EXPORTING SERVICES
A DEVELOPING COUNTRY PERSPECTIVE

Editors
Arti Grover Goswami • Aaditya Mattoo • Sebastián Sáez
EXPORTING SERVICES
<table>
<thead>
<tr>
<th>Chapter</th>
<th>Title</th>
<th>Author(s)</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Exporting Services: A Developing-Country Perspective</td>
<td>Arti Grover Goswami, Aaditya Mattoo, and Sebastián Sáez</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>Service Exports: Are the Drivers Different for Developing Countries?</td>
<td>Arti Grover Goswami, Poonam Gupta, Aaditya Mattoo, and Sebastián Sáez</td>
<td>25</td>
</tr>
<tr>
<td>3</td>
<td>A Cross-Country Analysis of Service Exports: Lessons from India</td>
<td>Arti Grover Goswami, Poonam Gupta, and Aaditya Mattoo</td>
<td>81</td>
</tr>
<tr>
<td>4</td>
<td>Reaching the World through Private Sector Initiative: Service Exports from the Philippines</td>
<td>Soonhwa Yi</td>
<td>121</td>
</tr>
<tr>
<td>5</td>
<td>Exploring Niches for Exporting: The Case of Malaysia</td>
<td>Mahani Zainal Abidin, Tham Siew Yean, and Loke Wai Heng</td>
<td>161</td>
</tr>
<tr>
<td>6</td>
<td>Unexploited Potential: The Case of Egypt</td>
<td>Ahmed Farouk Ghoneim</td>
<td>193</td>
</tr>
<tr>
<td>7</td>
<td>Becoming a Global Exporter of Business Services? The Case of Kenya</td>
<td>Nora Dihel, Ana Margarida Fernandes, Richard Gicho, John Kashangaki, and Nicholas Strychacz</td>
<td>237</td>
</tr>
</tbody>
</table>
8 Underlying Lessons: Service Exports from Brazil

Mário Marconini

9 The Elusive Road to Service Export Diversification:
The Case of Chile

Francisco J. Prieto, Sebastián Sáez, and Arti Grover Goswami

Index
Boxes

1.1 Defining Commercial Services 9
4.1 Exporting Services through the Movement of Labor: The Pattern 127
6.1 Case Studies of Successful Outsourcing Firms 220
6.2 ITIDA Programs 223
7.1 Description of Export Transactions 255
7.2 Kenyan Services Exporters’ and Innovators’ Success Stories: KenCall, Txteagle, Ushahidi, and Safaricom 257
7.3 The Experience of South Africa in ITeS Exports 262
9.1 Assessing the Performance of Chile’s Service Exports: An Econometric Illustration 320
9.2 Hidden Service Exports 327
9.3 The Importance of Developