialized for particular industries	2.4	736.1	0.8	–20.6	0.8	71.7	1.0	110.7
73 Metalworking machinery	0.4	163.4	0.3	59.6	0.3	63.8	0.2	28.9

(continued on next page)

TABLE 3.1 (Continued)

**Total Shares and Growth Rates of Products
in the Four Fastest-Growing Chinese Export Sectors, 1990–2003
(percent)**

Product	% of total 1990	% change 1987–90	% of total 1995	% change 1990–95	% of total 2000	% change 1995–2000	% of total 2003	% change 2000–03
74 General industrial machinery and equipment, n.e.s., and machine parts, n.e.s.	0.9	269.4	1.2	221.8	2.0	192.0	2.8	140.5
75 Office machines and automatic data processing machines	0.6	174.6	3.2	1,180.2	7.5	288.1	14.3	235.4
76 Telecommunications, sound recording and reproducing apparatus	4.2	170.2	5.7	220.5	7.8	132.0	10.3	130.8
77 Electrical machinery, apparatus, appliances, n.e.s., and electrical parts	2.0	263.0	6.4	684.1	9.9	158.0	9.9	76.6
78 Road vehicles (including air cushion vehicles)	6.1	149.2	1.8	–29.2	2.6	143.2	2.6	73.8
79 Transport equipment, n.e.s.	0.4	28.9	0.7	330.4	0.9	116.8	0.8	54.7
8 Miscellaneous manufactures	28.2	98.3	36.1	206.2	34.3	59.3	28.7	46.8
81 Prefabricated buildings; sanitary, plumbing, heating and lighting fixtures, n.e.s.	0.2	117.3	0.7	682.9	0.9	116.7	0.9	78.8
82 Furniture and parts; bedding, mattresses, cushions	0.5	81.5	1.2	447.9	1.8	160.5	2.1	97.4
83 Travel goods, handbags and similar containers	0.6	52.1	1.9	645.1	1.6	35.3	1.2	31.7
84 Articles of apparel and clothing accessories	15.6	81.1	16.3	150.3	14.5	49.4	11.9	44.2
85 Footwear	3.2	270.3	4.2	220.6	3.8	50.9	2.9	31.9
87 Professional, scientific and controlling instruments	0.3	225.8	0.6	355.3	1.0	194.9	1.4	138.5
88 Photographic apparatus and equipment and optical goods, n.e.s.	1.9	117.6	2.0	158.4	1.8	54.2	1.2	14.5
89 Miscellaneous manufactured articles, n.e.s.	6.0	96.3	9.2	267.9	8.9	61.0	7.2	42.4

Source: IDB-INT calculations based on UN/Comtrade data.

Table 3.2 shows the total shares and growth rates of products in the five fastest-growing import sectors—crude materials, mineral fuels, chemicals, machinery and transportation equipment, and miscellaneous manufactures.

Who are China's trading partners? As shown in Figure 3.5, Chinese exports during the past 20 years have become more evenly distributed among East Asia, North America, and Europe.¹ This reflects the growing global competitiveness of the Chinese

¹ Figure 3.5 depicts "Europe" in two segments of the pie: the preexpansion EU-15 and Eastern Europe, which also includes Turkey and the former Soviet republics. "Rest of the world," which absorbs about 2 percent of Chinese exports and provides less than 1 percent of its imports, is omitted.

TABLE 3.2

**Total Shares and Growth Rates of Products
in the Five Fastest-Growing Chinese Import Sectors, 1990–2003**
(percent)

Product	% of total 1990	% change 1987–90	% of total 1995	% change 1990–95	% of total 2000	% change 1995–2000	% of total 2003	% change 2000–03
2 Crude materials	7.7	23.7	7.5	140.3	8.7	99.5	8.2	72.5
21 Hides, skins and furskins, raw	0.0	–69.4	0.3	1,872.0	0.3	55.2	0.2	56.1
22 Oil seeds and oleaginous fruit	0.0	–66.3	0.1	428.8	1.3	2,586.2	1.3	87.5
23 Crude rubber	0.7	–6.8	0.6	107.3	0.6	74.4	0.6	77.4
24 Cork and wood	1.0	–12.6	0.4	7.0	1.2	388.7	0.9	39.6
25 Pulp and waste paper	0.5	–29.0	0.6	194.7	1.2	217.1	0.9	45.3
26 Textile fibers (except wool tops)	3.5	62.8	2.9	108.0	1.1	–33.2	1.0	53.5
27 Crude fertilizers	0.1	19.0	0.1	248.8	0.3	521.9	0.3	77.9
28 Metalliferous ores and metal scrap	1.8	80.9	2.3	222.0	2.6	89.6	2.9	103.2
29 Crude animal and vegetable material	0.2	–37.6	0.2	145.7	0.2	81.7	0.1	35.3
3 Mineral fuels	2.4	136.0	3.9	306.5	9.2	301.3	7.1	41.9
32 Coal, coke and briquettes	0.1	5.8	0.1	–0.6	0.0	–4.9	0.1	425.9
33 Petroleum and petroleum products	2.0	165.4	3.5	337.7	8.5	313.0	6.5	41.4
34 Gas	0.1	606.8	0.3	1,565.5	0.7	240.3	0.5	29.0
35 Electric current	0.2	72.1	0.0	–72.1	0.0	195.0	0.0	58.6
5 Chemicals	12.5	32.9	13.0	157.4	13.3	74.0	11.7	61.5
51 Organic chemicals	2.1	13.3	2.4	179.1	3.7	163.0	3.8	90.9
52 Inorganic chemicals	0.4	–49.0	0.3	72.8	0.4	139.8	0.3	51.8
53 Dyeing, tanning and coloring materials	0.5	20.6	0.6	224.6	0.7	105.8	0.6	53.8
54 Medicinal and pharmaceutical products	0.8	73.9	0.3	–2.5	0.4	134.0	0.4	79.0
55 Essential oils and resinoids and perfume materials	0.2	99.0	0.2	129.5	0.2	100.1	0.2	74.8
56 Fertilizers	4.9	86.0	2.8	43.4	0.8	–53.8	0.4	1.9
57 Plastic in primary forms	0.0	–69.6	0.0	2,141.8	0.0	–27.3	0.0	412.1
58 Plastic in nonprimary forms	2.8	2.0	5.4	378.4	5.8	83.0	4.6	44.0
59 Chemical materials and products, n.e.s.	0.9	93.6	1.0	183.2	1.3	112.8	1.3	91.8
7 Machinery and transportation equipment	40.3	29.0	40.0	145.5	40.9	74.3	46.8	109.6
71 Power generating machinery	3.2	204.9	2.4	79.9	2.3	68.2	1.9	51.9
72 Machinery specialized for particular industries	11.1	19.0	10.4	132.3	4.9	–19.6	5.2	93.9
73 Metalworking machinery	1.5	–19.2	2.5	322.3	1.3	–15.6	1.5	115.1
74 General industrial machinery and equipment, n.e.s., and machine parts, n.e.s.	3.2	–0.4	5.3	306.6	3.4	9.0	3.9	111.1
75 Office machines and automatic data processing machines	1.4	–0.9	2.2	270.4	4.8	279.9	5.9	123.1
76 Telecommunications, sound recording and reproducing apparatus	4.8	29.3	5.8	199.9	5.5	63.0	4.7	57.2

(continued on next page)

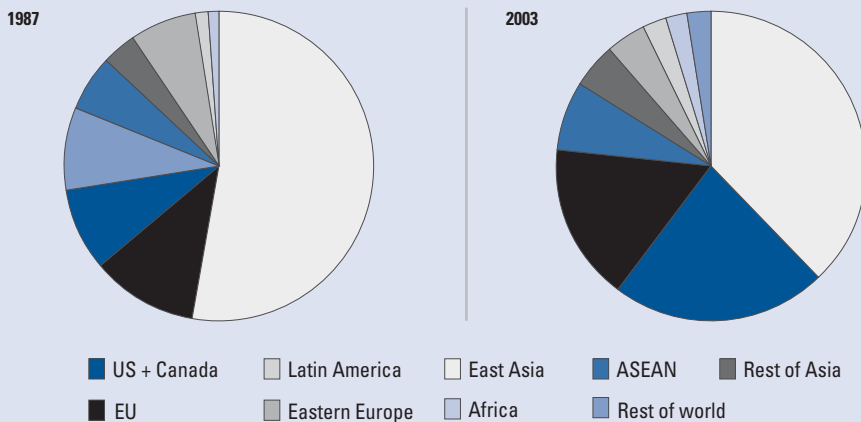
TABLE 3.2 (Continued)

**Total Shares and Growth Rates of Products
in the Five Fastest-Growing Chinese Import Sectors, 1990–2003
(percent)**

Product	% of total 1990	% change 1987–90	% of total 1995	% change 1990–95	% of total 2000	% change 1995–2000	% of total 2003	% change 2000–03
77 Electrical machinery, apparatus, appliances, n.e.s., and electrical parts	3.8	28.7	7.4	375.3	15.8	265.8	19.4	124.7
78 Road vehicles (including air cushion vehicles)	8.0	53.5	2.0	–37.3	1.6	33.7	2.8	226.9
79 Transport equipment, n.e.s.	3.1	32.3	2.0	57.1	1.2	4.5	1.4	107.2
8 Miscellaneous manufactures	6.2	19.4	6.0	139.4	5.6	59.7	8.1	162.6
81 Prefabricated buildings; sanitary, plumbing, heating and lighting fixtures, n.e.s.	0.1	32.9	0.1	177.6	0.1	–0.6	0.1	89.4
82 Furniture and parts; bedding, mattresses, cushions	0.1	73.9	0.1	27.8	0.1	101.4	0.1	200.9
83 Travel goods, handbags and similar containers	0.0	137.3	0.0	570.8	0.0	–22.3	0.0	93.7
84 Articles of apparel and clothing accessories	0.1	175.8	0.8	1,972.5	0.5	20.9	0.3	18.6
85 Footwear	0.0	1,076.7	0.0	127.5	0.0	36.5	0.0	222.8
87 Professional, scientific and controlling instruments	1.5	–8.6	1.6	175.1	2.0	103.7	4.9	357.8
88 Photographic apparatus and equipment and optical goods, n.e.s.	1.7	14.1	1.4	115.8	1.3	53.4	1.1	56.4
89 Miscellaneous manufactured articles, n.e.s.	2.7	40.1	1.9	76.0	1.7	46.0	1.5	62.6

Source: IDB-INT calculations based on UN/Comtrade data.

FIGURE 3.5 Chinese Total Exports by Region, 1987 and 2003



Source: IDB-INT calculations based on UN/Comtrade data.

economy. In footwear and toys, for instance, China replaced Taiwan and the Republic of Korea as the main U.S. import source. In the mid-1980s the United States imported 60 percent of its footwear and 60 percent of its toys and games from Hong Kong, Korea, and Taiwan, versus 6 and 2 percent, respectively, from China. However, by the late 1990s China provided 60 percent of all U.S. imports in both categories (Lardy, 2002).

East Asia (referring here to Japan, the Republic of Korea, the Democratic People's Republic of Korea, Hong Kong, Taiwan, and Macao) is still China's main destination for exports, absorbing nearly 40 percent in 2003. Nonetheless, its share has fallen by more than half with respect to 1985. This partly reflects the impact of the Asian financial crisis in the late 1990s, when the purchasing power of many of the region's economies steeply declined and the demand for Chinese goods in East Asia experienced its worst performance in 20 years (Lardy, 2002).

Figure 3.6 displays sectoral exports by region. The breakdown remained relatively unchanged between 1987 and 2003 (apart from the decline in Chinese–Eastern European trade because of the dissolution of the Soviet bloc).

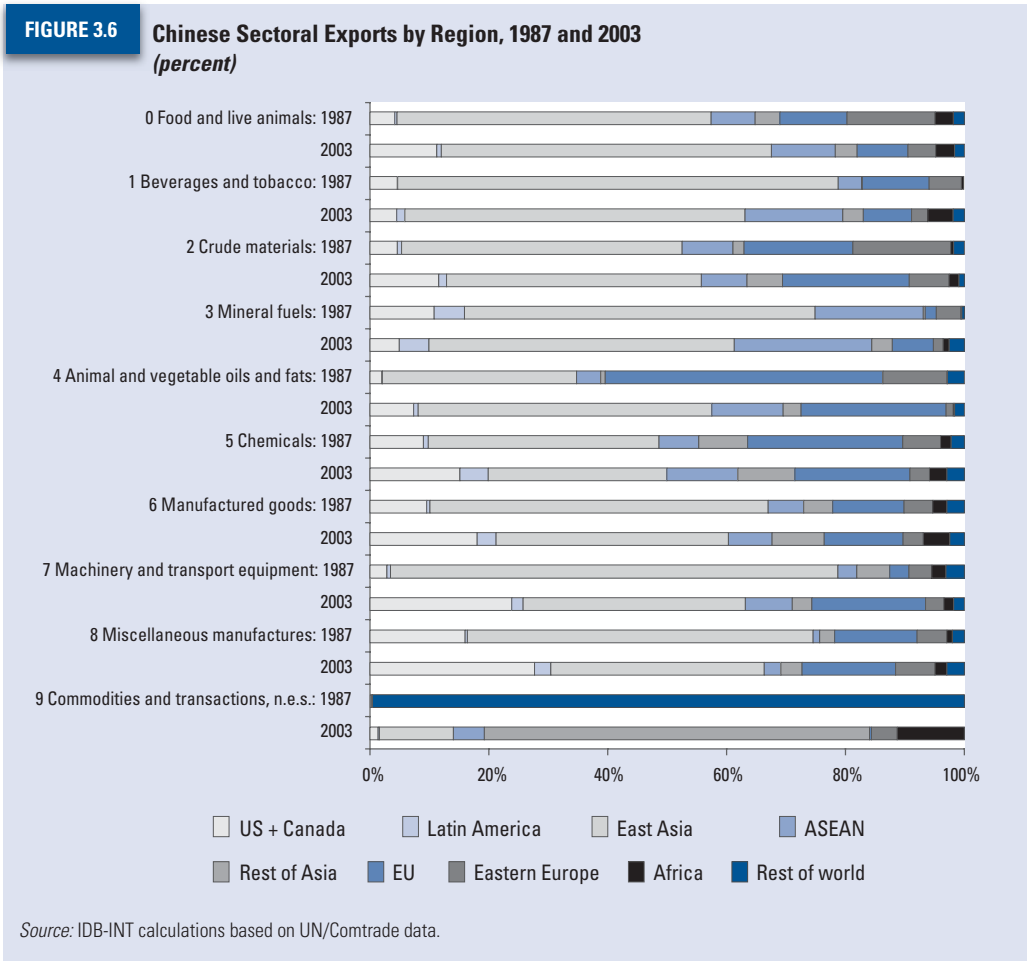


Table 3.3 details the geographic distribution of Chinese exports. The large share to Hong Kong consists largely of goods that were subsequently reexported to third markets. The only Latin American country among China's top 20 export partners in 2002 was Mexico, which accounted for less than 1 percent of sales.

TABLE 3.3**China's Leading Export Partners in 1985, 1995, and 2002**

1985			1995			2002		
Rank	Partner name	Percentage share of total	Rank	Partner name	Percentage share of total	Rank	Partner name	Percentage share of total
1	Hong Kong, China	26.2	1	Hong Kong, China	24.2	1	United States	21.5
2	Japan	22.2	2	Japan	19.1	2	Hong Kong, China	18.0
3	United States	8.6	3	United States	16.6	3	Japan	14.9
4	Singapore	7.5	4	Korea, Rep. of	4.5	4	Korea, Rep. of	4.8
5	Soviet Union	3.8	5	Germany	3.8	5	Germany	3.5
6	Jordan	3.6	6	Singapore	2.4	6	Netherlands	2.8
7	Germany	2.7	7	Netherlands	2.2	7	United Kingdom	2.5
8	Brazil	1.6	8	Taiwan, China	2.1	8	Singapore	2.1
9	United Kingdom	1.3	9	United Kingdom	1.9	9	Taiwan, China	2.0
10	Netherlands	1.2	10	Italy	1.4	10	Malaysia	1.5
11	Philippines	1.1	11	France	1.2	11	Italy	1.5
12	Italy	1.1	12	Thailand	1.2	12	Australia	1.4
13	Romania	1.0	13	Russian Federation	1.1	13	Canada	1.3
14	Poland	1.0	14	Australia	1.1	14	France	1.3
15	Macao	0.9	15	Canada	1.0	15	Russian Federation	1.1
16	Korea, Dem. Rep.	0.9	16	Indonesia	1.0	16	United Arab Emirates	1.1
17	Canada	0.9	17	Malaysia	0.9	17	Indonesia	1.1
18	France	0.8	18	United Arab Emirates	0.7	18	Thailand	0.9
19	Czechoslovakia	0.8	19	Belgium-Luxembourg	0.7	19	Belgium	0.9
20	Pakistan	0.7	20	Philippines	0.7	20	Mexico	0.9
29	Cuba	0.4	25	Brazil	0.5	26	Brazil	0.5
55	Mexico	0.1	31	Panama	0.4	30	Panama	0.4
72	Venezuela	0.0	37	Chile	0.3	37	Chile	0.3
79	Chile	0.0	42	Argentina	0.2	62	Venezuela	0.1
83	Panama	0.0	46	Mexico	0.1	63	Cuba	0.1
105	Argentina	0.0	54	Cuba	0.1	67	Colombia	0.1
107	Ecuador	0.0	55	Peru	0.1	71	Peru	0.1
109	Trinidad and Tobago	0.0	65	Paraguay	0.1	72	Guatemala	0.1
110	Peru	0.0	72	Venezuela	0.0	75	Ecuador	0.1
114	El Salvador	0.0	78	Colombia	0.0	76	Argentina	0.1
			83	Uruguay	0.0	84	El Salvador	0.0

(continued on next page)

TABLE 3.3 (Continued)

China's Leading Export Partners in 1985, 1995, and 2002

1985			1995			2002		
Rank	Partner name	Percentage share of total	Rank	Partner name	Percentage share of total	Rank	Partner name	Percentage share of total
115	Honduras	0.0	84	Guatemala	0.0	89	Dominican Republic	0.0
116	Nicaragua	0.0	85	Ecuador	0.0	96	Uruguay	0.0
119	Paraguay	0.0	89	Dominican Republic	0.0	102	Costa Rica	0.0
120	Suriname	0.0	92	El Salvador	0.0	103	Paraguay	0.0
122	Dominican Republic	0.0	101	Honduras	0.0	106	Jamaica	0.0
124	Guatemala	0.0	106	Costa Rica	0.0	107	Bahamas	0.0
128	Belize	0.0	107	Jamaica	0.0	110	Honduras	0.0
129	Bolivia	0.0	127	Trinidad and Tobago	0.0	118	Nicaragua	0.0
131	Costa Rica	0.0	134	Haiti	0.0	122	Trinidad and Tobago	0.0
137	Colombia	0.0	136	Guyana	0.0	135	Haiti	0.0
138	Uruguay	0.0	137	Nicaragua	0.0	149	Suriname	0.0
141	Barbados	0.0	138	Suriname	0.0			
143	Jamaica	0.0	139	Bolivia	0.0			
144	Haiti	0.0	143	Bahamas	0.0			
147	Bahamas	0.0	150	Antigua and Barbuda	0.0			

Source: IDB-INT calculations based on UN/Comtrade data.

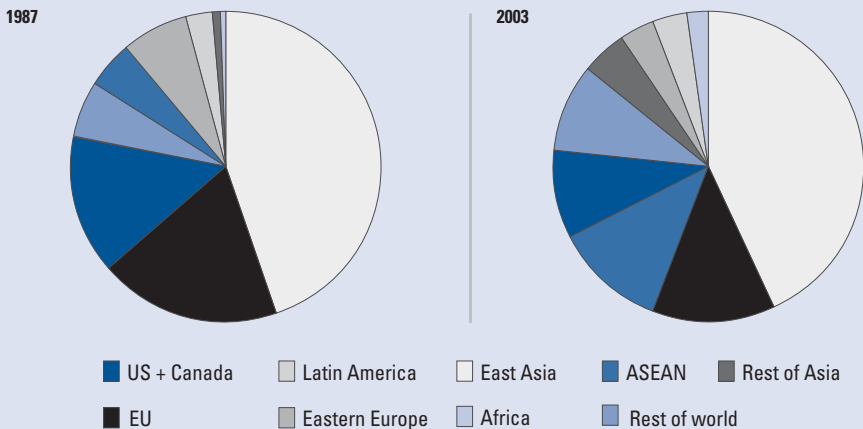
Figure 3.7 shows total Chinese imports by region. The most marked change from 1987 to 2003 is the rising significance of Asian countries other than the largest East Asian economies such as those of the Association of Southeast Asian Nations (ASEAN). This reflects China's growing integration with the Southeast Asian production zone, particularly Chinese efforts to harness the region's intermediate goods for the country's manufacturing industries.

Figure 3.8 illustrates sectoral imports by region in 1987 and 2003. The ASEAN region as a rising supplier to the Chinese market is particularly prominent in chemicals and manufactures.

Table 3.4 further illustrates the ascent of regional suppliers. As shown, Taiwan and Korea recently surpassed the United States as suppliers to China. Japan, however, maintained its preeminent position as the leading single source of imports. Together, Japan, Taiwan, and Korea provided more than 40 percent of China's imports in 2002.

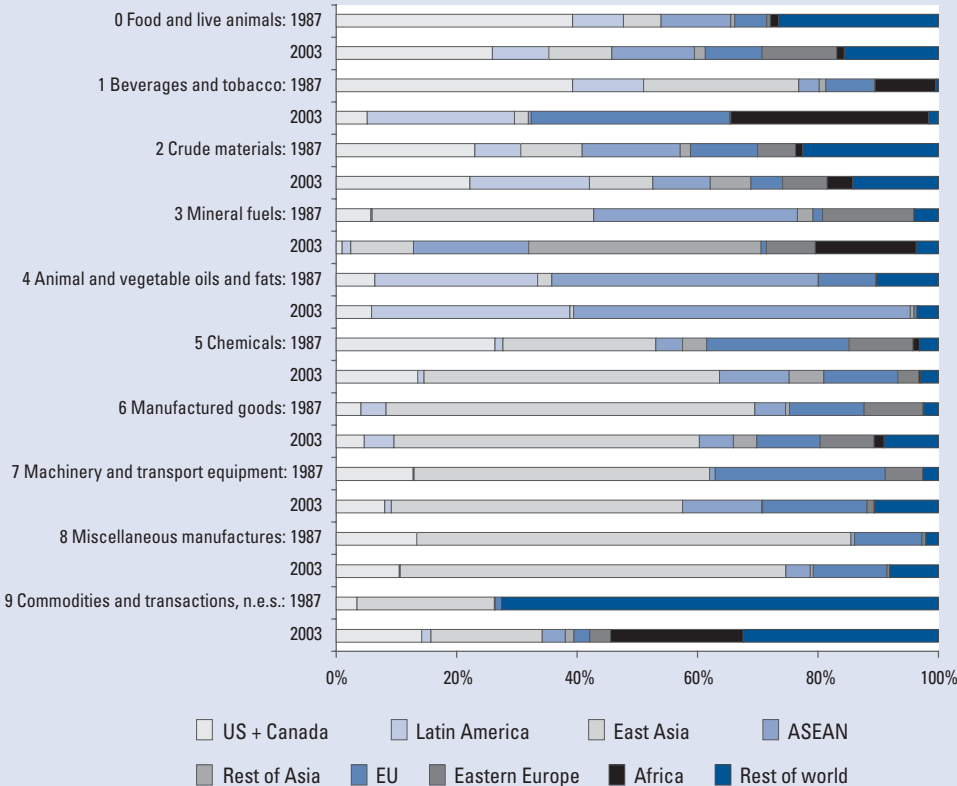
Interestingly, China's top three import sources—Japan, the United States, and Hong Kong—accounted for nearly 60 percent of imports in 1985, but just over 30 percent in 2002, reflecting the growing diversification of suppliers. Brazil was the only Latin American country among China's top 10 suppliers in 1985, providing 2.3 percent of imports, before dropping to 20th place and about 1 percent of imports

FIGURE 3.7 Chinese Total Imports by Region, 1987 and 2003



Source: IDB-INT calculations based on UN/Comtrade data.

FIGURE 3.8 Chinese Sectoral Imports by Region, 1987 and 2003 (percent)



Source: IDB-INT calculations based on UN/Comtrade data.

TABLE 3.4

China's Leading Import Sources in 1985, 1995, and 2002

1985			1995			2002		
Rank	Partner name	Percentage of total	Rank	Partner name	Percentage of total	Rank	Partner name	Percentage of total
1	Japan	35.77	1	Japan	21.96	1	Japan	18.11
2	United States	11.91	2	United States	12.20	2	Taiwan, China	12.89
3	Hong Kong, China	11.18	3	Taiwan, China	11.19	3	Korea, Rep. of	9.68
4	Germany	5.83	4	Korea, Rep. of	7.79	4	United States	9.24
5	Canada	2.69	5	Hong Kong, China	6.50	5	Germany	5.56
6	Australia	2.65	6	Germany	6.09	6	Free Zones	5.08
7	Soviet Union	2.42	7	Russian Federation	2.88	7	Hong Kong, China	3.63
8	Brazil	2.32	8	Singapore	2.57	8	Malaysia	3.15
9	Special Categories	2.23	9	Italy	2.36	9	Russian Federation	2.85
10	Italy	2.13	10	Canada	2.03	10	Singapore	2.39
11	United Kingdom	1.77	11	France	2.01	11	Australia	1.98
12	France	1.70	12	Australia	1.96	12	Thailand	1.90
13	Romania	1.39	13	Free Zones	1.71	13	Indonesia	1.53
14	Spain	1.28	14	Malaysia	1.57	14	Italy	1.46
15	Argentina	0.77	15	Indonesia	1.55	15	France	1.44
16	Indonesia	0.77	16	United Kingdom	1.49	16	Canada	1.23
17	Belgium-Luxembourg	0.73	17	Thailand	1.22	17	Saudi Arabia	1.16
18	German Democratic Republic	0.67	18	Brazil	0.93	18	United Kingdom	1.13
19	Switzerland	0.66	19	Belgium-Luxembourg	0.87	19	Philippines	1.09
20	Netherlands	0.64	20	Sweden	0.76	20	Brazil	1.02
29	Chile	0.43	30	Peru	0.35	27	Chile	0.53
32	Venezuela	0.30	32	Argentina	0.28	32	Argentina	0.42
36	Cuba	0.25	39	Chile	0.17	35	Mexico	0.38
40	Peru	0.18	43	Cuba	0.16	41	Peru	0.25
41	Mexico	0.18	44	Mexico	0.15	59	Costa Rica	0.06
71	Trinidad and Tobago	0.02	58	Uruguay	0.06	66	Venezuela	0.05
82	Antigua and Barbuda	0.01	74	Guatemala	0.03	71	Cuba	0.04
86	El Salvador	0.01	76	Costa Rica	0.02	77	Uruguay	0.03
89	Panama	0.00	77	Ecuador	0.02	85	Jamaica	0.02
92	Costa Rica	0.00	80	Paraguay	0.02	93	Colombia	0.01
103	Dominican Republic	0.00	88	Venezuela	0.01	105	Ecuador	0.00
108	Guatemala	0.00	90	Colombia	0.01	108	Bolivia	0.00
111	Suriname	0.00	97	Panama	0.01	115	Paraguay	0.00
118	Paraguay	0.00	104	El Salvador	0.00	126	Trinidad and Tobago	0.00
125	Colombia	0.00	106	Jamaica	0.00	131	Panama	0.00
143	Belize	0.00	111	Suriname	0.00	135	Suriname	0.00
144	Bermuda	0.00	140	Honduras	0.00	136	El Salvador	0.00
145	Bolivia	0.00	144	Antigua and Barbuda	0.00	137	Dominican Republic	0.00
146	Barbados	0.00	145	Haiti	0.00	147	Honduras	0.00

Source: IDB-INT calculations based on UN/Comtrade data.

by 2002. Chile, Argentina, and Mexico were the only other Latin American countries among China's top 40 suppliers in 2002, accounting together for just 1.3 percent of total imports.

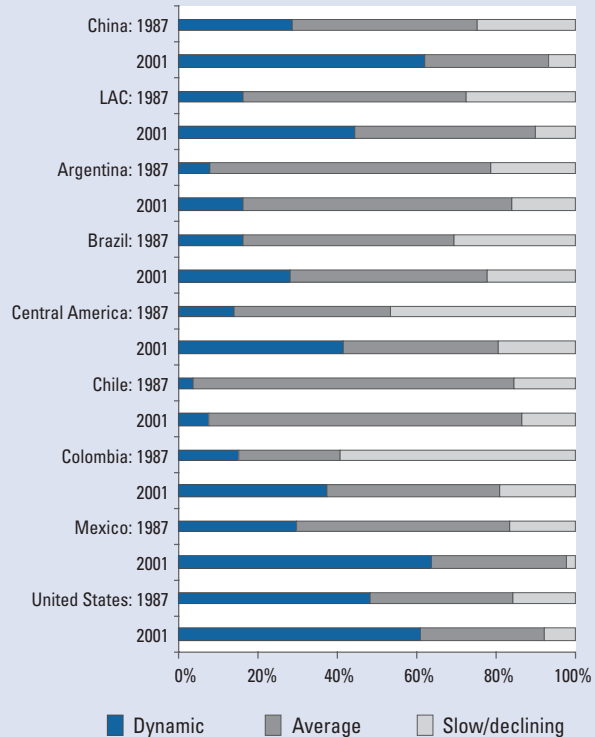
A Highly Dynamic and Diversified Export Pattern

How well-placed are Chinese export products in terms of global demand? Does China's export growth stem from specialization in goods with a highly dynamic demand in world markets?

Figure 3.9 shows the dynamism of export products, categorized according to their overall global demand.² The figure compares the behavior of the Chinese export basket in 1987 and 2001. For contrast, Latin American country and regional and U.S. export baskets are shown for the same two benchmark years. As shown, China and Mexico have experienced the most marked change. In 1987, about a quarter of China's ex-

FIGURE 3.9

Export Composition by Dynamism of Demand in 1987 and 2001, by Country/Region (percent)



Source: IDB-INT calculations based on UN/Comtrade data.

² The data consist of 225 three-digit Standard International Trade Classification product groups, which are categorized as dynamic, average, or slow/declining. A simple average is taken of the average yearly growth rates of each group, and those groups that fall within 0.5 standard deviations above or below the average are categorized as average. Those with growth greater than 0.5 standard deviations above the average are dynamic, and those with growth more than 0.5 standard deviations below the average are slow/declining. The simple average growth rate is 4.7 percent, and the cutoff points are 6.5 and 2.9 percent, respectively, with 74 products characterized as dynamic, 89 as average, and 62 as slow/declining. This classification was introduced by ECLAC in several analyses of competitiveness.

ports were in product categories with dynamic world demand. By 2001, however, more than 60 percent of China's export basket consisted of goods with dynamic global demand—a few percentage points ahead of the U.S. performance that year. Mexico's gain in dynamic products was similar to China's; moreover, the share of slow/declining products had dwindled to less than 5 percent of its overall export basket in 2001. Latin America has also become increasingly more specialized in goods with dynamic world demand, but this is largely the result of Mexico's striking export performance in the U.S. market.³

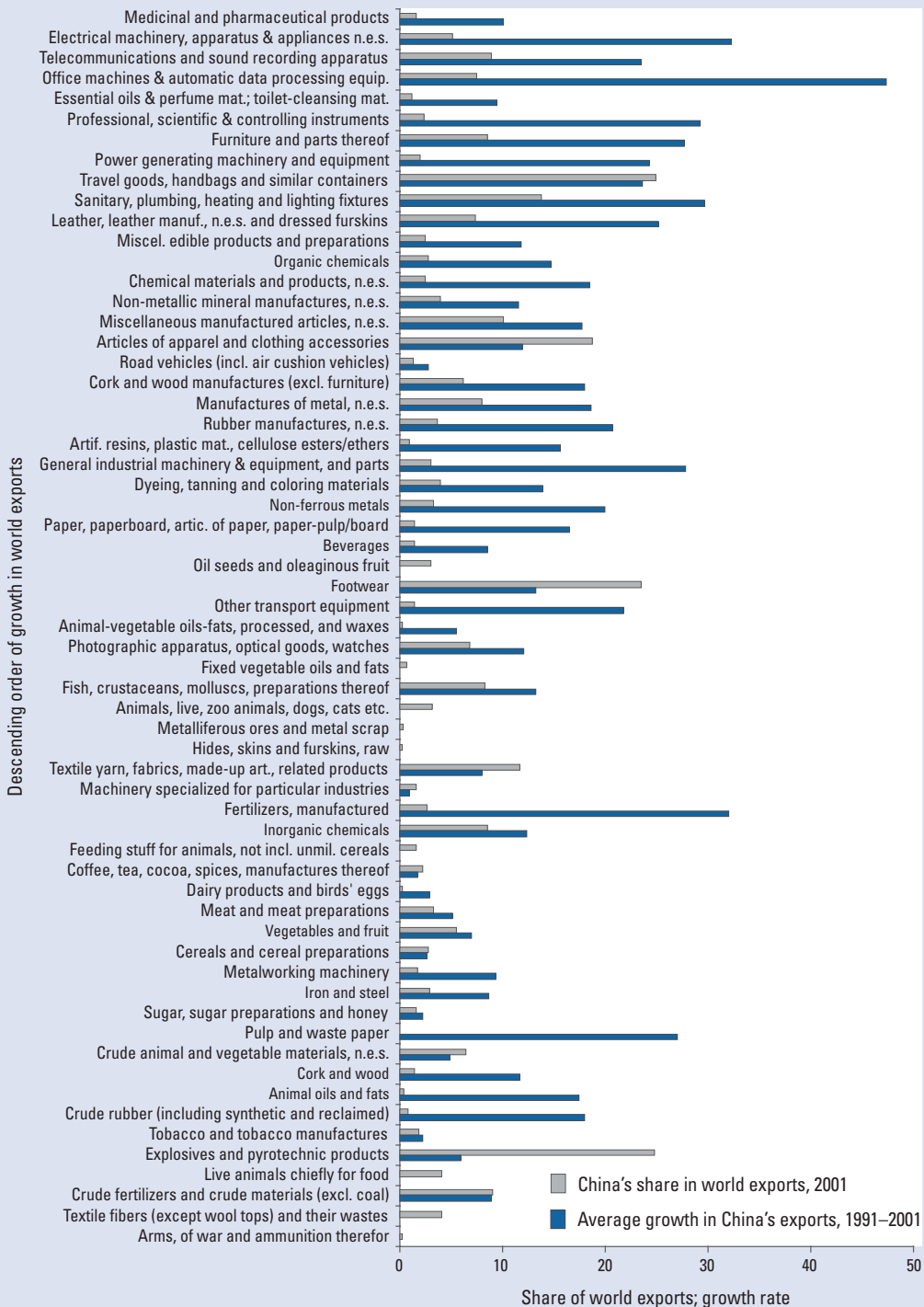
Figures 3.10a, 3.10b, and 3.10c permit comparative analysis of growth and market share at the sectoral level. The vertical axis in each figure ranks, in descending order, the sectors that experienced the fastest average annual growth in world exports in 1991–2001. The bars in the three figures represent the growth of Chinese, Mexican, and Latin American exports in 1991–2001, respectively, as well as the share of each in 2001 global exports for each sector.

A country (or region) can be said to have a dynamic export sector when its fastest-growing exports coincide with sectors that are also fastest-growing in global exports, while at the same time representing a sizable share of total world exports. Figure 3.10a shows that China approximates this “inverted-triangle” ideal to a large extent. It tends to have fast-growing exports precisely in sectors that have the highest global export dynamism, and its share of the total world export basket in those sectors is often a significant 5 to 10 percent. Mexican performance, shown in Figure 3.10b, is equally encouraging. Mexico scores high in both growth and shares in the sectors that are most dynamic globally. The Mexican and Chinese patterns are more vividly evident when contrasted with the performance of Latin America (excluding Mexico) in Figure 3.10c. The region's highest growth rates are less concentrated in those sectors that are expanding fastest globally, and overall they are growing at lower rates (at about 5 to 20 percent) than the fastest-growing Mexican or Chinese exports in the sample (often exceeding 20 or even 30 percent). Latin America's sectoral exports also make up more-modest shares of global totals.

The fact that China's fastest-growing exports account for a substantial share of the country's export basket disguises the significant diversity of its exports. In contrast, Latin American exports are relatively undiversified. How diversified is China's export basket? Figure 3.11 uses a traditional measure of export concentration, the Hirschmann-Herfindahl Index, for China, Latin America, the United States, and the

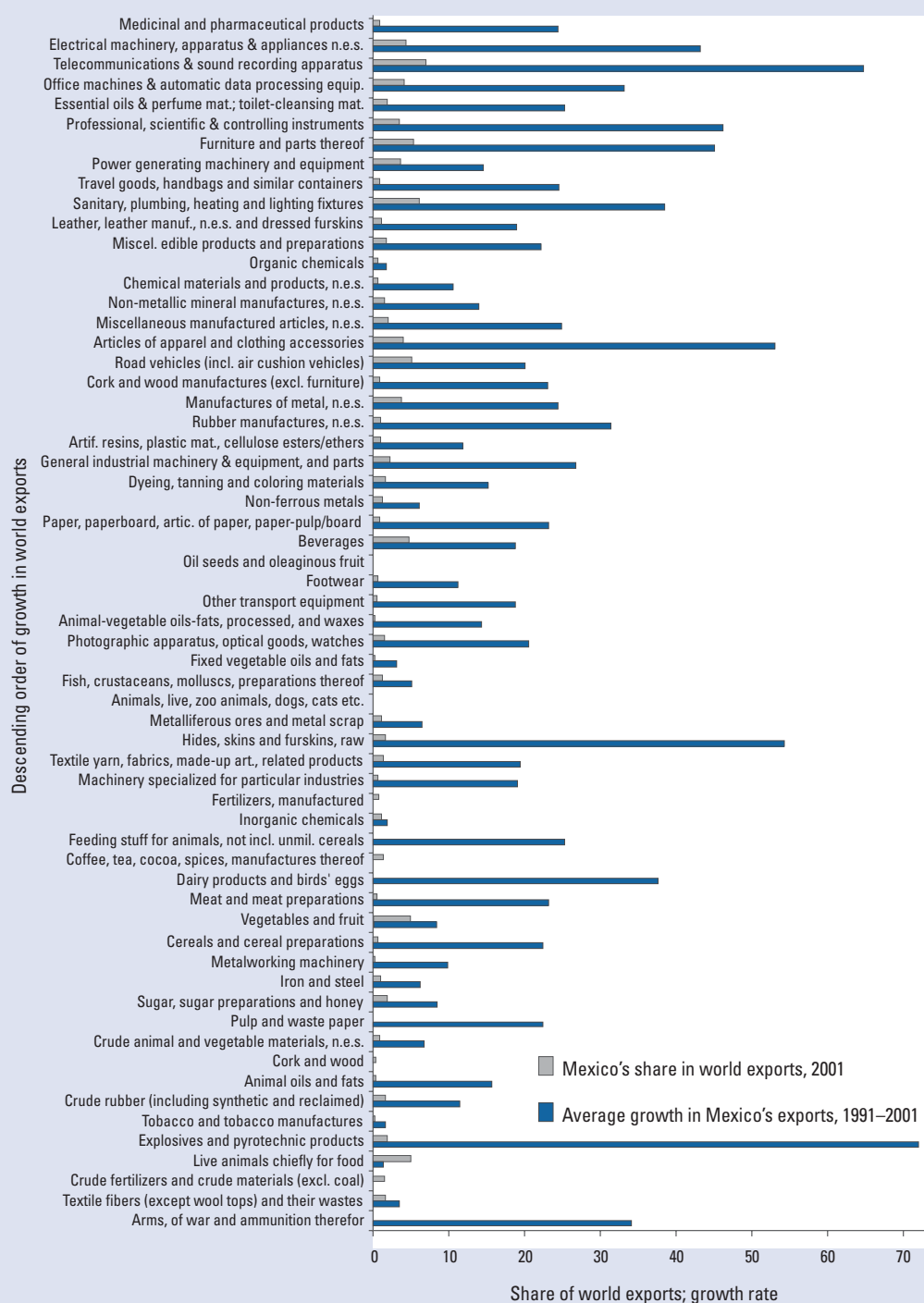
³ The share of goods with dynamic demand in the Mexican export basket grew from less than a third in 1987 to more than 60 percent in 2001. In contrast, other major Latin American traders (Argentina, Brazil, and Chile) experienced much lower growth in this area. Encouragingly, however, Central America has moved toward producing goods with dynamic demand. Another positive development for Latin America and China alike is the falling share, in their export baskets, of goods with slow/declining dynamism.

FIGURE 3.10a China's Growth and Market Share in World Trade's Most Dynamic Exports, 1991–2001
(percent)



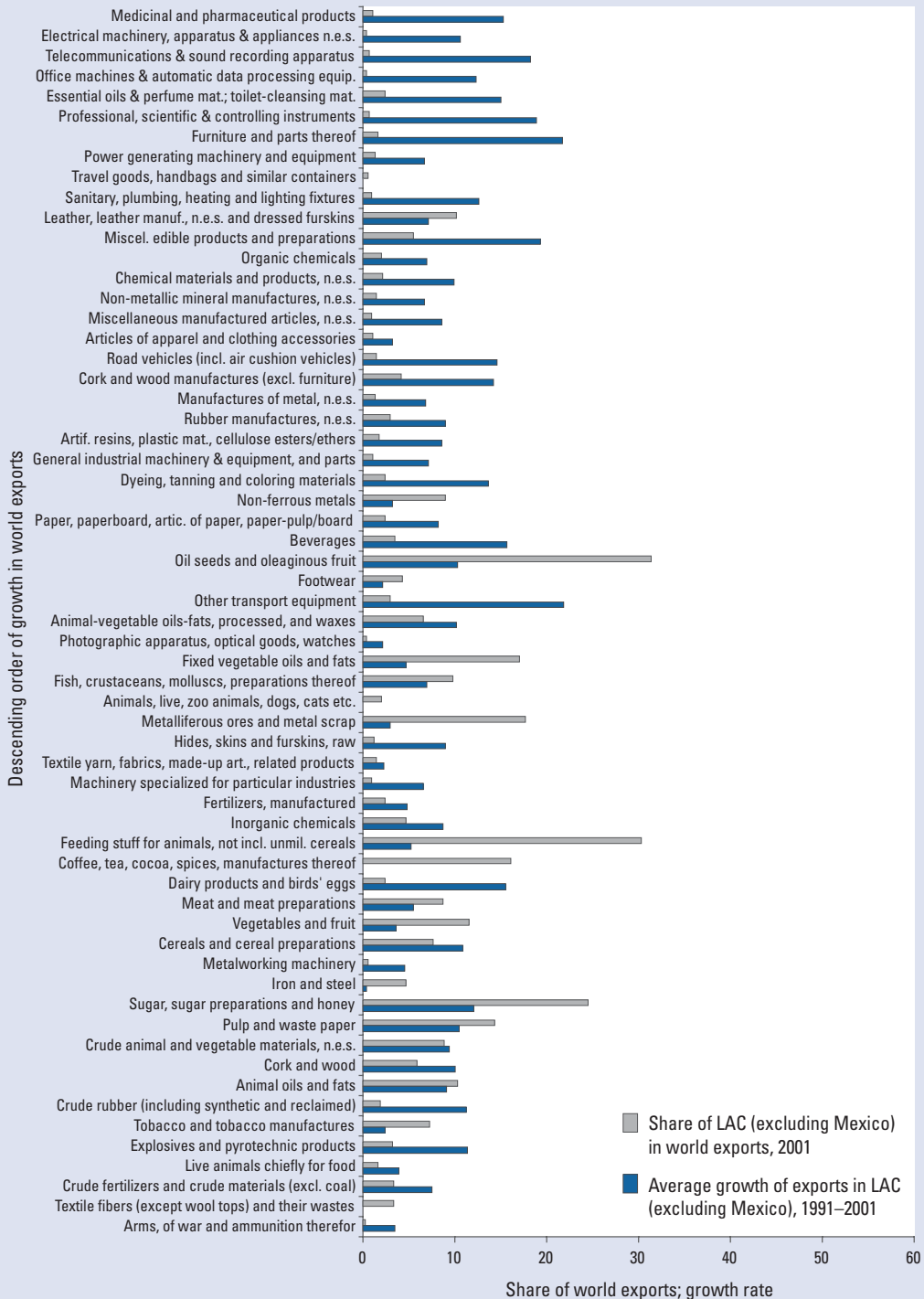
Source: IDB-INT calculations based on UN/Comtrade data.

FIGURE 3.10b Mexico's Growth and Market Share in World Trade's Most Dynamic Exports, 1991–2001 (percent)



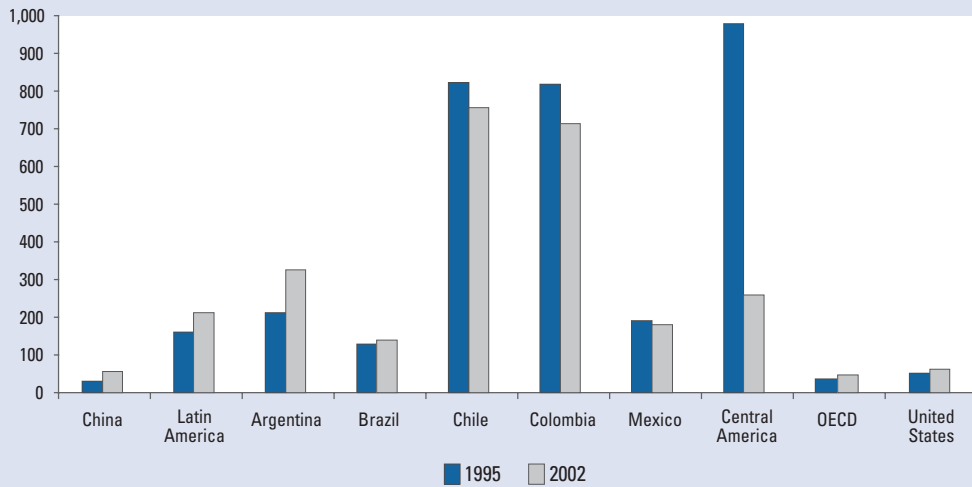
Source: IDB-INT calculations based on UN/Comtrade data.

FIGURE 3.10c Growth and Market Share of Latin America (Excluding Mexico) in World Trade's Most Dynamic Exports, 1991–2001
(percent)



Source: IDB-INT calculations based on UN/Comtrade data.

FIGURE 3.11 Export Concentration in China, Latin America, and the OECD, 1995 and 2002
(Hirschmann-Herfindahl Index)



Source: IDB-INT calculations based on UN/Comtrade data.

OECD (including the United States) in 1995 and 2002.⁴ The figure reveals the high degree of diversity in China's export basket relative to others. Indeed, China's export diversification approaches the levels attained by the United States as well as the OECD as a whole. The more natural-resource-based economies of Latin America have much lower levels of diversification. However, Central America's exports have become markedly diversified over time.

The Rising Technology Content of Exports and the Pattern of Production

Besides diversity, China's export composition can be examined in terms of its technology content. The preceding analysis suggests that China's export basket recently has undergone some significant structural change, advancing from less-complex manufac-

⁴ The calculations are performed at the six-digit level of the Harmonized System of 1992. The Hirschmann-Herfindahl Index calculates export concentration for each country or country cluster as

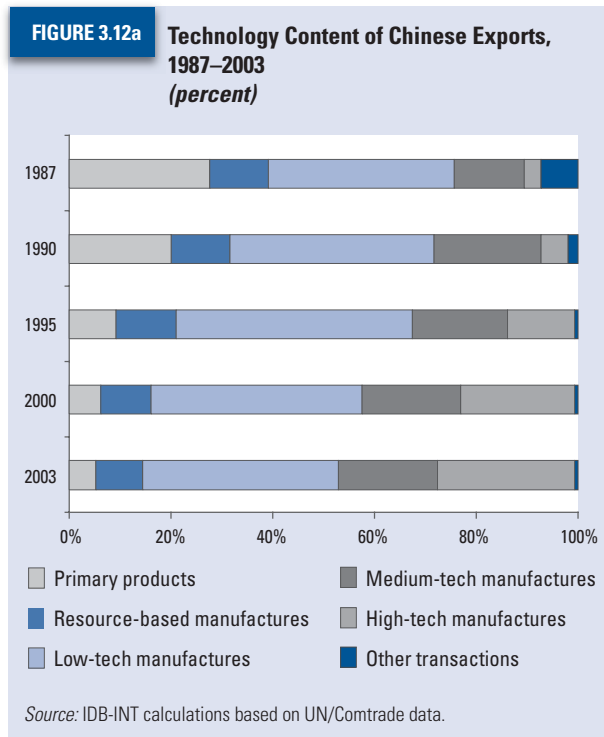
$$HHI = \sum_i \left(\frac{x_i}{X} * 100 \right)^2,$$

in which x_i is the exports to the world of each individual product and X is the value of total exports to the world.

tures to more-sophisticated products. Figure 3.12a shows that the nearly 80 percent share of primary products, resource-based manufactures, and low-tech manufactures in China's export basket in the mid-1980s had shrunk to roughly 50 percent by 2003. On the other hand, the share of high-tech exports rose from less than 5 percent to 30 percent.⁵ In the short run, China seems likely to mount a growing competitive challenge in world export markets—particularly in medium-tech goods (the lower-end high-tech sector) such as automobiles, machinery, and simple electronics (Lall and Albaladejo, 2003). At the top end of the

high-tech sector, data thus far suggest complementarity rather than competition between China and its neighbors. This reflects the growing integration of the East/Southeast Asian region as a complex network of export production, a phenomenon driven mainly by leading multinational companies in the electronics field, their first-tier suppliers, and contract manufacturers.

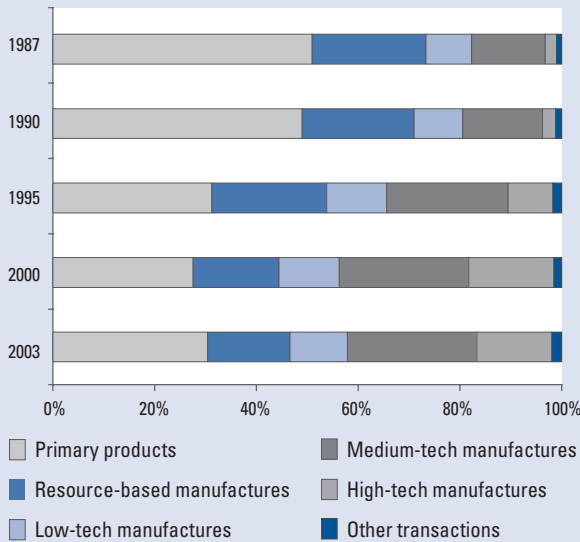
Latin America has experienced a similar trend in the technology content of its exports, albeit to a more modest extent, as shown in Figure 3.12b. While medium- and high-tech exports made up less than one-fifth of the region's export basket in 1987, their share grew to nearly 40 percent in 2003. The pattern, however, varies widely by country and, once again, is dominated by Mexico's export performance.⁶



⁵ The technology groupings of products are defined according to the Standard International Trade Classification (Revision 2) at the three-digit level. The total number of categories is 276, which includes 37 “not defined” categories that usually have trade values of zero. The detailed breakdown is available in Lall (2000).

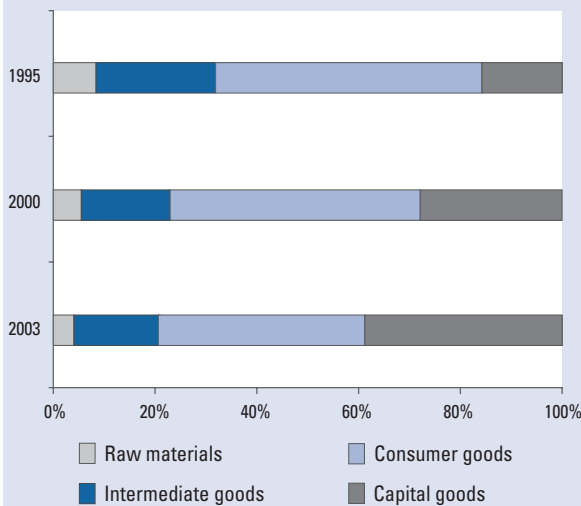
⁶ In 2003, nearly two-thirds of the Mexican export basket was composed of medium- and high-tech exports. In contrast, the technology content of Brazilian exports remained relatively flat between 1987 and 2003. Central America exhibits a pronounced trend toward medium- and high-technology exports as well, but the subregion's overall contribution to the Latin American data is modest.

FIGURE 3.12b Technology Content of Latin American Exports, 1987–2003 (percent)



Source: IDB-INT calculations based on UN/Comtrade data.

FIGURE 3.13a Chinese Exports by Final Use, 1995–2003 (percent)



Source: IDB-INT calculations based on UN/Comtrade data.

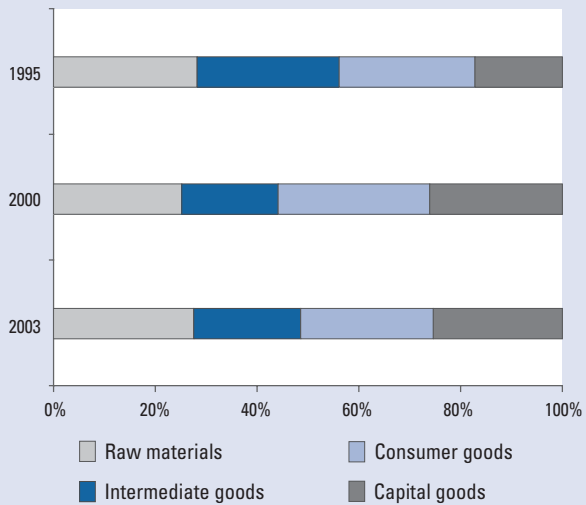
Analysis of changes in the dynamism, diversification, and technology content of China's exports suggests marked changes in the country's production patterns. Figure 3.13a classifies China's exports according to products' final use (that is, as raw materials, intermediate goods, consumer goods, and capital goods). Chinese capital goods exports have exhibited particularly strong growth, rising from less than a fifth of total exports in 1995 to nearly two-fifths in 2003. Together, capital and consumption goods accounted for nearly 80 percent of the 2003 Chinese export basket, versus 70 percent of the 1995 basket. Raw materials and intermediates comprise around 20 percent of Chinese exports, versus more than 30 percent eight years earlier. The pattern is consistent with what could be expected from the foregoing analysis of the technology content of Chinese exports.

The share of capital goods in Latin American exports has also grown, increasing from less than 20 percent of the total in 1995 to 25 percent by 2003 (Figure 3.13b). Capital goods appear to have grown at the expense of intermediate goods in particular. This may reflect Mexico's pattern in the post-NAFTA era. Intermedi-

ates are imported from the United States for production of final goods that subsequently are exported back to the U.S. market. Together, capital and consumer goods have come to account for more than half of Latin American exports, while the share of raw materials is about 25 percent. The remaining fifth is composed of intermediates.

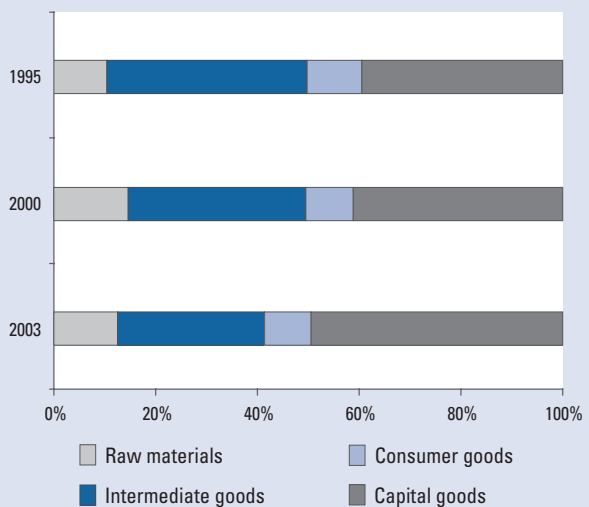
The increased share of finished products (capital and consumer goods) in China's export basket should be reflected by higher domestic production or imports of intermediate goods. Imports likely have been a more viable option thus far than domestic sourcing. Despite its great potential for scale, China only recently has succeeded in producing high-quality intermediates. As shown above, the Chinese import basket has significantly changed, and many sectors with the greatest import increases are also among the most important and fastest-growing sectors in China's export basket. China has boosted its intra-industry trade, particularly with nearby Southeast Asian countries. The region has emerged as one of the world's most productive and closely integrated economic zones. Figures 3.14a and 3.14b compare China and Latin America. The changes

FIGURE 3.13b Latin American Exports by Final Use, 1995–2003 (percent)

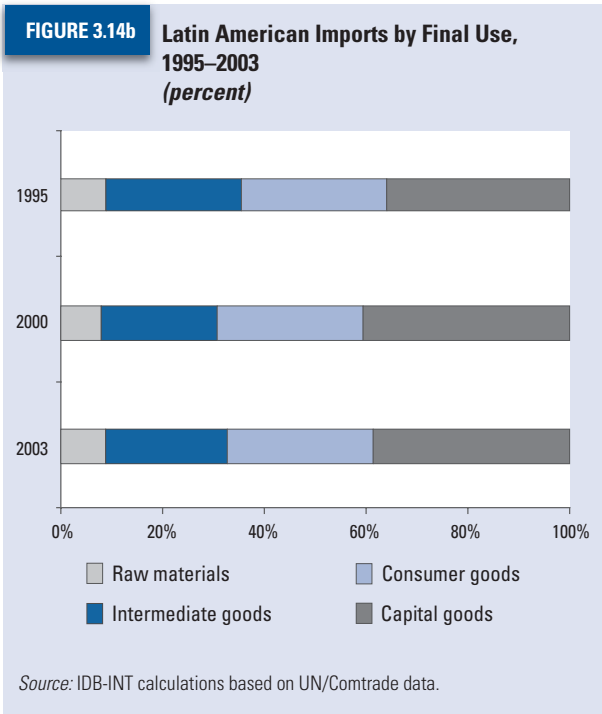


Source: IDB-INT calculations based on UN/Comtrade data.

FIGURE 3.14a Chinese Imports by Final Use, 1995–2003 (percent)



Source: IDB-INT calculations based on UN/Comtrade data.



over time are relatively minor in both regions, in part because of data limitations in extending the analysis farther back. Perhaps the most discernible difference is the greater importance of intermediates in China’s import basket relative to Latin America’s. China’s import pattern could also suggest that its export diversification reflects simple export processing. It is hard to assess this because, unlike Mexico, China does not detail “maquila-like” operations in its trade data. And the possibility of more dynamic export development underpinning export growth cannot be dismissed in view of the country’s aggressive industrial and technology

policies, coupled with increasingly dense skill and capital endowments in its industrial heartlands. Indeed, there are signs that China is gradually adding more value (see Annex I.3). China’s production patterns are an area that needs much more study.

Implications of China’s Changing Export Basket

In light of these substantive structural changes in the Chinese export basket, what are the implications for the future?

Today, China is generally viewed as being most threatening to countries that mainly rely on labor-intensive manufactures and low wages for their export advantage (Lall and Albaladejo, 2003). Improvement in China’s export structure, however, will likely soon start exerting increasing pressure on the exports and domestic markets of more-advanced economies—for example, the Asian Tigers of Singapore, Hong Kong, Korea, and Taiwan.

China is likely to pose a significant challenge to the potential of many other countries—including those of Latin America—to compete successfully in third markets in increasingly sophisticated capital and consumer products. Some sectors doubtlessly will be more affected than others. For example, China’s improving quality, design, and marketing scale in textiles and apparel is likely to exert strong influence on the

global market in that sector, especially following expiration in 2005 of the multilateral Agreement on Textiles and Clothing (see Chapter 5). The multinational corporations that now account for about half of China's exports (including the bulk of its high-technology exports) are incorporating China into the fragmented intrafirm production systems that span the East Asian region in particular. Moreover, Chinese enterprises themselves are likely to specialize, thus fostering intra-industry trade in differentiated products between China and the rest of the world (Lall and Albaladejo, 2003). The challenge is all the more pressing in view of China's extraordinary potential for scale and its well-demonstrated capacity for learning.

Offsetting the perceived threat is the prospect that China will advance beyond producing goods that now compete directly with those of other countries in world export markets. However, the greater opportunity for other countries may lie in their capacity to supply new demand segments of the Chinese production apparatus (for instance, providing raw materials and intermediate goods), and buying increasingly sophisticated (and probably more affordable) finished Chinese goods. Furthermore, China itself is playing a role in enhancing export activities in Hong Kong, Singapore, and Taiwan, countries that are currently at a higher technological and production stage. It is also possible that such prospects will be curtailed to some extent by the rise of local suppliers in China, as is occurring in clusters of high-tech activity (Lall and Albaladejo, 2003). This trend is likely to strengthen, with the government encouraging foreign firms to set up local R&D facilities. Lemoine and Unal-Kesenci (2002) document a marked deepening of local content, as well as design and development activity, in China during the 1990s. These trends are evolving faster in China than in Malaysia, Thailand, or the Philippines.

Overall, it remains to be seen how changes in production patterns will be reflected in China's export basket, and whether potential complementarity between China and other countries will offset the competitive challenge that China poses. Chapters 4 and 5 respond to these questions through a more detailed analysis of the current level of trade competition between China and Latin America.

This page intentionally left blank

Why China's Trade Performance Is So Exceptional

This chapter explores reasons behind China's exceptional export performance of recent years. The *pattern* of trade (that is, the composition of exported and imported goods) and the *direction* (that is, the selection of partners) reflect not only traditional measures of comparative advantage (in other words, relative factor endowments) but also China's economic size, the costs associated with commercial transactions (for example, transport), and barriers linked to the policy regime.

The following sections review these factors in turn. The first and second sections examine the structural advantages and constraints affecting the composition and direction of trade, including relative factor endowments and economic size. The third section explores distance to markets and transport costs. The final section analyzes China's trade policy regime, focusing on the liberalization of tariff and nontariff measures and the role of export promotion policies and institutions.

Comparative Advantage: The Role of Factor Endowments

Textbook “endowment-driven” trade theory provides a good starting point for assessing China's competitiveness in global markets. By any standard, China is extremely labor-abundant, in contrast with relatively more capital- and skill-abundant Latin American countries such as Mexico and Brazil. Basic insights of the theory of relative factor endowments might prompt one to conclude that countries endowed so differently would not compete in world markets. The aggregate assessment of China's economy, however, ignores the vast diversity of endowments at the regional level. The country's inland provinces are rural, underdeveloped, and abundant in labor and land. The coastal areas and large urban centers—in particular, Shanghai—are comparable to the fast-growing, capital- and skill-abundant Asian Tiger economies or the more developed countries in Latin America. This diversity of endowments may be at least as great as the variation across countries in Latin America, suggesting that China could begin to export skill- and capital-intensive products long before the aggregate economy seems able to do so.

The analysis can be formalized using a two-factor version of the standard Hecksher-Ohlin theory of international trade. Figure 4.1 features four industries—apparel, textiles, machinery, and chemicals—that differ in terms of their capital intensity (apparel is the most labor-intensive industry, while chemicals is the most capital-intensive). Countries would be expected to specialize in the two industries in which input intensities are most closely related to their endowments. Hypothetically (see the left panel in Figure 4.1), China, the United States, and Latin America would specialize in different commodity bundles, with the United States and China having no industries in common. Assuming that Latin America occupies the middle cone of diversification, the labor-intensive portion of its product mix would overlap with labor-abundant China, while the capital-intensive portion of its product mix would overlap with the capital-abundant United States. As the figure shows, the overlap between countries’ product mixes is a function of the relative similarity of their endowments. In this scenario, Latin America is in the “middle” and faces direct competition from “above” and “below”—in other words, from both capital- and labor-abundant countries.

This aggregate analysis, however, overlooks the diversity of endowments across Chinese regions. Accounting for China’s internal factor disparities may reveal that China, Latin America, and the United States compete even more directly against one another than implied in the left panel of Figure 4.1. Shanghai, for example, is far more skill- and capital-abundant than the labor-abundant inland province of Guizhou, and therefore may produce exactly the same mix of goods as the “middle” countries of

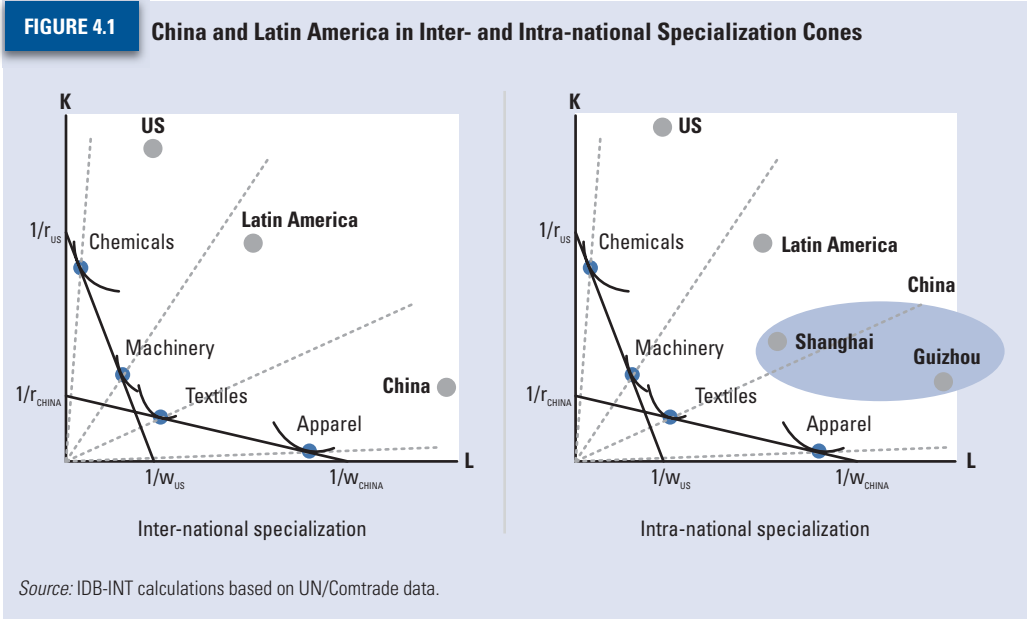


TABLE 4.1

Relative Endowments for Country Groupings and China

Region/country	No schooling (%)	Primary attainment (%)	Secondary attainment (%)	Post-secondary attainment (%)	Arable land per person (hectares)	Capital per capita (\$)
Asia	32	32	27	8	0.14	3,339
Caribbean	18	44	31	7	0.08	6,212
Latin America	18	49	20	13	0.25	5,590
OECD	5	34	40	21	0.38	67,688
China	21	42	36	3	0.10	2,274

Note: All columns report mean values across all countries by region for which data are available, except for “Capital per capita,” which reports median rather than mean values. Education measures are for 1999 and are from Barro and Lee (2000). Land abundance data are for 2000 and are from the World Bank’s *World Development Indicators* database. Capital per population data are for 1990 and are from Nehru and Dhareshwar (1993). Per capita capital values are adjusted for purchasing-power parity using World Bank PPP conversion factors; they are expressed in 1987 dollars.

Latin America.¹ Intraregional disparities within China are fueled by the lack of market integration, a circumstance driven by several factors, including the government’s explicit control of factor movements among other barriers. Such restrictions may prevent the factor price disparities illustrated in Figure 4.1 from converging within the country, thereby reinforcing the tendency of regions to produce and export goods of different capital intensities. At the same time, the presence of a vast inland labor force may prevent wages in the faster-growing regions from being bid up as quickly as might occur in a more labor-constrained economy, such as Singapore, which increases China’s overall competitiveness in world markets.

Comparing factor endowments across countries is difficult because of the lack of comparable data. Some standard measures, however, provide indirect evidence of the relative distribution of endowments. Table 4.1 compares the average relative distribution of endowments for China and several country groupings. Highly skilled workers appear to be relatively scarce in Asia in comparison with Latin America, and scarcer still in China. In 1999, approximately 13 percent of Latin Americans had a postsecondary education (Barro and Lee, 2000), compared with 8 percent for Asia and 3 percent for China. Similarly, the proportion of workers with no schooling was higher in China than in Latin America.

Table 4.2 shows China’s location in the distribution of various country groupings’ relative endowments.² China’s skill scarcity places the country below the median of

¹ Courant and Deardorff (1992) refer to this effect as the “lumpiness of countries.” If sufficiently large, intraregional factor endowment differences within countries can translate into a pattern of comparative advantage different from what might be expected where factors are evenly distributed.

² A value of 50 for a particular region in this table indicates that China’s relative endowments are equal to the median of that region.

TABLE 4.2

China's Position within Country-Grouping Relative Endowment Distributions

Region/country	No schooling	Primary attainment	Secondary attainment	Post-secondary attainment	Arable land per person (hectares)	Capital per capita (\$)
Asia	58	84	68	32	52	27
Caribbean	67	50	50	33	75	20
Latin America	68	26	89	5	19	21
OECD	95	64	41	5	26	9

Note: Cells report the percentile of each country-grouping distribution that China would occupy if it were part of the group. See the note to Table 4.1 for the source of data for each relative endowment variable.

the Asian and Latin American distributions. For instance, China is in the 32nd percentile in postsecondary education (behind Pakistan and India). Latin America would be in the fifth percentile if it and China were part of the same group. China has a relatively more unschooled population than 58 percent of Asian countries and 68 percent of Latin American countries. In addition to its relative shortage of skills, China is also relatively lacking in capital and land. China has 0.10 hectares of arable land per person, compared with 0.25 hectares per person in Latin America. In 1990, China's median capital per capita was a relatively low \$2,274,³ which would place it in the 21st percentile of Latin America's distribution.

Comparable data on the distribution of factors within China are unavailable; however, some variation across Chinese provinces can be explored using per capita GDP and illiteracy rates. Table 4.3 lists China's provinces according to per capita GDP. The ranking reveals a wide dispersion of values, with a maximum-to-minimum ratio of 12.⁴ Similar variation within China is also evident in illiteracy rates, a crude proxy for skill levels. This evidence suggests that, in the aggregate, China is very short on skills, capital, and land relative to other country groupings worldwide. The pattern is conducive to specialization in labor-intensive exports. China's provinces, however, exhibit at least as much relative variation in levels of development as in Latin America. Indeed, in terms of per capita GDP, the most developed regions in China appear to be roughly comparable to the more capital- and skill-abundant countries of Latin America and to the more advanced Asian countries. Moreover, this regional disparity is considerably more marked than that which is found in larger Latin American countries.

³ Capital per capita data are taken from Nehru and Dhareshwar (1993).

⁴ Per capita GDP data are non-purchasing-power-parity-adjusted. To compare this variation with Latin America, the maximum-to-minimum ratio is 6 for PPP-adjusted per capita GDP and 11 for non-PPP-adjusted per capita GDP.

TABLE 4.3

Interregional Endowment Disparities within China

Province, region, or municipality	Per capita GDP (CNY millions)	Illiteracy (%)
Shanghai Municipality	30,805	8.7
Beijing Municipality	19,846	6.5
Tianjin Municipality	15,976	8.0
Zhejiang	12,037	15.7
Guangdong	11,728	9.2
Fujian	10,797	18.5
Jiangsu	10,665	16.8
Liaoning	10,086	7.2
Shandong	8,673	20.2
Heilongjiang	7,660	9.8
Hebei	6,932	11.4
Hubei	6,514	15.0
Xinjiang Uygur Autonomous Region	6,470	9.8
Hainan	6,383	14.6
Jilin	6,341	6.8
Neimongu (Mongolia) Autonomous Region	5,350	16.4
Hunan	5,105	11.1
Henan	4,894	16.3
Chongqing Municipality	4,826	4.0
Shanxi	4,727	9.1
Anhui	4,707	20.3
Qinghai	4,662	30.5
Jiangxi	4,661	13.2
Ningxia Hui Autonomous Region	4,473	23.3
Sichuan	4,452	24.3
Yunnan	4,452	16.8
Xizang (Tibet) Autonomous Region	4,262	66.2
Guangxi Zhuang Autonomous Region	4,148	12.4
Shaanxi	4,101	18.3
Gansu	3,668	25.6
Guizhou	2,475	24.5
Maximum-to-minimum ratio	12.4	16.6

Source: Schott (2004), using data from National Bureau of Statistics of China (2000).

The Comparative Advantage of Size

China's expanding role in the world economy stems mainly from its size. But how does size determine comparative advantage? Recent international trade literature provides some insights into the mechanisms through which economic size might affect the pattern of trade, particularly through product differentiation. An assessment of the importance of size in China's export expansion requires an evaluation of *how* China's trade is growing. In other words, the implications for other countries of China's export boom depend heavily on the channels through which China's growing export platform is expanding.

Hummels and Klenow (2004) have advanced a useful framework for understanding the channels for trade and growth. In particular, they show that a country accumulates more resources (or, in China's case, brings resources from autarky into trade) when it produces more of the same set of goods (the intensive margin), produces a larger set of goods (the extensive margin), or improves the quality of its set of goods (the quality margin).

The implications differ considerably according to the respective channel. If the expansion takes place along the intensive margin, countries will produce and export a higher quantity of the same varieties. This entails strong negative terms-of-trade effects. If the expansion occurs along the extensive margin, countries will produce a larger number of varieties, avoiding a deterioration in the terms of trade.

The competitive pressure China exerts upon Latin America and other regions depends on the nature of its export expansion. Expansion along the intensive margin would imply substantial terms-of-trade effects for China, as well as for any country that exports the same set of products as China. The spillover effect on other exporters would depend on the substitutability of goods within each category. For example, raw industrial supplies (such as coffee from Vietnam) might be much more substitutable than industrial machinery. On the other hand, expansion along the extensive margin (as seems to be the case in China) widens China's product coverage but also alleviates some of the downward pressure on the terms of trade for both China and its product market competitors. Unfortunately, this is not all good news for Latin America. While expansion along the extensive margin would prevent a collapse in the terms of trade for common products, it would also mean a greater number of competing products. The growing overlap of traded goods is analyzed in Chapter 5.

Ultimately, China may run out of new product categories and new markets in which to compete, and it will be forced to use resources to improve quality. If Latin America today is assumed to produce higher-quality products than China, continued Chinese growth would produce a convergence in quality. Alternatively, if the product quality of both regions is similar, China's continued growth could result in China and Latin America coming to produce products that are basically different and overall better. Will that happen? The net effect is hard to assess. Yet potential policy actions must be considered, as discussed in Chapter 8.

The Costs of Distance

Distance is a major barrier to trade. About half of global trade takes place between countries within 3,000 kilometers of each other. A growing empirical literature has confirmed that the trade-distance relationship is extremely robust: doubling distance tends to halve trade.⁵ Trade costs correlated with distance include transportation and

⁵ Most of these studies used a gravity equation framework to explain the pattern of bilateral trade flows.

distribution (for example, shipping and insurance), some communication (for example, personal travel and telephone calls), preferential trade agreements (for example, tariff barriers that are lower for close neighbors), and search costs (for example, identification of partners and negotiation of contracts).

Does distance provide clues to China's remarkable trade performance? On the one hand, China's proximity to Asia and its vast industrial supplies could be viewed as a significant cost advantage on the production side. On the other hand, the relatively large geographic separation between China and its markets in the United States might be viewed as hampering China's global export potential.

Consider the contrast between China and Latin America. The distance between Los Angeles and Guangdong is roughly 11,700 kilometers, significantly greater than the 8,790 kilometers between Miami and the southernmost *tip* of South America. If distance diminishes trade because of real costs, Latin America's export sales to the United States should be protected from Chinese growth at least to the differential implied by those trade costs. In simple terms, if trade costs were 10 percent higher for China than for Latin America, China's ex-factory prices would have to be 10 percent lower to compete with Latin America in the U.S. market.

What are the costs and benefits of distance insofar as they relate to the potential impact of China on Latin America? The answer requires an assessment of the real cost differentials between players for shipping *and* time.⁶ The following sections address these two factors.

Shipping Costs

This section considers Chinese and Latin American aggregate shipping costs by two modes of transportation—ocean and air—and by three main stages: inland movement from point of origin and loading, unloading plus inland movement at the destination, and international transit. A rule of thumb is that each stage represents roughly a third of the total shipping bill.

Inland Shipping

Inland costs can be divided into those for transportation and those for loading/unloading. Movement depends on the quality of road and rail infrastructure and on the

⁶ Search is a third potential cost of distance. While promising in principle, the literature in this area is not greatly advanced beyond the assertion that search costs help to explain why trade diminishes with distance. The most interesting evidence involves China. Rauch and Trindade (2002) show that global spread of ethnic Chinese facilitates trade by providing a conduit for information about foreign markets. Nevertheless, direct evidence has not been produced for the underlying costs.

overland distance that the goods must travel.⁷ Currently, China's active export regions are on the coasts, not in the interior.⁸ Costs for loading and unloading depend, first, on the degree of port congestion and, second, on the costs to load cargo into a single storage container, which can then be packed once and moved intact from one mode to the next. Containerization of this sort is thought to be the single most important technological advance in shipping in the past half century. Loading/unloading expenses are substantially cut, thereby easing the movement of cargo between modes. There are significant differences between China and Latin America in container use. In 2001, 95 percent of Chinese waterborne exports to the United States (in terms of value) were containerized, up from 51 percent in 1991. In contrast, only about 48 percent of Central American and 39 percent of South American waterborne exports to the United States were containerized in 2001 (having increased from 30 and 24 percent, respectively).⁹

Inland transport factors have at least three implications for the continuation of China's export boom. First, China could bring the inland regions "closer" to world markets by improving infrastructure. Ongoing river-dredging efforts will allow oceangoing vessels to travel further inland and will expand barge traffic. Second, China could bring more resources into the coastal regions. This choice could reduce inland shipping costs, though it would ultimately lead to more congestion. Third, air transport could be used more widely, especially for items with a high value-to-weight ratio.

Greater use of air transport is probably China's best solution. Rather than transiting a congested ocean port, braving snarled intermodal linkages, and having to wait for days for a rail or truck shipment to arrive, shippers may well prefer to send goods by air. Relative to Latin America, the cost disadvantage of air transport has declined substantially in the past decade. However, China's interior regions remain backward, not only in their market access but also in their manufacturing sophistication. The goods best suited for airlift are high-value manufactures, such as electronics.

International Transit

Transit expenses depend on the distance goods travel, weight and bulk moved in relation to the value, and demand considerations (for example, the scale of operations and

⁷ Limão and Venables (2001) estimate that differences in infrastructure quality explain about 40 percent of international transportation costs for coastal countries and about 60 percent for landlocked countries. Further, the cost per mile shipped overland is six to seven times higher than the cost per mile for ocean transit. High-quality inland linkages lessen this problem by bringing inland regions "closer" to the port. There are several dimensions to "quality"—reliability, cost, modal interoperability (the ability to move containers from truck to rail to ocean liner and back again), and capillarity (infrastructure that reaches all parts of a region beyond the central transport hub).

⁸ Wei and Wu (2002) show that trade levels, trade growth, and income growth in China all decline with inland distance.

⁹ DOT, *U.S. Waterborne Trade Statistics* (1990–2001).

fluctuations in demand). This section discusses each of these issues, providing some comparisons between Latin America and China.

U.S. import data allow an estimation of the elasticity of shipping costs with respect to distance. For ocean shipping, the elasticity is about 0.2, and for air transport, it is about 0.4 (Hummels, 2001). In other words, if distance is doubled, transportation costs increase by 20 to 40 percent. Although these costs vary with fuel prices, the elasticity of transit costs with respect to distance has remained fairly flat for the past 15 years. This measure helps to explain why the advantages of air transportation are greater than those of ocean transportation: the marginal cost per mile is higher for planes than for ships, so the proximity advantage will be greater for air than for sea.

Measured in *ad valorem* terms, shipping costs are an increasing function of the shipment's weight-to-value ratio because the total cost is primarily a function of the quantity rather than the value shipped. Heavier goods require greater fuel expenditures, and bulkier goods fill cargo spaces. Consumers, however, are sensitive to changes in the final price at which goods are delivered, not changes in the transportation price. Consider, for example, that if shipping costs are \$8 for a bottle of wine, it is relatively more costly to ship a \$16 than a \$160 bottle of wine, as shipping costs make up 50 percent of the price of the former and only 5 percent of the price of the latter.

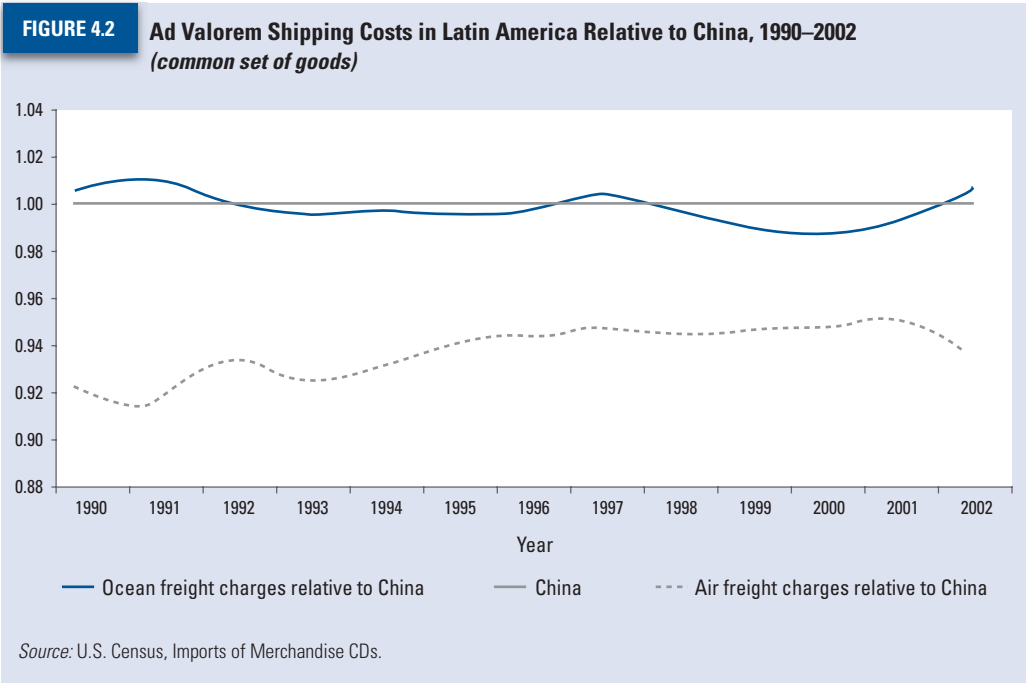
Shipping costs per kilogram from China are much higher than from Latin America. Unfortunately for Latin America, China's *ad valorem* cost (shipment cost per value) is comparable to, or even lower than, Latin America's. The weight-to-value ratio for the goods plays the key role. In the aggregate, goods from China are 10 times lighter per dollar shipped than goods from Central America. They are 20 times lighter per dollar shipped than goods from South America. In a nutshell, any Latin American proximity advantage in terms of shipping costs is completely wiped out because Latin America specializes in heavy, low-value products (Figure 4.2).

Unlike port costs, transit costs are typically estimated to be decreasing in the scale of operations.¹⁰ The effect of increased demand for shipping on the transportation price can be calculated on the basis of U.S. import data.¹¹ The estimated elasticity ranges from -0.05 to -0.12 ; thus, doubling the quantity traded reduces shipping costs by from 5 to 12 percent.¹² As the traded quantities increase, however, both China and

¹⁰ Once some minimum efficient scale has been reached, port costs rise rapidly as traffic increases because the supply of land is very limited around the port and points of road and rail access. In contrast, the number, size, and technological sophistication of the vessels committed to a particular route depend on the volume of trade along that route. If transpacific trade is growing while transatlantic trade is shrinking, ocean lines will simply divert vessels from the Atlantic to the Pacific. This will prevent strong congestion effects in the long run. However, sudden surges in demand will result in sharply rising prices.

¹¹ See Hummels and Skiba (2004) and Skiba (2004) for examples of these estimates.

¹² To be clear about units, starting from *ad valorem* shipping costs of 10 percent, this scale effect would reduce the *ad valorem* barrier to somewhere between 8.8 and 9.5 percent.



Latin America can gain. First, a densely traded route allows for effective use of hub-and-spoke shipping economies: small container vessels move quantities to a hub where containers are aggregated for longer hauls on much larger and faster container ships. Second, some goods require specialized vessels—for example, ships that move bulk commodities, petroleum products, refrigerated produce, or automobiles. Larger quantities justify the introduction of specialized ships along a route. Third, larger ships will be introduced on heavily traded routes, and these ships will enjoy substantial cost savings over the older, smaller models still in use.¹³

Finally, pro-competitive effects on pricing provide another potential source of benefits to scale. Many trade routes are serviced by a small number of companies organized in formal cartels known as “liner conferences.” If freight prices do include significant monopoly markups, increased trade quantities might well lead to entry of new firms into the market and more competitive pricing. Do liner conferences restrain competition and lead to higher shipping prices? Do they exercise undue market power, and are they necessary for transportation services? These questions have important policy implications. If the answers to the two questions are “yes” and “no,” respectively, international regulatory policy frameworks may be needed. Some (albeit not very robust) evidence suggests that liner conferences do exert important market power. On the other hand, it can be argued that they serve a necessary coordination function, so that shipping services would be less efficient without them.

¹³ One source of scale advantage is in crew costs, which are roughly independent of ship size.

Even if the total cargo moved along a route remains constant, freight costs can be strongly affected by unbalanced demand. Liner vessels move in endless circles, carrying cargo from China (and Asia) to the United States, and then back. If eastbound cargo holds are full and westbound holds are empty, the marginal cost to the shipper of adding westbound cargo is close to zero, while the marginal cost of adding eastbound cargo is extremely high. In essence, the eastbound cargo payments reflect both competition for scarce space and the cost of returning the nearly empty vessel.

Time Costs

Other than the costs, pronounced change has occurred in the quality of international transport over the past 30 years. Transportation time is the most notable change. Ocean shipments to the United States from Central America and the Caribbean require, on average, 6.4 days. Shipments from South America require, on average, 21 days, and those from China, 24 days. In contrast, air shipping from almost anywhere requires less than a day.

How valuable is timeliness in international trade, and what are its policy implications for Latin America in light of China's emergence as a competitor in global markets? Two recent empirical papers shed light on these questions. Evans and Harrigan (2003) show that timeliness in the apparel industry has a pronounced effect on sourcing patterns. This finding has important implications for Latin America—whether its proximity to the United States provides a sustainable, or even growing, comparative advantage over China. Using retail data on the “replenishment rate” for products (that is, how often retailers reorder from foreign suppliers within a season), Evans and Harrigan show that sourcing of apparel with high replenishment rates has grown much faster from Latin America than from China.¹⁴ In other words, temporal proximity to the U.S. market has provided a comparative advantage in goods requiring frequent reorders.

On the other hand, Hummels (2001) has estimated a demand for timeliness by examining the premium that shippers will pay for speedy air shipping rather than slow ocean shipping. He considers two main effects. First, for every day in ocean travel time, the probability of sourcing manufactured goods drops by 1 percent. Second, conditional on exporting manufactures, firms are willing to pay just under 1 percent of the value of the good per day to avoid the delays associated with ocean shipping. The effects are large because of the daily interest rate on goods in transit (otherwise known as “pipeline inventory”) and a “depreciation rate” that encompasses any reason why a more recently produced good might be preferred. Obvious examples

¹⁴ Evans and Harrigan (2003) show that clothing lines with high restocking rates during a buying season are more likely to be sourced locally than those in which orders are taken only once.

include perishable commodities such as fresh produce or cut flowers, which account for an important share of many Latin American countries' exports to the U.S. market. Depreciation also may reflect immediate need or lost profit if the good is not available on time. More generally, long lags between production ordering and final sales may create a mismatch between what consumers want and what firms have available to sell.¹⁵ Toys, apparel, and personalized computers are all produced in both China and Latin America. These are goods with unpredictable demand since firms can seldom establish far in advance the "ideal" or seasonal features that consumers may want.¹⁶ These lags can be rectified in two ways—by producing locally, or by producing at a distance and shipping by air.

In addition to costs associated with lengthy shipping, shippers may be concerned about variability in arrival times. This cost can be potentially serious if production is fragmented across locations. The absence of key components can idle an entire assembly plant. It may be necessary to increase the inventory on hand in order to accommodate variability in arrival time. The costs of defects in component quality are also magnified because sizable inventories may have to be built up before defects are detected. The potential for defects creates incentives for just-in-time inventory techniques, which minimize both the inventory on hand and that in the pipeline. To be sure, capacity to implement a just-in-time strategy may be limited if parts from the supplier are a month away by ocean transit.

Finally, shipping times are determined by the distance to be traveled *and* the scale of operations. This is particularly important in the case of Latin American trade with the United States (and elsewhere). Because trade volumes are still fairly small, ships do not travel directly from exporter to importer ports. Instead, a liner vessel typically travels more circuitously, stopping in up to a dozen other ports before reaching its U.S. destination. Table 4.4 shows some typical port-of-call itineraries for liner vessels between South and North America. Each route involves several country stops. In contrast, shipments are far more direct between China and the United States.

¹⁵ Consumers will pay a premium for goods with "ideal" characteristics, but firms cannot necessarily predict what is ideal far in advance. Firms able to wait longer to produce can better match the ideal and capture the corresponding premium.

¹⁶ Manufacturers generally do not know which among hundreds of competitors' toys will capture children's hearts during the holiday gift-giving season. The "ideal" types command a price premium over those that are not. As the holidays draw near, firms receive market signals (product reviews, early sales) and they adjust accordingly. Apparel is another example in which ideal characteristics cannot necessarily be discerned far in advance. Firms must produce and ship much closer to the sales dates, or restock in midseason. Personal computers are also extremely time sensitive. Standardized packages have little appeal to the many consumers who are willing to pay more for a computer manufactured to customized specifications in CPU, screen size, RAM, and so forth. Thus manufacturers tend to not build the computer until they know precisely what the consumer wants.

TABLE 4.4

Liner Vessel Itineraries (Examples)

Location	Date	Location	Date
Veracruz, Mexico	Thu., June 6	Buenos Aires, Argentina	Sun., June 9
Altamira, Mexico	Sat., June 8	Itajai, Brazil	Wed., June 12
Houston, United States	Sun., June 9	Santos, Brazil	Fri., June 14
New Orleans, United States	Tue., June 11	Rio de Janeiro, Brazil	Sun., June 16
Freeport, Bahamas	Tue., June 18	Puerto Cabello, Venezuela	Sun., June 23
Cartagena, Colombia	Sat., June 22	Veracruz, Mexico	Sat., June 29
Buenaventura, Colombia	Mon., June 24	Altamira, Mexico	Sun., June 30
Callao, Peru	Fri., June 28	Houston, United States	Tue., July 2
Arica, Chile	Mon., July 1	New Orleans, United States	Thu., July 4
Antofagasta, Chile	Tue., July 2		
Valparaiso, Chile	Wed., July 3		
Talcahuano, Chile	Mon., July 8		

Source: Hummels and Skiba (2004).

China's Trade Policy Regime

China's trade performance has also been influenced by profound changes in its trade policy regime. This section explores the evolution and current status of the country's trade policy framework, including its policies and institutions for promoting exports and competitive pricing, as well as the structure of its tariff regime.

Trade Liberalization

While China's gradual integration with global markets has been facilitated by strong economic growth, it is also an important factor behind the country's robust growth. Until recently, China was only loosely integrated into the world economy. High tariffs and a host of nontariff barriers (such as cumbersome technical standards) insulated critical sectors of the economy. Moreover, the state undercut foreign trade in many ways. The trading rights of a number of companies were limited. Burdensome inspection and safety licensing requirements were imposed on imports. Government procurement discriminated against foreign goods. High local content requirements were set for foreign and joint-venture firms producing in China. And key sectors of the economy—including distribution, telecommunications, and financial services—were mostly or fully closed to foreign direct investment.

East Asian export success in the 1980s has been largely attributed to export-oriented policy frameworks. Similarly, changes in trade policy have been critical to China's recent export boom. The most important policy regime changes were launched in 1978, when China allowed export-processing contracts (see Chapter 2). The impact of these changes can perhaps best be examined by distinguishing “offensive” policies

(export promotion and pro-competition activities) from “defensive” policies (traditional barriers such as tariff and nontariff measures) in the policy regime.

China has adopted a wide array of instruments and institutions geared toward export promotion, complementing its more-traditional liberalization strategies. Of these, exchange rate policy, duty drawback for exporters, sectoral policies, tax rebates and exemptions, and free trade zones have been particularly important in boosting exports (see Annexes II.1 and II.2). Latin America’s policy menu on export promotion has by and large been far less comprehensive (see country studies in the Appendix).

Moreover, instead of policies to open new markets, China has focused on domestic “behind-the-border” instruments for the promotion of exports. As shown in Figure 4.3, for example, China lags behind other Asian and Latin American countries in entering preferential trading arrangements (although this is likely to change in coming years). In 2001, China became a member of the Bangkok Agreement, which includes India and other South Asian countries. China is also a member of the Asia-Pacific Economic Cooperation forum (APEC), a looser integration scheme involving many regional actors and some of the world’s largest economies—the United States, Japan, Mexico, and Korea.

China has shown a growing interest in regional integration, particularly with Southeast Asia under the framework of the Association for Southeast Asian Nations. It has formed free trade agreements (FTAs) with Thailand, Hong Kong, and Macao. Negotiations have started or are about to start with Australia, Singapore, New Zealand, and ASEAN and, in China’s first transcontinental push for an FTA, with Chile.

What explains the rise of regionalism in China’s trade policy? First, China has become increasingly dependent on regional trade ties for sustained economic growth.



Pursuit of integration can be viewed as a strategy to solidify China's expanding regional production chains with East Asian economies. The Asian financial crisis of the late 1990s also created a sense of urgency in hedging against regional economic turbulence through formal cooperation.

Second, China's drive for free trade agreements represents a strategic response both to the ongoing proliferation of FTAs worldwide (with negative repercussions for those left on the sidelines) and to the slow progress being made multilaterally. Many analysts believe that not only is China seeking to avoid being omitted from the expanding web of FTAs, but it is also striving to establish itself as a continental FTA hub in Asia.

Finally, China's accession to the World Trade Organization has facilitated the regional track. Reforming its trade policy framework to meet WTO requirements has made China better equipped to adopt FTA disciplines and made it more attractive as a counterpart for potential partners. This, in turn, has ripple effects in the region. Close observers have noted the impact on Japan, which is moving toward regional integration agreements with diverse partners ranging from Mexico to the Philippines.

Since the 1990s China has energetically sought to boost its returns to trade through export promotion strategies and institutions. Annexes II.1 and II.2 summarize several of the main instruments and government institutions active at the national and local levels.

More-traditional steps have also been taken to liberalize trade. China has opened up its external sector dramatically through substantial dismantling of tariffs. As discussed in Chapter 2, China's unweighted average tariff plunged from over 50 percent in the early 1980s to around 25 percent in the mid-1990s. It halved again, to about 12 percent, in 2002. These levels are comparable to the tariff opening in Latin America during the same period. The WTO accession commitments, as outlined in Annex II.3, oblige China to cut its simple average tariff rate to 10 percent by 2005. China has made strides toward that goal, successfully lowering its simple average tariff rate from 12.3 percent in 2002 to 10.4 percent by January 2004. Figure 4.4 illustrates the evolution of China's sectoral tariffs from 1997 to 2001.

Figure 4.5 compares China's tariff profile with that of industrialized countries (the United States, EU members, and Japan) as well as with Mexico and Brazil. The data are for 2001, the last year for which consistent comparative data are available. The figure reveals that China's sectoral tariffs are still higher than the rates of the industrialized countries and that they are strikingly similar to those of many other emerging markets, including the largest Latin American economies, Brazil and Mexico. Indeed the Chinese reforms of the 1990s introduced several import tariff exemptions for processing trade and foreign investment. Thus, most Chinese imports were effectively free of tariffs by 2000 (Rumbaugh and Blancher, 2004).

What was the effect of tariff liberalization (and domestic price liberalization)? One indicator is that the domestic prices of most traded goods had largely converged with international prices by the mid-1990s (Rumbaugh and Blancher, 2004). Moreover, the pattern of intersectoral variation in the height of China's tariffs mirrors that of the

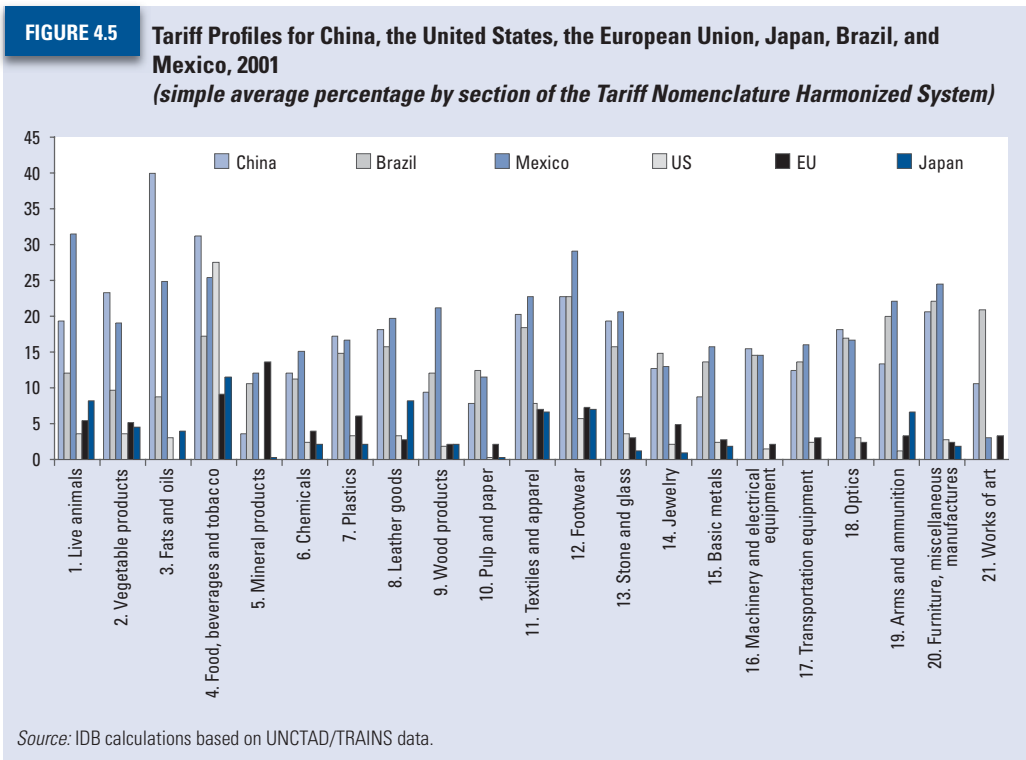
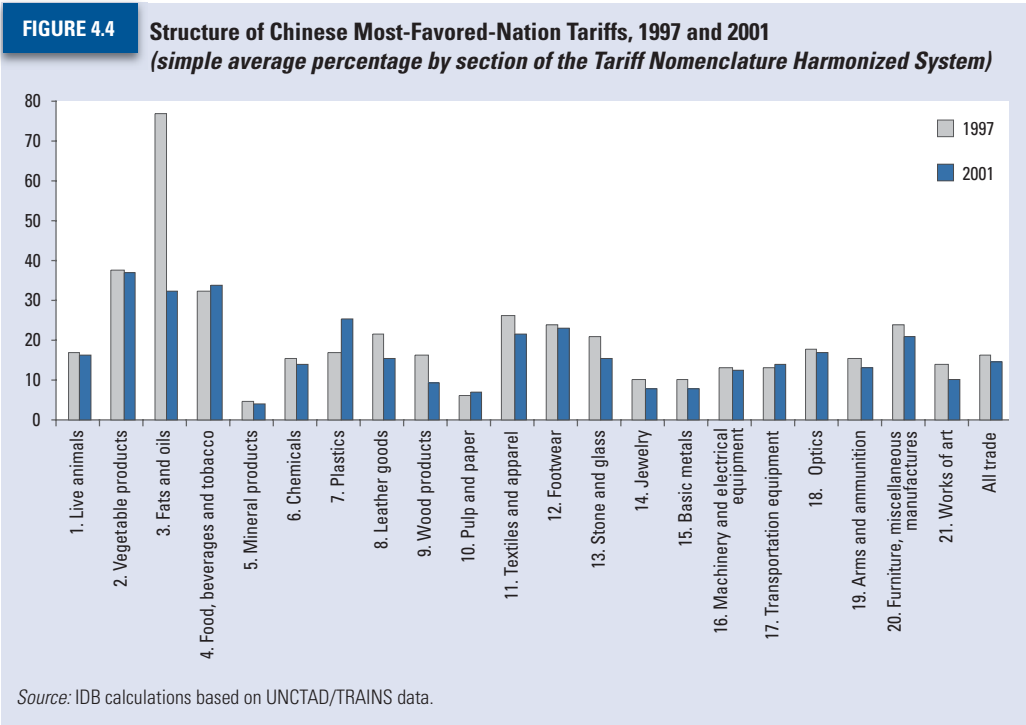
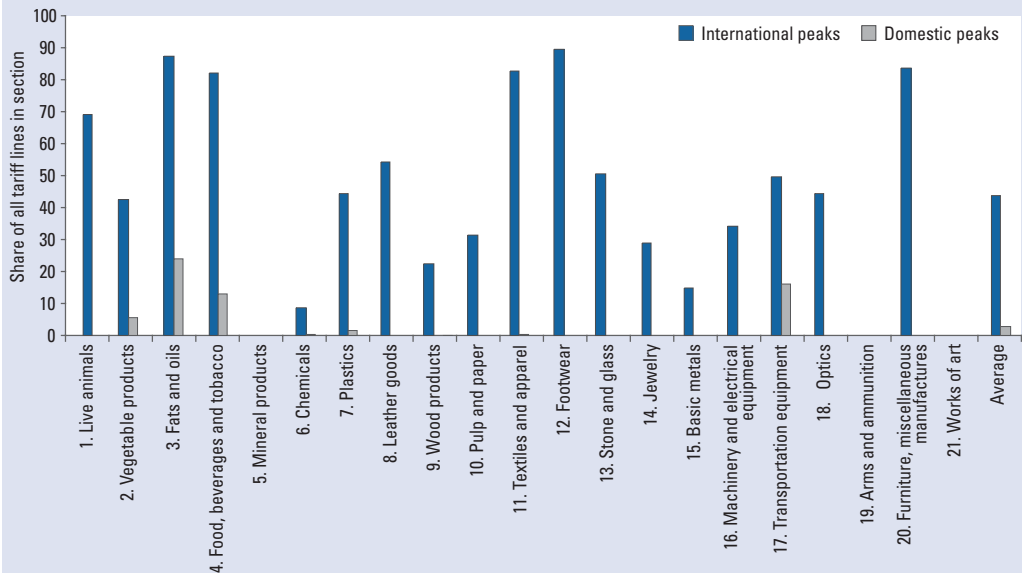


FIGURE 4.6**Sectoral Frequency of International and Domestic Tariff Peaks in China, 2001**

Source: IDB calculations based on UNCTAD/TRAINS data.

United States, the European Union, and Japan, with the highest tariff rates for agricultural and food products (sections 1–4 of the Harmonized System), textiles, and footwear.

Figure 4.6 shows the share of China's sectoral tariff lines in which the fee exceeds 15 percent (the international peak) and lines in which the rate is three times or more the applied simple average tariff (the domestic peak). Again, while China frequently uses peak tariffs, its profile resembles those of other emerging markets. China's domestic tariffs do include some that are particularly high on vegetable, food, beverages, and tobacco products. This, however, does not necessarily mean that China's tariff peaks are extraordinarily high. Rather, the applied rates simply happen to be three times higher than the applied simple tariff. Indeed China's highest average sectoral tariff peak is 122 percent. That is well below Mexico's highest rate of 260 percent, for example.

Tariffs are merely one trade policy instrument. Like most countries, China uses various nontariff measures such as quantity, finance, and price control measures. As noted previously, nontariff measures were commonplace in the 1980s and early 1990s. China has adopted nontariff measures alongside government policies to boost its "pillar" industries—machinery, electronics, petrochemicals, automobiles, and construction materials (USITC, 1999).¹⁷ Fewer nontariff measures are imposed in sectors

¹⁷ See USITC (1999) for a comprehensive list of China's nontariff measures in place in the late 1990s.

in which China has encouraged capital inflows, but such measures are used strategically in these key sectors to promote technology transfer and investment.

Rigorous quantitative and comparative accounting of China's nontariff measures is limited because the volume of actual trade (much less, potential trade) affected by these measures is difficult to establish. Also, no data (especially comparative data) are available for distortionary measures and some other measures. Research shows that the levels of nontariff measures before WTO accession were relatively unexceptional in international terms. A study conducted in 1998 calculated tariff equivalents for 25 key import products heavily affected by nontariff measures. The products included foods, beverages, chemicals, vehicles, televisions, and computers. The study found the level of overall protection to be lower than in Japan and the same as in Korea, albeit higher than in the United States.¹⁸ The research did not cover domestic nontariff measures—for example, rules hampering interprovincial trade. Such measures are significant in China and could push the level of protection above that of Korea or Japan. The United States International Trade Commission (USITC) has estimated that China's elimination of nontariff measures in 25 products (accounting for about 30 percent of China's imports) along with an across-the-board 50 percent tariff cut would double the economic gains the United States would realize if only tariffs were cut by China (USITC, 1999).

As with that for tariffs, China's policy framework for nontariff measures is changing significantly. Many nontariff measures are being eliminated in line with WTO accession commitments. For example, China must remove local content requirements, phase out its import quota system, make its licensing and registration regimes transparent, and apply international norms to its testing and standards administration.

China's Trade Policy Framework Today

China's trade policy regime has undergone substantial modifications during the past 15 years. Much of the country's current and future trade policy making, however, will be conditioned by WTO obligations. Annex II.3 provides an overview of accession commitments. For the foreseeable future, measures lowering the levels and dispersion of tariffs are likely to remain the most observable policies, along with continued reduction in nontariff barriers. China's trade policy regime will increasingly be based on tariffs alone, first because China is required to eliminate import quotas, licenses, designated trading practices, and other nontariff measures, and second because import quotas for some agricultural commodities will be replaced with tariff-rate quotas (TRQs).

China's commitment to the WTO accession protocol does not mean that its implementation has thus far been complete or uniform. However, by the second half of 2003, China had repealed or amended more than 3,000 laws inconsistent with the

¹⁸ See Shuguang, Yansheng, and Zhongxin (1998).

WTO, and it had issued a series of new laws and regulations to transpose the accession commitments into domestic law.¹⁹ Tariff cuts had also been implemented relatively smoothly, and laws consistent with WTO standards on antidumping and countervailing duties had been enacted.²⁰ The Ministry of Commerce (MOFCOM) had conducted a nationwide campaign to disseminate information in the provinces on WTO requirements, and it established an Inquiry and Notification Center to respond to businesses and the public on regulations affecting trade. For the first time in its history, China undertook publication of regulations—before their effective date—for public comment. As a result, the government has delayed and amended some regulations. Following WTO accession, China reportedly made progress in reforming its testing system, revising local content regulations, and improving overall regulatory transparency (for example, in import licensing).

Progress notwithstanding, many global trading partners—including the United States, the European Union, Canada, and Japan—continue to view China as lagging in its implementation commitments in agriculture, services, enforcement of intellectual property rights, and transparency (USTR, 2003b). Governments and exporters have complained about several restrictions, including food import quarantines, set-asides for agricultural imports intended for processors and reexporters, issuance of quotas in excessively small quantities, delays in quota allocation, problems with the application of sanitary and phytosanitary measures and inspection requirements, and a lack of transparency, particularly in China's approach to tariff-rate quotas and quota allocation for certain agricultural products.

Concerns have also been raised about government regulation of biotechnology products. The resulting uncertainty to overseas growers and shippers reportedly has disrupted trade in soybeans and corn. The United States, for example, has argued that since genetically modified soybeans are widely consumed in China, the regulatory restrictions on foreign imports are protectionist. U.S. industries have voiced unease about sanitary measures and high regulatory thresholds restricting entry into the in-

¹⁹ The following two paragraphs draw on Bader (2003), USTR (2003a, 2004), and WTO Council for Trade in Goods (2003).

²⁰ According to the U.S. General Accounting Office survey of 2004, U.S. company representatives viewed China as having taken at least some steps toward addressing areas of greatest importance to the surveyed companies—standards, certifications, registration, and testing requirements; customs procedures and inspection practices; intellectual property rights; tariffs, fees, and charges; and consistent application of laws, regulations, and practices. Overall, more than two-thirds of respondents thought that China's implementation of its WTO commitments had positively impacted their companies' ability to do business in China, and that their company activities (including the volume of production in China and their revenue stream) had increased since China's WTO accession. However, China was also viewed, on average, as having implemented most of the listed WTO commitments only to a small extent or to some extent. Moreover, respondents noted that changes in their business activities could not be directly attributed to China's WTO accession.

insurance and finance sectors (USTR, 2003a, 2003b). China's phytosanitary standards have also been deemed excessively high.

Concern has been raised that some Chinese trade barriers to manufactured goods are inconsistent with the WTO—for example, export quotas on fluorspar. Similarly, others are upset that China is planning a dual distribution network for domestically produced and imported automobiles. Another complaint is that China tests products in multiple certification bodies, which allows it to maintain unique Chinese standards inconsistent with international standards.

Certain Chinese tax policies have also caused disquiet—primarily a value-added tax widely viewed as favoring domestic production in sectors such as semiconductors and chemical fertilizers. Measures to “liberalize” trading rights for foreign enterprises have stirred similar unease since they are deemed to impose excessively stringent eligibility requirements in such areas as minimum registered capital, import and export levels, and prior experience. Arguably, such measures have restricted rather than expanded the number of foreign enterprises or foreign-invested enterprises eligible to acquire trading rights. Moreover, importers have complained that domestic officials neither understand the WTO commitments nor are prepared to relinquish control over their local economies.

How China and Latin America Compete in the Global Marketplace

What are the implications of China's export growth for other exporters? With which countries and where is China competing for market share? In terms of product coverage and markets, how does China's export expansion affect other developing countries' prospects for moving up the production value-chain? And specifically, how could Latin America benefit from China's increasing integration into the world trading system?

The previous chapter compared relative endowments across countries, revealing that China may be competing more directly with more-developed Latin American countries than its aggregate endowment measures might first suggest. How could the competitive pressure of China on Latin America be measured, and what are the new opportunities for Latin America in the growing Chinese domestic market? This chapter addresses these questions through detailed, product-specific analyses. The first section compares the international market penetration of China and Latin America. The second section presents a quantitative measurement of their product-level competition in the global marketplace, including closer looks at competition with Mexico's manufacturing sector.

Market Share and Product Penetration

This section looks side by side at China's and Latin America's share and penetration of the U.S. market, using other countries and regions for comparative benchmarks. Because of data constraints, the analysis assumes that U.S. trading partners' exports to the United States reflect their domestic production and their exports to other markets. This assumption is partially justified by the relative openness of the U.S. economy and its attractiveness as an export destination. The most important finding is the significant increase in the breadth and volume of China's manufacturing exports during the past 30 years, particularly in comparison to Latin America and other countries in Asia. That growth rivals any U.S. trading partner's. Among Latin American countries,

Mexico's pattern most resembles China's. Indeed, China and Mexico—with cumulative gains of 45 and 26 percentage points, respectively—lead the list of “gainers” in the U.S. market. They are also the main contributors to the growth of Asia's and Latin America's overall market shares in the United States.

Table 5.1a shows the overall import-value market share of five regions exporting to the United States. The table is broken down by industry and by decade from 1972 to 2001.¹ Note that the results for Asia include China. Aggregate market shares across all industries are reported in the final row. Table 5.1b shows similar data for China and four Latin American countries—Argentina, Brazil, Chile, and Mexico.

Exports from the developed economies of the Organisation for Economic Co-operation and Development dominated the U.S. market throughout this period, although the dominance decreased over time. From 73 percent of the value of U.S. imports in 1972, the OECD share has fallen to about 50 percent since the 1980s. Asia's market share has grown more quickly than Latin America's. At the beginning of the period, both regions accounted for about 10 percent of the U.S. market. However, Asia's share rose to 25 percent, while Latin America's share rose to about 17 percent—an increase only half the size of Asia's. Table 5.1b shows clearly that China and Mexico are the main drivers in their regions' respective growth in market share. China's share increased steadily—from virtually zero in 1972 to 9 percent in 2001, with the growth driven by large gains in miscellaneous manufacturing. Mexico's market share rose from 3 percent in 1972 to 12 percent in 2001, mainly as a result of large gains in machinery.

Further analysis of the data supports the notion of endowment-driven comparative advantages: land-abundant Latin America has relatively high market shares in resource-based products, linked to substantial export gains in beverages and materials. Labor-abundant Asia, in contrast, has relatively high market shares in manufacturing products (except for animal and vegetable oils, probably because of resource-abundant Malaysia and the Philippines), particularly manufactured materials and miscellaneous manufactures. In sum, Asia has, relative to Latin America, relatively high product penetration in manufacturing industries and relatively low product penetration in resource industries. China's largest growth in product market shares has also been in these two industries. (See Table 5.2 for product examples to assist in interpreting this discussion and other tables in this chapter.)

¹ The import-value market share of region r in year t and industry i is

$$MS_{ri}^t = \sum_{c \in r}^n \text{imports}_{ci}^t / \sum_c^n \text{imports}_{ci}^t,$$

where c indexes countries and $c \in r$ captures the set of countries in region r . Because the five regions summarized in the table do not capture all U.S. trading partners, market shares for each year do not add up to the total.

TABLE 5.1a

U.S. Import-Value Market Share by Region and Year, 1972–2001
(percent)

SITC1 industry	Africa				Asia				Caribbean				Latin America				OECD			
	1972	1981	1991	2001	1972	1981	1991	2001	1972	1981	1991	2001	1972	1981	1991	2001	1972	1981	1991	2001
0 Food	9	8	2	2	10	11	17	18	4	4	2	1	38	42	37	31	37	33	40	46
1 Beverage/ tobacco	0	1	2	1	1	3	2	2	1	2	1	3	3	8	11	20	92	85	81	72
2 Crude materials	4	7	5	3	9	13	10	10	3	3	2	1	11	13	15	16	70	63	68	68
3 Mineral fuels	8	21	19	14	3	7	3	2	16	7	3	2	25	17	26	25	36	19	27	37
4 Animal/ vegetable oils	6	2	1	1	60	69	31	29	0	0	0	0	15	11	12	5	19	17	56	64
5 Chemicals	1	1	0	1	2	4	8	8	5	1	2	1	6	6	5	5	85	85	82	80
6 Manufactured materials	3	5	3	2	10	14	19	23	0	0	0	0	5	7	9	12	79	70	65	54
7 Machinery	0	0	0	0	5	11	18	26	0	0	0	0	2	5	8	17	93	83	73	56
8 Miscellaneous manufacturing	0	2	0	1	30	47	53	48	1	1	2	2	4	7	8	15	63	41	34	31
All	3	9	3	2	10	14	22	25	3	3	1	1	3	10	12	17	73	53	59	51

Source: INT/ITD.

Note: SITC refers to the Standard International Trade Classification. Cells display the market share of each region's exports to the United States; Asia results include China.



U.S. Import-Value Market Share by Country, Industry, and Year, 1972–2001
(percent)

Source: INT/ITD.

TABLE 5.2

Sample of Products by Industry, Using the Standard International Trade Classification

SITC sector	SITC industry examples	SITC product examples	Number of products (1972/2001) with classifications
0 Food	Meat, dairy, fruit, vegetables, cereals, animal feeds	Milk, sausages, butter, dried fish, cheese, eggs, chocolate	703/1,898
1 Beverage/tobacco	Wines, cigarettes	Soft drinks, beer, wine, cigars	75/167
2 Crude materials	Hides, oil seeds, rubber, cork, wood, textile fibers	Silkworms, skins, fuel wood, jute, asbestos	646/812
3 Mineral fuels	Coal, coke, petroleum, gas	Gasoline, ethylene, petroleum jelly, electric current	49/98
4 Animal/vegetable oils	Lard, soybean oil	Olive oil, palm oil	58/77
5 Chemicals	Organic chemicals, dyes, medicines, fertilizer, plastics	Chloroform, sulfur compounds, cyclic hydrocarbons, tanning extracts, hormones	757/2,036
6 Manufactured materials	Leather, rubber, wood manufactures, iron and steel, manufactures of metal, textile yarn, paper, steel	Rubber tires, plywood sheets, paper and paperboard, cotton yarn, carpets, copper wire	2,862/4,426
7 Machinery	Power generators, computers, electrical machinery, transportation equipment, telecommunications apparatus	Printing machinery, refrigerators, air conditioners, radio and TV receivers, cars, ultrasonic scanners, liquid pumps	648/3,076
8 Miscellaneous manufacturing	Furniture, apparel, footwear, scientific equipment, toys	Overcoats, trousers, boys' shorts, sports footwear, microscopes, cameras, office and stationery supplies	1,869/3,704

Note: Products refer to 10-digit Harmonized System categories.

Table 5.3 shows U.S. manufacturing market shares in 1972 and 2001 for trading partners with the largest cumulative percentage-point increase over the period. China leads the list, followed by Mexico. The shaded numbers indicate the sector in each country that experienced the greatest market share gain—miscellaneous manufacturing for China, and machinery for Mexico.

Table 5.4a shows U.S. import product penetration by industry and region (including Latin America), while Table 5.4b reports by industry and country (including China). The numbers in each cell represent the share of products within the specified industry that are exported to the United States by at least one country from the specified region (Table 5.4a) or by the specified country (Table 5.4b). Import penetration equals 100 percent if the country exports every product category within the industry to the United States (refer to Table 5.2 for descriptions and number of products included in each industry by Standard International Trade Classification [SITC] com-

TABLE 5.3

U.S. Trading Partners with Largest Gains in Manufacturing Market Share, 1972–2001
(percentage points)

	1972 SITC industry				2001 SITC industry				Cumulative gain
	5 Chemicals	6 Manufactured materials	7 Machinery	8 Miscellaneous manufacturing	5 Chemicals	6 Manufactured materials	7 Machinery	8 Miscellaneous manufacturing	
China	0	0	0	0	3	9	7	26	45
Mexico	2	2	2	3	2	7	16	10	26
Ireland	1	0	0	0	17	0	0	1	17
Russia					2	3	0	0	5
Israel	1	1	0	1	1	5	1	1	5
India	0	2	0	0	1	3	0	2	4
Malaysia	0	1	0	0	0	0	4	1	4
Thailand	0	1	0	0	0	1	1	2	3
Korea	0	2	0	6	1	3	5	2	3
Indonesia	0	0	0	0	0	1	0	2	3

Source: INT/ITD.

Note: SITC refers to the Standard International Trade Classification. The table lists U.S. trading partners with the top 10 gains in manufacturing-import-value market share between 1972 and 2001. The final column reports total gain in market share (that is, the sum of columns 5–8 less the sum of columns 1–4). Shaded cells indicate the industry in each country that experienced the largest percentage-point gain.

TABLE 5.4a

Product Penetration by Country Groupings and Year, 1972–2001
(percent)

SITC1 industry	Africa				Asia				Caribbean				Latin America				OECD			
	1972	1981	1991	2001	1972	1981	1991	2001	1972	1981	1991	2001	1972	1981	1991	2001	1972	1981	1991	2001
0 Food	21	19	15	21	45	56	51	54	24	25	21	17	50	52	55	61	90	92	92	91
1 Beverage/ tobacco	27	23	19	28	40	47	44	39	24	40	31	35	44	68	58	62	80	87	87	84
2 Crude																				
materials	29	30	26	32	35	46	48	55	10	11	12	12	48	51	56	59	89	91	93	94
3 Mineral fuels	22	45	24	44	22	40	40	60	37	34	29	41	49	62	63	67	96	96	99	94
4 Animal/ vegetable																				
oils	16	17	17	21	34	35	38	51	5	6	9	9	28	44	42	58	79	92	89	96
5 Chemicals	7	9	9	15	17	38	53	78	7	6	6	9	22	33	43	49	98	99	99	98
6 Manufactured																				
materials	10	16	16	28	46	60	70	84	6	10	9	10	34	43	59	68	96	94	98	98
7 Machinery	12	18	16	27	56	74	78	88	13	17	12	17	51	60	65	73	100	99	100	99
8 Miscellaneous																				
manufacturing	14	21	23	39	73	87	88	91	16	31	27	30	45	56	59	70	98	97	95	96

Source: INT/ITD.

Note: Cells display the share of products in the industry that are exported to the United States by at least one country from the region. Asia results include China.

Product Penetration by Country, Industry, and Year, 1972–2001 (percent)																												
	China				Argentina				Brazil				Chile				Colombia				Costa Rica				Mexico			
SITC1	1972	1981	1991	2001	1972	1981	1991	2001	1972	1981	1991	2001	1972	1981	1991	2001	1972	1981	1991	2001	1972	1981	1991	2001				
industry																												
0 Food	15	31	25	33	13	9	11	13	16	14	12	15	5	8	18	18	10	7	12	13	9	10	13	11				
1 Beverage/ tobacco	3	19	15	14	19	14	20	16	21	37	20	20	7	5	13	13	16	14	10	11	7	8	4	2				
2 Crude																												
materials	7	17	24	36	12	10	8	12	17	18	23	24	4	8	11	15	7	5	7	11	2	5	6	7				
3 Mineral fuels	2	6	13	31	2	19	17	18	12	19	15	32	2	2	7	9	10	8	9	14	—	—	2	—				
4 Animal/ vegetable																												
oils	3	6	8	23	5	5	9	25	16	21	20	19	2	2	4	5	2	2	7	9	2	2	1	—				
5 Chemicals	4	19	28	62	6	5	6	9	8	14	16	20	1	2	2	5	3	2	4	6	0	1	2	3				
6 Manufactured																												
materials	7	23	37	63	6	6	13	12	14	21	30	32	1	3	7	7	9	7	11	12	1	2	4	4				
7 Machinery	1	16	47	72	12	11	12	14	21	36	36	41	3	3	4	6	4	5	6	9	1	4	5	11				
8 Miscellaneous																												
manufacturing	16	45	66	81	8	7	11	15	14	21	23	30	1	2	9	8	16	14	23	27	4	8	14	14				

Source: INT/ITD.

Note: Cells display the share of products in the industry that are exported to the United States by the denoted country. Shares are rounded to nearest integer. Dashes denote no exports in an industry.

modity category). These tables illustrate several points. First, OECD penetration in the United States was close to 100 percent in most industries in both benchmark years. Second, penetration by other regions also increased over time.² Third, in contrast with the Latin American pattern, Asia had relatively high product penetration in manufacturing industries and relatively low penetration in resource-based industries. Finally, China experienced particularly rapid product penetration in manufacturing, although some Latin American countries also made substantial gains.

The basic trends are confirmed by Table 5.5, which ranks countries by cumulative percentage-point gain in manufacturing product penetration between 1972 and 2001. China's gains are the largest of any trading partner, followed by Korea's and India's. China and Brazil experienced the largest gains in machinery, while Mexico gained most in manufactured materials.

Similarity in Export Baskets

To what extent are Latin America and China competing in world markets with similar export baskets? As a first step in answering that question, overlapping trade patterns were calculated using a traditional Finger and Kreinin (1979) export similarity index (ESI).³ The index ranges from 0 to 100. An index of 0 means that the countries' export structures are completely different, and a score of 100 means that they are exactly the same—that is, that the share of each good in the entire export basket is identical.

This section presents and discusses the findings from this analysis. The main conclusions are as follows. China's overall export overlap is greater with other Asian than with non-Asian economies. Miscellaneous manufacturing, particularly of apparel, mostly drives the export similarity with Latin America. China competes most directly with Mexico in Latin America, with the Dominican Republic in the Caribbean, and with Taiwan in Asia. China's export similarity with the OECD countries increased substantially during the period under study, reflecting the increasing sophistication of its export basket.

² These trends suggest that countries with very different relative endowments are increasingly exporting the same bundle of products to the United States. Declining specialization across products over time by countries with different relative endowments may be at odds with standard factor proportion results. Schott (2004) partially explains the apparent puzzle by showing that specialization occurs within rather than across products.

³ The ESI is defined as

$$ESI_{ij} = 100 * \sum c \min(X_{ci}, X_{cj}),$$

where X_{ci} (X_{cj}) represents the share of gross exports X of commodity c in total exports of country i (j).

TABLE 5.5

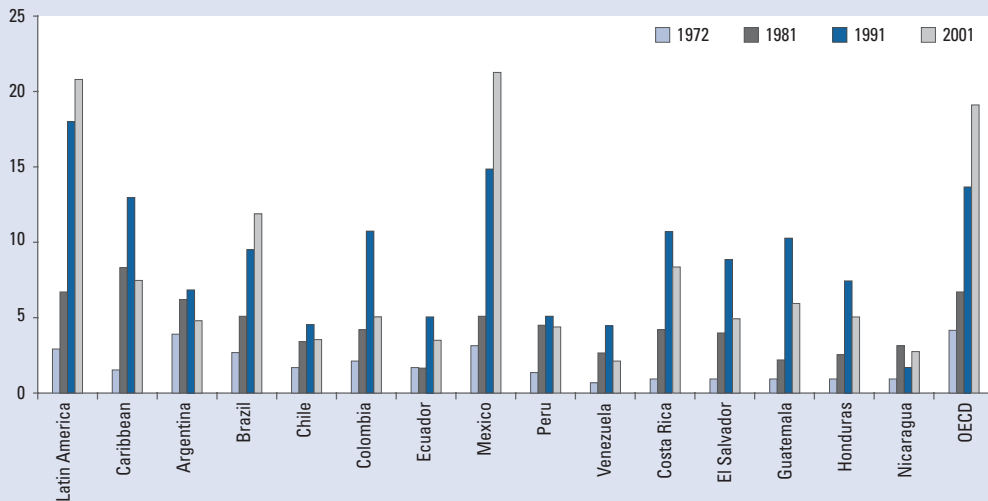
U.S. Trading Partners with Largest Gains in Manufacturing Product Penetration, 1972–2001 (percent)

	1972 SITC industry				2001 SITC industry				Cumulative gain
	5 Chemicals	6 Manufactured materials	7 Machinery	8 Miscellaneous manufacturing	5 Chemicals	6 Manufactured materials	7 Machinery	8 Miscellaneous manufacturing	
China	4	7	1	16	62	63	72	81	250
Korea	2	15	21	30	27	49	63	56	127
India	7	20	12	23	42	43	37	49	109
Mexico	13	22	41	33	37	55	65	58	106
Thailand	1	5	2	10	8	29	32	48	99
Taiwan	7	24	40	44	28	50	71	59	93
Indonesia	2	1	1	3	8	22	21	40	84
Malaysia	1	3	4	5	8	16	35	29	75
Brazil	8	14	21	14	20	32	41	30	66
Italy	26	45	71	65	40	70	75	80	58

Source: INT/ITD.

Note: The table lists U.S. trading partners with the top 10 gains in manufacturing product penetration between 1972 and 2001. Columns 1–8 report the percentages of each country's manufacturing products that were exported in 1972 and 2001, respectively, across SITC industries 5–8. The final column reports the total product penetration percentage-point gain (that is, the sum of columns 5–8 less the sum of columns 1–4). Shaded cells indicate the industry in each country that experienced the largest percentage-point gain.

FIGURE 5.1 U.S. Market Export Similarity Index between China and Selected Regions and Countries, 1972–2001



Source: INT/ITD.

Figure 5.1 shows ESI scores with respect to China for several Latin American countries and for comparator regions from 1972 to 2001.⁴ Table 5.6 shows China's similarity with the major geographic regions and the OECD. For the manufacturing sector, Table 5.7 shows China's similarity with the countries of Latin America

TABLE 5.6

Regional and OECD Export Similarity with China, 1972–2001

Region/group	1972	1981	1991	2001
Africa	3	2	6	4
Asia	11	25	50	60
Caribbean	1	8	13	7
Latin America	3	7	18	21
OECD	4	7	14	19

Source: INT/ITD.

and selected Asian countries. The first set of columns in Table 5.7 shows aggregate indices for all products subdivided into four benchmark years. The second set of columns shows the percentages of each ESI attributed to manufacturing as a whole for the same years. The remaining four sets of columns show the share of each ESI attributable to individual manufacturing industries.⁵

⁴ The averages are at the 10-digit level of disaggregation.

⁵ The second set of columns is the sum, by year, of the percentages in the final four sets of columns.

TABLE 5.7

Manufacturing Sector Contributions to Total Manufacturing Export Similarity with China, 1972–2001

Country/ economy	ESI for all products				Percentage due to all manufacturing				Percentage due to chemicals (SITC 5)				Percentage due to manufactured materials (SITC 6)				Percentage due to machinery and transport equipment (SITC 7)				Percentage due to miscellaneous manufactured articles (SITC 8)			
	1972	1981	1991	2001	1972	1981	1991	2001	1972	1981	1991	2001	1972	1981	1991	2001	1972	1981	1991	2001	1972	1981	1991	2001
Argentina	4	6	7	5	18	20	63	72	3	2	3	4	3	2	9	15	0	3	15	20	13	13	36	33
Bahamas	0	2	0	1	0	0	25	38	0	0	0	0	0	0	0	8	0	0	25	8	0	0	0	23
Barbados	1	1	3	3	60	71	64	57	0	0	0	0	0	0	4	10	10	0	12	23	50	71	48	23
Belize	1	2	3	2	0	60	55	47	0	5	0	0	0	5	3	0	0	0	0	7	0	50	52	40
Bolivia	3	4	3	4	92	57	47	84	0	9	3	0	84	37	13	8	0	0	3	5	8	11	28	70
Brazil	2	5	10	12	67	67	88	89	4	10	2	2	46	31	20	14	0	4	19	33	17	22	47	40
Chile	2	3	4	3	44	33	75	63	0	9	0	3	38	12	11	16	0	0	2	9	6	12	61	34
Colombia	2	4	11	5	65	73	58	72	0	0	0	2	40	17	6	14	0	0	1	4	25	56	51	52
Costa Rica	1	4	11	8	50	71	88	83	0	0	0	1	13	2	5	4	0	0	10	40	38	68	73	38
Dominican Republic	1	7	11	8	13	85	92	86	0	0	1	1	0	5	4	5	0	0	7	13	13	80	80	66
Ecuador	2	2	5	3	33	25	12	53	0	0	0	0	13	19	4	9	0	0	0	6	20	6	8	38
El Salvador	1	4	9	5	33	66	82	85	0	0	0	0	11	16	9	13	0	0	1	2	22	50	71	70
Guadeloupe	0	1	1	2	50	67	42	50	0	0	0	0	25	8	17	0	0	0	8	35	25	58	17	15
Guatemala	1	2	10	6	33	30	83	83	22	5	0	2	0	5	4	7	0	0	0	2	11	20	79	73
Guyana	0	3	3	2	0	14	32	45	0	0	0	0	0	0	0	5	0	0	4	5	0	14	28	36
Haiti	2	9	11	4	80	93	93	81	0	1	1	0	25	7	13	26	0	0	5	5	55	85	75	51
Honduras	1	2	7	5	0	63	79	88	0	4	0	0	0	4	4	6	0	0	0	8	0	54	75	73
Jamaica	1	3	7	2	29	68	87	42	0	8	0	0	0	0	1	0	0	0	3	4	29	60	82	38

(continued on next page)

TABLE 5.7 (Continued)

Manufacturing Sector Contributions to Total Manufacturing Export Similarity with China, 1972–2001

Country/ economy	ESI for all products				Percentage due to all manufacturing				Percentage due to chemicals (SITC 5)				Percentage due to manufactured materials (SITC 6)				Percentage due to machinery and transport equipment (SITC 7)				Percentage due to miscellaneous manufactured articles (SITC 8)			
	1972	1981	1991	2001	1972	1981	1991	2001	1972	1981	1991	2001	1972	1981	1991	2001	1972	1981	1991	2001	1972	1981	1991	2001
Mexico	3	5	15	21	63	61	70	93	0	2	1	1	20	12	9	9	3	4	30	58	40	43	31	24
Nicaragua	1	3	2	3	29	55	41	63	0	0	0	0	14	0	6	0	0	0	0	0	14	55	35	63
Panama	1	4	6	5	22	22	71	71	0	0	0	2	0	3	2	2	0	0	10	17	22	19	59	50
Paraguay	1	1	3	2	33	80	81	71	0	50	4	0	8	20	0	5	0	0	0	24	25	10	77	43
Peru	1	4	5	4	36	42	58	73	0	0	0	2	18	30	12	17	0	0	2	5	18	12	44	49
St. Kitts	0	2	6	5	33	79	85	77	0	5	0	0	33	11	5	10	0	0	15	37	0	63	64	31
Suriname	1	2	1	1	20	0	13	33	0	0	0	0	20	0	0	0	0	0	0	33	0	0	13	0
Trinidad and Tobago	1	9	4	1	22	1	11	33	0	0	0	0	0	0	0	8	0	0	3	8	22	1	8	17
Uruguay	4	3	5	3	33	81	90	81	23	3	0	3	3	9	6	6	0	0	4	16	8	69	81	56
Venezuela	1	3	4	2	20	0	19	61	0	0	0	6	0	0	7	17	0	0	5	28	20	0	7	11
India	7	17	14	17	64	62	88	91	0	2	3	4	52	31	22	23	0	2	5	15	12	27	58	49
Indonesia	5	3	25	27	57	73	83	96	6	0	0	1	39	50	7	10	0	0	7	31	13	23	68	54
Korea	4	16	28	23	76	94	97	95	0	1	0	1	15	19	8	9	2	3	20	57	59	71	70	28
Hong Kong	7	21	33	28	90	94	96	95	1	0	1	1	34	10	7	9	1	3	18	31	53	80	69	54
Malaysia	4	5	22	24	73	82	88	94	0	0	0	0	62	31	6	3	3	4	38	71	8	47	44	20
Singapore	3	11	13	15	80	66	91	91	0	1	0	1	24	9	2	1	4	5	53	77	52	51	36	13
Thailand	7	13	25	29	81	80	91	93	0	0	0	0	58	25	9	11	0	0	17	43	23	55	64	40
Taiwan	7	16	34	31	74	91	96	95	6	1	1	1	22	16	12	13	3	6	23	49	43	69	61	33
Vietnam	9	1	—	8	6	63	—	79	0	0	—	0	3	0	—	9	0	0	—	1	2	63	—	68

Source: INT/ITD.

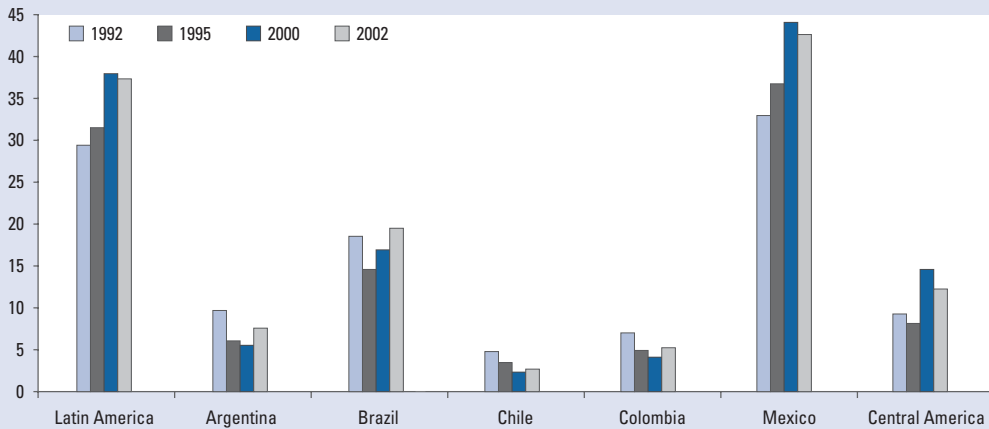
The data reveal significant variation across countries. As shown in Figure 5.1, Chile's export structure barely coincides with China's, while more than a fifth of the structure of Mexico's export basket approximated China's in 2001. Overall, China was more similar to Mexico in regard to export structure than to any other non-Asian developing country in that year. Most China-Mexico export similarity was in machinery products, accounting for 58 percent of the index, followed by miscellaneous manufacturing, which accounted for another 24 percent. The rates for Brazil and Costa Rica have also risen since the 1970s and 1980s, though much less so than for Mexico. The average for Latin America as a whole is relatively pronounced. Having grown during the past decade, it is now well above the corresponding figure for the OECD.

As shown in Table 5.7, China's overlap with other Asian economies is relatively high. Within manufacturing product categories, moreover, China's export prices (measured in unit values) are generally lower than the prices received by other developing economies in Latin America and Asia. The premium received by those countries over China is highest in machinery and lowest in apparel. One explanation for this differential is that products from those regions offer higher quality or have more attributes than products from China, thereby raising their value. This would be consistent with differences in comparative advantage—that is, countries with relatively abundant human and physical capital can improve quality or add product features. An alternative explanation is that the difference in prices reflects greater product efficiency in China—that is, the result of very low labor costs. This explanation is also consistent with China's explosive export growth. More to the point, it raises questions on the share of the manufacturing market that Latin America and other Asian countries will be able to retain as China's capacity and access to foreign markets increases.

The increasing similarity between the Chinese and Latin American export baskets is not unlike the increasing similarity between those of East Asia (China excluded) and Latin America. Figure 5.2 shows the ESI values with respect to East Asia for selected Latin American countries and Central America. The similarity of exports (particularly with Brazil and Mexico) was relatively pronounced in the early 1990s. This similarity has increased, particularly for Mexico and Latin America as a whole.⁶

What are the prospects for Latin American countries whose export structures most resemble China's? China has significant comparative advantages in the product categories (textiles, apparel, and electronics) that are crucial to Mexico and Central America. The latter specialize in labor-intensive segments of the production chain, where China has an important edge. The current and relatively high overlap in miscellaneous manufacturing is noteworthy and can be expected to widen given the expiration of multilateral textiles and apparel quotas in January 2005. This is explored more fully in Chapter 7.

⁶ Note that Figures 5.1 and 5.2 are not immediately comparable because different levels of data aggregation were used in computing the indices.

FIGURE 5.2**Export Similarity between Selected Latin American Countries and East Asia in the U.S. Market, 1992–2002**
(percent)

Source: IDB-INT calculations based on UN/Comtrade data.

As China and Latin America—and Mexico, in particular—have converged toward increasingly similar export baskets, especially in manufacturing industries, direct competition has intensified. The challenge to Latin American manufacturers may well intensify given the relentless expansion of China’s international production and its export base. As mentioned above, the global textiles and apparel sector is changing in ways likely to benefit Chinese exports relative to Mexican and Central American producers. With the Multifiber Agreement quotas on textiles and apparel phased out as of January 2005, Chinese garment exports could rise to nearly half the world’s total (Ianchovichina and Martin, 2001).⁷ Beyond China’s dominance in low-skilled manufactures, its leap into production for export of higher-value-added manufactured goods will raise the bar for Latin American countries trying to enter and compete in the same venues of the global marketplace. The considerable challenge confronting Latin America is explored in Box 5.1, which looks in greater detail at trade competition between China and Mexico.

⁷ Indeed, China is expected to be the “supplier of choice” for most U.S. apparel companies and retailers (USITC, 2004). China’s share may rise further in 2008, when transitory U.S. restrictions on Chinese textiles and apparel imports will probably be significantly reduced. Of course, safeguards by the United States and greater domestic demand in China for textiles and apparel might moderate the export growth (for fuller discussion, see Chapter 7).

BOX 5.1**A Closer Look at Trade Competition between China and Mexico**

In the mid-1980s, Mexico embarked on a process of swift trade liberalization. Reform opened export markets abroad and raised manufacturing productivity. Yet this performance has been uneven across industries and firms within the manufacturing sector, and regional disparities persisted or deepened. In addition, a slowing of the U.S. economy and China's emergence as a global manufacturing power have created widespread public unease that Mexico has been shortchanged by liberalization and is caught in a tightening vise. On the one hand integration into the U.S. economy is perceived as having failed to catalyze and sustain improved growth and welfare, while on the other, manufactured goods from China and other countries are eating into Mexico's market share. Questions abound. Is Chinese competition really to blame for the maladies affecting Mexican manufacturing? Should Mexico reconsider its economic opening? Or should Mexico examine its experience more deeply for answers to its dilemmas?

What are the facts? First, although average protection has dropped substantially since the early 1990s, trade liberalization in the manufacturing sector has been uneven. Low-wage, labor-intensive industries are still protected by high tariffs. In addition, countervailing and compensating duties have been actively used against imports of manufactured goods, particularly from China. As a result, tariff policy is now biased in favor of low-wage industries in which, presumably, Mexico does not have a comparative advantage internationally. This bias ironically has been intensified by elimination of U.S. tariffs on Mexican imports under NAFTA, which seemed to promise a windfall. As the United States opened its low-wage industries to competition within the treaty, it created an exceedingly large preferential margin for Mexican exports to the United States in labor-intensive sectors.

Economic theory suggests that Mexico's protective tariffs and its preferential entry into the U.S. market would jointly favor low-wage industries to the detriment of production in more-sophisticated sectors. According to the latest theoretical and empirical literature, trade liberalization promotes productivity growth as resources are reallocated from the least to the most efficient producers. Thus, protection of low-wage industries would have hindered productivity growth.

Has Mexico's skewed tariff policy conformed to these predictions? When the pieces are put together, the answer appears to be yes. First, manufacturing employment in the bottom half of the sector (ranked by hourly wages) rose from 51 percent in 1988 to 62 percent in 1998. In export assembly, or the maquiladora sector, employment in apparel production increased by almost 250,000 jobs between 1990 and 2000, rising from 10 percent of total maquiladora employment to 23 percent.

Meanwhile Mexico's exports to the United States gradually shifted from low- toward higher-wage industries after the mid-1990s, but China's did so too, and even faster. This suggests that Mexico and China are increasingly competing in the U.S. export market—especially in intermediate-wage industries, where Mexico should enjoy a comparative advantage. A detailed look at the data on exports to the United States confirms expectations. Until 2000, Mexico tended to gain and China tended to lose in lower-wage industries for which Mexico enjoyed relatively high preferences. In contrast, China generally gained and Mexico lost in higher-wage, technologically advanced industries in which Mexican goods were less protected.

Analysis of how import competition affects plant-level employment provides a third piece to the puzzle. Mexican trade policy seems to have kept resources from moving from low-wage industries toward those in which Mexico has a comparative advantage in world markets, namely, toward more-efficient producers. The analysis was based on a panel of manufacturing plants covering the 1993–2000 period. It indicates that import competition has adversely affected employment among “least-efficient producers” and “industries paying lower wages.”

(continued on next page)

BOX 5.1 (Continued)

Moreover, in considering these two characteristics together, the analysis found that least-efficient producers in low-wage industries were most sensitive to import competition. Coincidentally but not surprisingly, plant-level employment and total factor productivity were found to rise together.

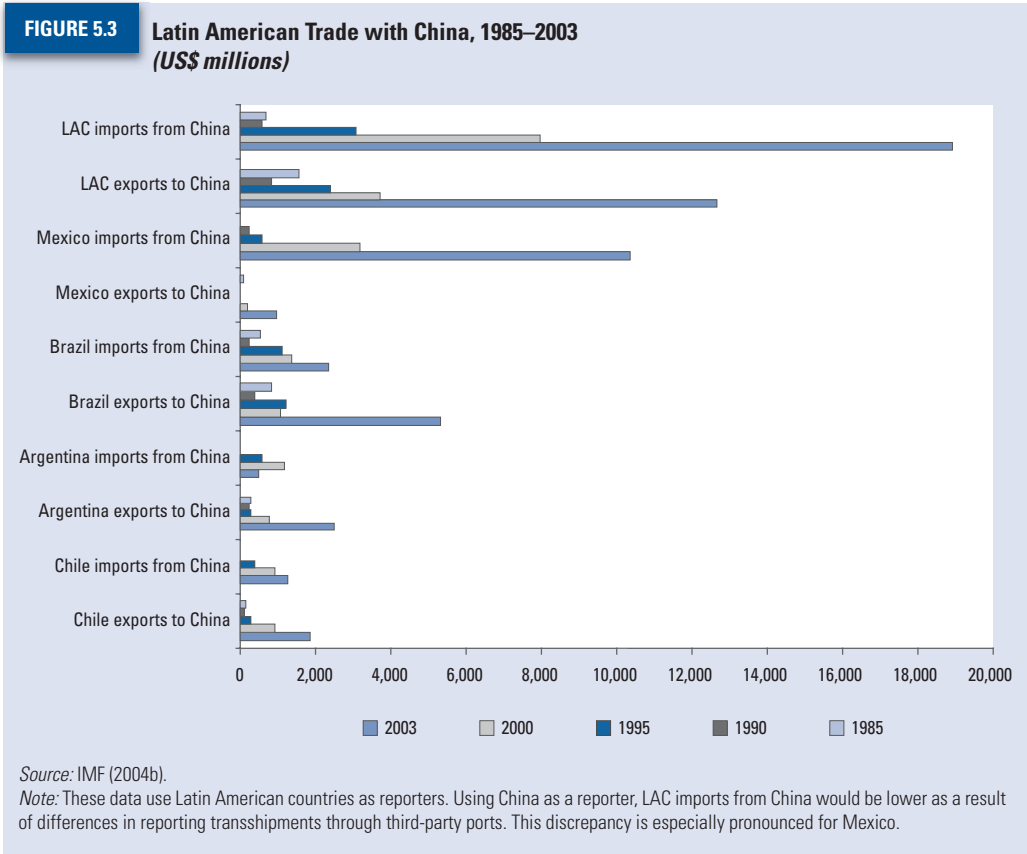
What lessons can be drawn from Mexico's performance in the manufacturing sector? First, preferential trade agreements with the United States and other developed countries offer an important opportunity to expand exports, to allocate resources to sectors in which developing countries have a comparative advantage, and to raise productivity at the level of the firm and the overall economy. Second, preferential trade may also have an unintended consequence—creating distortions that favor industries in which the country otherwise lacks comparative advantage, as in the case of Mexican apparel production. Rapid and immediate employment growth in those industries can make it seem as though trade liberalization is working in the short run but disguise how productivity growth and the efficient allocation of resources are being impeded in the long run. Third, the effects of the distortion are aggravated if countries maintain or increase trade protection in industries with a comparative disadvantage. Latin America has typically imposed high tariffs on imports of labor-intensive goods, an area where China has a comparative advantage. Yet as the Mexican experience shows, the main beneficiaries of protectionism tend to be the least-efficient producers in industries paying low wages. Finally, raising plant productivity translates into employment growth.

These lessons suggest that countries should reconsider using trade policy to protect jobs; instead they should self-critically assess the factors that undermine productivity growth. Mexico and Latin America lag behind other developing countries, including China, in many respects, including provision of a healthy business climate, a vision for developing a knowledge economy, and high-quality information and telecommunications infrastructures. Factors such as these are crucial for attracting and sustaining high-productivity industries. China's emergence as a manufacturing powerhouse calls out for Latin America to raise its consciousness about reforms needed in these areas, not for greater protectionism.

Growing Bilateral Trade Linkages between Latin America and China

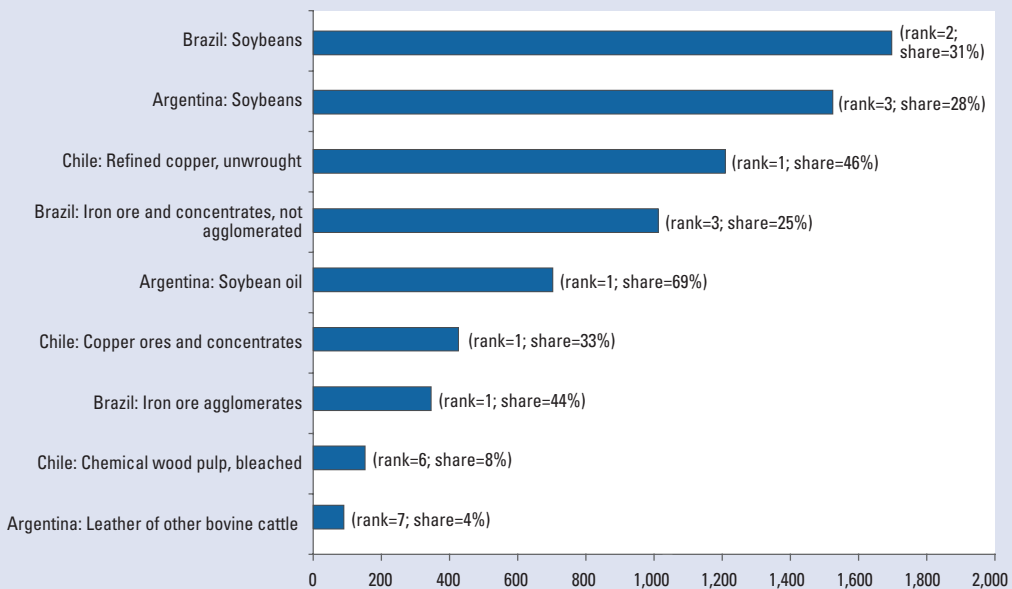
Figure 5.3 shows that Latin America has been converted, during the past two decades, from a net exporter to China to a net importer. Although trade between the two is growing, China remains a relatively modest player in the region's total exports and imports.

Bilateral trade relations have not been frictionless. In the 1990s, Latin America generally addressed the challenge to domestic production with defensive measures to wall out Chinese imports. Today, however, such policies are complemented and perhaps overridden by efforts at closer economic ties to benefit from ever-growing Chinese demand. These efforts are partly inspired by the promise of long-term consistency and transparency in China's trade policy framework. They have already borne some fruit since some Latin American countries have become increasingly important suppliers



to the Chinese market. As shown in Figure 5.4, Latin American exports to China still consist largely of raw materials and commodities. Yet China could potentially absorb a greater range of goods, from agro-industrial to new manufacturing products. With incomes and consumption rising, China’s consumers and industries are likely to demand more imports to meet domestic demand in general and more sophisticated and varied products in particular. Hence bilateral trade could become marked by greater intra-industry commerce.

China and Latin America share several broad interests in the multilateral trading system, and collaboration there can spill over into improved bilateral relations. That prospect was perhaps best reflected by formation of the Group of 20 (G-20) at the Cancún ministerial meeting of the Doha Round in October 2003. The group—China, Mexico, Brazil, and other developing countries—successfully pressured the European Union and the United States to alter a joint proposal on agricultural negotiations in the Doha Round, eventually leading to the failure to reach an agreement in Cancún. However, a similar dynamic in July 2004 allowed the Doha negotiating agenda to be relaunched, with a broad commitment to advancing agricultural liberalization. Box 5.2 examines Brazilian-Chinese relations in agriculture in greater detail.

FIGURE 5.4**Top Three Products Exported to China by Argentina, Brazil, and Chile in 2003
(US\$ millions)**

Source: IDB-INT calculations based on UN/Comtrade data.

Note: Products are ranked in descending order by export value. Rank = rank of exporter in Chinese market; share = exporter's market share.

Chinese interests are somewhat limited in agriculture. Perhaps more importantly, Latin America and China share an interest in the *demandeur* agenda of developed economies, including issues such as investment rules, intellectual property, government procurement, services, and environmental and labor standards.

How can Latin America gain ground in the demand niches of the Chinese market and convert the trade balance back to surplus? Much like China, Latin American countries have sought more effective export promotion policies and pro-competitive institutions. They are seeking to boost their overall competitiveness in global commerce. Beyond these general efforts, Latin American countries have started targeting the Chinese market itself. During the talks on conditions for China's WTO accession, they issued numerous detailed requests for sectoral changes in the Chinese trade policy framework. Recently, they have also expanded their "offensive" outreach toward China. High-level trade missions have been central to this campaign. In May 2004, for example, a major trade mission, headed by Brazil's president, Luiz Inácio Lula da Silva, paved the way for more Brazilian exports of finished products such as furniture, cosmetics, precious gems, software, and medical equipment. The effort included a Brazilian trade fair by the Brazil-China Chamber of Commerce in Shanghai. Brazil opened a trade promotion office in Shanghai, making China only the second country

BOX 5.2**Brazil-China Relations in Agriculture**

Brazil and China are both key players in world agriculture. Both are among the world's top five producers and exporters of agricultural products, and each has a significant portion of its population working in agriculture. However, Brazilian and Chinese agriculture are profoundly different in four significant aspects. First, the Brazilian agricultural sector is one of the most liberal in the world; the Chinese sector remains strongly subject to state intervention, despite recent liberalizing reforms. Second, the agricultural sector accounts for a very significant portion of Brazil's total exports, while accounting for a nearly negligible share of total Chinese foreign sales. Third, Brazil is a net exporter of agricultural products; China is now a net importer. Finally, Brazil is the world's leading country in terms of potential to expand cultivation; China has little uncultivated arable land available and is severely pressured by urbanization and the needs of other productive sectors.

Because their agricultural profiles are potentially complementary, Brazil and China have an opportunity to build a partnership by strengthening bilateral trade and investment. Already, China is Brazil's second-most-important destination for agricultural exports, and Brazil is China's third-most-important supplier of agricultural products (second in 2002). The two countries are currently considering potential Chinese investments in Brazil's infrastructure network for trade. Furthermore, both of these developing countries share a common interest in dismantling protectionist trade measures in the developed world. Although collaboration in the G-20 at the WTO Doha Round in 2003 reflects convergence at the multilateral level, important issues must be resolved if the two regional powers are to fully realize their potential for bilateral trade in agriculture.

Brazil exported \$1.7 billion f.o.b. in agricultural products¹ to mainland China in 2003, accounting for 8.1 percent of Brazil's total agricultural exports and putting China in second place only behind the European Union (39.2 percent) as Brazil's most important foreign market. Agricultural exports to China grew 57.5 percent annually in 2000–2003, accounting for 37.5 percent of total exports to China in 2003 (the remainder was mainly iron ore and its derivatives, and wood). If trade with the special administrative regions of Hong Kong and Macao is also included, Brazilian agricultural exports to China reached \$2.0 billion f.o.b. in 2003—that is to say, nearly 10 percent of total Brazilian agricultural exports.

About 13.2 percent of mainland China's agricultural imports originated in Brazil in 2003. Brazil was behind the United States and Argentina as the largest supplier of agricultural products to China in 2003, and behind only the United States in 2002. Chinese agricultural imports from Brazil are highly concentrated. One single tariff line—soybeans, excluding seeds (Harmonized System 1201.00.91)—accounted for nearly 80 percent of all Chinese agricultural imports in 2003. The soybean agro-industrial chain (which also includes soybean oil and soy meal) represented more than 93 percent of all agricultural imports from Brazil.

The central role of soybeans in Brazilian-Chinese trade spotlights four important facts. First, the soybean subsector is among the most liberalized in China. Unlike cereals, soybeans are not subject to self-sufficiency requirements linked to food security. Not surprisingly, soybeans are the single most important agricultural product imported by China (accounting for nearly 33 percent of all agricultural imports in 2003). Second, China used sanitary and phytosanitary measures to block soybean imports when international prices were unfavorable. In 2004, a zero-tolerance policy was instituted on the presence of fungicides in soy seeds, and imports from Brazil were suspended. Beijing was accused of imposing unnecessary restrictions and failing to meet its WTO obligations. Third, Brazilian exports of soybean oil to China decreased significantly while soybean exports soared. This stemmed from China's developing a crushing industry and the imposition of a tariff-rate quota on soybean oil as an element of China's WTO accession package (the tariff-rate quota is to be removed by 2006). Finally, the dominant role of the soybean agro-industrial chain in Brazil's exports underscores the lack of penetration by other Brazilian agricultural products in the Chinese market.

(continued on next page)

BOX 5.2 (Continued)

Although China was the world's second-largest importer of sugar in 2003, sales from Brazil were only about 2,000 tons. This represented only a quarter of 1 percent of China's total sugar imports (775,000 tons in 2003). Importation of sugar into Chinese territory is subject to both a tariff-rate quota and state trading. The fill rates for the quotas were 1.8 million tons (67 percent) in 2002 and 1.9 million tons (40 percent) in 2003, respectively. Despite being the world's largest producer and exporter of sugar, Brazil has failed to capture a notable share of China's imports. Nearly half of China's imports of raw cane sugar currently come from Cuba, while over 80 percent of its refined sugar imports come from the Republic of Korea.

Brazilian meat exports to China are hindered by the lack of transparency. Internal Chinese regulations significantly limit Brazilian exporters' maneuvering room. Hong Kong has become an important hub port for Brazilian poultry. Observers believe that the bulk of the poultry meat that enters Hong Kong is destined for mainland China. In 2003, Hong Kong was the world's single most important importer of Brazilian frozen chicken cuts and offal (measured in volume). More than 200,000 tons of Brazilian poultry meat entered Hong Kong in 2003, dwarfing the 11,000 tons that were sent directly to the mainland. Nontransparent regulations also depress Brazilian exports of pork and beef. Exporters have consistently criticized the process for obtaining import licenses. Burdensome certification and inspection requirements reportedly are used to control the pace of entry.

Notwithstanding the difficulties faced by some Brazilian exporters, China's rising income, its growing urbanization, and its significant changes in consumption patterns offer many export opportunities. The urban middle class increasingly demands less grain and more meats, milk, oils, and processed foods—and Brazil could well benefit from increased Chinese imports of these products. The prospects for cotton growers also seem encouraging. Although China is the world's leading cotton producer, its domestic production is insufficient to supply the country's rising textiles and apparel industries. The phase-out of the WTO Agreement on Textiles and Clothing (ATC) should further boost Chinese demand. Brazil's emerging cotton production could play an important role in supplying China. However, while the United States accounts for almost 60 percent of China's current cotton imports, Brazil's market share is under 1 percent.

In agricultural trade with Brazil, China is usually the importer. For a select list of products, however, China plays an important role as exporter. Chinese agricultural exports to Brazil totaled \$27.7 million in 2003, only 1.4 percent of the total value of Brazilian exports to China. Garlic is the single most important product, representing 40 percent of all Chinese agricultural sales. Since the mid-1990s, Chinese garlic exports have been subject to antidumping duties in Brazil. Other important products include animal feed preparations, pig bristles, and dried vegetables. No other tariff line accounted for more than \$1 million in exports to Brazil in 2003. Like South America generally, Brazil represents a major destination for China's agricultural exports; however, more than 98 percent of China's exports to Brazil in 2003 were nonagricultural.

Brazil and China found common ground for cooperation in WTO Doha Round talks on agriculture. Along with India, South Africa, Thailand, and Argentina, a coalition of emerging markets was formed to offset the joint position of the European Union and the United States. The G-20 aims to dismantle agricultural subsidies in the developing world. China, however, holds a unique position within the group—as a country that recently acceded to the WTO, it wants to shield itself from making further concessions in the current round of negotiations. Beijing believes that China has made great efforts at liberalization since its accession to the WTO and that additional requirements would be excessive. Chinese consumers also benefit from imports of subsidized grains and cotton from the developed world. So China might be less interested than Brazil in disciplining subsidies.

¹ This study uses the definition of agricultural product contained in Annex 1 of the Uruguay Round Agreement on Agriculture (URAA).

after the United States to have more than one Brazilian trade promotion office. For its part, Argentina undertook five trade missions to China between 2000 and 2004. In June 2004, Argentine President Néstor Kirchner visited China to advance bilateral trade ties.

Export Promotion Policies in China

Measure	Dates in effect	Public or private?	Description
Pro-export exchange rate policy	January 1994–present	Public; central government	Effective January 1, 1994, China unified the foreign exchange market and pegged its currency near the former free market rate. China thus abandoned the two-tier exchange system and network of exchange retention quotas that had been in place since the mid-1980s. Before 1994, steady expansion of the market tier had led to de facto devaluation of a currency that, previously, was seriously overvalued. After 1994, China theoretically adopted a managed float at around RMB 8.3 per dollar, but fluctuations have been tiny, and the RMB-dollar exchange rate has appreciated by only 4.8 percent nominally since 1994.
Derogation of VAT on exporters	Current system: January 1994–present	Public; central and local governments	<p>Partial derogation of the value-added tax on exporters began in 1985. Comprehensive fiscal reform in 1994 set the VAT rate for most products at 17 percent, of which 14 percent (14 percentage points out of the 17) was rebated to exporters. Rebate rates were subsequently raised and lowered several times. In 1996, rebate rates were cut (to 3 percent, 5 percent, and 9 percent according to sector), but they were raised again at the onset of the Asian financial crisis in 1997. By July 1999, the rebate rates for textiles, machinery and electronics, transportation, and mechanical products had reached 17 percent, with other products enjoying rebate rates of 15 percent and 13 percent. VAT rebate rates were lowered at the end of 2003 (as an alternative to currency appreciation). The magnitude varied by item, with the incidence of rebates being altered to favor agricultural products where possible. The average rebate rate was reduced by an estimated 3 percent.</p> <p>Between 1994 and 2003, VAT rebates were the sole responsibility of the central government. The actual impact of VAT rebates was blunted by persistent arrears in government payments. At the end of 2002, the central government owed exporters RMB 247.7 billion (\$29.9 billion) in unpaid rebates. Beginning on January 1, 2004, rebates were shared between the central and local governments, with the central government providing 75 percent and the local government 25 percent. Given the substantial role that local governments play in trade promotion in China, the new policy reduces the actual incentive to export.</p>

(continued on next page)

Measure	Dates in effect	Public or private?	Description
			Note that VAT rebates have also been used as a policy to encourage domestic production and discourage imports, notably in high-tech industry. These policies are probably not WTO-compliant, and China has recently agreed with the United States to discontinue the practice.
Derogation of other taxes on exporters	Early 1980s–present	Public	Derogation of other taxes on exporters is mostly associated with local policies to attract export-oriented foreign direct investment. Preferential tax policies for foreign-invested enterprises (FIEs) are found in many export-processing zones (EPZs), special economic zones (SEZs), and various development zones and industrial parks. In many cases, FIEs enjoy lower corporate income tax rates (15 percent instead of 33 percent) and tax holidays (three–five years). From the earliest stages of China's economic reform, these tax breaks were conditional on firms achieving a specified level of exports as a share of total production, typically 70 percent of total output. However, since WTO membership at the end of 2001, this type of explicit conditionality has been eliminated, but widespread tax exemptions for FIEs continue. FIEs accounted for 55 percent of China's exports in 2003.
Drawback for exporters	1978–present	Public; central government	<p>China established a system of duty exemptions on imported inputs used in exports, under various "export-processing" provisions, at the very beginning of the reform process. Under this system, the share of exports produced with some duty-free imports rose steadily and reached 55 percent in 2003. (FIEs disproportionately take advantage of these provisions, but it is purely coincidental that 55 percent of exports were produced with duty-free imports and also produced by FIEs.)</p> <p>Firms producing entirely or predominantly for export pay no duties if they register in advance and pay a deposit. However, smaller and part-time exporters must first pay duties and then apply for duty drawbacks. Beginning on January 1, 2002, an attempt was made to increase the number of duty-exempt firms; however, implementation was slow. Delays in receiving duty drawbacks are still common. The Export-Import Bank of China (China Exim Bank) (see below) provides loans of up to 80 percent of the duty drawback to bridge this period.</p>
Deferred payments	All periods	Public	Commonly adopted when massive infrastructure and construction projects are undertaken, particularly in developing countries.

(continued on next page)

Measure	Dates in effect	Public or private?	Description
Temporary admission	February 10, 1998–present	Public	China accepts ATA Carnets, the International Chamber of Commerce facility for the temporary duty-free admission of goods for display and use at trade fairs and exhibitions. It is expected that China will expand Carnet coverage to professional equipment and commercial samples.
Other fiscal incentives	Early 1980s–present	Public	Under the “open door” policy introduced in 1978, China has attracted foreign investment by providing physical and institutional infrastructure, as well as fiscal incentives. For some export-oriented FIEs, as well as domestic industries targeted for export growth, favorable fiscal policies are provided, including exemption from property tax, port fees, and land use fees. Bank loans can also be offered with favorable terms. These incentives are specific to local and central governments’ industrial policies and export goals.
Export credit agency	All periods; specialized Export-Import Bank of China since 1994	Public	<p>Several state-owned banks provide export credits. The Bank of China is the primary bank dealing in foreign exchange. It also provides trade credits in domestic and foreign currency.</p> <p>The China Exim Bank was established in 1994, and regulations promulgated in July 1995 established guidelines for buyers’ and sellers’ credit programs. Currently, the bank prioritizes financial support for the export of mechanical and electronic products, high- and new-tech products, overseas construction contracts, and offshore investment projects, particularly to Africa and Southeast Asia. Core businesses include export credit (including export sellers’ credit and export buyers’ credit), overseas construction contract loans and overseas investment loans, Chinese government concessional loans, international guarantees, onlending of loans from foreign governments and financial institutions, and so on.</p>
Export prepayment	Since at least 1995	Public	The China Exim Bank provides advance payment guarantee service to importers of Chinese products and construction projects. In the event of a breach of promise on the part of the exporter or proprietor in the performance of the contract, the guarantor bank must redeem the importer or contractor with payment plus interest as stipulated in a letter of guarantee.
Sectoral policies	1970s–present	Public; central and local governments	Sectors chosen for preferential sectoral policies have included light industrial products, textiles, and machinery and electronic goods. The key instruments to implement this pro-export measure were production networks for exports and higher exchange reten-

(continued on next page)

Measure	Dates in effect	Public or private?	Description
			<p>tion rights for targeted sectors. The Shanghai textile industry was targeted in the mid-1970s. More broadly, production networks for exports were established during the Seventh Five-Year Plan (1986–90). The networks were structured to bring together the leading factories within the targeted sector and support them through subsidies for technological upgrading, guaranteed supplies of raw materials and power, preferential access to transportation, attractive purchase prices for their goods, and higher exchange retention rights than other enterprises in the same industry.</p> <p>Since 1999, China has shifted development priority to high-technology industry. The primary sectors attracting support are the software development and the semiconductor and integrated-circuit industries. Though some sectorally targeted preferential policies were originally developed to foster domestic industries, they also provide incentives for foreign investors to outsource to China.</p>
Export notes	All periods	Public	The Bank of China and the China Exim Bank have been providing export buyers' credit, export sellers' credit, and so on.
Other credit incentives: credit insurance	Began 1988 on small scale; expanded 2001	Public	<p>Export credit insurance started in China in 1988, but the total trade volume insured since 1988 has been only \$18 billion. China Export and Credit Insurance Corporation (CECIC), China's first policy-oriented export credit insurance firm, was founded in Beijing in 2001. Established to promote exports while staying in compliance with the WTO, CECIC is mandated to promote the export of Chinese goods, technologies, and services, especially capital goods that are higher-value-added and high-tech.</p> <p>For many years, the Ministry of Commerce has provided export credit insurance for agricultural products. In 2003, these services were expanded in view of high risks related to phytosanitary trade barriers and trade disputes related to agricultural products.</p>
Customs incentives	January 1, 2004	Public	The China General Administration of Customs has begun facilitating imports and exports by implementing online services, including the "E-port," in which enterprises can process import and export applications to several related state agencies and banks at a click. Many local customs agencies provide online information service centers, search engines, and form-downloading centers, which facilitate both imports and exports.

(continued on next page)

Measure	Dates in effect	Public or private?	Description
Free trade zones	Since 1979	Public; central and local governments	<p>China began implementing special economic zones (SEZs), one of the earliest and most dramatic policies of economic reform and opening, in 1979–80. Since 1980, several kinds of zones have been created, all providing some combination of tax advantage and relatively free trade. Among the most important categories of zones are the following:</p> <ul style="list-style-type: none"> • <i>SEZs</i>. This includes four original zones plus Hainan Island and Pudong district in Shanghai. The feature reduced income tax rates, provided customs facilitation, and improved access to duty drawbacks. • <i>Economic and Technical Development Zones; High-Technology Development Zones</i>. Over 60 such zones are recognized in national regulations; others may be recognized by local governments. They are similar to SEZs, but with slightly less generous provisions. • <i>Bonded Zones</i>. These are smaller zones, typically inside existing SEZs. Import and export is permitted without passing through customs. Several bonded zones have been developed since the mid-1990s.
Special policy to promote SME exports	January 1, 2003	Public, and joint public and private	The Small and Medium-Sized Enterprise (SME) Promotion Law, in effect since 2003, stipulates that government should facilitate and assist export activities of SMEs. Related financing institutions should provide import/export credit services, export credit insurance services, and so on to help SMEs access foreign markets. Special export facilitation agencies have been set up in many cities (for example, Beijing and Shanghai have SME service centers). These assist SMEs in seeking help through channels such as banks and foreign trade offices in order to expand exports.
Subsidies	Direct subsidies until 1991; some indirect subsidies until 2001	Public	China officially abolished direct budgetary outlays for exports on January 1, 1991. Nonetheless, it is widely believed that many Chinese manufactured exports received indirect subsidies. For example, the 1995 State Council Circular on Industrial Policy for Automobiles decreed that exporters of autos and auto parts should have priority in obtaining loans and foreign currencies to support their activities. After WTO entry in 2001, an effort was made to identify and eliminate all export subsidies, replacing them where possible with WTO-compliant means of promoting exports.
Export requirements for foreign investors	Eliminated 2001	Public	Since the earliest legislation facilitating foreign investment in China, foreign-invested enterprises were encouraged to export. Approval of investment projects was contingent on approval of export plans. Wholly

(continued on next page)

Measure	Dates in effect	Public or private?	Description
			<p>foreign-owned firms were initially required to export. Furthermore, all foreign-invested firms were required to balance their foreign currency accounts with their own export income.</p> <p>The Law of the People's Republic of China on Chinese-Foreign Equity Joint Ventures was revised on March 15, 2001, and the Law on Contractual Joint Ventures and the Law on Wholly Foreign-Owned Enterprises were revised on October 31, 2001, to eliminate provisions outlining an export obligation, replacing them with a general statement that foreign-invested firms are encouraged to export.</p>

Pro-competitiveness Institutions in China

Institution(s)	Public or private?	Dates in effect	Description	Further comments
Ministry of Commerce (formerly, Ministry of Foreign Trade and Economic Cooperation)	Public	1949–present	The original Ministry of Foreign Trade and Economic Cooperation (MOFTEC) was in charge of foreign-trade-related affairs, initially as administrator of the state monopoly on foreign trade and subsequently as the only agency that could issue trade licenses. MOFTEC gradually became a trade promotion ministry and played a major role in regulating and liberalizing China's foreign trade system.	Originally, domestic trade and foreign trade were separate, but in 2003 both were combined into the new Ministry of Commerce.
Local government	Public	1980s–present	To ensure local export promotion and encourage foreign investment, most provinces and large cities in China actively support trade. Most large cities have a specially designated vice mayor in charge of export promotion. Normally, these officials work closely with the local branches of the Ministry of Commerce to strengthen the local export industry.	The pervasive influence and activity of local government is a peculiarity of China's system and a legacy of its past government-controlled economy. Local governments actively promote local businesses and trade.
Bank of China	Public	1912–present	Primary foreign exchange bank. Also provides trade credit, clearing services, and so on.	Three foreign investors (RBS, Merrill Lynch, and Li Ka-shing) hold a 10 percent stake in the Bank of China.
Export-Import Bank of China (China Exim Bank)	Public	1994–present	Established in 1994 and wholly owned by the central government, the Export-Import Bank of China is a state export credit agency under the direct leadership of the State Council. The Bank has six business branches, seven domestic representative offices, and two overseas offices. It has established and maintained correspondent relationships with 140 foreign banks.	

(continued on next page)

Institution(s)	Public or private?	Dates in effect	Description	Further comments
State Foreign Trade Companies (FTCs)	Public	1950s–present	Originally set up to directly manage the state monopoly on foreign trade, these state-owned enterprises played a major role in the export and import business. State FTCs work at both national and local levels and have been granted export and import licenses within the scope authorized by relevant ministries. However, with China's entry into WTO, the privileges enjoyed by these state monopolies are gradually being phased out. Trading rights have been extended to a much wider range of companies as part of China's market reforms.	The role of FTCs is declining, and some have been partially privatized.
China Council for the Promotion of International Trade (CCPIT)	Joint	May 1952–present	CCPIT is the largest and most important organization devoted entirely to the promotion of foreign trade in China. Enterprises, individuals, and government agencies are members of CCPIT. CCPIT objectives include promoting foreign trade, stimulating foreign investment, introducing advanced foreign technologies, conducting activities related to Sino-foreign economic and technological cooperation in various forms, and promoting the development of economic and trade relations between China and other countries. CCPIT also operates an arbitration service serving joint ventures and foreign companies.	In 1988, with the approval of the Chinese government, CCPIT started to adopt a separate name—China Chamber of International Commerce (CCOIC)—which is used simultaneously with CCPIT.
China Export and Credit Insurance Corporation (CECIC)	Public	December 2001	CECIC, China's first policy-oriented export credit insurance firm, was founded in Beijing to promote exports in general, and particularly of higher-value-added and high-tech capital goods.	
China Chamber of Commerce, trade associations and societies	Joint	Late 1990s–present	Affiliated with the Ministry of Commerce, the China Chamber of Commerce has several subdivisions featuring the imports and exports of different industries, such as textiles, light industrial products, machinery, and electronic products. There are also trade-promoting associations and professional societies.	Some formerly governmental functions have been spun off to the independent, but closely affiliated, chambers of commerce.

(continued on next page)

Institution(s)	Public or private?	Dates in effect	Description	Further comments
State Development and Reform Commission (SDRC) and other state industrial ministries	Public	1949–present	The SDRC was formerly the State Planning Commission. Industrial ministries, which formerly managed all state-owned industry, have been downsized and consolidated since the mid-1990s, with many functions spun off to enterprises or to other government agencies. The SDRC, similarly, has shrunk and redefined its mission toward long-range planning and industrial policy. Nevertheless, several ministries, such as the Ministry of Information Industry, continue to play a significant role in facilitating industrial cooperation; setting industrial standards; and promoting investment, trade, and technological upgrading.	
Industrial associations	Joint	Late 1990s–present	Industrial associations group together large enterprises and are often staffed by former government bureaucrats. They are expected to represent the interests of their industries on trade and competition matters. A special fund is now under consideration for promoting branded Chinese exports. R&D and marketing brands will be financed by the special fund. If this fund is established, industrial associations will play a significant role in its implementation and in overall export promotion.	Similar to chambers of commerce but government ties are mainly with industrial ministries.
SME Service Center	Joint		The Department of Small- and Medium-Sized Enterprises (SMEs) in the State Economic and Trade Commission has an administrative office to coordinate SMEs' export-related affairs. There are also local SME service centers in many cities. Beijing and Shanghai both have SME service centers.	

This page intentionally left blank

China's WTO Accession Commitments¹

1. General	Except as otherwise provided in the protocol, China accedes to the WTO Agreement, including all the agreements, decisions, and understandings. The report of the Working Party that discussed the accession of China includes a large number of commitments regarding the implementation of specific obligations in many of the WTO agreements, decisions, and understandings (see paragraph 342, document WT/ACC/CHN/49). Those commitments were incorporated by reference into the Protocol of Accession of China. In addition, China will be subject to periodic review in the WTO to monitor compliance with the commitments made during accession.	
2. Administration of trade regime	A. Uniform administration	WTO provisions shall apply to the entire customs territory of China. Laws, regulations, and rules issued by central or subnational authorities on issues related to trade in goods, services, intellectual property, and foreign exchange shall be applied and administered.
	B. Special economic areas (SEAs)	SEAs shall be notified. Taxes and other measures applying to imports to SEAs shall be the same as those measures for other parts of China's customs territory. Nondiscrimination and national treatment are to be observed when enterprises in SEAs are subject to preferential arrangements.
	C. Transparency	Only laws, measures, and regulations published and available to WTO members shall be enforced. An official journal shall be established. A reasonable period for comments before laws, measures, and regulations are implemented is to be given to WTO members. China shall designate an inquiry point.
	D. Judicial review	China shall establish independent tribunals, contact points, and procedures for prompt review of administrative actions related to trade. Review procedures shall include the right to appeal.
3. Nondiscrimination	Measures and practices that discriminate against imported products or foreign companies will be removed; all foreign individuals and enterprises, including those not invested or registered in China, will be provided treatment no less favorable than that accorded to enterprises in China. This pertains to (1) the procurement of inputs and goods and services for production, marketing, and sale in the domestic market and for export and (2) the prices and availability of goods and services supplied by national authorities or public enterprises.	
4. Special trading arrangements	STAs are to be made WTO-legal or eliminated, including barter trade arrangements with third countries and separate customs territories.	

(continued on next page)

¹ Based on WTO (2001a, 2001b, 2001c) and IMF (2004a).

5. Right to trade	China shall progressively liberalize the availability and scope of the right to trade, so that within three years after accession, all enterprises in China shall have the right to trade in all goods throughout the customs territory, including the right to import and export. Exceptions to the right to trade are in place for imports by state traders in grain, vegetable oil, sugar, tobacco, crude oil, processed oil, chemical fertilizers, and cotton (84 tariff lines in Annex 2A1 of the Accession Agreement), and for exports by state traders in tea, rice, corn, soy beans, tungsten ore, ammonium paratungstates, tungstate products, coal, crude oil, processed oil, silk, cotton (including yarn and some woven fabrics), antimony ores, oxide and products, and silver (134 tariff lines in Annex 2A2 of the Accession Agreement). Dual-pricing practices, as well as differential treatment of goods produced for sale in China as opposed to goods produced for export, will be abolished.
6. State trading	Purchasing procedures of state trading enterprises shall be fully transparent and in compliance with WTO. Pricing mechanisms for exported goods shall be notified.
7. Nontariff measures	China shall eliminate import licenses, import quotas, and import tendering for a list of products (377 tariff lines in Annex 3, table one, of the Accession Agreement) upon accession or according to a phase-out program (at the latest by 2005). Other products are subject to quotas only and are to be liberalized (15 tariff lines in Annex 3, table two, of the Accession Agreement). Products subject to import licenses only are to be liberalized upon accession as well (47 tariff lines in Annex 3, table three, of the Accession Agreement). As regards investment measures, China shall comply with TRIMs immediately. China is to eliminate trade and foreign exchange balancing requirements, and local content and export or performance requirements. China will not condition distribution of import licenses, quotas, or TRQs, or the approval for the right of importation or investment, on whether competing domestic suppliers of such products exist or on performance requirements of any kind, such as local content, offsets, technology transfer, export performance, or conduct of R&D in China. Import/export prohibitions and restrictions and licensing requirements can only be imposed and enforced by national or subnational authorities.
8. Import/export licensing	In implementing the WTO Agreements, China shall publish the list of organizations responsible for authorizing imports and exports, the procedures and criteria for obtaining such licenses, the products subject to tendering requirements, and the goods and technologies whose trade is restricted or prohibited. China shall notify all licensing and quota requirements remaining after accession, and their justification or scheduled date of termination. Import-licensing procedures are to be notified. Import licenses should be issued for a minimum duration of validity of six months. Foreign individuals and firms are to be given national treatment in respect of the distribution of import/export licenses and quotas.
9. Price controls	China shall allow prices for trade goods and services in every sector to be determined by market forces. Multitier pricing practices shall be eliminated. Annex 4 of the Accession Agreement includes exceptions to the latter: products subject to state pricing are tobacco, salt, gas, and pharmaceuticals (46 tariff lines); products subject to government guidance pricing are grains, vegetable oil, processed oil, fertilizer, silkworm cocoons, and cotton (29 tariff lines); utilities subject to government pricing are gas, water, electricity, heating power, and irrigation; service sectors subject to government pricing are postal and telecommunications, entrance to tour sites, and education services; service sectors subject to government guidance pricing are transportation, professional, commission agents, settlement, clearing and transmission services of banks, selling and renting apartments, and health-related services.
10. Subsidies	China is to notify any subsidy under the definition of the Agreement on Subsidies and Countervailing Measures. All forms of export subsidies inconsistent with WTO rules, such as grants and tax breaks linked to export performance, were eliminated upon accession. China will also limit its subsidies for agricultural production to 8.5 percent of the value of farm output (that is, less than the 10 percent limit allowed for developing countries under the WTO Agreement on Agriculture).

(continued on next page)

11. Taxes/charges on imports/ex-ports	Customs fees or charges and internal taxes and charges (including value-added taxes) must be in conformity with GATT 1994. Taxes on exports shall be eliminated or applied in compliance with Art. VIII of GATT. Annex 6 of the Accession Agreement establishes exemptions for export duties on 84 tariff lines.
12. Agriculture	China shall not maintain or introduce any export subsidies on agricultural products. Fiscal and other transfers between or among state-owned enterprises in the agricultural sector and other state trading enterprises in that sector must be notified.
13. Technical barriers to trade (TBT)	Criteria for a technical regulation, standard, or conformity assessment procedure are to be published in the official journal. Technical regulations, standards, and conformity assessment procedures are to be brought into conformity with the TBT Agreement; in particular, national treatment for imported goods is to be granted.
14. Sanitary and phytosanitary measures	China shall notify all laws, regulations, and other measures relating to sanitary and phytosanitary standards.
15. Tariffs	Tariffs were subject to deep cuts. The average weighted tariff rate of duty in 2001 was 13.7 percent, and the reduction and binding commitments imply that this figure is to be 5.7 percent in five years. Tariffs on agricultural goods will be lowered to an average of 15 percent. The rates range from 0 to 65 percent, with the higher rates applied to cereals. Some tariffs have been or will be eliminated and others reduced, mostly as of 2004 but in no case later than 2010. Tariffs on industrial goods will be reduced to an average of 8.9 percent, with a range from 0 to 47 percent. The highest rates apply to photographic film and automobiles.
16. Services	Deep commitments have been made on liberalization of many sectors. Within two years (by the end of 2003) foreign service suppliers will be permitted to engage in the retailing of all products; within three years (by the end of 2004) all firms will have the right to import and export all goods except those subject to state trading monopolies (such as oil or fertilizers); within five years (by the end of 2006), foreign firms will be allowed to distribute virtually all goods domestically. Foreign financial institutions will be permitted to provide services without client restrictions for foreign currency business upon accession; for local currency services to Chinese companies within two years (by December 2003); and for services to all Chinese clients within five years (by December 2006). However, there are also important reservations and exceptions in business and professional services; communications; construction; distribution; educational, financial, and environmental services; health-related social services; tourism; recreational services; and transportation.
17. Intellectual property (IP)	China undertook commitments to introduce a series of changes in its domestic laws on intellectual property. In the Working Party report, China pledged to implement fully the Agreement on the Trade-Related Aspects of Intellectual Property Rights (TRIPs) and other international intellectual property treaties, including specific obligations to amend its national laws on copyrights, trademarks, and patents. In particular, and in line with TRIPs, China undertook to give national treatment and most-favored-nation treatment to foreign holders of intellectual property rights; adequately protect geographical indications and appellations of origin; fulfill the requirements on undisclosed information, including trade secrets and test data; implement measures to control abuses of intellectual property rights; implement civil judicial procedures and remedies; establish provisions for the adequate compensation of injury caused by infringement; and implement obligations for full administrative prosecution of offenders, border-related measures, and lower thresholds in bringing a criminal action.

(continued on next page)

18. Trade-Related Investment Measures (TRIMs)	Foreign investment approvals will no longer be subject to mandatory requirements such as those for technology transfer or local content.
19. Trade remedies against China	<p>China will allow its WTO trading partners to use, for a period of 12 years after accession, a number of trade remedies against a consistent flow of Chinese goods into foreign markets. These include the following:</p> <ul style="list-style-type: none"> • A <i>transitional product-specific safeguard mechanism</i> is authorized. As provided under the WTO Agreement on Safeguards, a country may impose restrictions on imports if it can demonstrate that they cause or threaten to cause serious injury to domestic firms producing similar products. • A <i>special safeguard mechanism</i> for China's textile and clothing exports can be invoked. • To facilitate antidumping, under WTO agreement, other members can invoke "nonmarket economy" provisions to adjudicate dumping cases for 15 years following accession. Non-market economy provisions imply that domestic prices cannot be used as a reference point, making it much easier to reach a positive finding in an antidumping investigation.

References

- Bader, J. A. 2003. "China's Implementation of Its WTO Commitments: Mixed Results after Two Years." The Atlantic Council of the United States, Washington, D.C. (October).
- Barro, R. J., and J. W. Lee. 2000. "International Data on Educational Attainment: Updates and Publication." Working Paper No. 42, Center for International Development, Harvard University, Cambridge, Massachusetts (April).
- Blázquez-Lidoy, J., J. Rodríguez, and J. Santiso. 2004. "Angel or Devil? Chinese Trade Impact on Latin American Emerging Markets." Working paper, Banco Bilbao Vizcaya Argentaria (BBVA), Buenos Aires (June).
- Courant, P. N., and A. V. Deardorff. 1992. "International Trade with Lumpy Countries." *Journal of Political Economy* 100(1): 198–210.
- Davis, D. R., and D. E. Weinstein. 2003. "Market Size, Linkages, and Productivity: A Study of Japanese Regions." Discussion Paper No. 2003/53, World Institute for Development Economics Research (WIDER), United Nations University (UNU), Helsinki, Finland (June).
- Deardorff, A. V. 2004. "Local Comparative Advantage: Trade Costs and the Pattern of Trade." Photocopy, University of Michigan, Ann Arbor.
- DOT (Department of Transportation). 1990–2001. *U.S. Waterborne Trade Statistics*. CD-ROM. Office of Statistical and Economic Analysis, Maritime Administration, DOT, Washington, D.C.
- Evans, C., and J. Harrigan. 2003. "Distance, Time, and Specialization." International Finance Discussion Paper No. 766, Board of Governors of the Federal Reserve System, Washington, D.C. (May).
- Finger, J. M., and M. E. Kreinin. 1979. "A Measure of 'Export Similarity' and Its Possible Uses." *Economic Journal* 89: 905–12.
- Hanson, G. H., and C. Xiang. 2002. "The Home Market Effect and Bilateral Trade Patterns." Working Paper No. 9076, National Bureau of Economic Research, Cambridge, Massachusetts.
- Harrigan, J., and A. J. Venables. 2004. "Timeliness, Trade and Agglomeration." Working Paper No. 10404, National Bureau of Economic Research, Cambridge, Massachusetts (April); and Discussion Paper No. 4294, Centre for Economic Policy Research, London (March).
- Haveman, J. D., and D. Hummels. 2004. "California's Global Gateways: Trends and Issues." Report, Public Policy Institute of California, San Francisco (April).

- Hummels, D. 2001. "Toward a Geography of Trade Costs." Photocopy, Purdue University, Lafayette, Indiana.
- Hummels, D., and P. Klenow. 2004. "The Variety and Quality of a Nation's Trade." Photocopy.
- Hummels, D., and A. Skiba. 2004. "Shipping the Good Apples Out? An Empirical Confirmation of the Alchian-Allen Conjecture." *Journal of Political Economy* 112(6): 1384–1402.
- Ianchovichina, E., and W. Martin. 2001. "Trade Liberalization in China's Accession to the World Trade Organization." Working Paper No. 2623, World Bank, Washington, D.C. (June).
- IMF (International Monetary Fund). 2004a. "Chapter II: The Global Implications of the U.S. Fiscal Deficit and China's Growth." In *World Economic Outlook*. Washington, D.C.: IMF.
- . 2004b. *Direction of Trade Statistics*. CD-ROM. Washington, D.C.: IMF.
- Lall, S. 2000. "Export Performance, Technological Upgrading and FDI Strategies in Asian NIEs with Special Reference to Singapore." Productive Development Series Document No. 88, United Nations Economic Commission for Latin America and the Caribbean, Santiago, Chile.
- Lall, S., and M. Albaladejo. 2003. "China's Competitive Performance: A Threat to East Asian Manufactured Exports?" Working Paper No. QEHWPS110, Queen Elizabeth House, Oxford University, Oxford, U.K.
- Lardy, N. R. 2001. "Issues in China's WTO Accession." Testimony before the U.S.-China Security Review Commission, Washington, D.C. (May).
- . 2002. *Integrating China into the Global Economy*. Washington, D.C.: Brookings Institution.
- Lemoine, F., and D. Unal-Kesenci. 2002. "China in the International Segmentation of Production Processes." Working Paper No. 2002-02, Centre d'Etude Prospectives et d'Informations Internationales (CEPII), Paris (March).
- Limão, N., and A. J. Venables. 2001. "Infrastructure, Geographical Disadvantage, Transport Costs and Trade." *World Bank Economic Review* 15.
- López-Córdova, E. 2003. "NAFTA and Manufacturing Productivity in Mexico." *Economía* 4(1).
- . 2004. "Economic Integration and Manufacturing Performance in Mexico: Is Chinese Competition to Blame?" Photocopy, Inter-American Development Bank, Washington, D.C. (July 15).
- National Bureau of Statistics of China. 2000. *China Statistical Yearbook*. Beijing: China Statistical Press, National Bureau of Statistics of China.
- Nehru, V., and A. Dhareshwar. 1993. "A New Database on Physical Capital Stock: Sources, Methodology and Results." *Rivista de Analisis Economico* 8.
- Rauch, J. E., and V. Trindade. 2002. "Ethnic Chinese Networks in International Trade." *Review of Economics and Statistics* 84 (February).

- Rumbaugh, T., and N. Blancher. 2004. "China: International Trade and WTO Accession." Working Paper No. 04/36, International Monetary Fund, Washington, D.C.
- Schott, P. 2004. "The Relative Revealed Competitiveness of China's Exports to the United States *vis a vis* Other Countries in Asia, the Caribbean, Latin America and the OECD." Yale University School of Management, New Haven, Connecticut.
- Shuguang, Z., Z. Yansheng, and W. Zhongxin. 1998. *Measuring the Cost of Protection in China*. Washington, D.C.: Institute for International Economics.
- Skiba, A. 2004. "Economies of Scale in Transportation and Regional Welfare." Paper presented at the Midwest International Economics Meetings, Indianapolis, Indiana (April–May).
- U.S. General Accounting Office. 2004. "World Trade Organization: U.S. Companies' Views on China's Implementation of Its Commitments." Report No. GAO-04-508. U.S. General Accounting Office, Washington, D.C. (March).
- USITC (U.S. International Trade Commission). 1999. "Assessment of the Economic Effects on the United States of China's Accession to the WTO." Investigation No. 332-403, Publication No. 3229, USITC, Washington, D.C. (September).
- . 2004. "Textiles and Apparel: Assessment of the Competitiveness of Certain Foreign Suppliers to the U.S. Market." Publication No. 3671, USITC, Washington, D.C. (January).
- USTR (Office of the U.S. Trade Representative). 2003a. "National Trade Estimate Report on Foreign Trade Barriers." USTR, Washington, D.C.
- . 2003b. Statement of Deputy Assistant U.S. Trade Representative Charles W. Freeman III to the Congressional Executive Commission on China's (CECC's) Hearing "Is China Playing by the Rules? Free Trade, Fair Trade, and WTO Compliance," CECC, Washington, D.C. (September 24).
- . 2004. "National Trade Estimate Report on Foreign Trade Barriers." USTR, Washington, D.C.
- Weder, R. 1995. "Linking Absolute and Comparative Advantage to Intra-Industry Trade Theory." *Review of International Economics* 3.
- Wei, S. J., and Y. Wu. 2002. "Globalization and Inequality without Differences in Data Definition, Legal System and Other Institutions." Working Paper No. 8611, National Bureau of Economic Research, Cambridge, Massachusetts.
- World Bank. 1994. *China: Foreign Trade Reform*. Washington, D.C.: World Bank.
- WTO (World Trade Organization). 2001a. "Accession of the People's Republic of China." Document No. 01-5996, Symbol WT/L/432, WTO, Geneva (November 23).
- . 2001b. "WTO Successfully Concludes Negotiations on China's Entry." WTO, Geneva (September 17).
- . 2001c. "Report of the Working Party on the Accession of China." Document No. 01-4679, Symbol WT/ACC/CHN/49, WTO, Geneva (January 10).
- WTO (World Trade Organization) Council for Trade in Goods. 2003. "Report of the Council for Trade in Goods on China's Transitional Review." Document No. 03-6436, Symbol G/L/664, World Trade Organization, Geneva (December 4).

IDB Background Reports

- Hummels, D. 2004. "The Role of Geography and Size." Integration and Regional Programs Department, Inter-American Development Bank, Washington, D.C.
- Jales, M., M. Jank, S. Yao, and C. Carter. 2004. "Agriculture in Brazil and China: Challenges and Opportunities." Integration and Regional Programs Department, Inter-American Development Bank, Washington, D.C.
- López-Córdova, E. 2004. "Economic Integration and Manufacturing Performance in Mexico: Is Chinese Competition to Blame?" Integration and Regional Programs Department, Inter-American Development Bank, Washington, D.C.
- Mesquita Moreira, M. 2004. "Fear of China: Is There a Future for Manufacturing in Latin America?" Integration and Regional Programs Department, Inter-American Development Bank, Washington, D.C.
- Naughton, B. 2004. "China: Development Strategies and Policy Regime." Integration and Regional Programs Department, Inter-American Development Bank, Washington, D.C.
- Schott, P. K. 2004. "The Relative Revealed Competitiveness of China's Exports to the United States vis-à-vis Other Countries in Asia, the Caribbean, Latin America and the OECD." Integration and Regional Programs Department, Inter-American Development Bank, Washington, D.C.



FOREIGN DIRECT INVESTMENT



This page intentionally left blank

The Surge of FDI to China: Should Latin America Be Concerned?

Introduction

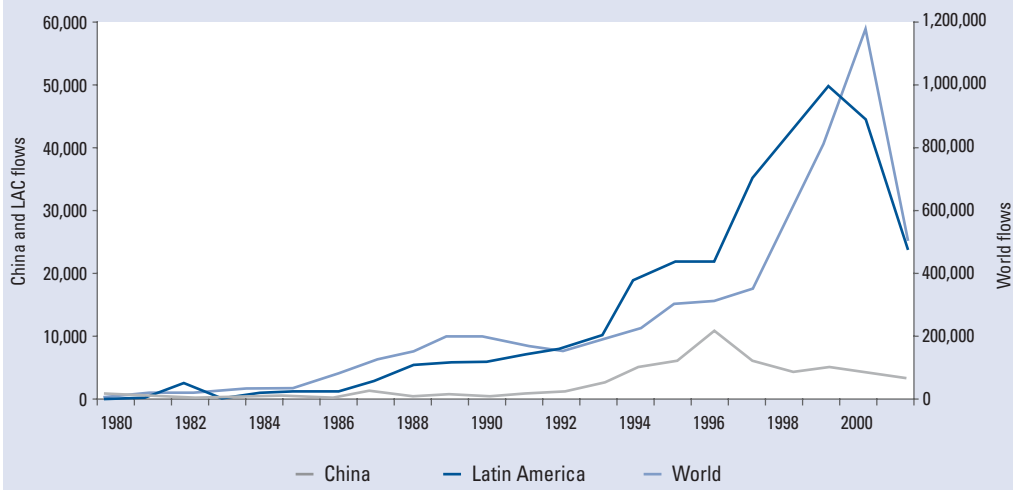
Chapter 1 illustrated the remarkable rise of foreign direct investment flows to China in the 1990s. Although the surge coincided with tremendous growth in worldwide FDI, clearly that coincidence is not the whole story. In 1990, the share of total worldwide FDI flows going to China was only 2 percent; by 2003 it had reached 6.3 percent. In 2004, China supplanted the United States as the world's leading destination for foreign investment.

One concern with the statistics about this rise in FDI flows to China is that some of the flows might consist of domestic investment routed through Hong Kong to benefit from investment incentives to foreigners. Called “round-tripping,” this practice would create fictitious FDI flows, exaggerating the real level of inflows. To gauge how much the data could be affected by this, Figure 6.1 shows total FDI flows only from OECD countries; it excludes round-tripping because it excludes FDI funneled through Hong Kong, for example. The figure shows that this reduces total FDI flows to China significantly, although the expansion is still substantial.

Evaluation of this rapid expansion of FDI flows to China should also consider something mentioned briefly in Chapter 1: FDI stocks (accumulated flows, allowing for depreciation) as a share of gross domestic product are still higher in Latin America than in China (Figure 6.2). Measured in relation to total population, moreover, FDI flows are significantly higher in Latin America than in China (Figure 6.3), although in terms of GDP the figures had become similar by the end of the 1990s (Figure 6.4).

In any case, FDI flows to China have grown remarkably since the 1990s. Reforms have opened the economy to foreign direct investment and secured access to abundant and disciplined low-cost labor, as well as a huge domestic market. The investment trend is expected to continue, moreover, given continuing market reforms, expectations that China will preserve its low-cost labor advantage over other manufacturing locations, and the prospect of significant expansion of the domestic market (income

FIGURE 6.1 FDI Inflows from OECD Countries, 1980–2001
(US\$ millions)



Source: OECD (2002).

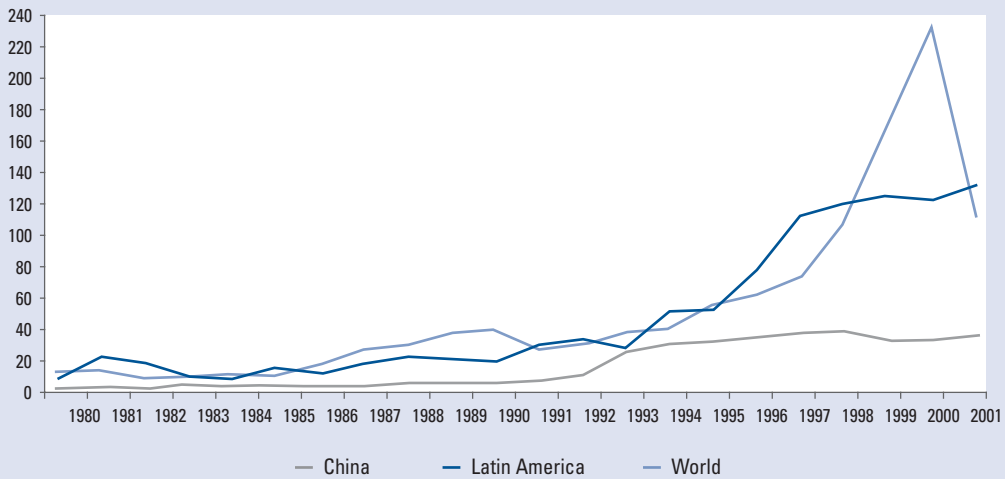
FIGURE 6.2 FDI Stock, 1982–2002
(percent of GDP)



Source: UNCTAD (2002).

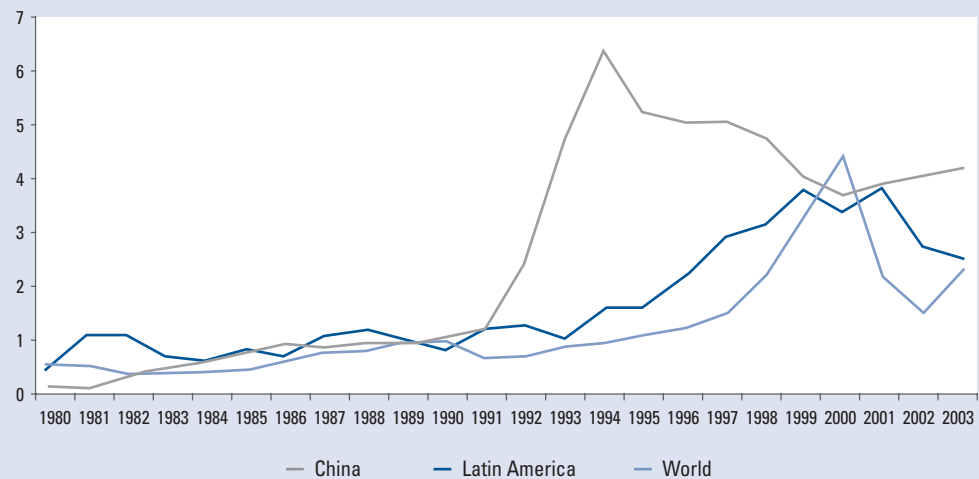
has doubled roughly every nine years). A recent OECD (2003) report points out that, even as wages start to rise, the increase in the labor market's purchasing power will make China's consumer market a magnet for FDI.

FIGURE 6.3 FDI Flows Per Capita, 1980–2001
(US\$ billions)



Source: IMF (2003).

FIGURE 6.4 FDI Flows, 1980–2003
(percent of GDP)



Source: IMF (2003).

A. T. Kearney's (2003) forward-looking FDI Confidence Index ranked China first among all countries, based on results of a survey of chief executive officers from the world's leading international corporations. Additionally, according to a joint survey of

international location experts conducted by the United Nations Conference on Trade and Development (UNCTAD) and the magazine *Corporate Location*, the top three investment “hot spots” for the next few years are China, India, and the United States. The survey results, based on 87 responses from experts in different regions, rank Mexico as the sixth-most-attractive investment location, the only Latin American country in the top-10 list. Yet the experts also stated that traditional FDI targets in the hemisphere besides Mexico, such as Brazil and Chile, would still have a role to play. FDI recovery in Latin America, unlike that in some other regions, will be characterized by investments in metal, mining, petroleum, and agriculture.

In another UNCTAD survey, the world’s largest multinational companies (MNCs) were optimistic about FDI’s prospects in 2005–07. Among the 84 responses, China was cited most often as the choice for FDI location. Brazil ranked second. MNC expectations for Latin America are mixed, but slightly optimistic.

Clearly, China is a special attraction. China’s recent accession to the World Trade Organization is likely to make it even more attractive to outside capital, including investment in the newly opened service sectors that have attracted much of Latin America’s foreign investment. Given the large number of public firms in China, moreover, FDI would rise much faster than current projections suggest if the country engages in massive privatization in the future. Should Latin America be concerned? To what extent is China competing with Latin American countries as a destination for FDI? Which countries in the region are most likely to be affected?

The Evolution of FDI in Latin America: A Qualitative Exploration

FDI brought many benefits to Latin America in the 1990s. Inflows helped transform most countries in the region by modernizing industries, services, and infrastructure. Among the many examples are the competitive export platforms in Mexico and Costa Rica, improved telecommunication systems in Brazil, and infrastructure concessions in Chile. FDI was very dynamic in the 1990s; however, international companies have increasingly expressed concern about their operations in the region.

ECLAC’s 2003 report on foreign investment in Latin America and the Caribbean assesses multinational corporate strategies and argues that FDI drivers in the region vary by country and subregion (ECLAC, 2004). One strategy, which centers on natural-resource-seeking investment, is pursued in the Andean Community, Argentina, and Chile. Companies pursuing this strategy invest mainly in the petroleum, gas, and mining sectors.

Other companies’ strategies are based on market seeking since they search for large domestic economies to supply their products or services. These investments are concentrated in Argentina, Brazil, and Mexico for financial, telecommunication,

and energy services. The automobile industry in the Southern Cone Common Market (Mercosur) also fits this strategy.

Finally, companies that seek efficiency by fragmenting production in order to capture low-wage labor inputs invest for export in Mexico (the automobile, electronics, and apparel industries) and the Caribbean Basin (mostly apparel).

According to the ECLAC report, natural-resource-seeking FDI in South America has held constant because commodity prices have remained relatively high and the companies' enclave investment is largely independent of local countries' macroeconomic conditions. FDI by market-seeking firms, however, has declined or virtually stopped. Economic recessions in the region, especially in Brazil in 1999 and Argentina in 2001, brought about a contraction in demand and sharp currency devaluations. Utility firms in Argentina, which had pegged its currency to the dollar one-to-one, could not meet their external debts when domestic service rates were frozen after the peg was broken and the peso devalued. Not only did firms cease investing but some withdrew from the market.

As for efficiency-seeking FDI, the report highlights two systems of integrated production. One model is that of the apparel industry in the Caribbean Basin based on the U.S. Caribbean Basin Initiative (CBI).¹ The second is the Mexican model for electronics and automobile production under NAFTA.

The apparel industry model in countries such as El Salvador, Nicaragua, Guatemala, and the Dominican Republic has experienced significant decline in FDI during the past two years. The advantages conferred by proximity, relatively low wages, tax incentives for export-processing zones, and special access to the United States are being offset by other advantages offered by new competitors such as China, which can tap an abundance of disciplined and very-low-cost labor.

Most countries that have specialized in labor-intensive assembly industries are under severe pressure from the profound changes in international markets induced by competition from Asia, especially China. China's accession to the WTO and the end of import quotas following expiration of the Agreement in Textiles and Clothing will further challenge these countries' competitiveness (see Chapter 7 for more details).

At first Mexico's automobile industry seemed immune to such pressures. Mexico attracted a significant increase in FDI flows during the 1990s. Beginning in 1994, multinationals with plants in the United States began to close them and relocate to Mexico. The Mexican automobile industry's marked dependence on its U.S. counterpart, however, has costs. A downturn in the U.S. industry spurred a decline in FDI to Mexico in 2002 and 2003, when flows fell by 26 percent. More importantly, the industry's future remains uncertain because the Mexican supplier base had insufficient incentives to invest in the technology needed to transform the industry into an integrated production cluster capable of competing with Asia and an emerging cluster

¹ For Central America and the Dominican Republic, preferences will expand under the recently agreed-upon U.S.–Central America–Dominican Republic Free Trade Agreement (DR-CAFTA).

in China. Mexico now faces competition from Asian countries, especially China, for efficiency-seeking FDI.

Undoubtedly, the region benefited from the FDI boom of the 1990s. MNC confidence, however, was shaken by the recent recessions and the emergence of other investment opportunities elsewhere. China's emergence seems to have particularly affected some countries and sectors. The rest of this chapter explores the significance of this at a more formal and quantitative level.

Are China and Latin America Competing in a Zero-Sum Game for FDI?

A first glance at the aggregate numbers suggests that China might not be much of a threat to the region. As mentioned earlier, growing foreign investment in China is part of a worldwide phenomenon that has also benefited Latin America. Chapter 1 showed that FDI flows to Latin America until recently grew at rates similar to China's. Yet the aggregate numbers mask a more complex state of affairs. Understanding what is happening requires a more detailed examination of how China and Latin America may be competing for FDI.

Conceptual Framework

The most elementary understanding of FDI competition begins with the observation that global savings are scarce. All other things being equal, increased investment profitability in one country will naturally attract greater investment inflows there, with a corresponding decline for other countries. The operating mechanism for this process is the rise in worldwide equilibrium returns to capital. To some extent, such a rise must be occurring, since the share of worldwide investment absorbed by China has spiked upward during the past two decades. This is evident in FDI flows: as previously stated, China's share of global foreign direct investment increased from 2 percent to 6 percent in the 1990s. Barring a strong boost in savings, FDI flows to Latin America would falter. A rough calculation suggests even that impact would be limited since China's gain in worldwide flows would reduce Latin America's share by at most 4 percent.² In other words, the general equilibrium channel explained here is likely to be small.³

² This result springs from a simple calculation. If total FDI flows do not change but flows to China go from 2 percent to 6 percent, this expansion must come from a contraction in flows to other countries. Assuming that the contraction is proportionally the same everywhere, then flows to other countries must decline by 98 divided by 94, minus 1, which is approximately .04, or 4 percent.

³ Of course, Chinese integration into world markets means not only that China becomes an option for investment flows, but also that Chinese savings affect worldwide interest rates. The

The problem is that world capital markets are not completely integrated. Perhaps, for example, capital markets are well integrated within Asia and within the Americas, but not across the two regions. In that case, increased return on investment in China would mainly affect other Asian countries rather than Latin America. This extreme example clarifies that how China's opening to FDI affects Latin America will depend crucially on how global capital flows are structured.

Complete analysis of this phenomenon is beyond the scope of this book, but it can be noted that—when markets are incompletely integrated—competition for capital flows is likely to be more severe across economies receiving investment from the same pool of source countries. For instance, imagine the extreme example in which Mexico receives all its FDI from the United States while Argentina receives all of its from Spain. Also assume that Spain does not invest in China, whereas the United States does so heavily. Increased investment profitability in China would divert U.S. capital there, reducing Mexico's total FDI inflows, while Argentina would remain unaffected. More generally, one can postulate that FDI competition is stronger among countries with a higher “FDI source coincidence index.”⁴

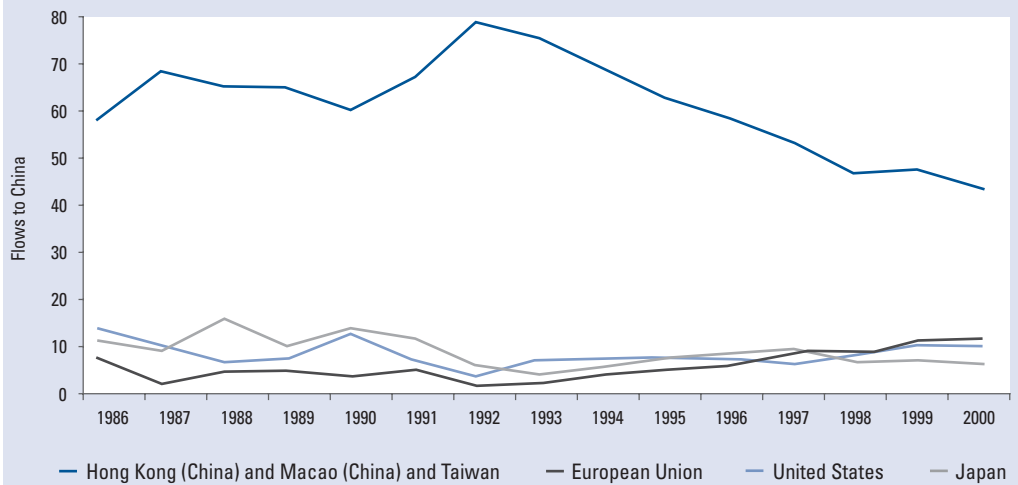
The same phenomenon arises when capital markets within countries are imperfect and firms rather than “the market” allocate scarce savings to different destinations as FDI. In this case, competition among countries for investment would be higher when the same multinationals are the conduits. Unfortunately, no detailed FDI data are available by company, so a “multinational source coincidence index” cannot be constructed to parallel the one for countries. Still, some sectoral data are available for calculating a “sector coincidence index.” A higher sector coincidence index between a particular country and China would suggest that the same multinational corporations are investing in both countries, and hence that FDI competition is more likely.

Confidence that a high sector coincidence index indicates stronger FDI competition is reinforced by the latter's strong relationship to competition in trade. To understand this, imagine if all investment were domestic, with no foreign inflows. If China's surge in export markets is in sectors in which Latin America has a comparative advantage, Latin America's terms of trade should deteriorate and its exports decline. That is, China's exports would displace Latin America's. Investment in Chinese exporting sectors would rise as that in Latin America's exporting sectors fell. This is precisely how export displacement happens in the long run. The obvious point is that trade effects and investment effects are connected. To the degree that export sector investment is foreign,

analysis here abstracts from this potentially important mechanism whereby China may impact other countries.

⁴ This analysis would be wholly correct when the following conditions are satisfied: first, there are no FDI flows among developed countries; and second, the opportunities for FDI are different among source countries—in other words, investment opportunities in any less-developed country are specific to each source country. Thus an increase in U.S. investment opportunities in China reduces FDI flows to any of the other countries in which the United States invests.

FIGURE 6.5 Changing Sources of FDI, 1986–2000
(percent of total realized FDI inflow)



Source: National Bureau of Statistics of China (2003).

the relationship extends to FDI. That is, China’s displacement of Latin America as a recipient of FDI would simply be the other side of the coin of its displacement of Latin America in world export markets. And since FDI effects accentuate trade effects, China could expand more rapidly sectors in which it enjoys comparative advantage, further displacing Latin America from international markets.

In sum, FDI competition essentially arises because worldwide savings are scarce. Given the quantities involved, however, this would explain, at most, a very marginal fall in FDI flows to Latin America resulting from China’s emergence in the world economy. Given imperfect capital markets and direct trade competition, however, some countries may be more strongly affected. In particular, countries benefiting from FDI sources similar to China’s or receiving FDI in similar sectors are more susceptible to sharper declines in FDI flows. Empirical analysis of these issues follows.

Empirical Analysis

In the 1980s and early 1990s, Hong Kong, Macao, and Taiwan were the main sources by far of investment flows into the Chinese mainland. Figure 6.5 shows that their shares of total FDI in China declined during the 1990s, while the shares from the United States and the European Union rose. However, the figure also shows that the three sources with Chinese populations still remained at the top of the heap in 2000.⁵ Given earlier discus-

⁵ There is clearly a misnomer now in referring to investment from the first two of these sources as FDI, since Hong Kong and Macao are not “foreign.” Meanwhile, Taiwan and mainland China continue their territorial dispute.

sion about lack of integration in worldwide capital markets, this suggests that FDI competition between China and Latin America is weaker than the aggregate data indicate.

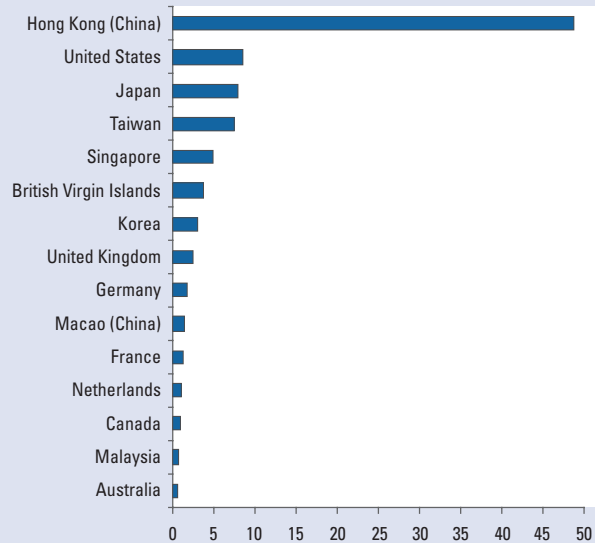
Country Sources

Figures 6.6a and 6.6b show in greater detail the composition of FDI flows by source to China and Latin America, respectively. Four of the five leading sources of investment inflows to China are from Asia, whereas only one of Latin America's top 10 is Asian. Figure 6.7 compares the source coincidence index between China and India, the Republic of Korea, and several Latin American countries. The low index readings for the Latin American countries versus the higher readings for the Republic of Korea and India buttress previous findings that China and Latin America have different sources for FDI.

This does not mean that there is no overlap. Figures 6.6a and 6.6b show that the United States and Japan are significant sources of FDI for both China and Latin America. It is interesting to complement the previous analysis of FDI inflows with an exploration of the evolution of FDI outflows

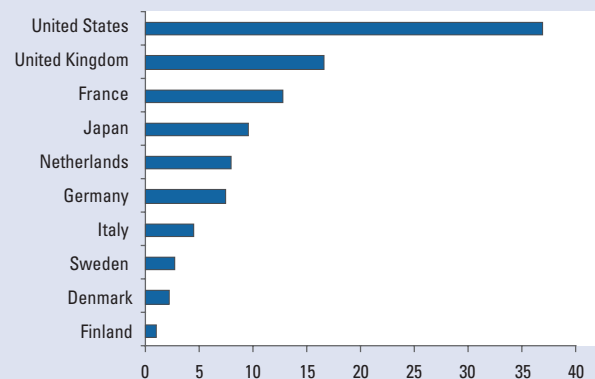
from these two countries. Figure 6.8 documents the evolution of FDI outflows from Japan to China and Latin America, while Figure 6.9 provides the same data for the United

FIGURE 6.6a Cumulative FDI Flows by Source to China as of 2000 (percent)



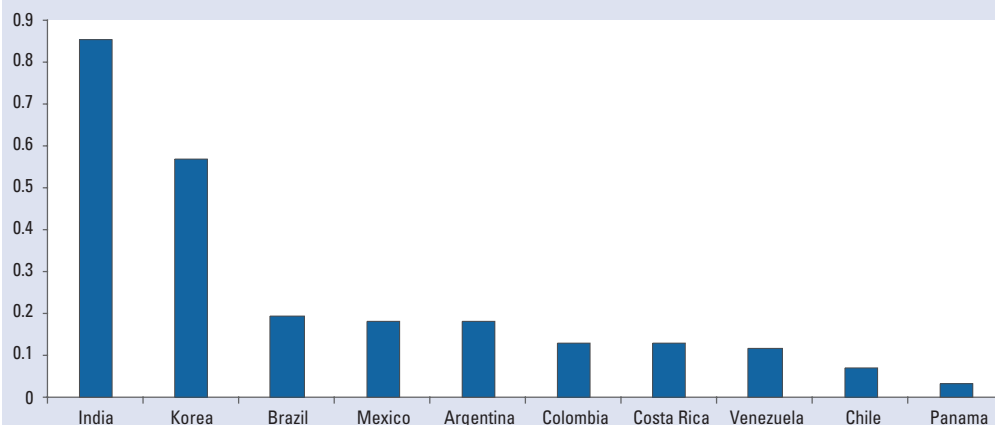
Source: National Bureau of Statistics of China (2003).

FIGURE 6.6b Cumulative FDI Flows by Source to Latin America, 1997–2001 (percent)



Source: OECD (2002).

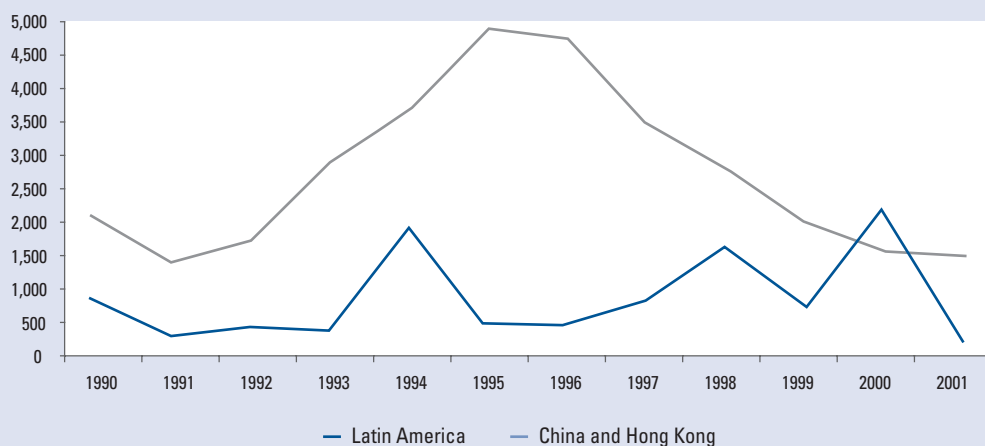
FIGURE 6.7 FDI Source Coincidence Index for China, 1997–2001



Source: OECD (2002).

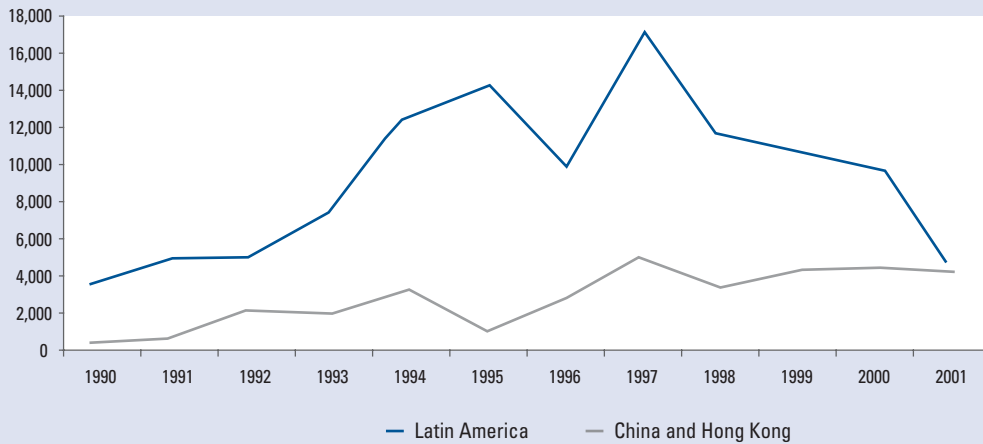
Note: FDI Source Coincidence Index between China and country $j = 1 - 0.5 * \sum |Share(i, Ch) - Share(i, j)|$, where $Share(i, Ch)$ and $Share(i, j)$ represent the share of total flows from source country i going into China and country j , respectively. Calculated from OECD FDI flows from source countries (i countries) to China and Latin American countries and the Republic of Korea (j countries).

FIGURE 6.8 Trends in Japanese FDI Flows to Latin America and China and Hong Kong, 1990–2001 (US\$ millions)



Source: OECD (2002).

States. The United States shows a clear upward trend in investment outflows to both destinations up to 1997. After that, flows to Latin America plunge from a peak of \$17 billion in 1997 to \$4 billion in 2001, while flows to China stagnate at about \$4 billion. The lack of reciprocal behavior suggests that China's rising importance has not been the

FIGURE 6.9**Trends in U.S. FDI Flows to Latin America and China and Hong Kong, 1990–2001**
(US\$ millions)

Source: OECD (2002).

trigger for the waxing or waning of U.S. FDI to Latin America. Other explanations are more plausible. First, the strong boom in investment in Latin America was partly due to large-scale privatization, which could not be sustained indefinitely. Second, the 1997 crisis in Asia and the 1998 crisis in Latin America negatively affected FDI flows to both regions. Latin America has faced greater difficulties than Asia in emerging from the crisis, causing further deterioration in its investment inflows. Finally, as mentioned earlier, China's anticyclical policies were able to sustain macroeconomic stability and growth throughout the Asian crisis and the world economic slowdown.

Claims that China has somehow been responsible for a decline in Japanese FDI flows to Latin America are equally unfounded. In fact, there seems to be a weak and volatile positive trend in flows to Latin America, while those to China exhibit a boom-bust cycle. The Asian crisis of 1997 is a likely factor in that cycle, and Chinese competition in fields in which Japanese products have traditionally been a leader, such as consumer electronics, may also play a role. In any event, the surprising finding is that Japanese FDI in China was at the same level in 2001 as in the early 1990s.

Sectoral Analysis

As the conceptual framework suggested, analysis of FDI country source coincidence can be complemented by examination of sectoral coincidence to see if the increase in China has occurred in the same sectors Latin America depends on for its flows. Unfortunately, sector-level data are not available for outflows from all OECD countries, so the analysis must be limited to those from the United States. As has been noted, however,

FIGURE 6.10 Composition of U.S. FDI Flows by Sector to Latin America and China, 1998–2003 (percent)

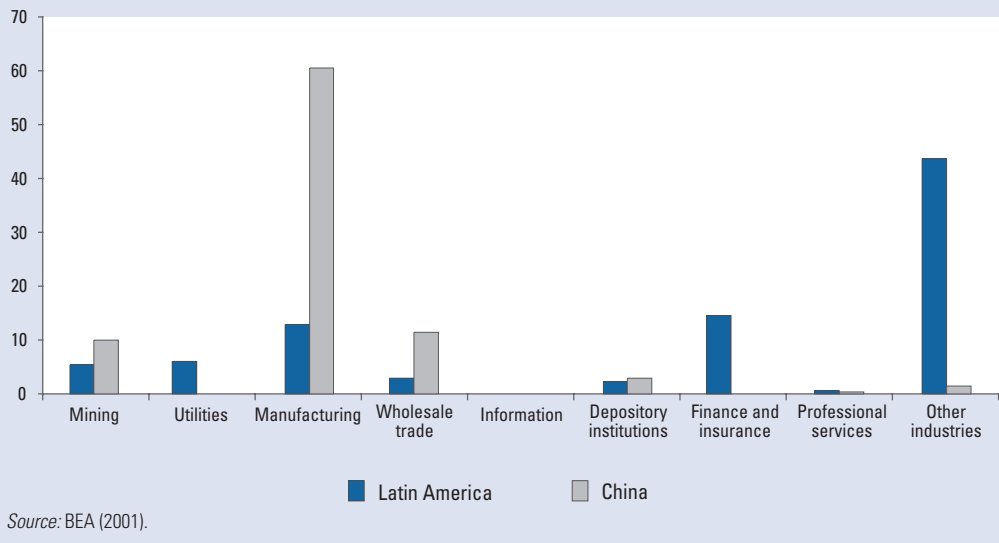
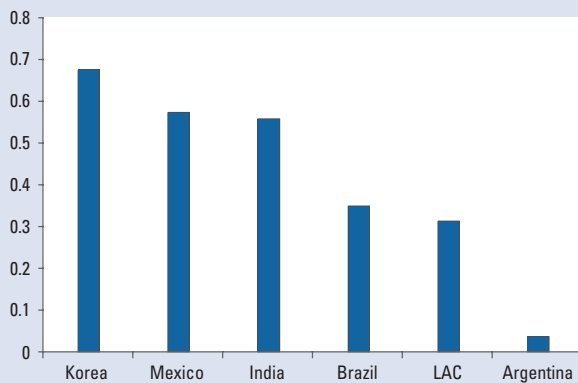


FIGURE 6.11 U.S. FDI Sector Coincidence Index



Source: BEA (2001).

Note: FDI Sector Coincidence Index between China and country $j = 1 - 0.5 \sum |Share(Ch, i) - Share(j, i)|$, where $Share(Ch, i)$ and $Share(j, i)$ represent the share of total FDI flows from the United States to China and country j , respectively, that go into sector i . Calculated from data for 2001 from the Bureau of Economic Analysis on U.S. FDI flows to host countries (j countries: India, the Republic of Korea, and Latin American countries).

the United States is the most important conduit for FDI to Latin America and the second-most-important source for China, so the analysis is pertinent.

Figure 6.10 shows the composition of FDI outflows from the United States to China and Latin America. Significant differences are evident, including the heavy concentration of FDI in China on manufacturing. Figure 6.11 shows the sector coincidence index for FDI flows between China and several Latin American countries, the Republic of Korea, and India (sectors are defined at the one-digit level

of the International Standard Industrial Classifications). The figure plainly reveals the low similarity in sectoral composition of U.S. FDI flows to China and Latin America, at least relative to that between China and the Republic of Korea or India. U.S. flows to

Asian countries are dominated by investment in manufacturing, while other sectors predominate in flows to Latin America. Unsurprisingly, the Latin American country exhibiting the greatest similarity is Mexico, where manufacturing receives a high share of the nation's inflows from the United States. At the other extreme, Argentina has very low similarity with China, mainly because most U.S. flows to Argentina are concentrated in "other industries," with virtually nothing in manufacturing.

Summing Up: Is China's Emergence a Storm Cloud or Not?

Generally speaking, then, the evidence suggests that the contraction of FDI inflows into Latin America and the Caribbean is not attributable to competition from China, but rather to internal causes, including the unsustainable nature of privatization-led inflows and a slow recovery from the 1998 crisis. Looking more closely, it appears that China's emergence is a gathering storm for some Latin American economies and a potential boon to others. Those countries that share sources of foreign investment with China or that receive FDI in similar sectors are more likely to feel the pinch, while others may actually gain.

Of all Latin American countries, Mexico is likely to be the most adversely affected. Between 2001 and 2003, Mexico's sales to the United States, its largest export market, fell by 5 percent, while U.S. imports from China increased by 35 percent. The sectors most affected by Chinese competition are textiles and apparel, electronics equipment, footwear, and leather. Given the link between trade and investment, Mexico has the highest FDI sector coincidence index with respect to China of any Latin American country. The evidence points toward direct competition with China for efficiency-seeking FDI. What should be done? Some argue that Mexico should shift gears and specialize in higher-value-added production, while others emphasize maximizing comparative advantages by reducing transport costs and boosting infrastructure efficiency to exploit proximity to the U.S. market.

Brazil does not appear to be a strong candidate for FDI diversion to China in the medium term, since most of its investment inflows target industrial inputs and service sectors competing in domestic and subregional markets. Trade competition appears to be relatively small, with only a few low-tech sectors such as textiles and footwear being affected. In the long term, however, some export-oriented industries may be vulnerable. For example, large investment inflows in the late 1990s have left the automotive sector with substantial overcapacity. Global investment in this sector could bypass Brazil for more-lucrative destinations like China where demand is growing. To prepare for the longer-term challenge Brazil will need to focus on sound macroeconomic policy to hone the competitiveness of affected sectors.

In Central America and the Caribbean, some countries face growing trade and investment competition from China. Those most affected will be the ones specializing in unskilled-labor-intensive industries such as apparel and textiles. The main factor stoking increased competition is the lower cost of labor for production in China.

Other countries either remain unaffected or may even reap new opportunities. Chile, for instance, suffers little trade competition from China's increased role in the global economy. The two countries' export structures are strikingly different: the former specializes in fruits, fish, wood, copper, chemicals, and beverages, and the latter focuses on apparel, leather, footwear, plastics, toys, furniture, and machinery. Hence it is no surprise that investment inflows into Chile do not target the same sectors as those into China, thereby lessening the possibility of FDI diversion. In fact, Chile could benefit from China's emergence by becoming a destination for Chinese natural-resource-seeking investments, particularly in the mining sector.

Argentina also faces little, if any, trade and investment diversion to China. Foreign investment flows to the two countries do not come from the same sources or target the same sectors. Bilateral trade has also grown significantly during the past 20 years, led by Argentine exports of soybeans, soybean oil, and grains. As with Chile, Argentina could see increased inflows of capital from Chinese firms. Food and energy industries are the most likely beneficiaries from China's ongoing search for natural resources to satisfy its rising domestic consumption. Closer ties could have some potential drawbacks, however, such as vulnerability from exposure to China's (and the world's) economic cycles and volatility from increased specialization in the commodities trade. Box 6.1 profiles the nascent FDI flow from China into Latin America, which by 2001 had financed more than 300 enterprises with investments in excess of \$1 billion.

Can Costa Rica Keep Its Export-Processing Zones from Unraveling?

If Box 6.1 calls attention to the little-noticed potential for future investments by China in Latin America, this section looks at a sector in Central America facing the stress of increased competition. It summarizes a recent survey concerning how foreign firms in Costa Rica are faring using the system of export-processing zones (EPZs) that has taken root there in the past two decades. Despite the country's success in attracting foreign investment, questions about the future are rampant. Are the multinationals located there planning to move their operations to China? What differential characteristics identify firms most likely to move? One might assume, for example, that unskilled-labor-intensive firms (such as those in apparel *maquila* operations) and firms relying on intermediate goods from Asia would be likely candidates. The survey also opens a window onto the wider question of what factors determine where FDI goes. Does geography, for instance, shield Latin America from Chinese competition? The survey's main findings shed tentative light on these and other subjects.⁶

⁶ A cautionary note should be sounded in drawing conclusions from these survey data. First, the sample is small: out of an already-small population of 100 foreign firms in Costa Rica's EPZ system, only 41 were effectively sampled (although they were statistically chosen to be repre-

BOX 6.1

Chinese Foreign Direct Investment in Latin America

Although China is an important destination for FDI, its role as an investment source is still developing. China's FDI outward stock of \$35 billion (0.5 percent of global outward FDI stock in 2002) is invested predominantly in Hong Kong and the United States. In recent years, Chinese investment has sought comparative advantages in other markets to fill the gap between domestic consumption and production of natural resources. Chinese FDI to build export platforms for securing natural resource supplies has begun to target Latin America and offers the greatest potential for future inflows.

China's investments in Latin America are being driven by enterprises (conglomerates of firms operating in different economic sectors; their organization and role is similar to that of the Japanese *keiretsu*) originally established to compete with large multinational firms at home and abroad. Enterprises have concentrated their overseas investments in sectors related to the extraction and processing of natural resources, but have also invested in manufactures assembly, telecommunications, and textiles. The most important destinations for Chinese outflows to Latin America are Brazil, Mexico, Chile, Argentina, Peru, and Venezuela.

China's relations with *Brazil* are the most extensive, with large bilateral trade flows and well-established levels of cooperation. At year end 2002, Chinese investment in Brazil stood at \$75 million and was directed at wood processing, minerals, textiles, telecommunications, and the manufacture of bicycles and tractors. In the past 20 years, more than 50 firms have been established in Brazil with Chinese capital. The largest enterprises include Huawei Technologies, suppliers of telecommunications equipment; Shangdong Electric Power Group, producers of thermoelectric generation in Rio Grande do Sul; and Shangai Baosteel Group, a joint venture with Companhia Vale do Rio Doce to mine iron ore.

Mexico is China's second-largest commercial partner in the region and also an important destination for foreign investment. According to official sources, China's FDI stock in Mexico was \$110 million in 2002. Of the 3,000 foreign-owned firms registered in Mexico, about 1 percent have Chinese capital. These firms are mainly in the tradable sector and are located in Mexico City, Baja California, Mexico State, and Jalisco.

China's relations with *Chile* have strengthened in recent years as bilateral trade and investment have grown. In 2002, 19 Chinese-financed enterprises were registered in Chile. Most of this investment was in trading companies like CITICFOR Chile S.A. and Intershang SMIEC S.A. The increased importance of the mining sector, particularly that for copper, has led to creation of the Chile-China Mining Commission. The commission will facilitate dialogue and exchange to promote increased cooperation and investment in Chile's mining sector.

In 2002, some 28 Chinese enterprises were registered in *Argentina*. Chinese enterprises are invested in a number of sectors, including fishing, agriculture, natural resources, chemicals, assembly, electronics, and telecommunications. Two prominent examples are the Jincheng Group, which assembles motorcycles through the joint venture Jinarg, and Huawei Technologies, a supplier of telecommunications equipment in Argentina as in Brazil. Beef is a potential sector for future investment. Argentina's recertification as a cattle producer free of bovine spongiform encephalopathy (BSE) could spark renewed growth in exports of fresh meat and attract new investment to the sector.

Chinese investment in *Peru* and *Venezuela* is concentrated in the petroleum and mining sectors. In the 1990s, China National Petroleum Corporation gained rights to explore petroleum fields in Peru and Venezuela with investments of \$65 million and \$360 million, respectively. Mining operations include a Chinese enterprise investing \$120 million in Hierro Perú to extract iron ore, while China National Petroleum Corporation has invested in Venezuelan production and transportation of iron ore, expecting to boost iron sales to China 10-fold by 2006.

Despite the geographical and cultural divide between the two regions, enterprises based in China have found Latin America to be a promising site for natural resources and production advantages. The trend shows no signs of abating.

Source: Oliva (2003).

First, the United States is by far the main source of FDI. Of the 41 firms surveyed, 32 have 100 percent U.S. financing and 29 have headquarters in the United States. Only two firms are capitalized from Asia (Singapore and Japan), and only three are headquartered there (the Philippines, the Republic of Korea, and Japan).

Second, very few firms (six) export a significant share of their production to Asia, but several rely significantly on intermediate goods imported from there (seven directly from China and nine from some other Asian country).⁷ This suggests that while Costa Rica has a geographic advantage over China in being closer to main consumer markets, China has a geographic advantage over Costa Rica in being closer to the countries that are competitively producing intermediate goods. This is often overlooked in arguments that Latin American countries' proximity confers an advantage over China in manufacturing oriented to the U.S. market.

Third, when asked whether they had subsidiaries in other countries, 11 of the 41 multinational firms surveyed answered that they had a subsidiary in China. Thus China is a viable production option for multinationals invested in Costa Rica, suggesting that FDI competition with China might indeed be important. This is confirmed by responses to an open question about which countries offer the best investment conditions, with China being cited most often: 19 of 146 mentions (each firm was permitted up to five choices).

Survey Results

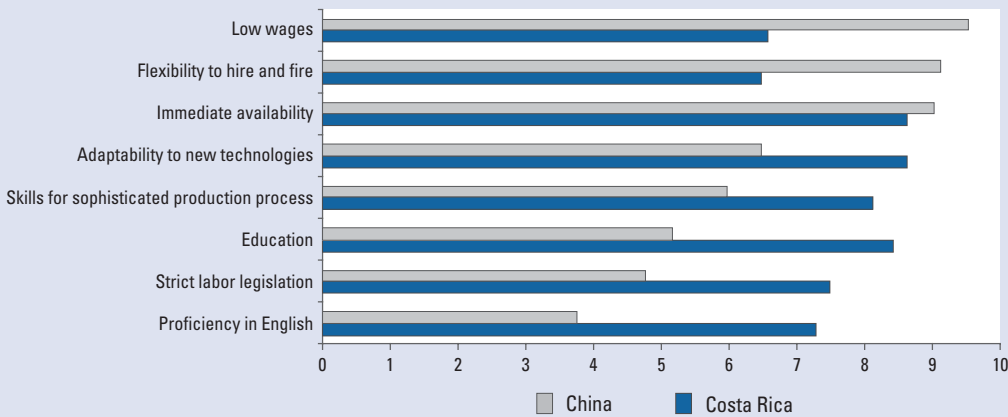
The survey probed directly and indirectly to ascertain the degree of FDI competition between Costa Rica and China. The most revealing question was whether firms planned to expand, contract, or move their Costa Rican operation to another country. Some 22 firms said that they planned to expand; 14 said they would retain their current level of operations; and 3 said that they would contract. More importantly, 2 said they would move their operations to another country, and both were moving to China. When asked to explain why, the companies cited lower labor costs; one also mentioned higher labor productivity, while the other cited better access to intermediate goods.

The rest of the survey suggests that the low cost of labor is, by far, China's main competitive advantage over Costa Rica. The latter outperforms China on issues related to labor quality, such as skills, adaptability, and culture. Figure 6.12 shows the firms'

sentative). More importantly, most firms came to Costa Rica after China was already an option. Hence they are in a sense preselected by having already chosen where to operate, and therefore are likely to attach greater importance to aspects of Costa Rica thought to be stronger than China's. They are also likely to rank Costa Rica above China in many factors crucial to FDI decision making.

⁷ Lall and Albaladejo (2003) see China as a low-cost labor platform in which high-technology and high-productivity inputs are imported and later assembled for reexport to the rest of the world. As a result, China acts as "an engine of export growth for its neighbors in terms of direct trade."

FIGURE 6.12 Evaluation of Labor Variables in Costa Rica versus China
(rank 1–10)

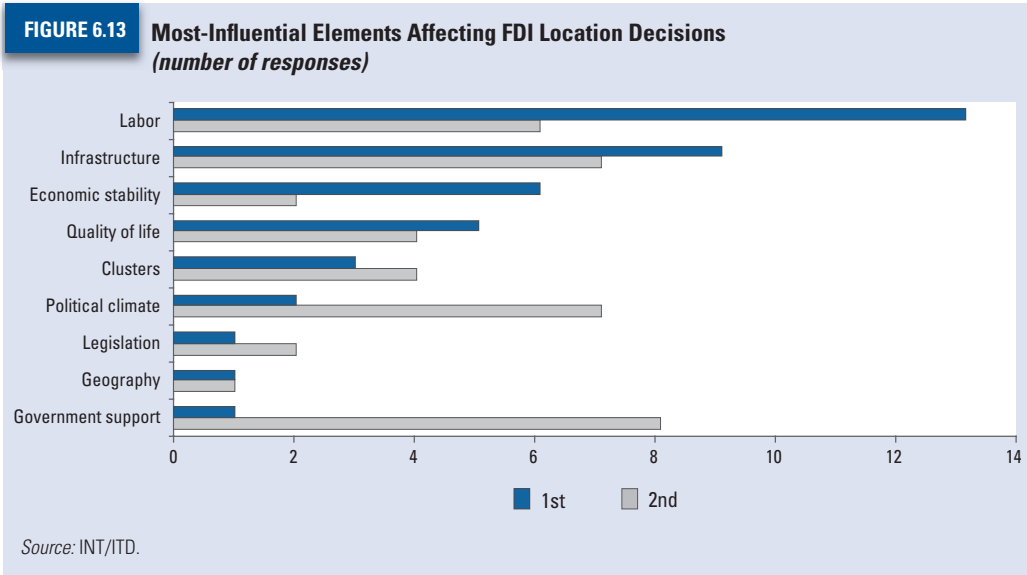


Source: INT/ITD.

assessment of different dimensions of labor conditions in China versus Costa Rica. Costa Rica scores significantly better than China on matters related to “labor quality,” whereas China scores better on labor cost and the flexibility to hire and fire staff. Issues associated with labor costs and quality are particularly important in light of another finding: these are the most important elements in decisions about where to invest abroad.

The unsurprising finding that firms regard China’s labor costs as significantly lower than Costa Rica’s, and believe that skills are relatively more abundant in Costa Rica than China, suggests that (just as with trade) FDI competition from China is likely to be much stronger for unskilled-labor-intensive industries than for other types. Indeed, the two firms in the survey that were planning to transfer their operations to China are relatively intensive in unskilled labor (the proportion of skilled workers in these two firms is 4.4 percent and 10.7 percent, compared to an average of 24.2 percent for the whole sample). Both firms mentioned up front that China’s main advantage over Costa Rica is the significantly lower cost of labor. Both are *maquila* operations (one in garments and the other in electronic components), and both rely heavily on intermediate goods imported from Asia.

Of course, several other dimensions affect firms’ decisions about where to invest. Figure 6.13 shows the number of times that each of several different issues was listed by the firms surveyed as the most important or second-most-important element in determining FDI location. Infrastructure is the most important after labor, while issues such as economic stability, quality of life, clusters, political climate, and government support seem to matter less. As with labor, the survey asked firms to assess China versus Costa Rica on each of these dimensions. In summary, China does better than Costa Rica in infrastructure and clusters, and Costa Rica does better in quality of life, legisla-



tion, political stability, and geography. Clearly, each country has its strengths, and the average assessment of the two countries across all these dimensions is very similar.

The finding that China does better than Costa Rica in infrastructure and production clusters merits further discussion. According to the survey, China dominates all the infrastructure variables, including quality and price of electricity and telecommunications, roads, ports, and airports.⁸ This finding suggests that Costa Rica’s theoretical advantage of proximity to the United States (see the discussion in Chapter 4 about whether this geographic advantage is illusory) is not fully realized because of the inadequacy of its transportation infrastructure, particularly in regard to ports. The implication is that Costa Rica (and probably the rest of Latin America) should strive to improve its ports and export-related transport systems.

With respect to clusters, firms were asked to evaluate both countries in terms of two categories: the presence of companies in the same and related sectors, and the local availability of intermediate goods and services. China does better than Costa Rica in both categories, but the perceived superiority is much stronger for the second category. This confirms the previous finding that China benefits from its location in a region with an abundant production of intermediate goods for manufacturing.

These findings have broader implications. In particular, they suggest that Costa Rica has less to fear from China than other Central American and Caribbean countries whose exports and FDI inflows are concentrated in sectors that rely intensively on unskilled labor. FDI and export competition from China might be expected to be

⁸ This is consistent with other indicators showing that China does better than Costa Rica in terms of overall infrastructure, as well as the cost of electricity and the quality of ports (WEF, 2004).

TABLE 6.1

FDI from Source Countries to El Salvador, Honduras, and Nicaragua

Source/ host	El Salvador		Honduras		Nicaragua	
	Number of firms	Percentage of total	Number of firms	Percentage of total	Number of firms	Percentage of total
United States	46	13	96	51	10	33
Korea, Rep. of	25	7	22	12	0	0
Taiwan	20	6	6	3	6	20
Hong Kong	0	0	6	3	0	0
Rest of Asia	0	0	8	4	0	0
El Salvador	223	63	0	0	0	0
Guatemala	4	1	0	0	0	0
Honduras	0	0	32	17	0	0
Nicaragua	0	0	0	0	5	17
Others	37	10	17	9	9	30
Total	355	100	187	100	30	100

Source: Jenkins, Larraín, and Esquivel (2001).

particularly strong in regard to *maquila* operations relying on cheap labor, such as clothing and apparel production. As the following chapter explains in more detail, the elimination of the remaining quotas affecting China's garment exports to the United States is likely to ratchet up this competition severely. One likely result, for example, is withdrawal of support from Taiwan and the Republic of Korea for apparel and clothing operations in the region to bypass such quotas. Table 6.1 shows the percentage of Asian firms belonging to EPZs in El Salvador, Honduras, and Nicaragua.

More promisingly, most FDI in the region's *maquila* operations comes from the United States, which implies that the intermediate goods also come from there. As the survey reveals, the upshot is that Central America's (and Mexico's) geographic advantage over China in attracting this type of FDI is much more important. The problem with this argument, however, is that it fails to take into account (as discussed above) that FDI competition may also stem indirectly from trade competition, which is likely to be very intense in unskilled-labor-intensive manufacturing sectors. In other words, although U.S. *maquila* FDI should not be expected to move from the Caribbean Basin (and Mexico) to China, this kind of FDI is likely to be supplanted by the strong expansion of Chinese exports to the United States in low-wage sectors.

This page intentionally left blank

References

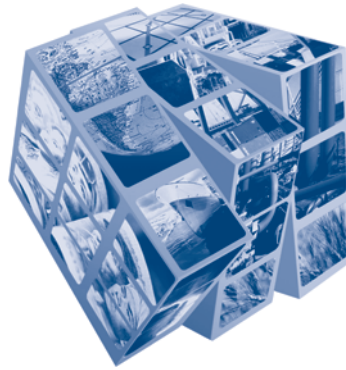
- Blázquez-Lidoy, J., J. Rodríguez, and J. Santiso. 2004. "Angel or Devil? Chinese Trade Impact on Latin American Emerging Markets." Working paper, Banco Bilbao Vizcaya Argentina (BBVA), Buenos Aires (June).
- BEA (Bureau of Economic Analysis). 2001. "U.S. Direct Investment Abroad: Financial and Operating Data for U.S. Multinational Companies. Majority-Owned Foreign Affiliates, Capital Expenditures by Country and Industry 1999–2001." International Economic Accounts database. Available at <http://www.bea.doc.gov/bea/di/di1usdop.htm>.
- . 2003. "U.S. Direct Investment Abroad: Balance of Payments and Direct Investment Position Data. Capital Flows—Detailed Annual Country by Industry Tables: Total Capital 1998–2003." International Economic Accounts database. Available at <http://www.bea.doc.gov/bea/di/di1usdbal.htm>.
- ECLAC (United Nations Economic Commission for Latin America and the Caribbean). 2004. *Foreign Investment in Latin America and the Caribbean: 2003 Report*. Santiago, Chile: ECLAC.
- IMF (International Monetary Fund). 2003. *World Economic Outlook*. Washington, D.C.: International Monetary Fund.
- Jenkins, M., F. Larraín, and G. Esquivel. 2001. "Export Processing Zones in Central America." In *Growth and Internationalization*, Vol. 1 of *Economic Development in Central America*, ed. F. Larraín. Cambridge, Massachusetts: John F. Kennedy School of Government, Harvard University.
- Kearney, A. T. 2003. "Foreign Direct Investment Confidence Index." In *The Global Business Policy Council*, Volume 6.
- Lall, S., and M. Albaladejo. 2003. "China's Competitive Performance: A Threat to East Asian Manufactured Exports." Working Paper No. QEHWPS110, Queen Elizabeth House, Oxford University, Oxford, U.K. (October).
- Ministry of Commerce of the People's Republic of China. 2003. *Yearbook of China's Foreign Economic Relations and Trade*. Available at <http://english.mofcom.gov.cn>.
- National Bureau of Statistics of China. 2003. *China Statistical Yearbook*. 2003. Beijing: China Statistical Press, National Bureau of Statistics of China.
- OECD (Organisation for Economic Co-operation and Development). 2002. *Foreign Direct Investment in China: Challenges and Prospects for Regional Development*. China in the Global Economy Series. Paris: OECD.
- . 2003. *China: Progress and Reform Challenges*. OECD Investment Policy Reviews. Paris: OECD.

- Oliva, C. 2003. "Inversiones en América Latina: La inserción regional de los grupos económicos Chinos." Photocopy, Buenos Aires.
- UNCTAD (United Nations Conference on Trade and Development). 2002. *World Investment Report 2002: Transnational Corporations and Export Competitiveness*. Geneva: UNCTAD.
- . 2003. *World Investment Report 2003: FDI Policies for Development—National and International Perspectives*. Geneva: UNCTAD.
- . 2004a. "New Take-Off Predicted for FDI." Press Release No. UNCTAD/PRESS/PR/2004/005, UNCTAD, Geneva (April 14). Available at <http://www.unctad.org/Templates/Page.asp?intItemID=1528&lang=1>.
- . 2004b. "World's Largest TNCs Opt for Expansionary Strategies." Press Release No. UNCTAD/PRESS/PR/2004/012, UNCTAD, Geneva (June 3). Available at <http://www.unctad.org/Templates/Page.asp?intItemID=1528&lang=1>.
- WEF (World Economic Forum). 2004. *Global Competitiveness Report, 2003–2004*. New York: Oxford University Press.

IDB Background Reports

- Lora, E. 2004. "Should Latin America Fear China?" Research Department, Inter-American Development Bank, Washington, D.C.
- Monge, R., V. Lentini, and J. Hewitt. 2004. "Percepción e imagen de las empresas multinacionales establecidas en Costa Rica, respecto a China como país competidor en atraer IED." PowerPoint presentation at Comisión Asesora en Alta Tecnología (CAATEC) for Research Department, Inter-American Development Bank, Washington, D.C.
- Stein, E. 2004. "The Surge of FDI to China: Should Latin America Be Concerned?" PowerPoint presentation, Research Department, Inter-American Development Bank, Washington, D.C.

THE CASE OF TEXTILES AND APPAREL

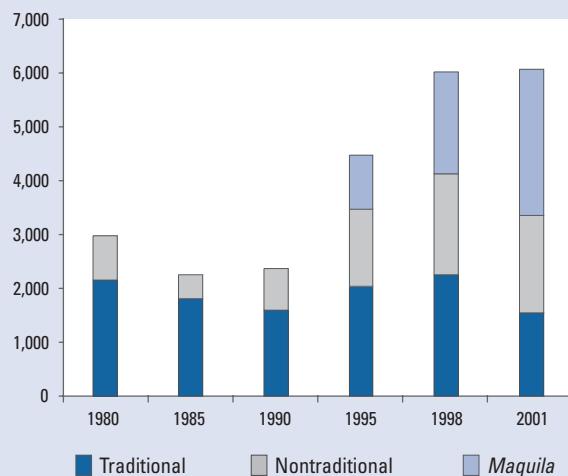


This page intentionally left blank

China and the Future of Latin America's Textile Sector

One of the most salient Latin American economic successes during the past two decades has been the rise of the textiles and apparel sector. From 1989 to 2002, Latin America's textiles and apparel exports to the United States mushroomed by a factor of 6.6, raising the region's share of U.S. imports from 11 percent to 27 percent (OTEXA, 2004).¹ This success is key for Mexico, Central America, and some countries in the Caribbean (especially the Dominican Republic). In Central America, for example, the sector was the engine driving most of the growth in manufactured-goods exports and most of the manufacturing jobs created since the mid-1980s, when the region began replacing import-substitution regimes with export promotion. As Figure 7.1 demonstrates, the growth of nontraditional exports (including *maquila*) accounts for almost all export expansion in these countries, and *maquilas* account for a large and increasing share of that gain.² By 2001, some Central Ameri-

FIGURE 7.1 Central American Exports, 1980–2001
(US\$ millions)



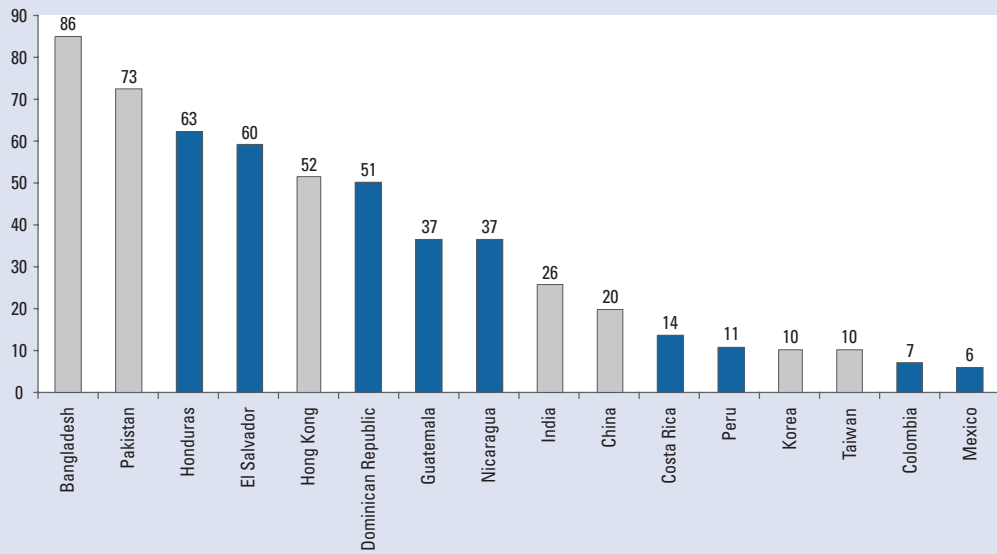
Source: ECLAC (2003).

Note: Includes data only for El Salvador, Guatemala, and Honduras.

¹ The latest databases can be accessed at <http://otexa.ita.doc.gov>.

² Because of data unavailability, Figure 7.1 includes only a group of Central American countries: El Salvador, Guatemala, and Honduras. Data were unavailable for Nicaragua; and Costa Rica is

FIGURE 7.2 Textiles and Apparel Share of Countries' Total Merchandise Exports, 2001 (percent)



Source: USITC (2004).

can countries and the Dominican Republic were among those national economies with the highest export concentrations in textiles and apparel (see Figure 7.2).

The textiles and apparel industry accounts for a significant share of total manufacturing employment (see Figure 7.3) and has generated around 1.3 million jobs in Mexico and the Caribbean Basin countries (see Figure 7.4). Contrary to popular opinion, moreover, the jobs created in this sector are mostly “good,” in the sense that they are in the formal economy, provide social security benefits, pay above the minimum wage, and so on (De Ferranti et al., 2002).

Unfortunately, the growth of the textile sector is less the inevitable outcome of an emerging comparative advantage within the region than an outgrowth of preferential U.S. trade policies.³ Indeed the United States, facing strong competition from low-cost Asian producers, enacted a series of trade preferences for Mexico and countries in the Caribbean Basin Initiative to complement U.S. industry and help make it more competitive. Production costs could be cut by allowing U.S. firms to shift labor-intensive

excluded because, unlike in the rest of the Central American region, maquiladoras there are primarily tied not to clothing manufacture but to microelectronics (mainly an Intel plant).

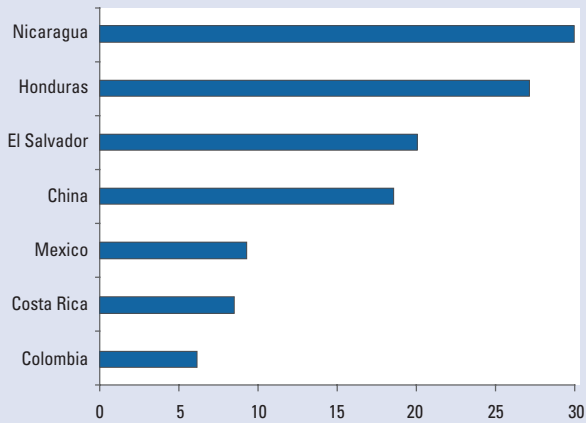
³ The “textile sector” is really the “textiles and apparel sector,” which includes the manufacture of made-up textile goods, goods from knitting mills, carpets and rugs, cordage, and rope and twine, as well as the manufacture of clothing. See Box 7.1 for a detailed description.

parts of their supply chain into nearby countries with low wage scales, while retaining the more capital-intensive processes such as the production of yarn and fabric in the United States. A *maquila* system soon emerged in the region in which parts or intermediate goods are shipped in from the United States for basic assembly operations (such as cutting and sewing cloth spun in U.S. mills) and the final product exported back to the U.S. market under tariff and quota preferences. Most of the textile industry that has emerged in Mexico and the CBI countries therefore should be seen as part of a regional cluster in which the most capital- and skill-intensive processes remain in the United States while those requiring unskilled labor are relocated to its southern neighbors. Proof that the textile industry in Mexico and the CBI region is part of such a North American cluster is evident in the fact that almost all regional exports in this sector go to the U.S. market (Figure 7.5).⁴

The *maquila* system has been of tremendous benefit to the Latin American countries involved, generating exports

FIGURE 7.3

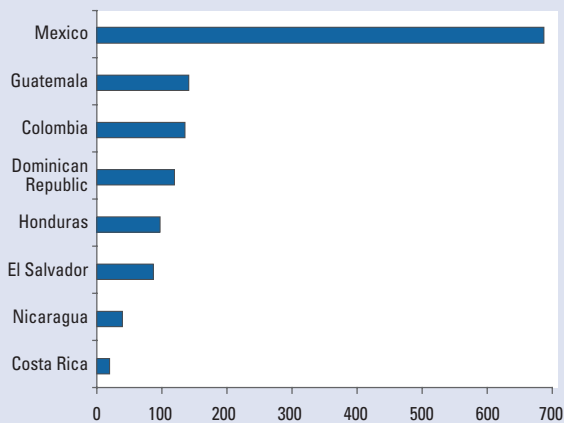
Textiles and Apparel Employment Share of Total Manufacturing Employment in China and Six Latin American Countries, 2003 (percent)



Source: INT/ITD.

FIGURE 7.4

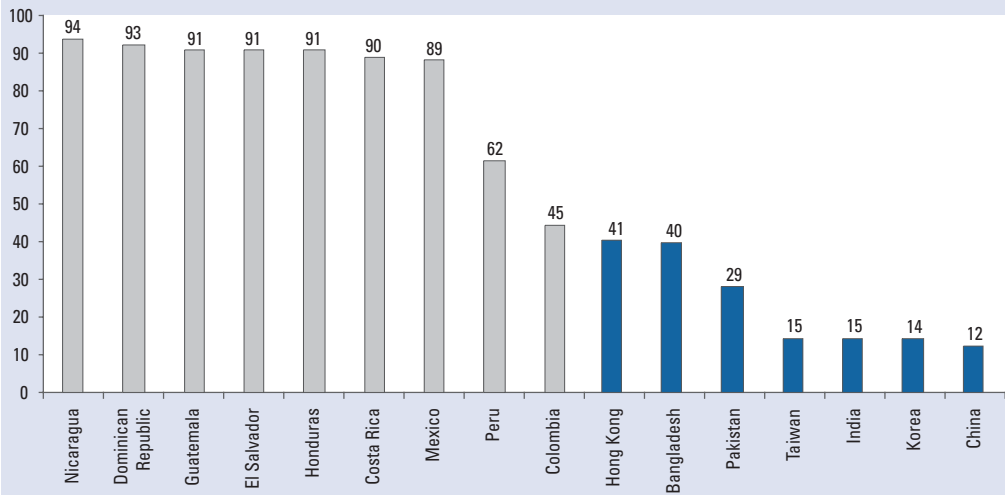
Textiles and Apparel Employment in Eight Latin American Countries, 2003 (thousands)



Source: INT/ITD.

⁴ Something similar happens in Europe, where tariff preferences have led countries such as Romania and Morocco to direct most of their exports to the European Union (Kyvik Nordas, 2004).

FIGURE 7.5 Shares of Textiles and Apparel Exports to the United States, 2001
(percent)



Source: OTEXA (2004).

and good jobs as previously noted. It has probably also dampened immigration to the United States, one of the program’s implicit goals.

There are some disadvantages as well. One in particular was built into the fundamental arrangement and remained invisible so long as the rules governing international trade remained unchanged. The region’s textile sector emerged under the umbrella of U.S. protection from low-cost Asian producers. If the United States exposes its domestic industry to more open competition, the Latin American countries tied to that industry will incur some of the adjustment costs and risks. This is happening now as part of the Uruguay Round of the General Agreement on Tariffs and Trade. Under the Agreement on Textiles and Clothing, the United States is eliminating quotas by scrapping the Multifiber Agreement (MFA), which severely limited and channeled apparel imports for decades. The effects of this earthquake are being felt throughout the regional cluster.

Most countries in the cluster have suffered significant job losses. In just four years, from 1998 to 2002, U.S. textile industry payrolls shrank by more than a third, with the industry losing 434,000 jobs (Kyvik Nordas, 2004). Mexico lost 36,780 of its 700,000 textiles and apparel jobs in 2003 alone (*El Universal* [Mexico], November 8, 2003).⁵ Over a longer horizon, the textile industry in Mexico has lost 187,000 jobs since January 2001, when the industry reached its employment peak (*El Universal* [Mexico],

⁵ Statements from Rosendo Vallés, Chairman of the Cámara Nacional de la Industria Textil (Canaintex).

December 18, 2003).⁶ In El Salvador, exports dropped by an estimated 5.2 percent during the first half of 2004, and about 7,000 jobs went with them.⁷

Surely part of this decline stems from the fall in U.S. growth rates following the events of 2001, but structural changes as a result of rising competition from China and other Asian countries may also be in play.⁸ To appreciate the intensity of this competition and the effects of trade liberalization, one merely needs to consider what happened when the United States eliminated quotas on imports of 29 categories of apparel in 2002. Two years later, China's share of the U.S. market in these categories had burgeoned from 9 percent to 65 percent, while prices had dropped by 48 percent (*El Universal* [Mexico], July 21, 2004). Observers were alarmed that this was a harbinger of much greater changes in the offing come January 2005, when all remaining quotas would be eliminated.

The increasing penetration of Chinese apparel exports in world markets also will affect other countries in the hemisphere beyond the Caribbean production cluster. Colombia and Peru, for instance, are concerned about increased competition once the remaining quotas are removed. Yet there are several reasons to believe that these countries are unlikely to be as strongly affected as Mexico and the nations in the Caribbean Basin Initiative. First, both Colombia and Peru specialize in high-value-added goods such as cotton knit tops, tailored clothing, and fashion apparel. Second, at least in Colombia, the sector is more vertically integrated and has developed independently from U.S. tariff preferences.⁹ "Full-package" production is already prevalent in Colombia, accounting for more than half of exports.¹⁰ Third, in line with the previous point, both Colombian and Peruvian textiles and apparel exports are significantly less concentrated in the U.S. market and account for a smaller share of total exports than in the Caribbean countries (see Figure 7.5). Hence the rest of this chapter focuses on

⁶ Statements by Salomón Presburger, Chairman of the Cámara Nacional de la Industria del Vestido (Canainvest).

⁷ According to Francisco Escobar Thompson, Chairman of the Asociación Salvadoreña de la Industria de la Confección (ASIC).

⁸ The *maquila* industry in general experienced renewed growth in 2004, thanks to the recovery of the U.S. economy. Growth is concentrated in electronics and automotive parts; the textiles and apparel maquiladoras continue to shrink (see Global Insight Inc., 2004).

⁹ Circumstances have changed recently. Since 2002, the Andean Trade Promotion and Drug Eradication Act (ATPDEA) has allowed Colombia and Peru to take advantage of U.S. tariff preferences. Colombia applies ATPDEA tariff preferences to nearly 40 percent of its textile exports to the United States, while the figure is 80 percent for Peru.

¹⁰ A full-package supplier's responsibilities vary across firms and countries. They range from purchasing the fabric and trim and pattern making to full production and packaging for retail sale. Generally, full-package programs in the CBI region refer to services ranging from procurement of the materials to cutting and sewing, and to finishing and packaging of the final product. In the Far East, full-package services may include product development, fabric sourcing, garment sewing, packaging, quality control, trade financing, and logistic arrangements.

Mexico, Central America, and the Dominican Republic, a group of countries that will be referred to as “the region.”

The Textile Sector in Mexico and the Caribbean Basin

As mentioned above, the textile industry is a prime exporter and job creator in the region. In 2003, textiles and apparel exports from Mexico, Central America, and the Dominican Republic were worth \$7,941 million, \$7,116 million, and \$2,128 million, respectively. Together, these countries accounted for 22.2 percent of U.S. textiles and apparel imports. According to the latest figures, the textile industry comprises 14,000 firms in Mexico (79 percent apparel, 15 percent textile, 6 percent *maquilas*). In the Dominican Republic, the second-largest U.S. apparel supplier in the Western Hemisphere after Mexico, 50 free trade zones located throughout the country are home to more than 500 firms, half of which are in textiles and apparel. The five Central American countries of Costa Rica, El Salvador, Guatemala, Honduras, and Nicaragua together have 963 firms (652 in apparel, 61 in textiles, and 250 in accessories), mostly located in 85 industrial parks with duty-free and other tax preferences.¹¹

The region’s textile industry developed under the incentives of the *maquila* program, a child of the late 1950s, when the United States responded to competition from low-wage countries by allowing some reallocation of the most labor-intensive stages of apparel production to Mexico. The *maquila* was facilitated by a U.S. import scheme that charged tariffs only on the value added to manufacturing goods assembled in designated low-wage labor countries (production-sharing agreement 806.30 was established in 1956, and agreement 807.00 in 1963).¹² Initially, the system was limited to Mexico, but then it was broadened to include the other countries in the region. The first *maquila* operations entailed only the sewing of fabrics precut into garment parts in the United States. As experience, confidence, and skills developed on both sides of the system, cutting operations were also included. This required additional capital and skill intensity, but *maquiladoras* essentially remained contractors of basic labor-intensive tasks that did not extend to the more sophisticated work of design, procurement, or distribution.¹³ Evolution of the industry toward more-complex op-

¹¹ Information from OTEXA (2004) for U.S. textile imports and from INCAE (2003).

¹² ILO (1997), chapter II.1.4. Agreements 806 and 807 were renamed 9802.00.60 and 9802.00.80 under the Harmonized System in 1989.

¹³ *Maquila* operations received further incentives in the 1980s through export promotion laws in most countries of the region. These laws encouraged establishment and development of the textile industry through tax exemptions on imported raw materials using drawback regimes, as well as setting up an even more generous export-processing zone system to extend tax exceptions to imports of machinery and equipment and to corporate profits for firms established in specifically designated industrial parks.

erations remained constrained by the nature of the tariff preferences and continued for Mexico only with enactment of NAFTA and for the Central American and Caribbean countries only via the Caribbean Basin Trade Partnership Act (CBTPA). These U.S. concessions opened the way for firms in the region to upgrade their production: they began to engage in sourcing of some basic inputs or even “full-package” operations, in which the manufacturer receives detailed specifications from the buyer and is responsible for acquiring inputs and coordinating all parts of the production process. Miniclusters are developing in which manufacturers contract detailed specifications with buyers and then are responsible for acquiring inputs and coordinating all parts of the production process.

Thanks to NAFTA, Mexico gained duty-free access to the U.S. market in most textiles and apparel categories previously walled off by the *maquila* system. NAFTA imposed strict rules of origin, but the definition widened so that all exports would qualify for duty-free access as long as the yarn was produced somewhere in North America, and not necessarily the United States specifically. As a result, the textile sector in Mexico has evolved into a more complex and integrated production chain. A full-package production process has not developed as thoroughly as expected, however (USITC, 2004, Chapter 3).

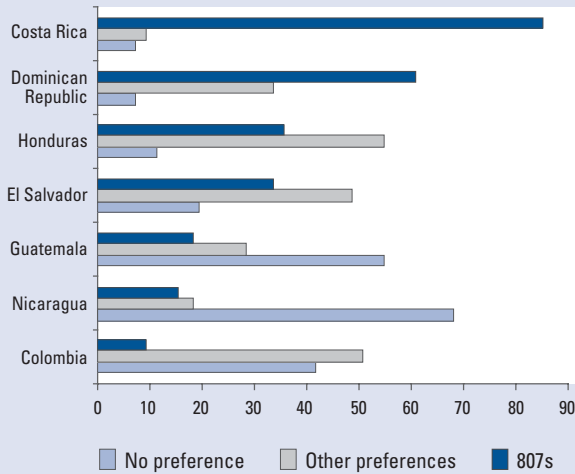
Confronted with deteriorating conditions compared to Mexico, the Central American and Caribbean countries lobbied effectively to extend favorable provisions to the CBI that would secure “NAFTA parity.” This led to the CBTPA, which extended preferences to CBI textiles and apparel under rules of origin similar to those granted to Mexico. In particular, regional fabrics could now be used so long as they were made from U.S. yarns or fibers. The result was not only an increase in export value added, but greater sophistication in the production process. Some 168 firms in Central America are already working under full-package schemes.¹⁴

This general description of how the industry structure has evolved in the region masks significant differences across countries, however. Countries such as Costa Rica and the Dominican Republic remain heavily concentrated in *maquila* operations under agreement 807 preferences, while others, such as Honduras and El Salvador, rely more on CBTPA preferences. And Guatemala and Nicaragua, as Figure 7.6 shows, enjoy no preferences for most of their exports. This reflects the heavy Asian presence in these countries: in Guatemala 66 percent of the textile firms (273) are Asian, while 65 percent (24 firms) in Nicaragua are. The main purpose of such Asian investment has been to circumvent U.S. quotas rather than to take advantage of U.S. preferences, something that would restrict their operations and sourcing practices.

In sum, the industry has been evolving toward more-complex and vertically integrated processes, but most firms and countries still concentrate on simple *maquila*-type operations that depend heavily on U.S. preferences. The next section considers how the industry might evolve in coming years when the effect of these preferences weak-

¹⁴ Based on USITC (2004) and INCAE (2003).

FIGURE 7.6 Latin American Countries' Preference-Applied Textile Exports to the United States, 2003 (percentage of square meters equivalent)



Source: INT/ITD.

ens with the elimination of quotas that were part of the MFA system.

The China Challenge

China has led the increase in U.S. textile imports since 1997. Textiles and apparel shipments from China to the United States grew by 137 percent in 1997–2002, reaching five billion square meters equivalent. In 2002, China replaced Mexico as the largest foreign supplier of textiles and apparel to the United States, shipping 13 percent of the total imported volume compared with 11.3 percent

for Mexico. Other countries, such as the Republic of Korea, Pakistan, and Turkey, also have substantially increased their textiles and apparel exports to the United States since 2001.¹⁵

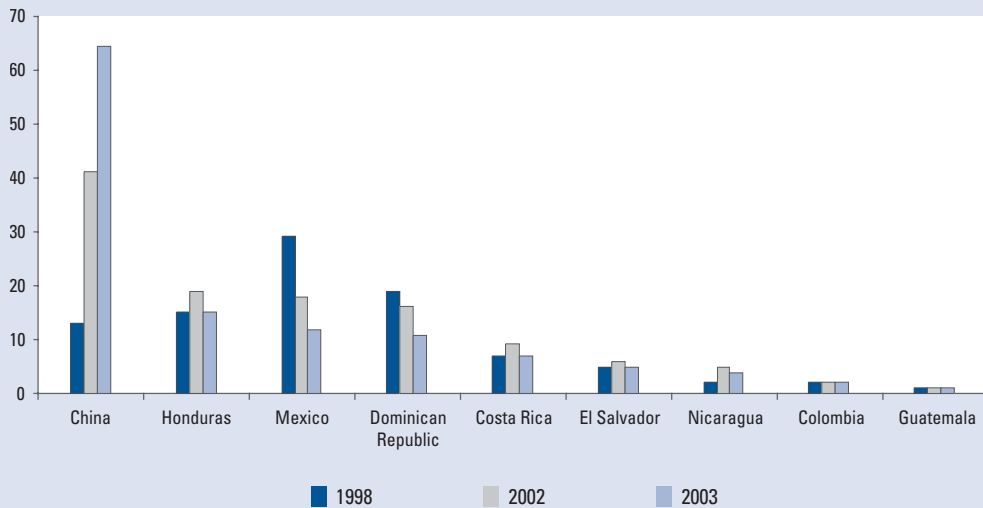
Industry executives have said that “China offers a one-stop shop of efficient and productive labor, modern machinery, and reliable customs processing.” Bob Zane, who is in charge of global sourcing and manufacturing for Liz Claiborne, thinks that “China will become the factory of the world, and they deserve that distinction” (quoted in *Financial Times*, July 20, 2004).

China has consolidated its position as the largest foreign supplier of textiles to the United States; in 2003, it accounted for a 14 percent and 16 percent share of total U.S. imports of textiles and clothing, respectively (Kyvik Nordas, 2004). China is also the leading exporter of clothing to Japan and Canada, and the second-largest clothing exporter to the European Union.

As mentioned earlier, countries have agreed as part of the Uruguay Round, under the ATC, to eliminate MFA quotas. The phase-out was scheduled to occur in four stages, with the main importing countries deciding the order of integration for goods. The first three stages (January 1 of 1995, 1998, and 2001) included low-value-added items that were not subject to quotas or had low quota usage. The United States im-

¹⁵ Based on USITC (2004).

FIGURE 7.7 Effects of Quota Elimination for U.S. Imported Brassieres (349 and 649)
(millions of square meters equivalent)



Source: OTEXA (2004).

posed MFA quotas on textiles and apparel from 46 countries, which accounted for 79 percent of the total value of U.S. imports of such goods in 2002. Most U.S. textile sector imports were subject to quotas and were not scheduled for integration until 2005. Now, however, some other mechanisms, such as safeguards, can be used to protect the textile sector. The WTO allows countries to apply selective safeguards quotas on imports in order to confront surges in imports for a period of four additional years, on an annual basis, until December 31, 2008.¹⁶

Analyzing the trade in goods for which the United States had already eliminated quotas opens a window to understanding the likely effects of eliminating the remainder. Only four cotton categories were liberalized in stages II and III, but these displayed great dynamism. Chinese exports in these categories grew 86 percent during 2001–03 (compared to 3.34 percent during 1992–2000). A clear example is provided by brassieres. In 2000, China was using 94 percent of the quota in these items. As shown in Figure 7.7, China increased its exports to the United States after the elimination of quotas in 2001 to more than 64 million square meters equivalent in 2003. Brassiere exports from all the CBI countries and Mexico declined in the same period.

A more general way to gauge the probable impact of removing remaining U.S. quotas on Chinese exports involves looking at China's share of total imports in advanced

¹⁶ Based on USITC (2004).

TABLE 7.1

**Export Concentration by Stage of U.S. Quota Elimination
(percent)**

	Stage II	Stage III	Stage IV	Other
Mexico	2.1	2.0	95.4	0.6
Costa Rica	7.4	1.7	90.9	—
Dominican Republic	1.0	3.0	96.0	—
Guatemala	—	2.0	94.1	3.9
El Salvador	4.0	1.0	90.0	5.0
Honduras	1.3	1.7	95.7	1.4
Nicaragua	—	3.0	90.0	7.0
Colombia	5.8	1.8	91.3	1.0

Source: INT/ITD.

Note: Dashes signify zero.

countries with unrestricted imports of textiles and apparel. In 2002, China's textile share was 35 percent in Australia and 66 percent in Japan; its share in clothing was 70 percent and 77 percent, respectively. This suggests that current Chinese shares of total U.S. imports of textiles (14 percent) and clothing (16 percent) are likely to expand dramatically with trade liberalization. The problem with this analogy, of course, is that geography matters. A significant part of the difference in China's share of U.S. textiles and clothing imports relative to its shares of Japan's and Australia's is that China is much closer to the latter countries than to the United States. Offsetting this caveat, China's shares remain high even in a more "geographically neutral" country such as South Africa, which has free trade in textiles and clothing.

Another approach is to formally simulate the consequences of trade liberalization. Using a general equilibrium model of the world economy, Kyvik Nordas (2004) suggests that China's share of total domestic demand in the United States and Canada combined would increase from 21 percent to 22 percent in textiles, and from 34 percent to 45 percent in clothing.¹⁷

The categories in which the United States eliminated quotas in January 2005 accounted for 79 percent of the total volume of U.S. textile sector imports in 2002. These are also the most important categories for Mexico and the CBI countries, accounting for more than 90 percent of their textile exports to the United States, as shown in Table 7.1. Some CBI countries had unexploited quotas in the categories to be liberalized in stage IV. In contrast, the Asian countries used on average 90 percent of their quotas, and their export capability was underused. A factor operating in the region's favor will be the diversification strategy of U.S. retailers trying to avoid overdependence on one country or even one continent. This should attenuate the magnitude of the shock in the region.

¹⁷ The simulation uses 1997 as the base year.

Why Is China So Competitive?

As the previous section shows, when China gets the chance to compete on an equal footing in the United States it rapidly increases its market share and displaces Latin American countries. China clearly is much more competitive than Latin America in most textiles and clothing categories. This section shows that China's superior competitiveness in this sector comes not only from its lower wages but from access to a greater variety of high-quality specialized inputs and from lower costs for some key inputs (electricity). Latin American countries have two advantages to narrow the superiority gap: geography and better access to the United States (trade preferences). This section explores the extent to which these two Latin American advantages offset the region's higher costs.

The simplest way to see China's competitive superiority in textiles and apparel is to compare production costs. As shown in Table 7.2, the cost of clothing manufacturing is relatively low in China. Nicaragua has the lowest cost in the region, but it still is 34 percent higher than China's. At the other end of the spectrum, Mexico has the highest cost of all the Latin American exporting countries compared, nearly twice as high as China's.

TABLE 7.2

Clothes Manufacturing Cost by Country (US\$)

Country of origin	Total manufacturing cost
China	1.12
Nicaragua	1.50
Dominican Republic	1.70
Honduras	1.70
Guatemala	1.80
El Salvador	1.85
Costa Rica	2.00
Mexico	2.20
United States	5.00

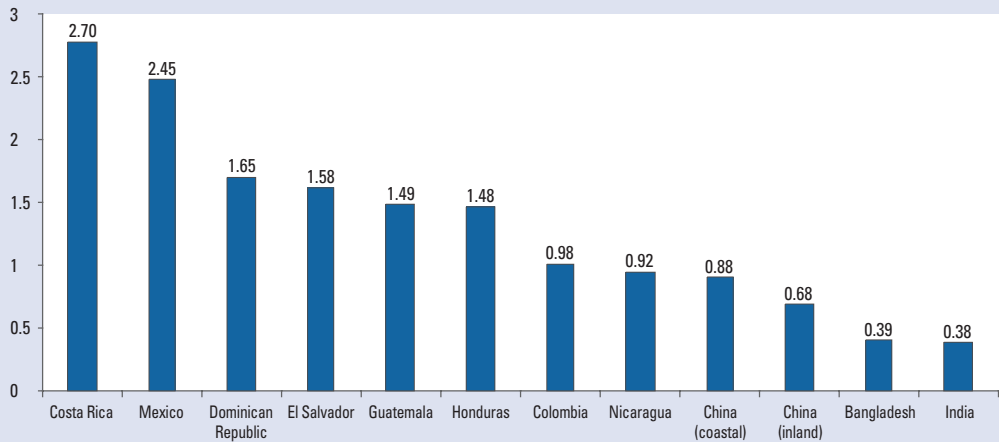
Source: INT/ITD.

Note: Amounts shown assume that it takes 20 minutes to cut, sew, and finish a dress shirt for the U.S. market.

Figures 7.8 and 7.9 show the primary reason for China's cost advantage—a lower wage structure than its competitors for similar types of labor. Only Nicaragua can compete in terms of cost, and even it has a significant disadvantage. And one must realize that China isn't the only competitor or potential competitor to pay lower wages than Latin America; other large Asian countries such as India and Bangladesh do, too. Thus even if labor scarcity in China starts to bid up wages (as is already happening), or if the United States' temporary safeguards against China persist, competition will come from elsewhere in Asia.

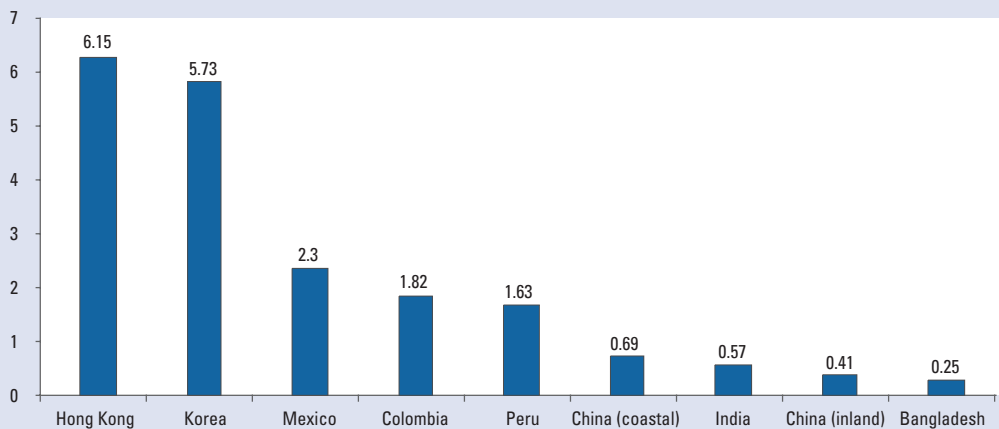
Apart from cheap labor, China benefits from being in a region with a strong production cluster in textiles and apparel. Large volumes of FDI have already flowed in from neighboring countries, which has probably fueled intensive technology transfer. China also benefits from rapid and cheap access to a vast supply of specialized inputs (fibers, yarns, fabrics, and trim), thanks to its proximity to some of the world's chief suppliers. China also can tap its domestic supply of raw materials: although currently

FIGURE 7.8 Labor Force Cost for Clothing, Including Benefits, 2002
(US\$/hr)



Source: USITC (2004).

FIGURE 7.9 Labor Force Cost for Textiles, Including Benefits, 2002
(US\$/hr)



Source: USITC (2004).

a cotton importer, it is the largest producer of man-made fibers (USITC, 2004). The weak points in the Chinese cluster are the dyeing and printing processes, as well as the lack of identifiable brands and poor final designs. The Chinese textile supply chain, however, is very complex and integrated. Chinese manufacturing services and supplier reliability also are highly valued.

Finally, electricity is cheaper in China, as is the cost of capital (see Figure 7.10). Mexico's electricity is more than three times as expensive as China's. El Salvador and Costa Rica, which have the cheapest electricity in Central America, have 60 percent higher costs than China. And even Colombia, the Latin American competitor that fares best, pays 35 percent more than China.

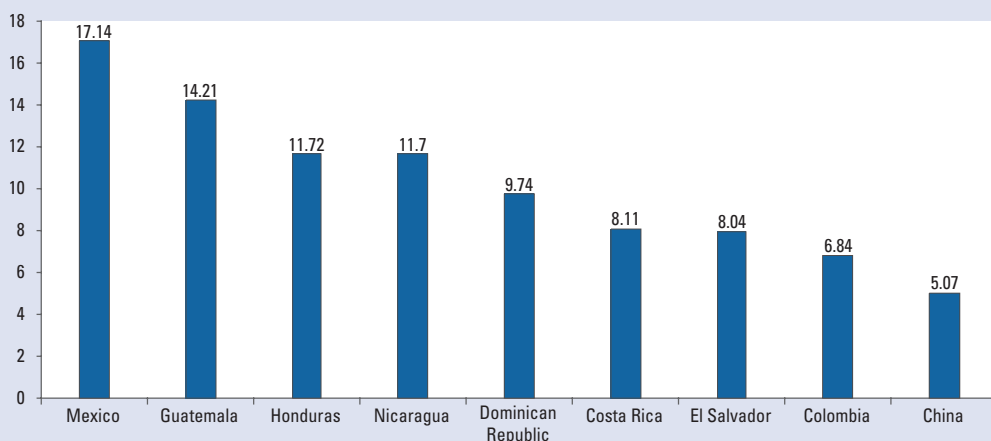
Latin American Advantages: Geography and Market Access to the United States

Many commentators argue that Latin American textiles and apparel producers can survive Chinese competition, despite higher costs, because of their geographic advantage and the trade preferences their exports enjoy in the U.S. market. This section examines whether the claims are true.

Although Latin American countries' proximity to the United States may offset their lower competitiveness, the advantage is not automatic. The pure savings in lower transport costs are mostly unrealized because of inefficient port facilities. Even if fully realized, they would constitute a small advantage relative to the difference in costs with respect to China. Much more important than lower transportation costs is the ability to deliver goods faster than China, giving the region competitive advantage in goods that require "speed to market." Exploiting this opportunity, however, requires significant action by firms and governments in the region.

Transportation costs from China to the United States are at least double those from any country in the region (see Table 7.3). However, given transportation's mod-

FIGURE 7.10 Electricity Costs in China and Eight Latin American Countries, 2002–03
(US¢/kWh)



Source: INT/ITD.

TABLE 7.3

Comparative Shipping Costs to the United States, 2003 (US\$)

Country	Total shipping cost for a 40-foot container
China	4,300
El Salvador	2,100
Nicaragua	2,050
Guatemala	1,950
Mexico	1,750
Dominican Republic	1,600
Costa Rica	1,450
Honduras	1,400

Source: INT/ITD.

TABLE 7.4

Maritime Travel Days to the United States

Countries	Average days by ship
Mexico	2
Honduras	2
CBI	2–7
Colombia	3
China, Hong Kong, Taiwan	12–18
ASEAN	45
India	45–60

Source: INT/ITD.

Association, the time that elapses between placement of an order for a dress shirt and delivery in the United States is close to three weeks for Mexico, four weeks for the CBI countries and Colombia, and ten weeks for China. Kyvik Nordas (2004) and others argue that rapid turnaround is a crucial element in the industry, and increasingly so as a result of new investments in information systems and other industry and consumer trends. Time matters more for differentiated products (for example, it is more important for a dress shirt than for underwear).

As for trade preferences, the region’s main exporters (Mexico, Central America, and the Caribbean countries) now enjoy duty-free access to the United States. As mentioned, the first step in this direction was taken with NAFTA, which granted Mexico duty-free access to the U.S. market for its textiles and apparel exports. This preference was extended to the rest of the region with the passage of the CBTPA in 2000. Given an average most-favored-nation (MFN) tariff level for textiles and apparel of 17 percent, this is equivalent to a 17 percent cost advantage for countries in the region. Although important, it clearly falls short of the region’s cost disadvantage relative to China.

est share of total textiles and apparel costs, at best this advantage shaves between a tenth and a third off of China’s advantage in total manufacturing costs.

Transportation may be a relatively insignificant part of the textile industry’s total costs, but geography offers another advantage through shorter timelines. Latin American countries have a great advantage over China in shipping times. It is much faster to send a container by ship (the usual case for this industry) to the United States from any country in the region than from Asia (see Table 7.4). Producers in the region can respond more quickly to changes in market conditions and to special demands.

According to the American Apparel and Footwear

Recently, five Central American countries and the Dominican Republic completed negotiation of a free trade agreement with the United States that transforms the unilateral U.S. concessions of the CBTPA into a formal reciprocal agreement.¹⁸ This is important for promotion of foreign and domestic investment because it secures the “rules of the game” in a manner that a unilateral concession like the CBTPA cannot. Moreover, it makes it much harder for the United States to impose protective measures against countries in the region, something that it can still do against China in the coming years.¹⁹

An additional and significant benefit of the free trade agreement with the United States is that it relaxes the rules of origin applying to regional exports. In particular, regional garments no longer need to be made with U.S. fabrics to benefit from tariff preferences; use of regional yarn is sufficient. Moreover, materials from the Dominican Republic–Central America Free Trade Agreement and NAFTA countries are now included in regional value added, easing in principle compliance with rules-of-origin requirements so that these countries can benefit from tariff preferences. This eliminates current restrictions on the development of a regional cluster in this industry. The main setback for the region in negotiation of the free trade agreement was the failure to secure tariff preferences for exports using cloth and materials from third countries. This was important for the region to compete with a China no longer restricted by quotas. These preferences would have allowed the region to import cloth from Colombia, Peru, and even Asia at better prices and quality, thereby enabling the region to benefit from its geographic proximity to the United States and its easier access. The United States did not accept the proposal, however, conferring only a very small quota with tariff preferences for garments made with third-country materials.²⁰ The exception is for brassieres, certain woven boxers, pajamas, and girls’ dresses, which are granted origin according to the assembly process. This allows unrestricted use of foreign fabrics and fibers.

¹⁸ This agreement was signed in April 2004 by these five Central American countries, and then again in August when it was extended to the Dominican Republic.

¹⁹ As mentioned earlier, under the ATC the United States can protect its textile sector and stop import surges from China (also from India and other countries) by applying safeguards. It did so in 2005. However, under WTO rules, this defensive mechanism can be applied only on a yearly basis, until the end of 2008, so at best it offers temporary relief.

²⁰ Nicaragua received a quota of 100 million square meters equivalent for five years, whereas Costa Rica’s quota is 0.5 million square meters equivalent for two years, subject to renewal.

BOX 7.1

Textile Sector

The “textile sector” really refers to the “textiles and apparel sector,” which includes

321—Manufacture of textiles.

3211—Spinning, weaving, and finishing textiles: Preparing fibers for spinning, such as ginning, rotting, scotching, scouring, carding, combing, carbonizing, and throwing; spinning; weaving; bleaching and dyeing; printing and finishing of yarns and fabrics. Manufacture of narrow fabrics and other small wares; braids and other primary textiles. Yarn, fabric, and jute mills.

3212—Manufacture of made-up textile goods except wearing apparel: Establishments not engaged in weaving which are primarily engaged in making up from purchased materials, house furnishings such as curtains, draperies, sheets, pillow cases, napkins, tablecloths, blankets, bedspreads, pillows, laundry bags, and slipcovers; textile bags: canvas products; trimmings of fabrics; embroideries; banners, flags and pennants. Also included are stitching, pleating, and tucking for the trade.

3213—Knitting mills: Establishments, such as hosiery and knitting mills, primarily engaged in producing hosiery, outerwear, underwear, nightwear, other knitted apparel, and knitted fabrics and laces from natural and synthetic fibers. Included are the bleaching, dyeing, and finishing of knitted products. The manufacture of knitted apparel from purchased knitted fabrics is classified in group 3220 (Manufacture of wearing apparel, except footwear).

3214—Manufacture of carpets and rugs: The manufacture of woven, tufted, or braided carpets and rugs of any textile fiber or yarn, and mats or matings of twisted paper, grass, coir, sisal, jute, or rags. The manufacture of linoleum and other hard-surfaced floor coverings, other than of rubber, cork, or plastic, is classified in group 3219 (Manufacture of textiles not elsewhere classified).

3215—Cordage, rope, and twine industries: The manufacture of rope, cable, cordage, twine, net, and related products from abaca (Manila), sisal, henequen, hemp, cotton, paper, jute, flax, man-made fibers, including glass, and other fibers. The twisting of these fibers is also included.

3219—Manufacture of textiles not elsewhere classified: The manufacture of linoleum and other hard-surfaced floor coverings other than of cork, rubber, plastic, irrespective of type of backing; oilcloth; artificial leather which is not wholly of plastic, and other impregnated and coated fabrics except rubberized; felt by processes other than weaving; laces except knitted; batting; padding, wadding, and upholstery filling from all fibers; processed waste and recovered fibers and flock; tire cord and fabric. The weaving of felts is classified in group 3211 (Spinning, weaving, and finishing textiles). The manufacture of wood-excelsior upholstery filling is classified in group 3311 (Sawmills, planing, and other wood mills); and the manufacture of asbestos pads and padding is classified in group 3699 (Manufacture of nonmetallic mineral products not elsewhere classified).

3220—Manufacture of wearing apparel, except footwear: The manufacture of wearing apparel by cutting and sewing fabrics, leather, fur, and other materials; and the making of hat bodies, hats, and millinery. Important products of this group include underwear and outerwear: millinery; hats; fur apparel, accessories and trimmings; gloves and mittens; suspenders, garters, and related products; robes and dressing-gowns; raincoats and other waterproofed outer garments; leather clothing; sheepskin-lined clothing; apparel belts regardless of material; handkerchiefs; academic caps and gowns; vestments, theatrical costumes. The repair of wearing apparel is classified in group 9520 (Laundries and laundry services, and cleaning and dyeing plants).

Source: International Standard Industrial Classification (ISIC), Rev. 2, United Nations.

References

- De Ferranti, D., G. E. Perry, D. Lederman, and W. F. Maloney. 2002. *From Natural Resources to the Knowledge Economy: Trade and Job Quality*. World Bank Latin American and Caribbean Studies. Washington, D.C.: World Bank.
- ECLAC (United Nations Economic Commission for Latin America and the Caribbean). 2003. *Statistical Yearbook for Latin America and the Caribbean*. Santiago, Chile: ECLAC.
- Global Insight Inc. 2004. *Maquiladora Monthly Monitor* (July).
- ILO (International Labour Organisation). 1997. "La industria maquiladora en Centroamérica." Paper presented at the Seminario Subregional de Empleadores de Centroamérica y República Dominicana, Guatemala (April 21–22). Available at <http://www.ilo.org/public/spanish/dialogue/actemp/papers/1998/maquila/index.htm> (accessed August 2004).
- INCAE (Instituto Centroamericano de Administración de Empresas). 2003. *Directorio Regional 2003*. San José, Costa Rica: INCAE.
- Kyvik Nordas, H. 2004. "The Global Textile and Clothing Industry Post the Agreement on Textiles and Clothing." World Trade Organization, Geneva.
- OTEXA (Office of Textiles and Apparel). 2004. Data on U.S. textile imports. U.S. Department of Commerce—International Trade Administration, OTEXA, Washington, D.C. Available at <http://otexa.ita.doc.gov> (accessed August 2004).
- USITC (U.S. International Trade Commission). 2004. *Textile and Apparel: Assessment of the Competitiveness of Certain Foreign Suppliers to the U.S. Market*. Publication No. 3671, USITC, Washington, D.C. (January).

IDB Background Reports

- Condo, A., M. Jenkins, L. Figueroa, L. Obando, L. Morales, and L. Reyes. 2004. "El sector textil exportador Latinoamericano ante la liberalización del comercio." Research Department, Inter-American Development Bank, Washington, D.C.

This page intentionally left blank

CONCLUSION



This page intentionally left blank

Where Does Latin America Go from Here?

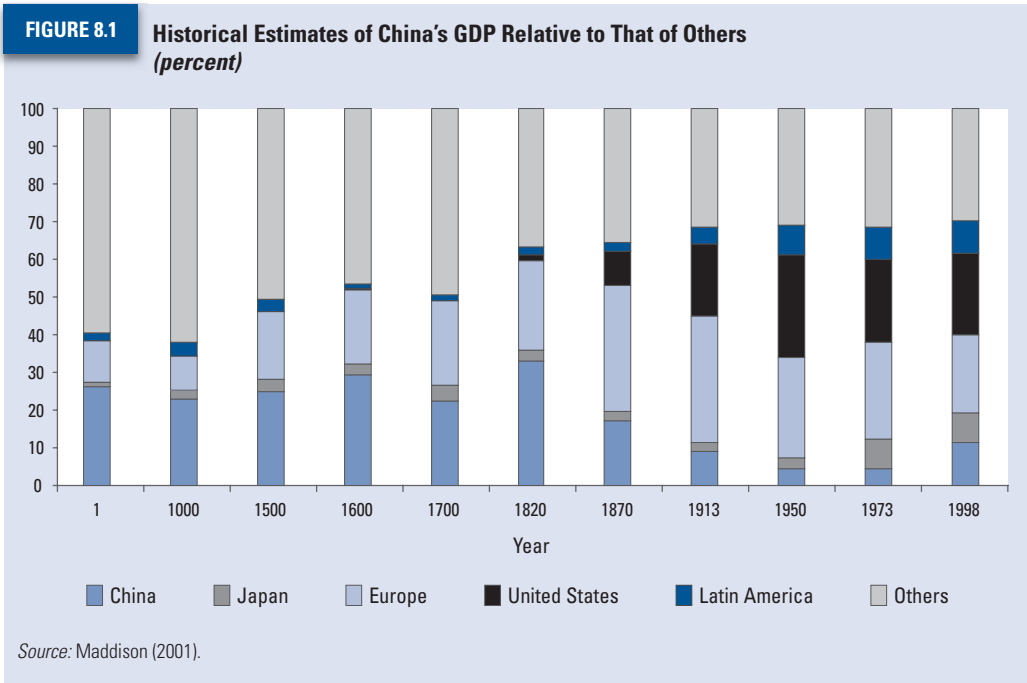
The Starting Point: What Is the Future Evolution of the Chinese Economy?

Since the start of reforms in 1978 the Chinese economy has maximized the formula for “catch-up” growth. Add an extremely backward economy’s labor force to important market-based policy and institutional reforms and stir with sufficient capital and know-how (especially that imported from richer countries), and the result has been an economic expansion averaging more than 9 percent annually for more than 35 years. Such an impressive growth spurt has no historical counterpart.

China today has the world’s sixth-largest economy at market prices. It is the largest consumer of many commodities (copper, steel, cement, coal, and others) and a significant producer of consumer goods (including DVDs, TVs, computers, and textiles and apparel) for the rest of the world. For a very large country, its external trade accounts for an unusually large percentage of gross domestic product. China is now the world’s fourth-largest exporter and third-largest importer. Because of its size, openness, and fast growth, China is having a major impact on the evolution of the global economy, generating nearly a quarter of its expansion since 1995. Hence, developments in China are increasingly affecting world demand and prices for tradable goods. Indeed, for the first time since the Second World War, global economic growth hinges significantly on developments in a country outside the OECD area.

Historically, one should remember that China’s emergence as an economic powerhouse is not entirely new. Reemergence is a more appropriate description, since China had the world’s largest economy for most of the past thousand years. This changed only when the economy began a secular tumble between 1850 and 1950 (Figure 8.1). Until the 15th century China was not only the world’s richest country but a technological leader.¹ So in some ways China seems to be in the process of rediscovering itself in this resurgence.

¹ See Huang (2004).



The future, however, matters more than the past for China in an increasingly interconnected world. Sustained rapid expansion of the Chinese economy should in principle be a boon to world growth. It also likely means that China—given its size, economic weight, and nuclear and space technology—will become an increasingly important geopolitical player. Economic and probably political competition are likely to ratchet up as well. If China’s economic transformation is too fast and massive it could risk overwhelming the capacity of its trading partners to smoothly adjust, sparking protectionist movements abroad and even social instability at home. Alternatively, volatile booms and busts could wreak havoc on the world economy not to mention China itself. So whatever the current disposition of gain or loss among countries from China’s expansion, the stakes are likely to rise and shift so that everyone has reason to think about the future of that economy.

As Chapter 2 indicates, China faces major challenges in sustaining high rates of growth. Success is not guaranteed. However, Chinese authorities and entrepreneurs have proved to be quite deft at pragmatically navigating the stresses of rapid transformation and cannot be underestimated. While there is always the risk of a “bubble” in Chinese punditry, most China watchers seem relatively sanguine about the future.

Econometric projections of the future are always risky and of course that risk increases the further out the estimates go. Keeping that caveat in mind, a number of estimates suggest that China can grow at an average annual rate of 7 to 8 percent

in coming years.² But that is not the end of the story. Achieving these averages does not exclude potential volatility that could ripple through the world economy, seriously impacting South American countries buoyed by Chinese demand for imports of raw materials.

In thinking about the future one must also be wary of statically projecting the Chinese economy of tomorrow from the composition of its output today. As mentioned in Chapter 2, the Chinese growth strategy is very ambitious and involves proactive policies to drive continuous diversification and upgrading to climb the international value chain. Continued growth will probably also be accompanied by radical changes in the makeup of Chinese export competitiveness and import demand. Countries currently enjoying a boom in raw material commodity demand due to China, or facing stiff export competition in basic textiles and apparel, may find a different playing field 10 years hence with China buying much “lighter” imports and selling much more specialized and sophisticated textile and apparel exports.³ Thus, anticipating where China will be positioning itself in the international value chain in the future is as important strategically as managing the benefits and competitive challenges of China’s emergence today. And of course behind China is India, another country undergoing market-based transformations and large enough to alter the complexion of world competition.

What China’s Emergence Means for Latin America

For Latin America, China’s emergence as a major player in world markets involves at least four equally important dimensions: (1) China the successful growth story and potential source of policy lessons, (2) China the market of 1.3 billion consumers and a low-cost source of goods and services, (3) China the partner, and (4) China the strong competitor in Latin America’s main markets. Perhaps the main challenge to Latin

² Heytens and Zebregs (2003) of the IMF estimate an annual rate of growth of 7–8 percent over the second half of this decade. Meanwhile, Oxford Analytica and Oxford Economic Forecasting (2004), while not diminishing serious risks in the Chinese expansion, concludes “in the long run, China still has substantial scope for rapid economic growth. Both macroeconomic and industry data show that the potential for ‘catch up’ growth is not yet exhausted.” Oxford Analytica’s projections through 2015 point to a 7–8 percent annual growth rate. Meanwhile, Goldman Sachs (2003) also projects Chinese growth of 7–8 percent yearly through 2015. (In size the Chinese economy would overtake Germany before the end of this decade, Japan in 2015.) One less buoyant scenario, based on an aging population trend, estimates only a 4.8 percent growth rate over the next 10 years (Asian demographics as cited in the *Economist*, February 26, 2005).

³ For example, Shanghai apparel producers are aiming over the next decade to make the city a major design capital on par with New York, Milan, and Tokyo (*International Herald Tribune*, October 12, 2004). This is a development that Central America should monitor closely as it attempts to move up the value chain in the face of current Chinese competition in commodity-like apparel.

America's policy makers is to reconcile the findings from these separate dimensions and forge an effective response to the Chinese phenomenon. This chapter is an effort to contribute to that process, examining each dimension in turn to highlight some of the main issues involved.

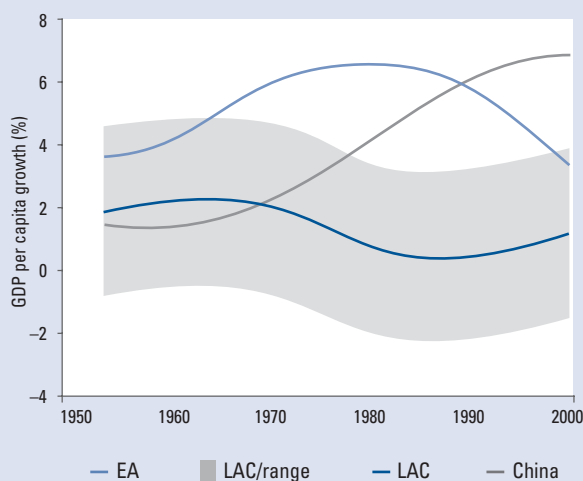
China the Success Story

From Latin America's perspective, China's takeoff might well be read as yet another chapter in an unsettling story that has been unfolding over the past half century. To a great extent it is a reversal-of-fortune story. Between the world wars and for some time following the Second World War, Latin America was one of the most dynamic developing regions, perceived to be industrializing itself out of underdevelopment. East Asia, on the other hand, was in a period of diminished expectations, its countries severely weakened by war, occupation, and political strife. Some countries in Asia even looked to Latin America's import-substitution policies as a model; indeed, the region's experience inspired the mainstream development theory of that era as expressed by thinkers like Myrdal, Hirschman, Prebisch, Nurske, and Rosenstein-Rodan, among others. Other countries, such as China, seemed to veer off into the development wilderness. As decades passed, however, the regions gradually reversed roles.

Figure 8.2 presents some stylized facts of this story. In the early 1950s, Latin America's per capita income was growing much faster than China's and somewhat more slowly than the rest of East Asia's. East Asia's edge, however, was misleading, since its climb was from very low income levels in the aftermath of the war (Latin America's per capita income in 1960 was 50 percent higher than Korea's). Latin America's dynamism began to falter in the late 1960s, just as East Asia was gathering steam, driven by export-led industrialization. In the late 1970s, while most of Latin America stuck to an inward-oriented model, China began its takeoff, following the policies of its successful neighbors. After

FIGURE 8.2

GDP Per Capita Annual Growth in China, East Asia, and Latin America
(Hodrick-Prescott filter, 1996 international dollars)



Source: Penn World Table.

Note: LAC range is a 95 percent confidence interval for growth rates in Latin America.

growth virtually halted during the debt crisis of the 1980s, Latin America drastically changed its strategy. While mimicking some core features of the “East Asian model,” such as opening up the economy to trade, it was much more attuned to policies and institutions inspired by the countries in the North. Growth resumed but remained, with a few exceptions, anemic, well below that of the years following World War II. The gap between Latin America and East Asia remained considerable (despite the East Asian financial crisis of the late 1990s) and continued to widen in the case of China.

China’s emergence therefore is not only the latest, but perhaps the most powerful reminder to Latin America of its lagging growth relative to that of East Asia for most of the last half century. If it were only a matter of regional pride in ranking, this story would be irrelevant for policy debates in Latin America. But it is about much more than that. One region has managed, despite a late start, to lift most of its people out of poverty after three consecutive decades of fast growth (and it is happening again in China), while the other, despite its head start and later efforts to reform, has consistently failed to achieve takeoff growth and reduce poverty. So Latin Americans have reason to examine the East Asian experience for policy lessons. Of course, looking is easier than finding. Economists have been debating the fundamentals of the “East Asian miracle” since the 1970s (see, for example, World Bank, 1991, 1993a; Young, 1993; Noland and Pack, 2002) and have reached no consensus beyond the key role of trade. China is inspiring similarly heated debate, with no resolution in sight. Both in the stage of its reforms and in basic characteristics, China is a world apart from Latin America. Yet given the stakes involved, Latin American policy makers cannot afford to disregard good ideas that might be adapted to other settings. Chapter 2 describes the main traits of China’s growth and development strategy, providing the basis for further reflection.

China the Market

China’s increasing participation in globalization is an important opportunity for the world and Latin America. The world economy has a new engine of growth to complement the traditional sources of stimulus—the United States, the European Union, and Japan.

Unlike Japan in its post–World War II expansion, China imports almost as much as it exports. China’s sustained high rate of growth, coupled with a relatively high trade-to-GDP ratio, has helped economic recovery in Asia (including recession-prone Japan) and stimulated rising commodity prices (which is important for Latin America, especially South America) in the face of sluggish growth in Europe and uncertainty about U.S. economic performance. The growing efficiency of Chinese production and exports, moreover, while a source of competition as previously mentioned, is also providing a cost-effective supply of finished goods and inputs that can potentially finance improved terms of trade, especially for primary-commodity producers.

China's 1.3 billion people mean 1.3 billion potential consumers. Aggregate consumption in China is relatively low and bound to rise with growing levels of national income. Many Latin American countries are well positioned to supply the Chinese market with agricultural products, processed food, and beverages. For example, Argentina and Brazil have found an important market in China for their agro-food industries. As Chinese incomes grow, consumer tastes should also diversify, offering growth opportunities for exports such as wines, coffee, meats, fruits, and vegetables (some of which can exploit the inverted seasons of North-South temperate zones).

China's expansion has fueled strong external demand for nonagricultural raw and processed materials as well. Latin American countries are exploiting this opportunity. For example, Chile has found an important market in China for copper, ores, wood pulp, wood, and slag and ash, while Brazil is selling iron ore and pellets (see country notes in the Appendix).

A relatively unexplored market is that in services. Numerous possibilities exist, including tourism, for which many Latin American countries have an international comparative advantage. The World Tourism Organization (2003) projects that 100 million Chinese will be traveling abroad by 2020, making the country the world's fourth-largest source of international tourists. And the current level is not insignificant, totaling about 24 million travelers. Latin American countries should begin the groundwork now to attract and service Chinese tour groups. Promotion and marketing in China, Web sites, cultural/language accommodation in tourist industries, development of attractive tour plans, convenient and economical air transport packages, and enhanced security are obvious parts of a campaign to bring Chinese visitors to the region. However, countries must also negotiate with the Chinese authorities an "Approved Destination Status" (*Financial Times*, September 2, 2004). The Latin American countries that achieve this status first will have a head start in the competition for Chinese tourists. Among the countries already fast off the mark are Mexico, Brazil, Chile, Argentina, and Peru.

Foreign direct investment (FDI) has been good for China, but also for many investors. For instance, some auto multinationals have earned between a quarter and a third of their global net profit in China (*Economist*, September 3, 2004). Some Latin American firms, like Brazil's commuter jet manufacturer Embraer, are investing in China to tap this huge market, especially in light of the opening of the domestic market and the enhanced security of WTO rules. Although China's stock of outward FDI is small, US\$33 billion in 2003 (*Economist*, January 8, 2005), attracting Chinese FDI is more likely now that Chinese industrial policy encourages its industrial giants to become global players and also targets secure supplies of strategic raw material imports. Raw material exporters in Latin America are finding Chinese capital increasingly available. Peru, for instance, has attracted Chinese FDI for iron-ore mining. Chinese FDI is also being funneled into processing raw materials into higher value shipments to China. For example, Shanghai Baosteel is developing a \$1–1.4 billion joint venture with Brazilian CVRD for an integrated steel complex in Brazil (see the Appendix).

Argentina expects major Chinese investments in rail transport and gas exploration, while Venezuela's oil sector should be an attractive investment target. And funds will be available for the right opportunities. On a state visit to several Latin American countries in 2004, the president of China announced that Latin America could anticipate up to US\$100 billion in Chinese direct investment during the next decade.⁴ But Chinese authorities and entrepreneurs are tough, cautious negotiators who value stable, long-term relationships, something Latin America sometimes still has trouble ensuring.

Finally, part of China's strong savings performance finances U.S. Treasury bonds and helps keep international interest rates in check. This is good news for Latin America, which has a significant foreign debt burden. To the extent that the region can deepen its own financial markets, establish the credibility of its economic management and financial regulation, and tighten commercial and political links with the East, there may be an opportunity to attract Chinese finance to home markets as China's capital account opens up and more private participation emerges in its domestic financial market.

China the Partner

Closer trade links can lead endogenously to growing noneconomic cooperation through creation of a "trade-cooperation nexus" (Devlin and Estevadeordal, 2004). Given China's size and impact, this nexus can be rich and influential in many areas. Indeed, the frontier of cooperation with China is already being opened up. For example, Latin American countries have collaborated effectively with China in international forums to promote multilateralism. This has been evident in the UN Security Council; by formation of the G-20 in the Doha Round to advance agricultural liberalization in highly protected Northern markets; and in Brazil, Argentina, and Chile recently granting China the "market economy" status that it has been seeking from individual members of the WTO. Meanwhile, China's willingness to send a police contingent to help the multilateral effort to restore civil order in Haiti created a partnership with the participating Latin America countries.

China's and Latin America's economic experiences are rich with possibilities for policy exchange. As previously discussed, China's impressive development performance might offer insights for Latin America, but the region also has much accumulated experience (good and bad) to offer in policy areas of potential future interest to China. That list includes managing implementation of WTO accession, capital account opening, privatization, regional integration, environmental protection, pension reform, the management of systemic nonperforming loan portfolios in banking, public ser-

⁴ Given that Chinese producers of domestic consumer goods are beginning to go international, opportunities also may open for manufacturing investments to serve regional and North American markets, which are increasingly linked by preferential free trade areas.



vices regulation, tourism services, and so on. Meanwhile, China's experience in poverty reduction, infrastructure development, technological parks, and science and engineering curriculums may be of interest to Latin America. Interregional cooperation could also be envisioned in such areas as language training, biotechnology, information technology, and satellite technology.⁵ Finally, deepening cooperative links can lead to new commercial opportunities for Latin America, reinforcing the process.

The ultimate potential vehicle for partnership would be a free trade agreement with China that becomes the basis for a broader "trade-cooperation nexus." Chile is paving the way by preparing to negotiate a free trade agreement with China.

China the Competitor

World attention—including anxiety in many parts—has been sparked by China's emergence from autarky into the global economy. Other countries see China's continental scale and vast population; its extraordinary economic growth and transformations; its broad internal distribution of endowments across regions, facilitating competitiveness in low-, middle-, and high-tech activities; and its strong, proactive state economic apparatus. Latin America is no exception, even among those countries now experiencing the benefits of the Chinese market. Hence China the competitor should be in the minds of all the region's policy makers.

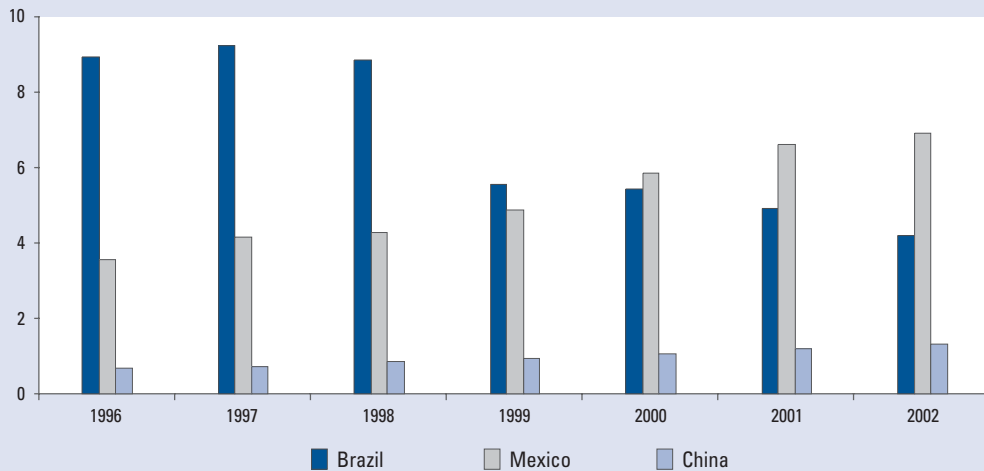
In general, economists dismiss the notion that countries compete in a zero-sum game (Krugman, 1994). In an imperfect world, however, quick swings in trade flows can impose high social costs, and economies of scale and externalities can make some activities more growth-enhancing than others. So policy makers are well-advised to pay close attention to their competitors' strategy and performance. And given its sheer size, China is no ordinary competitor.

Endowments

Endowment structure is a critical factor giving rise to China's competitiveness in certain sectors, particularly manufacturing. As seen in Chapters 2 and 4, a population of 1.3 billion and a labor force of 640 million mean that China enjoys a huge comparative and competitive advantage in labor-intensive goods, especially in light of its relatively limited natural resource base. This vast labor abundance translates into wages that are well below the prevailing rates throughout most of Latin America.

Figure 8.3 compares China's manufacturing wages with those of Brazil and Mexico, Latin America's largest economies. The wage rates are greatly affected by movements in the exchange rate—that is, Brazil's mega devaluations after 1999 and the appreciation of the Mexican peso after the 1995 crisis. Yet as can be seen, even in its most

⁵ In this latter area there has been a long-standing program with Brazil (see the Appendix).

FIGURE 8.3**Average Nominal Annual Manufacturing Wages in China, Brazil, and Mexico
(US\$ thousands)**

Sources: National Bureau of Statistics of China (2003); IBGE and INEGI annual industrial surveys.

favorable year (2002), Brazil's wages exceeded China's by a factor of three; and in the case of Mexico (1998), its wages exceeded China's by a factor of five. Notwithstanding China's breakneck growth, signs of wage pressure in the coastal areas, and market pressure for appreciation of the national currency, this basic advantage is likely to persist for quite some time to come given China's present employment structure. With roughly 50 percent of its labor force still in the primary sector, China seems to be far from its "Lewisian point"⁶ (that is, the point at which rapid manufacturing growth exhausts the excess supply of labor in the primary sector so that wages start growing faster than productivity).

Assessment of China's competitiveness should not assume that its endowments are evenly distributed. In fact, as shown in Chapter 4, regional disparities are so pronounced that China's comparative advantages go well beyond unskilled, labor-intensive goods—in particular, because of the disparity between the capital- and skill-abundant east and the unskilled, labor-abundant west.

As pointed out in Chapter 4, "lumpiness" (variability in factor endowment among regions) can give rise to a trade pattern that differs from that in countries where factors are more evenly distributed. China's sheer size—with many provinces having populations larger than most countries—means near-certain lumpiness rather than a hypothetical possibility. The trade data analysis in Chapter 4 shows that, in fact, China's export composition spans a wide range of factor intensities. Latin America should not fear Chinese competition in areas such as agriculture and mining, where

⁶ See Lewis (1955).

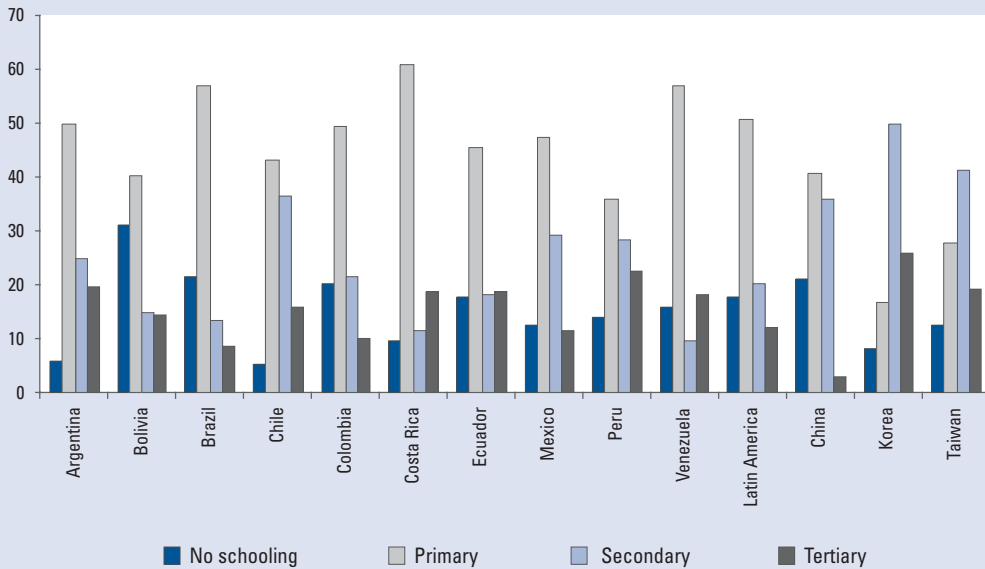
the region has strong comparative advantages (though China does have advantages in labor-intensive areas such as garden agriculture). Yet China's lumpiness means—and the trade data confirm—that competition will be fierce in every type of manufacturing. This even includes natural-resource-intensive sectors, such as food and mineral processing, given the relative abundance of capital and skilled labor and the huge market of the coastal provinces. Moreover, Chapter 4 also reveals that China's distance from markets does not provide significant advantages to the region in terms of transport costs because of the higher unit value of Latin America's exports.

As shown in Annex I.1, China's wage advantage arising from its endowment is not fully the result of lower productivity. Indeed, productivity is rising much faster in China than in Latin America. However, the evidence supporting a strong productivity performance by China does not address the issue of its sustainability. Although the lion's share of manufacturing productivity growth appears to be attributable to the phenomenon of labor migration out of the primary sector—which, as mentioned, could continue for some time to come—the surplus labor phenomenon will eventually fade away. Therefore, long-term drivers of productivity growth should be considered, such as education, R&D investment, science and technology, infrastructure, trade, and foreign direct investment. These factors will be considered in turn.

Education

China's record in education is as mixed as Latin America's. The adult population in both areas had close to 6 years of education on average in 2000 (Barro and Lee, 2000), far less than developed economies' 9.8 years. Figure 8.4 shows the underlying distribution of educational attainment. China has 76 percent and Latin America has 71 percent of its adult population with up to a secondary education, proportions well above those in East Asian countries such as Taiwan and Korea. Latin America has an edge over China in tertiary education, although its attainment is still well below that of East Asia. Enrollment levels determine how the stock of human capital will evolve over time. In contrast with China, Latin America has a “massive deficit in secondary enrollment” in this regard (De Ferranti et al., 2003). In other words, Latin America's secondary enrollment is well below the level “predicted” by per capita income, while China has a small surplus. In tertiary enrollment, both China and Latin America have “deficits” of similar size.

The data on secondary enrollments spell trouble for Latin America, and they signal better times for China. A strong base of secondary graduates increases the quality of the pool from which universities can draw students. China and Latin America are now both at a critical stage of development in which technological progress is driven mainly by the absorption of existing technologies, not by innovations on the technological frontier. But that will change. The “deficits” in tertiary enrollments are more likely to hinder Latin America's productivity growth for several reasons. First, the composition of the tertiary enrollments is dissimilar. About 45 percent of China's graduates are in

FIGURE 8.4**Educational Attainment of People Aged 25 and Over in Latin America, China, and East Asia in 2000 (percent)**

Source: Barro and Lee (2000).

science and engineering, compared with an average for Latin American countries of 33 percent (National Bureau of Statistics of China, 2003; World Bank, n.d.). Second, there is force in absolute numbers. China is churning out 1.3 million college graduates per year. Finally, as discussed in Chapter 2, China is well engaged in a drive to expand tertiary education.

Beyond the numbers is the issue of educational quality. Evidence here is sketchy. Studies suggest a huge range in quality across regions. In addition, the government mainly tracks quantitative and input-based indicators rather than qualitative or outcome-oriented indicators (De Ferranti et al., 2003). Modernization of the curriculum to provide the required skills for the “knowledge economy” and creative thinking have recently been touted (Dahlman and Aubert, 2001); however, there is little real information on the quality of Chinese education relative to that in the rest of the world. Barro and Lee (2000) provide some limited information on international test scores. For example, science and math scores for 14-year-old Chinese students in 1990–91 were on average well above those of their Brazilian counterparts. They were close in math to and higher in science than those in the United States. The results for Brazil seem consistent with performance reported for other international tests, and Brazil’s performance seems reasonably representative of the rest of Latin America. Such data

have prompted many analysts to assert that educational quality in Latin America is relatively poor (see Arellano, 2002; De Ferranti et al., 2003).

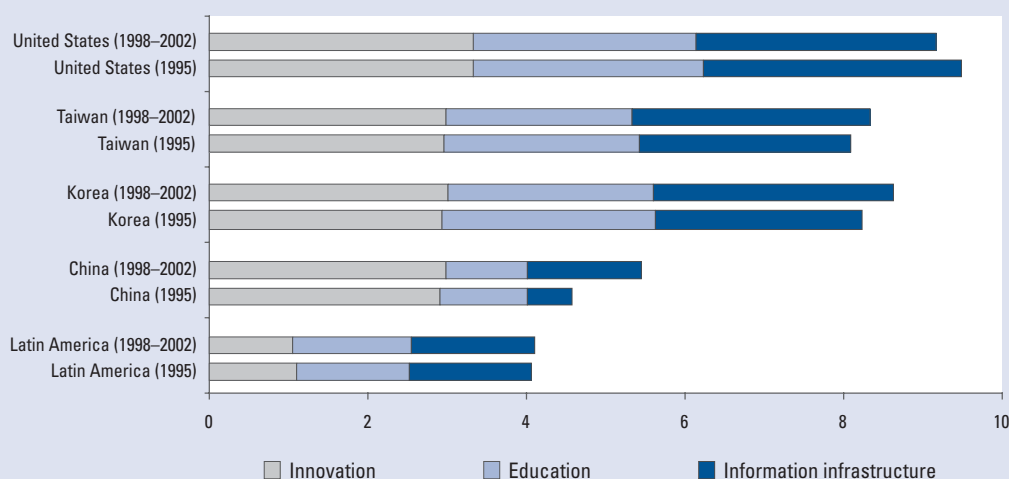
Innovation

China does not appear to be particularly strong in the area of innovation, but signs suggest rapid progress and vast potential in light of the sheer quantity of available resources. Most science and technology indicators rank China close to Latin America but far behind the “core innovators.” As shown in Figure 8.5, for example, the World Bank Knowledge Assessment Methodology ranked China slightly ahead of Latin America in 1995, with China’s lead widening in 1998–2002. Both regions lagged behind East Asia and the United States.

China’s increasing lead over Latin America stems mostly from its heavy investment in telecommunications and information infrastructure and from its sizable advantage in the “innovation pillar” of the index. That is, China leads Latin America in the number of researchers in R&D, patent applications in the United States, and total R&D expenditures as a percentage of GDP (see Chapter 2). The dynamic environment for innovation is captured by the sharply increasing number of multinational companies setting up R&D facilities in China, including more than 160 centers in Beijing alone (*New York Times*, September 12, 2004). A major attraction is the large supply of competent, low-wage scientists and engineers.

One area often cited as a weakness in China’s “innovation environment” is enforcement of intellectual property rights (see, for example, WEF, 2003; USTR, 2003).

FIGURE 8.5 Knowledge Index for Latin America and Selected Countries, 1995 and 1998–2002



Source: World Bank (n.d.).

This problem doubtless undermines many firms' incentive to innovate and dissuades their foreign affiliates from bringing their most up-to-date technology, yet there are also short-term advantages. China's present cycle of growth is clearly driven not by innovation at the technological frontier, but by its ability to adopt knowledge developed elsewhere. WTO accession will reduce China's degree of freedom in this regard. Yet so long as the present phase continues, a lax system of intellectual property rights will reduce the cost of knowledge adoption by local firms.

Investment

At least four channels for investment have helped to boost China's competitiveness. First, the very high investment rates have pushed the country through a rapid process of industrialization, pulling labor out of low-productivity agriculture into higher-productivity manufacturing. Second, high investment in capital goods has provided a shortcut to international knowledge, boosting China's technological capabilities and bringing its productive capacity closer to the international frontier. Third, China's investment "push" has helped to overcome indivisibilities and internalize externalities in diversifying toward sectors that are intensive in economies of scale. Fourth, as shown in Chapter 2, China has allocated a substantial part of its investment to infrastructure. In a stable macroeconomic environment, this is thought to enhance growth and competitiveness by reducing costs to produce goods and services, opening opportunities for diversification, providing access to knowledge, and raising the returns to labor through better health and reduced time in nonproductive activities (Kessides, 1993).

Scale

Although China is only a lower-middle-income country, by all other standards it is a large country. Apart from the standard advantages of size in terms of public goods (see Wacziarg, Spolaore, and Alesina, 2003), sheer scale endows China with an important edge in capital- and technology-intensive industries. First, high fixed costs for equipment and R&D translate into low unitary costs. Second, higher returns are associated with clustering, learning, and the creation of knowledge. Third, diversification into scale-intensive sectors helps to overcome indivisibilities and externalities (Murphy, Shleifer, and Vishny, 1989). Finally, a deeper supply chain helps to maximize the benefits of specialization and proximity—for example, through just-in-time technology and labor mobility.

The Chinese consumer electronics industry illustrates the advantages of scale. Domestic sales alone reached \$41 billion in 2001. By contrast, sales in Mexico and Brazil—countries with much higher per capita incomes—were only \$10 billion and \$9 billion, respectively (McKinsey Global Institute, 2003). In telecommunications, the local corporate giant's adaptation of cutting-edge technology and the vast domestic scale have served as a platform from which international markets were penetrated

(*Financial Times*, January 11, 2005). Size coupled with openness serves as a magnet for foreign direct investment, in turn bringing technology, attracting more investment, and further reducing entry barriers in scale and access to technology-intensive industries.

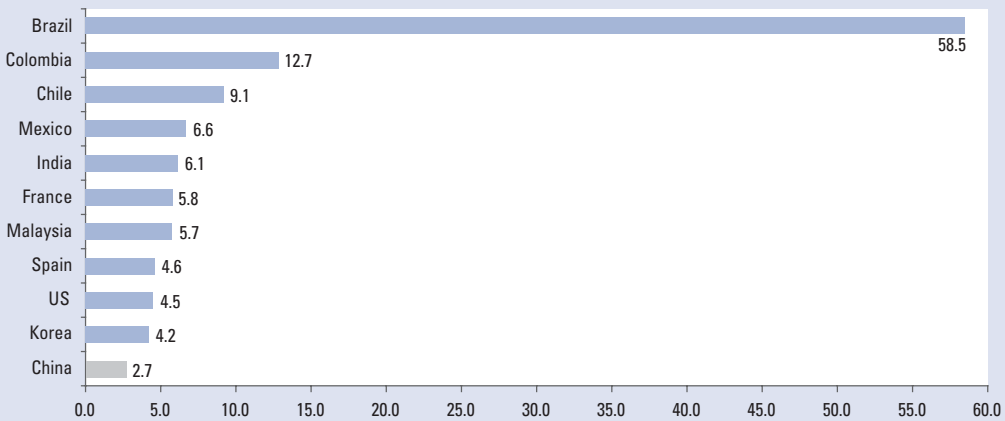
Finance

The financial sector is widely seen as the Achilles' heel of the Chinese economy—and with good reason. As discussed in Chapter 2, financial intermediation in China is dominated by the banking sector, which is almost entirely owned by the state despite recent efforts to diversify ownership. The banks are generally viewed as more responsive to government guidance than to commercial judgment, and they are not permitted to set their own interest rates. State-owned enterprises have been the main beneficiaries of the banking sector. Nonperforming loans have built up because of a series of allegedly ill-advised investments, and the government has been forced into a string of expensive bailouts.

It is tempting to believe that the financial sector has been a drag rather than a driver of growth and that it has put Chinese firms at a competitive disadvantage. However, a bit of perspective is needed for a more nuanced view. Without doubt, China's is far from an Anglo-Saxon-style, market-based system. Nevertheless, financial intermediation in China seems to have been very effective in mobilizing and pooling savings. Chinese firms and governments have ample access to capital at a cost that is low even by the standards of developed countries. From the perspective of Latin America, which has long struggled with low savings and credit-constrained firms and public sectors, this is no small achievement.

Chapter 1 shows that financial deepening has proceeded apace in China. It has reached levels comparable to or even higher than those of high-income countries. With the remarkable exception of Chile, Latin America seems to have moved in the opposite direction—despite market-oriented reforms and costly bailouts such as Mexico's spending nearly a fifth of its GDP to shore up its banks following the 1994 peso crisis.

Figure 8.6 shows that lending rates in China in the past decade have been among the lowest in the world, possibly the lowest. Latin American countries cluster at the opposite extreme. So, yes, China's financial sector must improve its commercial orientation and strengthen its financial position to, among other things, improve resource allocation and reduce financial vulnerability. Yet compared with Latin America, China has done an excellent job in mobilizing saving and providing capital to local firms and public authorities. If anything, financial conditions for investment and growth are better in China today than in Latin America. Moreover, the economic growth and transformation of China has—up to now at least—generated enough resources to finance bailouts of its banking system. Bank crises have been avoided, and gradual reforms have been supported.

FIGURE 8.6**Real Average Lending Rates for Selected Countries, 1990–2003**
(percent per annum, CPI deflator)

Source: International Monetary Fund, *International Financial Statistics*.

Note: Statistic for Brazil is for 1997–2003. Statistic for Mexico is for 1993–2003.

Is Latin America Prepared to Cope with Chinese Competition?

This study has stressed how Latin America could be affected by China's emergence in the global economy. A major factor is China's strong comparative advantage in unskilled-labor-intensive manufactures, which could influence international prices, factor returns, and specialization patterns across the world. Unsurprisingly, the immediate effects will differ among countries. Those specializing in light manufactures—for example, Mexico and the countries of Central America and the Caribbean—may encounter declining terms of trade and shrinking participation in export markets, especially to the United States. By contrast, countries with strong export advantage in natural resources—such as Argentina, Brazil, and Chile—have encountered improved terms of trade and expanded exports. However, there are circles of concern even in these countries. They could be excessively specialized in natural-resource-based sectors such as soybeans, iron ore, and copper. Volatile demand on prices could reduce long-term growth and employment. This possibility is real because these sectors tend to have relatively low ceilings for dynamic economies. There are relatively few incentives for skill upgrading, learning, and innovation.

The “China phenomenon” (with the “India phenomenon” on the horizon) has raised concerns everywhere in Latin America. Moreover, the development debate may be at a crossroads as the Washington Consensus encounters increasing skepticism throughout the region. Circumstances could combine to trigger protectionist and other defensive reactions. More constructively, Latin America should regard the China phenomenon

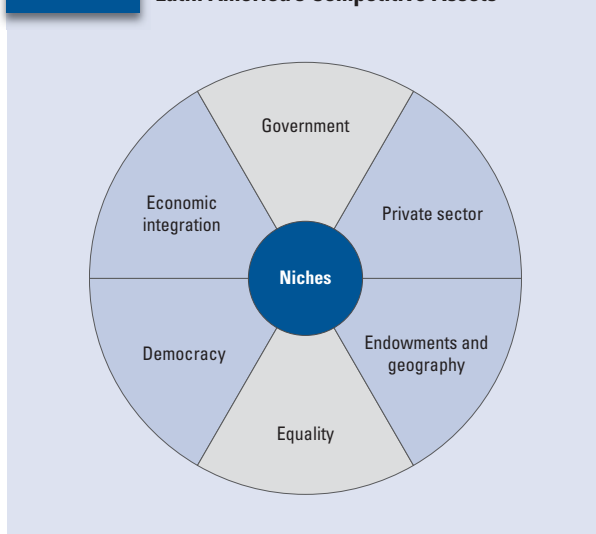
as a call to action. The region needs a fortified development policy that builds on its many strengths and squarely addresses its weaknesses.

Latin America is not unarmed in meeting this challenge. Fortunately, the region acquired and reinforced certain economic (and non-economic) assets during the reform process—and now it can draw upon them. By organizing itself strategically, moreover, the region can build new assets to become an increasingly offensive player in the competitive global economy.

If old and new assets are effectively combined, Latin America can cope with the challenges and opportunities posed by China and the other emerging giant, India. The world economy is extraordinarily diverse. Trade holds immense potential for product variety and differentiation. Using and combining assets to develop market niches will be essential.

The region's main assets are shaded in blue in Figure 8.7. These are strong relative to China.

FIGURE 8.7 Latin America's Competitive Assets



Endowment and Geography

- The region has abundant natural resources, especially in South America. The reform process has established a policy framework conducive to foreign investment. This is a formidable comparative advantage that can generate resources for diversification and growth.
- Demand in the region is close to that in the large industrialized markets of North America and the European Union, and the regional market comprises more than 530 million consumers.
- Language and culture forge links in many markets, including Europe and the United States (the world's fourth-largest Spanish-speaking country).⁷

⁷ Aside from offering market opportunities, the Latin American diaspora generates more than \$40 billion in remittances to the region. See Multilateral Investment Fund (2005).

Democracy

Though not without ups and downs, reforms and political modernization have helped build participatory democracy in virtually all the region. Progressive consolidation of this process is the best guarantee for a deepening market environment.

Private Sector

Market-based reforms have helped develop an energetic private sector that stands ready to compete when given an enabling environment.

Economic Integration

After decades of isolation, Latin America has tapped the benefits of economic integration.

- Economies have been opened.
- Every country (except the Bahamas) is an active member of the WTO. Virtually all are well past the initial challenge of implementing their accession agreements.
- After decades of failed efforts, real progress has been made toward deep subregional integration.
- Opportunities have materialized for North-South free trade areas with North America, the European Union, and Japan.
- Interest has grown in South-South interregional integration.

Figure 8.7 also illustrates two main weaknesses. Assets that should be shaded in blue are shaded in gray. These areas were insufficiently tackled during the years when they should have been. One area—the severe inequality that continues to plague Latin America—seriously impedes the potential of countries or the region as a whole to realize its full capacity. The second area—government—refers to the need for strong, modern states that can pursue effective, forward-looking economic policies. Strong, professional government is essential in an increasingly competitive world to maximize synergies among national and regional assets and to help create new assets.

Exploiting Latin America's assets is even more urgent than the static picture in Figure 8.7 might suggest. If no actions are taken, China's impact could erode the value of present assets. In other words, standing still is not an option. There are several reasons.

First, China's emergence in global markets implies that the return to skills is likely to increase. Since China has so much advantage in unskilled labor relative to the rest of the world, its integration into global markets should spur a decline in the price of unskilled labor relative to others. That would lead to an increase in the world's skill

premium (the wage of skilled workers relative to that of unskilled workers). And that (in the absence of strong education policies) would lead to greater inequality in a region that is already marked by the world's highest levels of inequality.⁸

Second, increased Chinese demand for raw materials is boosting exports and growth in some Latin American countries, but at the cost, some might argue, of an excessive reallocation toward natural-resource-based industries. Several observers have pointed out significant risks—that these industries do not generate the dynamic economies associated with manufacturing, which may generate perverse political processes weakening domestic institutions (Sachs and Warner, 1995; Mesquita Moreira, 2004). In short, Dutch disease is to be avoided. This arises when high prices for a particular commodity make other sectors less competitive and lead to excessive specialization. The argument is even stronger when the natural resource is nonrenewable.

Under what circumstances would this phenomenon be a “disease”? It is when there is also a market failure. For example, positive externalities—associated with nontraditional agriculture or manufacturing—can mean higher prices for traditional agricultural goods or mining products. These higher prices can lead to an exchange rate appreciation (increasing wages in dollars). That pushes the economy away from the production of these goods with externalities. In other words, the economy is pushed even further from the optimal allocation of resources. Traditionally, Latin America has been a prime example of this problem.

Third, China's strong state and pragmatic approach to economic policy, coupled with a long-term strategic vision as described in Chapter 2, could outperform Latin American policy frameworks. The latter are typically focused on short-term fluctuations, and overall strategy is prone to wide swings.

Much has been written about the endemic historical problem of inequality in Latin America. Without doubt, inequality is a serious liability for Latin America's competitiveness. Yet the primary focus in what follows will be upon renewing the proactive role for government for countries faced with intense global competition. This perspective has only recently gained attention in Latin America. The orthodoxy of the recent reform period focused heavily on government failure and, hence, the need to roll back the state. In retrospect, there probably was a serious underestimation of market

⁸ In fact, some have already suggested that a higher premium on skills may partially explain the observed increase in wage inequality in Latin America, a subject of intense debate. At the onset of trade liberalization in the late 1980s, trade liberalization was defended because it would supposedly lead to reduced wage inequality through a lower skill premium. This was based on the idea that Latin America was abundant in unskilled labor and that open trade would work in Latin America's favor through specialization in unskilled-labor-intensive goods, such as clothing and low-end electronic products. But to the contrary, wage inequality has actually increased, thanks to an increasing skill premium. The prevailing view is that this is caused by skill-biased technological change, which also explains the increasing skill premium in the United States and other advanced countries. Yet many people also point to China's emergence in international markets—and more broadly to Asia—as the cause of the increasing skill premium in Latin America.

failures—which could seriously undermine the impact of the reform triad of privatization, liberalization, and macroeconomic stability—and the role of government in helping to overcome them.

Toward a Renewed Policy Framework to Compete

A Public-Private Alliance

Latin American governments have been relatively limited in their capacity to design and implement forward-looking policies that support their private sectors' ability to compete. This weakness contributes to private sector underperformance. Stronger government, however, will not in itself be sufficient to diversify and upgrade production and exports. Government policy with the private sector (broadly defined) must be forged in a constructive partnership.

As a first step, a government apparatus must be developed that can engage the private sector credibly and capably to formulate policies and incentives to compete. Among other things, this involves working together to identify the country's strengths, weaknesses, binding constraints, and strategic options in global competition. It also involves programs to develop private sector capacities and incentives for experimentation, learning, and investment to foster diversification and upgrading.

From the end of World War II through the late 1970s, the state generally protected the private sector without reciprocal private sector efforts to improve its productivity through better technologies, exports, learning, and innovation. This was an era of much economic debate over the effectiveness of state enterprise relative to the market.⁹ More often than not, public-private sector relations were marked by conflict rather than by collaboration. In the next two decades, states generally withdrew from direct economic intervention. Most focused instead on privatization, trade liberalization, deregulation, and improved legal structure for autonomous operation of market economies. This brought undeniable benefits; however, it did not necessarily bring public-private endeavors to address the market failures that potentially retard development. Such failures can be particularly acute in an era of major structural changes at home and rapid globalization abroad.

Fortunately, interest in this issue has been renewed. This stems partly from realization that the Washington Consensus reforms have not yielded all the expected benefits. It is also a reaction to the success of East Asian economies—most recently China's—in which governments have gone beyond market-oriented reforms and engaged more closely with their private sectors to bring about medium- and long-term strategic focus, learning, industrial upgrading, and growth.

⁹ See, for instance, Wilber (1969).

The prospect of market failures should be a central concern in the state's role in complementing market reforms with constructive engagement with the private sector. As discussed, the importance of market failures in the reform process may have been underestimated. Economists can point to market failures everywhere. However, which are significant in retarding development—the binding constraints, so to speak? Although this question is far from answered recent studies suggest that the most important market failures are in the areas of technology, information, and coordination. They affect many critical areas of development—discovering and investing productively in new activities, Dutch disease, innovation and exports, provision of public goods, and new productive alliances that would allow sectors to increase their productivity. This is precisely why countries should not simply allow current market forces (partly triggered by the challenge of China) to lead them toward specialization in a few “traditional” sectors.

The bottom line is that China's success should stimulate Latin America toward proactive strategies that provide incentives to diversify and increase the technological sophistication of its domestic production. This book has discussed the many policies pursued by China. The story is hardly one of pure free market forces at work. To the contrary, few economic success stories have been purely market driven.

As with industrial policy in East Asia more generally, it is not always possible to draw firm conclusions about which interventions have been most critical in stimulating growth. As argued in Chapter 2, there are no formulas. Each country must creatively adopt a national policy framework adapted to local capacities, culture, politics, and social circumstances. It is safe to say, nonetheless, that a strong state that encourages and provides incentives for forward-looking industrial upgrading and diversification has been important in China. Strong state involvement in policy formulation has been important in Asia more generally—and has not been absent in policy formation in the OECD area, either.

A Strategic National Social Process

The need to renew government as a proactive force in market development comes at a time of active discussion of the proper development policies for Latin America to follow (Ramos, 2000; Melo, 2001; De Ferranti et al., 2002; Rodrik, 2003, 2004; Hausmann and Rodrik, 2003; Rodríguez-Clare, 2004; ECLAC, 2004). The importance of creating space for collaboration between the public and private sectors is clearly a critical element of the equation. This alliance should be constructed through “national social processes” geared toward developing more-focused policy frameworks than has been the case in the past. This involves strategic approaches to international competition that allow for competition among domestic interests, visions, and capacities as a set of incentives and interventions are built that make economies more competitive. Ultimately, government must arbitrate the process. This has to be done in ways that

are predictable, transparent, accountable, and technically sound—and then withstand the acid test of performance in the international marketplace.

Horizontal and Vertical Policies

The alliance built on the national social process should promote deployment of both horizontal policies that generally encourage new activities and sectors and vertical policies that involve specific government actions to encourage certain activities and sectors. It is important to stress that such policies do not substitute for the existing structural reform process. Rather, they are a complement to other policy instruments at the margin of reforms, aiming to consolidate a sound overall market-based economic framework.¹⁰

Horizontal policies tend to be less controversial. Vertical policies tend to generate more debate, because they introduce the need for selectivity. Selectivity is necessary for several reasons. First, sectoral needs and opportunities are not homogeneous. Second, the government cannot possibly take action on all activities and sectors because of the scope and complexity required for many public interventions. Third, public sector human resources and capacity for leadership have limits. Finally, fiscal resources are scarce.

The need for selectivity raises the question of the criteria by which activities and sectors are chosen for incentives and support. Several considerations should be kept in mind.

- Most countries already implicitly select certain activities and sectors for special attention—for example, tourism or agriculture (although interventions are not necessarily the outcome of the type of structured forward-looking process that is being suggested here).¹¹
- The focus should be on overcoming binding constraints and stimulating new private sector activities that lead to diversification and upgrading in international value chains.
- In contrast to past policies, the policies that are termed “vertical” here do not necessarily distort prices in favor of one activity over another or “pick winners.” Their point is to provide incentives for socially beneficial investment in activities that would not otherwise happen without public action or support.
- There is no accepted economic principle to objectively and rigorously dictate which activities or sectors should be chosen. Thus, the activities and sectors to be accorded special support cannot be chosen by government technocrats

¹⁰ While the focus here is on national and regional policy, it also has implications for support from multilateral and regional development institutions.

¹¹ Interventions often are a multilayered formation resulting from ad hoc measures undertaken by different government administrations over decades.

alone. The selection must be an outcome of the social process with technical foundations, described above, leading to choices in which public incentives can make a difference.

- Governments generally do not possess detailed knowledge of the most effective economic activities to undertake or sectors to support from the standpoint of development. Such choices require strong cooperation from the private sector, which has market-based knowledge and experience. Thus, one of the most important components in selection is effective articulation with the organizational and entrepreneurial culture of sector-level associations. This holds for constructing the required partnership with government as well as designing and implementing the interventions.
- To be effective and credible within an alliance with the private sector, governments need to build up the professionalism and technical capacity of their trade- and investment-related agencies.

A successful program has other requirements as well. Some are as follows.

- Interventions should not dull competition.
- Introduction of policies should practice the art of gradualism in order to avoid the pendulum swings to which Latin America has been prone. All governments have some capacity to engage in alliance building and interventions, but their expectations should not exceed reality.
- Government has been identified generally as a weak asset. Hence, countries with weaker government capacity must start cautiously. The public–private alliance should be realistic in its initial ambitions and deploy fewer and simpler interventions. It should build over the medium term through experimentation, learning, and a structured process of capacity building. Learning curves can be developed and tested against the marketplace. So as a general principle, pilot programs offer good starting points.
- Vigilance must be employed against an old nemesis: rent seeking. In the past, external protection was much higher, domestic competition was much lower, democratic politics were scarce, and governments were less constrained by public accountability. The risk today is much less than in the past. Yet the threat is still there.
- Proactive policy must be subject to regular checks and balances—for example, sunset clauses for support programs, performance contracts, counterpart funding, and third-party independent evaluations of outcomes. Failures are to be expected in such complex endeavors. The goal, however, is to build a policy portfolio defined by its successes.
- If governments are to engage in these policies, they need fiscal space.¹² In most Latin American countries, persistent fiscal imbalances have forced a focus on

¹² Policies are discussed in IDB (1997).

short-term cyclical needs rather than long-term priorities and strategy. Enhancing the tax base is clearly one option that cannot be avoided. But rigorous prioritization of expenditures and tax administration must also be part of the formula.

Finally, a government's space for proactive policy grows side by side with its progress in several areas—strengthening the macroeconomic environment, increasing domestic savings, deepening domestic financial markets, and reducing the foreign debt burden. Most Latin American economies are still fragile in these areas. So consolidation of related reforms remains on center stage.

Some Policy Areas That Support Competitiveness and Upgrading

Dealing with Dutch Disease

Dutch disease is a classic market failure faced by raw material producers. How to deal with it? If the cause is cyclical—for example, a temporary rise in oil prices—a stabilization fund might be effective. When the problem is not cyclical, this would not be effective. An option would be to deal directly with the market failures that hinder the economy from devoting resources to potentially dynamic industries. A good example of an effective policy is the 2004 initiative of the Chilean government to create the Innovation Fund for Competitiveness, which is based upon a new tax on copper exports, a nonrenewable resource. This fund would be used to support learning, innovation, and R&D in nontraditional agriculture-based exports and in industries in which Chile has a comparative advantage. The goal is to increase productivity, develop new products and markets, foster export-related services, and promote industries that provide inputs such as machinery, seeds, fertilizers, and logistics. This could help diversify exports in the direction of knowledge-based goods and services that are related to the country's comparative advantage in natural resources.

Provision of Public Goods

Market failures also arise because of inadequate coordination for the provision of public goods and services that are critical for growth in certain activities and sectors.¹³ Coordination failures in the provision of public goods can arise under sev-

¹³ “Pure” public goods have the characteristics of “nonexclusivity” and “nonrivalry.” However, in practice most public goods are impure and reflect degrees of dilution with respect to these two fundamental characteristics (Buchanan, 1968).

eral circumstances—for example, the “free rider” problem arising from efforts to eliminate contaminated beaches to support tourism. In other cases, coordination failures arise from activities with strong complementarities. For example, building an airport in a region with no hotels would not induce traffic, but hotels without an airport might not work either. Similarly, creating a university to specialize in high-fashion design would not make sense where firms were not demanding trained personnel in this area, but firms might never evolve toward fashion design in the absence of specialized professionals. A cluster built around microchip production might never happen without foreign direct investment, but a foreign factory without a domestic labor market in science and engineering would probably not spark cluster development.

In other cases, the supplier of an input or service would not capture the full returns of a risky investment because of externalities. As a result, the input or service might be unavailable despite being socially beneficial. For example, sterilization services must be available locally for a medical-devices cluster to emerge, but since a supplier might not be able to extract the full surplus from the sterilizing service, it might not be offered despite being “socially efficient.”

Education

Conventional wisdom once held that increasing enrollment in primary education was usually the “right” priority for education policy in developing countries. As Pritchett (2001) has pointed out, increasing enrollment rates without appropriate attention to quality can be a monumental waste of resources. China’s emphasis on higher education suggests the need for a balanced approach—primary education with due evaluation of the requirements for secondary and tertiary education, as discussed previously.

The importance of higher education does not stem solely from the rising skill premium that China’s emergence is likely to generate. As emphasized by De Ferranti et al. (2002), IDB (2002), and ECLAC (2004), Latin America should adopt policies that increase the technological content of production. Simple observation of the instances in which this has already happened in the region—for example, Chile’s successful fruit, salmon, and upscale wine exports; Costa Rica’s medical devices sector; and Brazil’s commuter jets and automobile parts—underscores the importance of an adequate higher education system, both for the supply of high-quality professionals and for the appropriate R&D infrastructure.

An improved higher education system does not boil down just to giving more resources to public universities or allowing private universities to expand. It requires policies to upgrade curricula (particularly in mathematics, science, and engineering), improving information about future job opportunities (so that prospective students can make career decisions more judiciously), and incentives to universities to expand the courses that are in high demand in the private sector and “alliance-oriented” public

agencies. Two- and three-year technical colleges can make an intermediate contribution to upgrading technological capacities.¹⁴

In addition, the allocation of resources should increase university departments' capabilities in R&D in a manner that is relevant to the private sector. Increased collaboration between private sector organizations and universities is essential. Governments can promote that collaboration through a system of R&D grants for universities. These can be conditional upon research being approved or even requested by the private sector. Finally, education policy is a means of overcoming Latin America's wide deficit in equality.¹⁵

Export Development and Investment Promotion

Development is related not only to goods that the country already produces, but to new goods and progressive upgrading of the export basket. Unfortunately, this area is severely affected by market failures because significant knowledge spillovers arise as new exportable sectors are discovered. The market failure here is that the cost of discovery and investment is incurred by an entrepreneur, though the benefit is enjoyed by the whole society because other firms can rapidly imitate successful ideas (see Ramos, 2000; Hausmann and Rodrik, 2003). For one thing, regulations must be questioned that discourage new ventures or that block credit to exploit new investment opportunities. But even more important, proactive policies must actively encourage discovery and investment.

Many notable examples of such policies can be found in Latin America, including the salmon industry in Chile, nontraditional agriculture in Costa Rica, clothing *maquilas* in Central America, export services in Uruguay, and electric motors and machine tools in Brazil. The goal is not to "pick winners."¹⁶ The government knows even less than the private sector about what new lines of business will become profitable or successful exports. Rather, government's job is to provide an effective incentive structure to entrepreneurs who are engaged in discovery and willing to invest. This might translate into a policy of providing grants or predictable credit for new types of exports, new markets, or launching new firms.

Chapter 7 analyzed market failures that have prevented Mexico and the Caribbean from developing niche areas that build upon their geographic and market access advantages. One can easily imagine a Latin American clothing industry specialized in higher-value items. It would be characterized by high rotation, customization, and quick delivery by land and maritime transport. Thus, while Asia specializes in high-

¹⁴ It is important that the educational system allow for easy transitions between different education levels, particularly from technical training to advanced university degrees.

¹⁵ For policies to address this problem more generally, see IDB (1996).

¹⁶ This is not to say that countries do not pick winners. There are numerous examples of success, but the strategy can be very costly fiscally speaking and prone to big errors.

volume, scale-intensive, low-rotation, and low-cost production, Latin America would focus on narrower markets requiring quick shipment and flexibility in response to rapidly changing fashion trends and consumer preferences. This would require regional production of specialized inputs at competitive prices, so that full-package producers could rapidly respond to customized orders. As discussed in Chapter 4, many industrial products could broadly benefit by maximizing the region's asset of geographical proximity to major markets. Development is needed to increase the scale of shipments, hubs and spokes in transport systems that promote scale and two-way balance in shipping, containerization, more competition in air and freight services, and modern customs facilities.

Certain pro-growth policies are often advocated—macroeconomic stability, financial deepening, access to local credit,¹⁷ strengthening property rights, infrastructure, and so forth. But Latin America must take three other measures to ensure investment in export growth and diversification: increases in technological sophistication; learning and innovation; and attraction of foreign direct investment.

In this regard, the region should avoid the too-frequent episodes of real exchange rate appreciation. A competitive exchange rate facilitates discovery of new exports and can attract foreign direct investment into the export sector. Indeed, ECLAC (1995), Rodrik (2003), and Hausmann, Pritchett, and Rodrik (2004) have argued that a competitive real exchange rate is a key to high growth, as in Chile since the mid-1980s. China, of course, provides another example. Real exchange rates have been competitive for many years, strongly encouraging long-term investment in tradable goods.¹⁸ With the exception of El Salvador since the mid-1990s, Central America has enjoyed stable real exchange rates and fast export growth. By contrast, Argentina, Brazil, and Uruguay have experienced intense swings in real exchange rates, weaker export growth, and less foreign direct investment in export activities.

The region also should deal with the so-called country cost of doing business¹⁹ as well as with the “insecurity” (that is, with institutions, taxes, crime) over prevailing business conditions. The critical challenges are to rationalize and strengthen institutions, the effectiveness of the state, and the rule of law. Investors need to know, understand, and trust the rules of the game. In this regard once again, China provides instructive lessons on how to adopt temporary measures to create a secure environment for investors.

China's ability to reassure investors that possible policy shifts will not threaten export-oriented investments has been a cornerstone of its successful policy mix (see

¹⁷ See IDB (1997).

¹⁸ Part of Chile's management of the exchange rate involved use of controls on volatile short-term capital flows (see ECLAC, 1995). As was seen in Chapter 2, China has been very gradualist about capital account opening, letting it lag behind trade liberalization.

¹⁹ For analysis of this problem, see World Bank (2004).

Chapter 2). Export-processing zones are another example in which China—and in this case several Latin American countries—have created advantage beyond tax benefits by establishing predictable “rules of the game” (usually 15 years in Latin America). This has allowed foreign and domestic investors to plan ahead and commit to long-term investments. The system of export-processing zones is now being eliminated because it is considered an export subsidy and is therefore a violation of WTO agreements. To move beyond the system of export-processing zones, all countries must strengthen their institutions and thus improve credibility for investors. A transitional measure might be “investment contracts” between the state and investors to guarantee a set of rules for the first 10–15 years of an investment. In the case of Mexico, Central America, and the Dominican Republic (and probably some Andean countries in the near future), these contracts are backed by the investment chapters included in a free-trade agreement reached with the United States (although, granted, this is relevant only for regional investors).

Finally, export promotion to China and attracting investment will be important areas for public–private sector collaboration. Today, most Latin American countries have export promotion policies. Such policies correctly respond to market failures related to the difficulty of discovering new export opportunities and markets. The cost of exploring the Chinese market is relatively high. In the absence of public support, the burden falls upon the shoulders of a few entrepreneurs who are then unable to capture a significant part of the consequent benefits. Discovery hence is discouraged. This explains, for example, public initiatives in Brazil to undertake missions to China in search of new markets and investment. Other countries, including Argentina, have undertaken similar initiatives. There are various possibilities for promotion. One is to offer grants to entrepreneurs who propose new projects in the Chinese market or who bring investment home. Another is to develop private, public, or mixed institutions that specialize in export promotion and attracting investment. Still another is to hold fairs and missions and to conduct market searches. More generally, access to export credits is critical for penetrating Chinese and global markets.

Innovation

One of the most relevant externalities that leads to coordination failures is related to innovation. Much evidence supports the hypothesis that innovation generates significant externalities that benefit nearby firms (Audretsch and Feldman, 2004). The standard policy prescription for this market failure has been to subsidize R&D through universities and through tax incentives to private corporations. Strengthening intellectual property rights is another recent approach. More generally, it has become fashionable to talk about the need to strengthen “national innovation systems.”

Though they are useful, the impact of these policies may be limited for several reasons. First, reliance on tax incentives for R&D by private corporations in developing countries is a strategy that is likely to fail. Such subsidized research is not likely

to generate any significant spillovers, since it is unlikely that other firms are close enough, geographically or economically, to benefit from the knowledge generated in the originating firm.

Second, as documented by Audretsch and Feldman (2004), some kinds of research lead to greater spillovers than others. In particular, research in universities and research centers on behalf of industry groups is likely to generate much greater spillovers than R&D in private corporations. Thus, instead of simply subsidizing R&D across the board, policy should aim to promote collaborative research from which several firms can benefit.

Third, most of the policies mentioned above support the supply side of the R&D market but leave aside the demand side, which may be the main constraint in developing countries. It has been argued that a way of doing this is to increase the private gains from innovation by strengthening the country's intellectual property rights regime. However, in small less-developed countries this is likely to have an insignificant effect since the local markets protected by patents are small.

Instead, policy should aim at promoting collaborative innovation activities in particular sectors. Support obviously should focus on new activities and groups in sectors of comparative advantage, but public-private collaboration also should emerge in other sectors that may display signs of incipient success. A good example is offered by Uruguay's experience of collaboration between the private rice sector and the Instituto Nacional de Investigación Agropecuaria (INIA), created by law in 1990.²⁰ In the 1990s, INIA developed new rice seeds that are better adapted to Uruguay's soil and climate, allowing productivity and exports to grow to levels among the highest in the world. Today, INIA's rice program includes studies to identify and treat plagues (biotechnology), improvements in irrigation systems and planting methods, and the continuous evaluation of pesticides and fertilizers. Many of these projects take place in close collaboration with universities, and always in close coordination with private sector associations. Similar developments can be found in Brazil for soy and other agricultural products.

The Role of Regional and Global Integration

Regional integration is clearly a big asset that can help Latin America meet the competitive challenges of global competition and the emergence of newly dynamic economies such as China and India. Indeed, the emergence of China should also be a wake-up call to renew efforts to pursue deep regional integration; the great progress made in this area during the 1990s was followed in 2003–2005 by stalemates in many initiatives.

Regional integration can be a way for Latin American firms to ameliorate disadvantages in scale and agglomeration as they exploit access to bigger regional markets

²⁰ Although INIA is a public institution, it operates outside the sphere of the state, giving it much more flexibility.

BOX 8.1**Some Policies Specific to Textiles and Apparel**

This report has documented in detail the threat posed by China's growth and the removal of the remaining quotas of the Agreement in Clothing and Textiles in January 2005 to the textiles and apparel sector in Mexico, Central America, and the Caribbean countries. According to recent experience, the elimination of U.S. import quotas in many categories of textiles and apparel is likely to dramatically boost China's (and probably India's) share of the U.S. market to the detriment of Latin American exports.

The threat of a crisis such as this always leads to the danger of defensive and even protectionist measures intended to allow inefficient producers to survive. This would be unfortunate, as it would merely postpone the inevitable shake-up that the industry must endure if it is to evolve toward a competitive operation that makes a positive contribution to national development. For the most part, the evolution of the industry will take place thanks to the initiative of private corporations in the face of strong competition. Public policy should never aim at supplanting this process. Rather, the objective should be to visualize with private sector input the way the textile and apparel industry is evolving in a competitive world and provide the necessary public goods for the new activities to grow.

Given the magnitude of the Chinese challenge in this sector, it is possible that even aggressive policies like the ones that have been proposed in Chapter 7 (and that will be enumerated below) will not prevent a contraction in employment. This is very difficult to ascertain at this moment. In any case, it is clear that this sector will not contribute to the creation of jobs in the same way that it did during the 1990s. This makes the export diversification strategy outlined in this chapter even more critical for the countries enduring the Chinese challenge in textiles and apparel. These countries may also have to think about policies to assist displaced workers with training and assistance in finding new jobs. More generally, in all countries in Latin America the rise of new exporting sectors will be essential to generate the jobs needed to reduce unemployment, underemployment and informality currently prevailing in the region.

There are several reforms and policies that must be pursued to turn the vision of an industry capable of competing with China into a reality. First, it is necessary to improve customs services (working 24 hours, 7 days a week) and ease the related paperwork on firms. This is important not only for trade with the United States, but also for intraregional trade more generally, and is essential for the development of a regional cluster. Second, it is necessary to invest in infrastructure such as roads and deep-water port facilities, so that the geographical advantage becomes a real source of savings in transportation costs. In other words, the region should target its policies in order to reduce transaction cost and times. Third, the region must improve its position in terms of basic services such as electricity and secure access to long-term capital for the industry's restructuring. Fourth, it is necessary to invest in the generation of specialized human resources for the new stages of the industry. This requires people knowledgeable in engineering, design, marketing, procurement, cost accounting, and so on. Honduras has a specialized university in this field, but industry representatives think that it is not up to world-class standards. Perhaps the Central American countries should cooperate and form a world-class university specializing in textiles, apparel, and fashion. Finally, as discussed more below, the region should leverage its superior position in terms of labor and environmental standards.

Colombia offers a positive example. It produces high-quality apparel products and tailored clothing, fashion jeans, and sportswear. It has a vast supply of skilled textile workers. Its textile industry has vertically integrated firms that produce a variety of man-made fibers and fabrics. Colombia is

(continued on next page)

BOX 8.1 (Continued)

recognized by the USITC (2004) as “a good source for retailers and apparel suppliers looking to do a quick-turn business, for which they might be willing to pay a premium.”

Some firms have already been doing this in Mexico and Central America. Tricot Piccolo Leader S.A. (Small-Knit Leader), based in San José, Costa Rica, has been producing since 1976, and it has evolved into one of the most innovative companies in the region, using high-tech machinery and a computerized production process, achieving high productivity and optimal quality level and maximizing the company's profits.¹

Regarding labor and environmental standards, this could become a further source of positive differentiation for the region in northern markets in which labor and environmental issues in production processes are increasingly conditioning consumer demand for specific products and retailers. The region could pursue certification of labor (eight-hour working days, optional extra hours, maternity leave, at least one free day a week, a transparent process to receive labor complaints through nongovernmental organizations or the church) and environmental conditions, further differentiating its product, allowing it to charge higher prices than China and other Asian countries, which have a worse reputation here. The U.S. FTA with Central America and the Dominican Republic took a big step toward underpinning international labor standards in the region through mandatory enforcement of local laws. The agreement is also in line with the latest ecological standards. These policies open the door to serving a more demanding and selective market.

There is one initiative for enhanced competitiveness worth mentioning that others could emulate. The Textiles and Apparel Summit gathered in San Salvador more than 400 entrepreneurs of the Central American textile sector along with 200 U.S. entrepreneurs. In 2003 it was the “Full-Package Summit” and in 2004 the topic was “Speed to Market.” The summit counts on support from important associations in the United States, such as Caribbean and Latin American Action (CLAA), American Apparel and Footwear Association (AAFA), and American Apparel Producers Network (AAPN), which represent the bulk of the industry in that country. The priorities of the summit are focused on the search for strategies that help increase the sector's competitiveness. The strategy is based on proximity and access to the U.S. textile market. It is agreed that the strongest advantage comes from fast production processes and high-quality value-added goods produced according to ecological standards and that also are in line with international labor codes.

Clearly, apparel and textile producers in Central America are not asking for handouts or protection. They are instead outlining a set of concrete measures that must be taken if the sector is to survive. Thus, the summit offers governments in the region a clear opportunity to engage in a constructive partnership with the private sector. This may even turn out to be a source of experience for countries to draw upon in pursuing similar strategies in other sectors in the future.

¹This is not an extensive list, but only attempts to make a point by naming a few successful cases.

with preferences and collective rules. Regional integration can also lower the costs associated with distance through the elimination of tariffs, the organization of hubs and spokes in transport and port systems (which maximize opportunities for scale and timeliness), and familiarity, which lowers search costs. Regional partners can also cooperate in important areas that enhance competitiveness such as higher education facilities, R&D efforts, the development of production linkages and clusters, regional infrastructure development, export and investment promotion, and macroeconomic policy cooperation. The formation of regional markets has contributed to the attrac-

tion of FDI, especially when the agreement incorporates an industrialized-country partner (IDB, 2002).

The regional approach to competitiveness can be practiced at various levels. The deepest potential integration and most comprehensive cooperation is available in principle to subregions committed to developing common markets, such as Mercosur, Central America, the Andean Community, and CARICOM.²¹ FTAs involve less cession of sovereignty and weaker commitments to cooperation but can provide a commercial platform that supports scale through market access and the reduction of trade and investment costs. This is especially true for second-generation agreements that go beyond goods trade to incorporate services, government procurement, investment, and so on. Moreover, more trade can lead to more investment and cooperation.

The broader the participation in the FTA and the more extensive the range of endowments among the countries, the less the risk of inefficient trade and investment diversion that would move countries away from their production frontier unless offset by medium- and long-term dynamic effects. North-South FTAs, in particular, display this benign characteristic (Venables, 2003)²² and have the added advantage of serving as a magnet for FDI. In this sense, completion of the FTAA is a historic opportunity for Latin America to prepare for global competition and the emergence of big markets such as China. In effect, an FTAA would create a hemispheric vehicle to anchor reforms and a preferential regional market of 800 million, with endowments ranging from highly capital- and technology-intensive to very labor-intensive (Estevadeordal et al., 2004). FTAs with the United States share some of these characteristics as well, although they offer a smaller market than the FTAA and have the disadvantage for Latin America of representing less efficient hub-and-spoke systems (Wonnacott, 1996). South-South FTAs, such as that between Mercosur and the Andean Community, are of a lesser scale, depth and endowment diversity, but they can aid competitiveness if care is taken in the tariff structures to minimize the more inherent risks of diversion.

Another level comprises interregional FTAs. One strategy worth considering is that adopted by Chile and Mexico, which have pursued FTAs with Southeast Asia and the European Union. The former has an FTA with the European Union and the Republic of Korea and has begun to pursue another with China, while the latter has an FTA with the European Union and Japan. The advantage of FTAs with Asia is not only

²¹ The Central American Common Market could be a vehicle for consolidating and upgrading the textiles and apparel industry in that subregion.

²² But as shown in earlier chapters North-South FTA preferences and restrictive rules of origin can lock countries into low-value-added activities that make them vulnerable to the emergence of low-wage exporters such as China and India. This is most evident in textiles and apparel. Also, these agreements have disciplines that may restrict policy space: for example, “WTO-plus” intellectual property rules and limits on the use of short-term balance of payments capital controls. Nevertheless, these costs must be weighed against the potential to accommodate objectives hard to achieve in global alliances such as the WTO.

market access for exports. These accords also reduce Latin America's distance from the production of world-class intermediate goods, technological development and investments that could serve to energize the region's competitiveness and growth in the world economy. Asia is a relatively unexploited market for Latin America, and formal trade agreements could be a useful tool to enhance participation there.

The last level is ad hoc cooperation such as the Initiative for the Integration of South American Regional Infrastructure (IIRSA) and the Plan Puebla-Panama (PPP) (IDB, 2002). Their focus on regional infrastructure and related regulations (the PPP is more than that) could narrow one of the region's prime competitive deficits.

The challenge of regional integration is not only to do it effectively but to take full advantage of its opportunities. In both areas, Latin America has sometimes been slow. In practice, subregional integration has often not gone much beyond imperfect free trade in goods, despite ambitious declarations and protocols. Furthermore, at the local level member countries have not tailored national policies to maximize the opportunities of a regional market. Negotiations for the FTAA and the European Union–Mercosur agreement are stalled because the parties cannot reach agreement on market access issues. Mexico's NAFTA experience, moreover, revealed that a North-South FTA is not a panacea for competing in the world arena (Lederman, Maloney, and Servén, 2003). Free trade agreements must be accompanied by proactive national and regional pro-competitiveness programs, since preferences are only a very temporary advantage in a world economy that is liberalizing, steadily raising productivity and moving up the value chain. Moreover, high preferences with very restrictive rules of origin (typical of some sectors in North-South agreements) can lock countries into areas of activity where they do not have a real possibility of becoming internationally competitive, making them vulnerable to the inevitable phenomenon of preference erosion.

Finally, the region's membership in the WTO is an asset that should not be underestimated. As seen in Chapter 2, China's accession to the WTO led to an important opening of the Chinese market. In the negotiations, Latin American countries had opportunities to tailor some of the conditions to their specific interests (see the Appendix). The forms of China's industrial and technological promotion will also be restrained by WTO rules. On balance, WTO accession has leveled the playing field for Latin America and China in trade and investment policy.

The WTO dispute settlement mechanism will be another way of leveling the playing field between China and Latin America. More generally, at least in the near term, Latin America's longer experience in the GATT/WTO system may offer the region some temporary advantages in terms of effectively deploying the institution's mechanisms and participating in negotiations.

Last, but not least, some Latin American countries have found the WTO to be a vehicle for building alliances with China, most notably the already mentioned G-20.

References

- Arellano, J. P. 2002. "International Competitiveness and Education in Latin America and the Caribbean Countries." In *The Latin American Competitiveness Report 2001–2002*, ed. J. Vial and P. K. Cornelius. New York: Oxford University Press for the World Economic Forum.
- Audretsch, D., and M. Feldman. 2004. "Knowledge Spillovers and the Geography of Innovation." In the *Handbook of Regional and Urban Economics*, Vol. 4, ed. V. Henderson and J. Thisse. Amsterdam and New York: North-Holland.
- Barro, R. J., and J. Lee. 2000. "International Data on Educational Attainment: Updates and Publication." Working Paper No. 42, Center for International Development, Harvard University, Cambridge, Massachusetts (April).
- Buchanan, J. 1968. *The Demand and Supply of Public Goods*. Chicago: Rand McNally.
- Dahlman, C. J., and J.-E. Aubert. 2001. *China and the Knowledge Economy: Seizing the 21st Century*. WBI Development Studies. Washington, D.C.: World Bank.
- De Ferranti, D., G. E. Perry, I. S. Gill, J. L. Guasch, C. Sanchez-Paramo, N. Schady, and W. F. Maloney. 2003. *Closing the Gap in Education and Technology*. World Bank Latin American and Caribbean Studies. Washington, D.C.: World Bank.
- De Ferranti, D., G. E. Perry, D. Lederman, and W. Maloney. 2002. *From Natural Resources to the Knowledge Economy: Trade and Job Quality*. World Bank Latin American and Caribbean Studies. Washington, D.C.: World Bank.
- Devlin R., and A. Estevadeordal. 2004. "Trade and Cooperation: A Regional Public Goods Approach." In *Regional Public Goods: From Theory to Practice*, ed. A. Estevadeordal, B. Frantz, and T. Nguyen. Washington, D.C.: Inter-American Development Bank.
- ECLAC (United Nations Economic Commission for Latin America and the Caribbean). 1995. *Policies to Improve Linkages with the Global Economy*. Santiago, Chile: ECLAC.
- . 2004. *Productive Development in Open Economies*. Santiago, Chile: ECLAC.
- Estevadeordal, A., D. Rodrik, A. Taylor, and A. Velasco, eds. 2004. *Integrating the Americas: FTAA and Beyond*. Cambridge, Massachusetts: David Rockefeller Center for Latin American Studies, Harvard University.
- Goldman Sachs. 2003. "Dreaming with BRICS: The Path to 2005." Global Economics Paper No. 99, Goldman Sachs, New York.
- Hausmann, R., L. Pritchett, and D. Rodrik. 2004. "Growth Accelerations." Photocopy, Kennedy School of Government, Harvard University, Cambridge, Massachusetts.

- Hausmann, R. and D. Rodrik. 2003. "Economic Development as Self-Discovery." Working Paper No. 8952, National Bureau of Economic Research, Cambridge, Massachusetts (May).
- Heytens, P., and H. Zebregs. 2003. "How Fast Can China Grow?" In *China: Competing in the Global Economy*, ed. W. Tseng and M. Rodlauer. Washington, D.C.: International Monetary Fund.
- Huang, Y. 2004. "China Is Not Racing Ahead, Just Catching Up." *Financial Times* (June 8).
- IBGE (Instituto Brasileiro de Geografia e Estatística). Various years. Annual Industrial Survey (Pesquisa Industrial Anual).
- IDB (Inter-American Development Bank). 1996. *Making Social Services Work*. Washington, D.C.: IDB.
- . 1997. *Latin America after a Decade of Reforms*. Washington, D.C.: IDB.
- . 2001. *Competitiveness: The Business of Growth*. Washington, D.C.: IDB.
- . 2002. *Beyond Borders: The New Regionalism in Latin America*. Washington, D.C.: IDB.
- INEGI (Instituto Nacional de Estadística Geografía e Informática). Various years. Annual Industrial Survey (Encuesta Industrial Anual).
- Kessides, C. 1993. "The Contributions of Infrastructure to Economic Development: A Review of Experience and Policy Implications." Discussion Paper No. WDP213, World Bank, Washington, D.C.
- Krugman, P. 1994. "Competitiveness: A Dangerous Obsession." *Foreign Affairs* (March/April): 28–44.
- Lederman, D., W. Maloney, and L. Servén. 2003. *Lessons from NAFTA*. Washington, D.C.: World Bank.
- Lewis, A. 1955. *Theory of Economic Growth*. London: Allen and Unwin.
- Maddison, A. 2001. *The World Economy: A Millennial Perspective*. Paris: Organisation for Economic Co-operation and Development.
- McKinsey Global Institute. 2003. "New Horizons: Multinational Investment in Developing Countries." San Francisco: McKinsey Global Institute.
- Multilateral Investment Fund. 2005. "Cluster: Remittances as a Development Tool." Available at www.iadb.org/mif/v2/files/remittances.pdf.
- Murphy, K. M., A. Shleifer, and R. W. Vishny. 1989. "Industrialization and the Big Push." *Journal of Political Economy* 97.
- National Bureau of Statistics of China. 2003. *China Statistical Yearbook*. Beijing: China Statistical Press, National Bureau of Statistics of China.
- Noland, M., and H. Pack. 2002. "Industrial Policies and Growth: Lessons from International Experience." In *Economic Growth: Sources, Trends and Cycles*, ed. N. Loyaza and R. Soto. Santiago: Central Bank of Chile.
- Oxford Analytica and Oxford Economic Forecasting. 2004. *China: A Five-Year Outlook*. Oxford: Oxford Analytica.

- Pritchett, L. 2001. "Where Has All the Education Gone?" *World Bank Economic Review* 15(3).
- Ramos, J. 2000. "Policy Directions for the New Economic Model in Latin America." *World Development* 28(9).
- Rodrik, D. 2003. "Growth Strategies." John F. Kennedy School of Government, Harvard University, Cambridge, Massachusetts.
- . 2004. "Industrial Policy for the Twenty-First Century." John F. Kennedy School of Government, Harvard University, Cambridge, Massachusetts.
- Sachs, J., and A. M. Warner. 1995. "Natural Resource Abundance and Economic Growth." Development Discussion Paper No. 517a, Institute for International Development, Harvard University, Cambridge, Massachusetts.
- USITC (U.S. International Trade Commission). 2004. "Textiles and Apparel: Assessment of the Competitiveness of Certain Foreign Suppliers to the U.S. Market." Publication No. 3671, USITC, Washington, D.C. (January).
- USTR (Office of the U.S. Trade Representative). 2003. "Report to Congress on China's WTO Compliance." USTR, Washington, D.C. (December).
- Venables, A. 2003. "Regionalism and Economic Development." In *Bridges for Development: Policies and Institutions for Trade and Integration*, ed. R. Devlin and A. Estevadeordal. Washington, D.C.: Inter-American Development Bank.
- Wacziarg, R., E. Spolaore, and A. Alesina. 2003. "Trade, Growth, and the Size of Countries." Harvard NOM Working Paper No. 03-14/Harvard Institute of Economics Working Paper No. 1995, Harvard University, Cambridge, Massachusetts; and Stanford Graduate School of Business Working Paper No. 1174, Stanford University, Palo Alto, California (January).
- WEF (World Economic Forum). 2003. *Global Competitiveness Report 2003–2004*. New York: Oxford University Press.
- Wilber, C. 1969. *The Soviet Model and Underdevelopment*. Chapel Hill: University of North Carolina Press.
- Wonnacott, R. 1996. "Trade and Investment in a Hub-and-Spoke System versus a Free Trade Area." *World Economy* 19(3): 237–52.
- World Bank. 1991. *World Development Report*. Washington, D.C.: World Bank.
- . 1993a. *The East Asian Miracle: Economic Growth and Public Policy*. New York: Oxford University Press.
- . 1993b. *China—Promoting Growth with Equity*. Country Economic Memorandum, Report No. 24169, World Bank, Washington, D.C. (September).
- . 2004. *Doing Business in 2005: Removing Obstacles to Growth*. Washington, D.C.: World Bank.
- . n.d. Knowledge Assessment Methodology interactive home page. Available at <http://info.worldbank.org/etools/kam2005/>.
- World Tourism Organization. 2003. *Chinese Outbound Tourism*. Madrid: World Tourism Organization.

Young, A. 1993. "Lessons from the East Asian NICs: A Contrarian View." Working Paper No. 4482, National Bureau of Economic Research, Cambridge, Massachusetts.

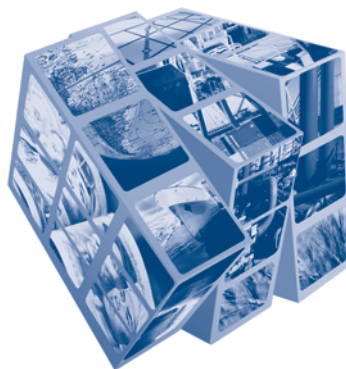
IDB Background Reports

Melo, A. 2001. "Industrial Policy in Latin America at the Turn of the Century." Working Paper No. 459, Research Department, Inter-American Development Bank, Washington, D.C.

Mesquita Moreira, M. 2004. "Fear of China: Is There a Future for Manufacturing in Latin America?" Integration and Regional Programs Department, Inter-American Development Bank, Washington, D.C.

Rodríguez-Clare, A. 2004. "Macroeconomic Interventions after the Washington Consensus." Photocopy, Research Department, Inter-American Development Bank, Washington, D.C.

COUNTRY CASE STUDIES



This page intentionally left blank

Implications of China's Emergence in the Global Economy for Latin America: The Cases of Argentina, Brazil, Chile, and Mexico¹

The Case of Argentina²

Impact of China's Emergence on Trade and Investment Mechanisms

Overview of Argentine-Chinese Bilateral Trade

Argentina's exports to China have grown significantly over the past 20 years, from \$189 million in 1980 to almost \$2.5 billion in 2003. Meanwhile imports of Chinese products have also grown, from \$33 million to \$635 million. Thus China has become an increasingly important trading partner for Argentina and now stands as the fourth-largest Argentine export and import market.

Three-quarters of Argentina's exports to China are from the agro-food industry. The top export products are soybeans, soybean oil, leather, wool, and seamless iron tubes, which are mainly utilized as inputs in various Chinese industries. Perhaps the most dynamic export performance is attributed to soybeans, exports of which grew at a much faster rate to China than to the world, signaling a shift in export market composition for the commodity and increased dependence on Chinese demand. Argentina's imports from China are mainly in machinery and transport (over 40 percent of imports), chemicals (18 percent), and textiles and footwear (11 percent). The top imported products include computers, organic and inorganic compounds (mainly agricultural herbicides), toys, and radio receivers.

Two additional indicators can be used to analyze the structure of bilateral trade between Argentina and China. First, Argentina runs a balance-of-trade surplus in agro-food products, metals, and leathers and a deficit in chemicals, machinery and transport products, textiles, and footwear. Second, a study of the patterns of intra-

¹ The case studies in this appendix were prepared in mid-2004.

² Based on Galperín, Girado, and Rodríguez Diez (2004).

industry trade provides more-detailed information on the production specialization in bilateral trade. Argentina's trade with China demonstrates a very small share of intra-industry trade (0.2 percent), while most agricultural products register an export coefficient and most manufactures register an import coefficient.³

The emergence of China in the global economy has three important consequences for Argentina: (1) it provides new export opportunities; (2) it signals a possible increase in imports; and (3) it poses the threat of increased competition in third markets.

New Export Opportunities

The trade complementarity index is used to analyze sectors with export potential, identifying product lines for which Argentina is a relatively specialized exporter and China is a relatively specialized importer. Once identified, sectors with potential are separated into those for which Argentina already has *entrée* (presenting an opportunity for expansion through export promotion or better market access) and those for which it has no presence (unexploited opportunities due to high protection or lack of demand).⁴ The analysis shows that the products with complementarity and *entrée* make up a total market of \$29 billion (Chinese import values), of which Argentina accounts for \$800 million. The biggest potential for growth is in agricultural sectors like oil seeds, meats, and fish, as well as other sectors like fuels, plastics, iron and steel, leather, and wool. Argentine sectors with complementarity but no current market presence in China equaled \$16 billion in import value (annual average in the period 1998–2001). Agro-food products accounted for \$800 million of those imports, with cereals, fats and oils, tobacco, and dairy products the most important sectors. The remaining \$15.2 billion of imports were in non-agro-food sectors, particularly plastics, machinery, steel, organic chemicals, and synthetic fibers.

Opportunities for Increased Imports

The same analysis can be done to identify sectors in which increased imports could occur. Using the complementarity index, one can measure those products for which

³ The intra-industry trade indicator is measured as

$$IIT = 1 - \left[(X_i - M_i) / (X_i + M_i) \right],$$

where X_i is exports of sector i , and M_i is imports of sector i . A high percentage for intra-industry trade indicates similar production structures and greater integration since there may be large amounts of intrafirm trade or exchange of differentiated products.

⁴ The trade complementarity index is defined as

$$TCI = \left[(X_a^i / X_a^t) / (M^i / M^t) \right] * \left[(M_b^i / M_b^t) / (M^i / M^t) \right],$$

where X is exports and M is imports of product i or total t by countries a and b .

Argentina is a relatively specialized importer and China a relatively specialized exporter. The analysis shows that the sectors with complementarity and a presence make up a total market of \$6.8 billion. Among these, the largest products (in Argentine import values) are manufactures such as machinery, chemical and metal products, autos and auto parts, footwear, and plastics. On the other hand, the sectors with complementarity yet no presence in Argentina totaled \$744 million and were concentrated in fertilizers, steel products, wood-related products, oil seeds, and meats.

Competition in Third Markets

China's growing global economic presence could also significantly threaten Argentina's export performance in third markets. To identify those products that may face increased competition, a measure of revealed comparative advantage is calculated to determine which Argentine and Chinese exports have achieved comparative advantage relative to world trade.⁵ Only products that fall into one category—those for which Argentina revealed no comparative advantage and China did—pose a high risk of displacement. This “high-risk” group accounted for only 2 percent of Argentine exports, a small amount characterized by agricultural sectors like fruit and vegetable preparations, meats, products of animal origin, and fish and crustaceans and nonagricultural sectors such as electrical machinery, articles of iron or steel, rubber, footwear, and plastics.

Displacement of Argentine exports could also occur after a free trade agreement between China and Mercosur, given the erosion of tariff preferences Argentina would face in the Brazilian market. Analysis by the Centro de Economía Internacional in 2003 concluded that the biggest threat corresponded to 4 percent of Argentine exports to Brazil, mainly in rice, herbicides and insecticides, and certain machinery (CEI, 2003).

Policy Responses to Control Threats and Open Opportunities

Defensive Measures

Argentina has taken defensive actions to protect itself from China's emergence in the global economy. During the period 1995–2004, Argentina initiated 31 antidump-

⁵ The revealed comparative advantage is defined as

$$RCA_i = \left[\left(X_a^i / X_a^t \right) / \left(M^i / M^t \right) \right],$$

where X_a^i is exports of product i by country a , X_a^t is total exports of country a , M^i is world imports of product i , and M^t is total world imports.

ing investigations against China—roughly 28 percent of total cases and the most against any country. In 24 of these investigations definitive measures were applied, 9 of which have expired. Active antidumping measures have mostly been applied to the machinery and transport sector (40 percent of cases) and metals (20 percent). Argentina did not apply any safeguard measures on Chinese products in the period 1995–2004.

Offensive Measures

Argentina has also taken several actions to benefit from China's increasing role in world trade. Some of these offensive measures include the negotiation of China's accession into the WTO, participation in the agricultural negotiations under the Doha Round, diplomatic and commercial missions to China, and agreement on sanitary and phytosanitary standards.

In the talks surrounding *China's WTO accession*, Argentina was granted tariff reductions in 78 product lines, mainly in the agricultural and metallurgical sectors. Argentina has also benefited from concessions made by China to third parties; most-favored-nation reductions particularly in agricultural products; initial negotiator rights in beef, oranges, lemons, maté, soybean oil, and preparations of meat and corn; tariff-rate quotas for many agricultural exports like wheat, corn, soybean oil, and wool; and agreement on some sanitary measures.

Under the WTO umbrella, Argentina has also had close relations with China in the *Doha Round agricultural negotiations*. Both have been participating in the G-20, a multinational effort to forge a common position for liberalizing agricultural trade in the European Union, the United States, and other developed economies. The G-20 is a new avenue for cooperation between Argentina and China.

Argentina has also used *diplomatic and commercial missions* to improve its participation in the Chinese market. Since 2000, six missions comprised of Argentine public and private officials have traveled to China. The last trip—in June 2004—included current President Kirchner and addressed issues of economic and technical cooperation, in addition to strengthening political ties and improving economic relations.

One area of limited success has been the negotiation of sanitary and phytosanitary requirements for exports entering China. Although agreements have been signed for dairy products, poultry meats, and oranges, agreement is still pending for beef, lamb, pork, and other fruits. Agreement in the short term appears unlikely.

Policy Recommendations and Courses of Action

Despite some geographical and cultural divides, Argentina and China share points of common interest in their development agendas and national security strategies (for example, in food and energy policy). China's demand for basic raw materials

puts Argentina in its sights as a strategic supplier of grains, other basic foods, and energy resources. This convergence justifies efforts to maximize opportunities in China, while also preparing to meet the challenges that China's emergence brings in the multilateral arena. A comprehensive government plan could be formulated analyzing China's interests in Argentina and China's place in Argentina's external relations.

A comprehensive framework would include an Argentine promotion policy in China, definition of common public-private sector interests, and better coordination between national and regional institutions to take advantage of the Mercosur-Asia relationship. A mixed committee (*comité mixto*) of government, private sector, and academic participants should manage this initiative toward China, using a flexible approach and broad consultations to help shape long-term public policy. The committee would channel political dialogue and collaborate with China in defining bilateral and multilateral strategies. A key strategy is outlining how to become a long-term commercial supplier to and a target for investment from China by emphasizing Argentina's manual labor quality and integration in regional markets.

Argentina's diplomatic and public officials in China should make collection and dissemination of information useful for Argentine private sector activities a priority. Commercial strategies targeted at China should also be defined, for example, by promoting Argentine agricultural products as quality goods free from disease. Institutionally, the plan should promote consortia of companies exporting into China. To attract Chinese investment, the plan should promote Argentina as an export platform to Mercosur and the Free Trade Area of the Americas, as well as back to China itself.

Private sector involvement should complement government actions and strive to bridge the cultural divide and knowledge gap in bilateral commercial practices and customs. The private sector should also participate in Asian meetings, learning more about quality expectations in Asia and defining a sharper image of Argentina's opportunities for Asian economies. It is important for entrepreneurs to understand that successful penetration of the Chinese market requires planning and medium-/long-term perseverance.

Interested academics should take advantage of the engagement with China to encourage exchanges and to evaluate the developing relationship. Chinese interest in Spanish is a positive development and should help in the exchange of ideas among academics of both countries. Academia could play a major role in any deepening of relations since that implicitly requires learning (both in terms of training and adaptation).

In sum, the proposal calls on government and the private sector, with support from academia, to work together to build consensus and formulate an effective Argentine foreign policy toward China.

The Case of Brazil⁶

Impact of China's Emergence on Trade and Investment Mechanisms

Brazil-China Bilateral Trade

Bilateral trade between Brazil and China has increased significantly since 2000. The share of exports to China in Brazil's total exports has tripled, reaching 6 percent in 2003. During the same period, the share of imports from China more than doubled to account for 4.5 percent of total imports.

Brazil's exports to China are concentrated in commodities that include soybeans, soybean oil, iron ore, iron ore pellets, and wood pulp. Together they account for roughly two-thirds of all exports to China. The most dynamic export sector has been soybeans. The Brazilian share of Chinese soybean imports has increased significantly since the early 1990s, rising to more than one-third of the Chinese market by 2002. Brazil has also been increasing its share of the Chinese iron ore and pellet market, making up 28 percent of Chinese imports of those commodities in 2003. China is the largest export market for Companhia Vale do Rio Doce (CVRD), the world's largest iron ore producer, and the company hopes to increase its market share further in the next few years. Brazilian exports of iron and steel products to China showed a rapid expansion of over 400 percent to reach \$745 million in 2003.

China's accession to the World Trade Organization has set it on an accelerated path of trade liberalization. As a result, Brazil and other WTO members will benefit from reduced Chinese tariff levels. Soybean oil, as well as corn, sugar, and cotton, are subject to tariff-rate quotas. In 2002, the soybean oil TRQ was a 9 percent in-quota rate (2.5 million metric tons) and a 48 percent out-quota rate. The out-quota rate decreased by 13 percentage points a year to reach 9 percent in 2005 and effectively transition to a tariff-only system. China's unweighted-average bound tariff on agricultural products fell to 17.4 percent in 2005. Bound rates on industrial products fell to 9.4 percent. Nontariff barriers are relevant in bilateral trade, especially obstacles concerning how foreign firms are regulated and the role of state trading. These barriers are gradually being dismantled as well.

Sustainability of Chinese demand in commodity imports is an important issue for Brazil. All Brazilian exports, with the exception of iron and steel products, are unlikely to be affected by increased supplies within China. By 2010, China is expected to become a major steel exporter, posing a threat to current producers (including Brazil). However, Brazil is also a major supplier of iron ore to world markets, and China's growing steel industry is likely to continue to depend on high-grade iron ore imports. New export opportunities are also expected in several traditional agricultural prod-

⁶ Based on Abreu (2004).

ucts such as beef, poultry, pork, and orange juice, as well as transport equipment and software.

Brazilian imports from China have been concentrated in a few products that include coal and coke, organic chemicals, and electrical machinery, equipment, and parts. Coal and coke imports from China are increasing their share of the Brazilian market, displacing imports from Australia. Imports of electrical machinery, equipment, and parts are also accelerating at the expense of the United States and Japan.

The level of protection faced by imports from China in the Brazilian (Mercosur) market is relatively high but with a low coefficient of variation. Most of the electronic parts and components are imported by firms operating in the Manaus Free Trade Zone and are thus exempt from customs duties and all federal, state, and municipal taxes.

Competition in Third Markets

Increased competition by China in all third markets, but especially in the United States, has adversely affected Brazilian exports. A product analysis at the SITC five-digit level shows that the reduction of Brazilian exports between 1990 and 2001 from increased Chinese competition equaled 4 percent of total exports (in 2002 values) (see Mesquita Moreira, 2004). These losses were particularly heavy in the East Asian markets (14.5 percent of 2002 exports there). Products most affected in relative terms were those with low technology content such as textiles and steel products, while in absolute terms, losses were greatest in mid-technology-content products such as radios, ships, iron and steel products, air-conditioning equipment, excavating equipment, and sewing machines. It is important to note, however, that the similarity in the export structures of China and Brazil toward third markets—especially the United States—appears to have declined over the period 1992–2001.

Foreign Direct Investment

The stock of Brazilian foreign direct investment in China is very limited, standing at \$13 million in 2003 out of a total Brazilian outward stock of \$43.4 billion. A handful of Brazilian firms are invested in China, including Brasmotor S.A. and Embraco Snowflake (compressor producers) and Voith Siemens (a producer of turbines and generators). Two companies in the automotive sector, Sabó and MarcoPolo, have shown interest in investing in China. Perhaps the most emblematic case of the new opportunities for Brazilian investment in China is Embraer, the commercial regional jet manufacturer. In a joint venture with China Aviation Industry Corporation II, it has made a total investment of \$50 million to manufacture so-called regional jets (model RJ145) in Harbin in the northeastern province of Heilongjiang.

At the end of 2002, China's investment in Brazil was \$75 million out of a total outward stock of \$35.5 billion. The primary targets have been in manufacture of tele-

communications equipment and consumer electronic products. Huawei Technologies and ZTE are currently invested, while China's TCL Corporation and SVA are planning future investments in these sectors. Prior FDI, however, will be dwarfed by investment planned in the Brazilian steel industry. Shanghai Baosteel and European Union-based Arcelor—China's and the world's largest steelmakers, respectively—and the Brazilian CVRD are conducting feasibility studies for investment of \$1.0–1.4 billion in an integrated steel mill. This would be China's largest investment overseas.

To the extent that FDI in Brazil is mostly geared to the domestic or subregional markets, it is unlikely to be significantly affected by likely global investment diversion toward China in the medium term. Relatively small trade effects imply relatively small FDI effects. The strongest candidate for investment diversion in the short term is in the automotive sector since the previous wave of capital inflow to Brazil in the late 1990s and early 2000s led to idle capacity exceeding 40 percent in 2003. It is no surprise that current automotive FDI is skipping Brazil. Beyond the medium term, other sectors in Brazil may be vulnerable to investment diversion toward China. But indices of FDI source or sector coincidence between China and Brazil are relatively small. On the other hand, as already noted, fast and sustained expansion of the Chinese economy would attract FDI for resource-based projects to supply raw materials and food to China (see Chapter 6). The best possible defense against this future FDI diversion lies in the deepening of sound macroeconomic and microeconomic policies to improve and maintain Brazil's industrial competitiveness.

Policy Responses to Control Threats and Open Opportunities

Defensive Measures

Since 1989 Brazil has become an important user of “contingency” remedies such as antidumping measures and safeguards. Brazil has applied a total of 101 definitive antidumping measures, 20 of them directed at Chinese imports. The second-most-affected economy was the United States, with 11 such measures. Import values affected before the adoption of measures have been small, with only two Chinese imports (garlic and high-speed steel drills) exceeding \$10 million in 2003. As a whole, Brazilian antidumping measures have affected only a few relatively insignificant manufactured products.

Safeguards have affected Brazilian toy imports since 1996. Initially equivalent to a 50 percent markup to the Mercosur Common External Tariff (CET) of 20 percent, the surtax was adjusted in 1996–99 to not exceed the bound tariff set in the Uruguay Round. The current surtax sits at 10 percent and is scheduled to contract another 2 percentage points by 2006. The sum of the CET rate and the safeguard

surcharge will remain below Brazil's binding of 35 percent for manufactured imports in the WTO.

Offensive Measures

Brazilian trade initiatives toward China have been modest but are now picking up steam through diplomatic missions, bilateral technical cooperation, and international negotiations. In 2002, after 14 years without any trade promotion in the Chinese market, a high-level Brazilian trade mission visited China. The current administration of President Lula da Silva has continued this initiative, with a visit in May 2004 to deepen political and economic ties. Meanwhile, bilateral channels for technical cooperation have been open for some years. Brazil and China are collaborating in space technology to construct two satellites and plan to work in other strategic areas such as ethanol, iron ore, steel, certain agro-industries, software, drugs, civil engineering, and the aeronautical and electronics industries. Even though a bilateral trade agreement between Brazil and China is unlikely at this time, the two nations have cooperated in the G-20 group of developing economies to pressure the European Union, the United States, and Japan to open their agriculture sectors in the Doha Round negotiations.

Conclusions

Based on the experiences of Japan, Taiwan, and the Republic of Korea, most observers agree that China is likely to continue its present growth path for another two decades. Increasing Chinese demand for raw material imports is also expected, given that domestic supply will be unable to match growth in consumption. Future import growth will include presently imported products from Brazil such as iron ore and soybeans and possibly expand to new products like prime beef and orange juice.

China's exports will also continue growing much faster than the world average, increasing market shares in third markets at the expense of less-competitive economies. For Brazil, the sectors most likely to be affected are iron and steel products in the medium term and transport equipment in the longer term.

Diversion of investment away from Brazil and other developing economies is likely, especially once the Chinese services sector opens up and other sectors—like automobiles—begin to develop. Investment in China will allow certain advantages of scale that have proven elusive in some Brazilian sectors.

Brazil previously has had an almost insignificant role in China, and it is important for new policies to focus on correcting such distortion. Seeking closer relations with Beijing should be sustained and not necessarily be dependent on broader coalitions of like-minded countries.

The Case of Chile⁷

Impact of China's Emergence on Trade and Investment Mechanisms

Chile-China Bilateral Trade

China's importance in Chile's trade has increased significantly over the last 15 years. Chilean exports to China have gone from 0.4 percent of total exports in 1990 to over 9 percent in 2003. During the same period, imports from China have gone from 0.8 to over 7 percent of total Chilean imports. China is now Chile's third-largest trading partner behind the United States and Argentina.⁸

Chile's exports to China are concentrated in a small number of sectors. Copper, ores, slag and ash, wood pulp, and food residues represent 85 percent of the total. Copper dominates Chile's exports to China, as the Asian market has become the world's largest consumer of this commodity (17.4 percent of global consumption). Chile's two main copper products experienced significant export growth during the past five years. Between 1998 and 2003, China's share of Chile's copper cathode exports grew by 19 percentage points to 22 percent; its share of Chilean copper ores and concentrates rose by 6 percentage points to 15 percent. Chile's imports from China are also concentrated in a few industries. The leather, apparel, footwear, and toy sectors represent 45 percent of those imports, while machinery accounts for an additional 25 percent.

Competition in Third Markets

To analyze competition in third markets, one can examine Chile's and China's exports to the United States, initially at the Harmonized System (HS) chapter level (two digits) and then at more-disaggregated levels (four and eight digits) for those chapters in which competition could occur.

Chile's exports to the United States are concentrated in fruits, wood and wood articles, fish, copper and copper ores, organic and inorganic chemicals, and beverages. Together, these sectors account for almost 80 percent of total exports. China's main exports to the United States are in the apparel, leather, footwear, plastic articles and toys, electrical and nonelectrical machinery, and furniture sectors. The only sector (HS chapter) representing a high share in both Chilean and Chinese exports to the United States is furniture: 1.2 percent and 8.5 percent, respectively. This indicates a difference in export structures, also evident in the export similarity index. At the eight-digit

⁷ Based on Claro (2004).

⁸ Partners are measured as individual countries and using total bilateral exports and imports.

level, the ESI yields a value of 3—compared to an ESI of 21 for China-Mexico and 12 for China-Brazil.⁹

Nevertheless, this analysis is an incomplete measure of the degree of competition in third markets, given that a Chinese export may represent a small share of the country's total export structure and still be a major player in the world market for that product. To correct for this eventuality, the analysis shifts to Chilean and Chinese import penetration into the U.S. market. Both countries display high shares for U.S. imports of fish and crustaceans, vegetable and fruit preparations, organic and inorganic chemicals, precious stones and salt, wood and wood articles, and furniture.

In the *fish and crustaceans* sector, Chile and China are both significant exporters of fish fillets into the United States (25 percent and 16 percent shares of U.S. imports, respectively). However, at a more disaggregated level, we see that Chile exports salmon and sea bass, while China specializes in pollack, cod, sole, and tilapia.

Direct competition in the *preparations of vegetables and fruits* sector is more evident. In 2002, Chile's apple juice exports to the United States equaled \$34 million and competed directly with China's exports of \$51 million, representing 14 percent and 21 percent shares of that market, respectively. Although apple juice exports are economically less important for both countries than fish exports, for example, the product's penetration in the U.S. market, and hence competition, is greater.

Although both countries display a high share of *organic and inorganic chemical* imports into the United States, a more detailed look shows that Chile's and China's export structures are very different. Chile exports mainly fluorine, chlorine, and salt to the United States; China exports radioactive chemicals, cement, and feldspar.

In the *wood and wood articles* sector, evidence shows that while Chile is an important exporter of wood, China is an important exporter of wood-related products like wood articles and furniture. Chile does export some furniture and wood articles to the United States, making these sectors potential competitors with China. This is also true of paper products.

Foreign Direct Investment

China's emergence in the global economy could impact Chile's FDI flows in three ways. First, it could divert investment otherwise directed into Chile. No evidence exists for such diversion. Second, increasing export opportunities with China may attract in-

⁹ The export similarity index is defined as

$$ESI = 100 * \sum_c \min(x_c^i, x_c^j),$$

where x_c^i represents the share of gross exports of commodity c in total exports of country i , and x_c^j represents that share for country j . The index is bound by 0 and 100; it is 0 if export structures are totally different and 100 if the share of each good's exports in total exports is equal in both countries.

vestment into Chile. Recent inflows have been directed predominantly at the mining industry, particularly that for copper. Although it is not possible to determine how much of these investments were driven by China's growth prospects, one cannot fail to note that China has been the engine driving the world copper market in recent years. Finally, increased investment opportunities for Chilean firms could open in China, and vice versa. Evidence shows that Chinese FDI flows into Chile have been very low, accounting for only 0.2 percent of total FDI flows between 1974 and 2002. Most of these investments were directed at the forestry and services sectors.¹⁰

Policy Responses to Control Threats and Open Opportunities

Defensive Measures

To confront the risks of China's openness and penetration in world markets, Chile reserves the right to investigate and implement three types of action: antidumping measures, countervailing duties, and safeguards. Between 1981 and 2001, Chile initiated 215 investigations that targeted, among others, the textile industry (67 initiations), fabricated metals (26 initiations), and agriculture, dairy products, chemicals, and rubber/plastics (17 initiations each). If measured by country of origin (some investigations targeted more than one country), Chile has initiated 395 cases of which China was the target for 22 (6 percent). Four other countries—Brazil, Argentina, Peru, and the Republic of Korea, in that order—were the only countries more frequently targeted. Of the 22 cases against China, definitive measures were imposed in 15. These numbers are relatively low compared to the world pattern, in which initiation of action on Chinese products has been much more common. One possible explanation is that China's market penetration in Chile has mainly crowded out third-country exports rather than Chilean production.

Offensive Measures

Chile's expansive trade policies include closer economic relations through foreign investment frameworks and free trade agreements. Since 1991, Chile has been negotiating bilateral investment treaties to provide additional protection to inward and outward foreign investment flows. In March 1994, Chile signed such a treaty with China. Bilateral investment treaties offer added protection of rights guaranteed to foreign investors under Chile's legal framework, Foreign Investment Statute DL 600. DL 600 has five main provisions: (1) foreign investors in Chile can own up to 100 percent of a Chilean-based company, and there are no time limits on property rights; (2) investors have the right to repatriate capital one year after its entry and to remit profits at

¹⁰ Chile's Foreign Investment Committee indicates that most investments catalogued as Chinese are from Hong Kong investors.

any time; (3) investments brought into the country in the form of physical goods are subject to the general value-added taxation regime and customs regulations; (4) some tax advantages exist, not in the form of “tax breaks” but rather as “tax insurance” intended to provide a stable tax horizon; and (5) investments in new or extractive activities, such as mining, are entitled to additional tax benefits if they have a value of at least \$50 million.

A fundamental component of Chile’s trade policy since 1990 has been entry into free trade agreements with several countries/regions, including Canada, Mexico, Costa Rica, El Salvador, the Republic of Korea, the European Union, and the United States. The Chile-U.S. agreement is a good example of comprehensiveness, with modern treatment of investment flows and commercial disputes as well as coverage of all products in the tariff elimination process. The agreement is divided into 24 chapters, covering issues like rules of origin, customs administration, sanitary and phytosanitary measures, labor and environmental standards, government procurement, investments, intellectual property, financial services, telecommunications, national treatment and market access for goods, labor flows, tariff and trade barriers, and dispute settlements. Chile has used free trade agreements to improve its access for certain goods, such as apparel, forestry, and wood products.

Chile’s export advocacy includes its position on China’s accession to the WTO. During this process Chile petitioned China for a list of priority products with requested tariff rates. The goods on Chile’s priority list were mainly fish (HS chapters 03, 15, 16), fruits (08, 20), wine (22), wood and wood articles (44), and wool and animal hair (51). As a result of China’s negotiations with other WTO members, China’s final tariff offer was actually lower than Chile’s request in many of these products. It is important to note that products included in the list represent a relatively low share of Chile’s exports to China (almost 4 percent). This can be explained by the fact that Chile’s top seven export products enter China at very low rates (0 or 2 percent tariff).

Implications and Policy Conclusions

The Copper Market

China’s increasing role in world copper markets and copper’s role in the Chilean economy make this a very important sector. Strong Chinese demand has pushed copper prices up in recent years and boosted Chile’s output growth and fiscal revenues. However, risks come with benefits. First, the price increases may be transitory, so Chile’s fiscal policy should act accordingly and avoid pressures to spend revenues as though the stream might never slacken or fail. Second, there is potential for Dutch disease. A strong increase in the price of a natural-resource-intensive product or a major discovery generates a shift in resources toward that sector, appreciation of the real exchange rate, and contraction in the non-resource-intensive manufacturing sector. As long as correct price signals reallocate resources to more-profitable industries—like copper—

this is not problematic. However, if non-natural-resource-intensive manufactures have some kind of increasing returns, this may affect Chile's long-run growth. In response, authors Larrain, Sachs, and Warner (2000) recommend providing an institutional framework that facilitates increases in manufacturing output and exports rather than trying to pick winners.

A Free Trade Agreement between Chile and China

In mid-2003 the governments of Chile and China declared their intentions to negotiate a free trade agreement. Both sides stand to benefit.¹¹ Although its main exports to China enter at very low rates, Chile still faces high Chinese tariffs on agricultural products that Chile exports profitably to other markets. Nontariff restrictions (such as phytosanitary regulations) as well as problems with product classifications (particularly in organic and inorganic chemicals) also hinder Chile from selling a more diversified mix of products to Chinese markets. For China, the main benefits of a bilateral deal would be (1) the expertise gained from negotiating a free trade agreement with an experienced partner; (2) favorable deals on rules of origin to access other markets in countries that have FTAs with Chile; and (3) benefits and facilities for Chinese investment opportunities, especially in the mining industry. A final agreement was concluded in 2005.

The Case of Mexico¹²

The Chinese transformation during the past two decades has not only opened up a huge market with a vast array of export opportunities but created a strong competitor for countries with similar comparative advantages. Mexico appears to be among the developing countries most challenged by China's emergence.

Impact of China's Emergence on Trade and Investment Mechanisms

Mexico-China Bilateral Trade

Trade links between Mexico and China, though historically important, have been minimal over recent decades. With China's WTO accession, trade relations have shown renewed dynamism, particularly in the form of Mexican imports. Between 2000 and 2003, Mexico's imports from China have more than tripled, an impressive figure given that Mexico's rate of growth of total imports remained stagnant. In 2003, 75 percent

¹¹ Editors' note: A free trade agreement was signed by the two countries in mid-2005.

¹² Based on Arellano (2004).

of imports from China were concentrated in electrical equipment/appliances and machinery. Another 5 percent were in textiles and garments. Though important, legal imports from China are not the main source of competition for Mexican apparel production. Mexico's Ministry of the Economy estimates that 58 percent of the domestic apparel market is covered by illegal channels (smuggling, stolen merchandise, and tax evasion).

Mexican exports to China have not taken off and represent less than 0.3 percent of total exports. This stagnation, coupled with the increased penetration of Chinese products into the Mexican market, has caused continuous deterioration of Mexico's trade balance with China. In 2003, the deficit reached almost \$9 billion.

Competition in Third Markets

WTO membership in 2001 increased China's market access and opened new economic opportunities, favorably impacting trade and investment for years to come. Shafaeddin (2002) analyzes product rivalry between China and other developing countries (including Mexico) by calculating the revealed comparative advantage for each country's top 50 products. Shafaeddin's study found that the correlation coefficient between China and Mexico in 1992–98 on their top 50 export items showed relatively low rivalry compared to other competitors (Shafaeddin, 2002).¹³ Nevertheless, Mexico's and China's competition in third markets, specifically in the United States, has significantly changed in the last few years. During 2001–03, China increased its market share in total U.S. imports by 35 percent, whereas Mexico's share declined by almost 5 percent. In fact, 2003 was the first time in the post-NAFTA era that Mexican exports lost ground in the U.S. import market.

The Mexican sectors most severely affected by Chinese competition in third markets are textiles and apparel, electronic equipment, and shoes and leather.

In *textiles and apparel*, U.S. imports from China have increased steadily in the past two years at an average rate of 16.5 percent. Over the same period, U.S. imports from Mexico declined consistently at an average rate of 5 percent a year. This outcome is even more telling considering Mexico's tariff advantage over China in the U.S. market of 8–32 percent—depending on the tariff line. Mexico's share of U.S. apparel imports is expected to contract further once U.S. restrictions on Chinese textile and apparel imports are significantly reduced in 2005.

Another sector negatively affected by China's emergence is *electronic equipment*, including telecommunications and electric machinery. Chinese exports of these goods to the United States have maintained dynamic growth rates of roughly 40 percent per year. Exports by Mexico, on the other hand, have registered negative average growth rates of 10 percent annually. There has also been strong enterprise migration out

¹³ Other studies suggest that the degree of competition between China and Mexico is substantial (see Chapter 4).

of this sector in Mexico toward other locations like China. The outlook for Mexico's electronic equipment industry is worrisome, given that China's recent signing on to the Information Technology Agreement means a further erosion of Mexico's NAFTA-preferential access for telecommunications products.

The *shoes and leather sector* has registered a pattern similar to that of the textiles and apparel sector. U.S. shoe and leather imports from China have skyrocketed in the last few years, averaging an astonishing 58 percent annual growth rate. Meanwhile U.S. imports from Mexico have remained practically unchanged.

On a positive note, the *automotive sector* continues to be a leader in Mexican exports to the United States. Seven out of the 10 largest foreign-affiliate exporters in Mexico are concentrated in this sector. Thus far the geographical and market access advantages of Mexico in this sector have not been challenged by Chinese competition.

Policy Responses to Control Threats and Open Opportunities

Defensive Measures

Mexico has initiated 211 antidumping and countervailing-duty investigations since 1990. China is the country with the highest number of cases initiated against it (41), while the United States is a close second (39). Mexico's antidumping actions against China have concentrated in unskilled-labor-intensive products such as apparel, textiles, footwear, and toys.

In a bilateral agreement reached during China's WTO accession talks, Mexican negotiators sought a number of concessions in the use of antidumping, countervailing, and safeguard measures. It was agreed that a seven-year extension—up to 2007—would be applied to countervailing duties on Chinese products, particularly those considered labor-intensive. In addition, Mexico may impose on China the “nonmarket economy” criteria for safeguard measures up to 2016.¹⁴ This allows Mexico to label a product as “dumped,” using the benchmark of a similar product from a third country considered a “market economy.” The original “serious distortion” criterion also was downgraded so Mexico could apply specific safeguards if a domestic industry merely faced a “market distortion.” To date, Mexico has not used any of these agreed-upon arrangements in regard to China.

Offensive Measures

Mexico's principal offensive measure aims at making the Mexican economy more competitive. In 2002, the Economic Policy for Competitiveness established the Presidential Competitiveness Board to analyze essential strategies and actions for transitioning to

¹⁴ Editors' note: Brazil, Argentina, and Chile agreed with Chinese authorities to negate “nonmarket” status for China in exchange for prospects of new Chinese investment.

an innovation economy. To achieve its goals, the board has set out structural strategies (including macroeconomic strengthening, human capital development, and promotion of technology development) as well as sector-specific strategies.

One sector-specific strategy tries to make the fiber, textiles, and apparel industries more competitive. The program has three key objectives. First, it calls for recovery of domestic and external markets. Domestically, the strategy will push use of domestic inputs, reduction of illegal production, and with respect to China, implementation of a system to monitor unfair imports and possibly employ a safeguard mechanism. Externally, it calls for consolidation of the Free Trade Area of the Americas to create a hemisphere-wide, integrated fibers-textiles-apparel chain to compete better with Asian competitors. Second, it plans to develop a full-package production structure to improve vertical integration of the sector through human resource development and technology innovation in the region. Third, it calls for regulatory changes and improvements in cost structures, which is important for Mexico given its higher wages in the sector relative to its main competitors. Similar programs will laser in on other sectors such as aeronautics, agriculture, the automotive industry, chemicals, construction, internal trade, maquiladoras, tourism, electronics, software, and shoes and leather.

In addition to sector-specific programs, the executive branch has been promoting second-generation structural reforms to improve the business environment, cut production costs, and hone competitiveness. Proposed reforms include increasing labor market flexibility; improving human capital; promoting private investment in research and development; raising the capacity of micro-, small, and medium-sized enterprises; and reforming infrastructure and services.

As members of the Presidential Competitiveness Board, and in response to China's emergence in the global economy, Mexico's private sector representatives have created the Mexican Institute for Competitiveness (IMCO). Among its first activities, IMCO has proposed reforming several government agencies whose responsibilities directly impact Mexico's competitiveness. For example, the Federal Competition Commission, the country's antitrust agency, is urged to tackle monopoly practices by state-owned enterprises. The institute also has proposed clear demarcation of responsibilities between the Federal Telecommunications Commission and the Ministry of Communications. Implementation of these reforms could help reduce Mexico's energy and telecommunications costs.

Conclusions

The integration of China into the global economy has opened many export opportunities and posed major challenges for developing countries like Mexico. Mexican exports to the United States in textiles, apparel, and electronic equipment have borne the brunt of displacement by Chinese competition. Mexico has responded with a comprehensive program to eliminate every systemic problem that diminishes national competitiveness in domestic and international markets.

This page intentionally left blank

References

- CEI (Centro de Economía Internacional). 2003. "Oportunidades y desafíos para la Argentina en el Mercado de Asia Oriental: un estudio de impacto." Study No. 6, CEI, Buenos Aires.
- Larrain, F., J. Sachs, and A. Warner. 2000. "A Structural Analysis of Chile's Long-Term Growth: History, Prospects, and Policy Implications." Document prepared for the government of Chile.
- Shafaeddin, S. 2002. "The Impact of China's Accession to WTO on Exports of Developing Countries." Discussion Paper No. 160, United Nations Conference on Trade and Development, Geneva.

IDB Background Reports

- Abreu, P. 2004. "China's Emergence in the Global Economy and Brazil." Integration and Regional Programs Department, Inter-American Development Bank, Washington, D.C.
- Arellano, R. 2004. "Implications of China's Emergence in the Global Economy for Latin America: The Case of Mexico." Integration and Regional Programs Department, Inter-American Development Bank, Washington, D.C.
- Claro, S. 2004. "Implications of China's Emergence in the Global Economy for Latin America and the Caribbean Region: Chile." Integration and Regional Programs Department, Inter-American Development Bank, Washington, D.C.
- Galperín, C., G. Girado, and E. Rodríguez Diez. 2004. "Implicancias para América Latina del nuevo rol de China en la economía internacional: el caso Argentino." Integration and Regional Programs Department, Inter-American Development Bank, Washington, D.C.
- Mesquita Moreira, M. 2004. "Fear of China: Is There a Future for Manufacturing in Latin America?" Integration and Regional Programs Department, Inter-American Development Bank, Washington, D.C.

ECONOMICS

China is emerging as a truly global economic and political power. China's impact on Latin America and the Caribbean region is mixed, however—fostering a trade market for some countries, but creating competition for others.

The Emergence of China: Opportunities and Challenges for Latin America and the Caribbean, produced by the Inter-American Development Bank's Integration and Regional Programs Department and Research Department, provides a comprehensive overview of China's economic policy and performance over recent decades and contrasts them with the Latin American experience. What are the underlying factors behind China's competitive edge? What are the strategic implications of China's rise for growth and development in Latin America? These questions open new avenues for thinking about revitalizing development strategies in Latin America in the face of China's successful development and reduction of poverty. This insightful report is a must-read for analysts, policymakers, and development practitioners, not only in Latin America and the Caribbean, but wherever China's presence is being felt.



Inter-American Development Bank

1300 New York Avenue, N.W.
Washington, D.C. 20577

www.iadb.org/pub

**David Rockefeller Center
for Latin American Studies
Harvard University**

**Distributed by
Harvard University Press**

ISBN 1-59782-022-9



9 781597 820226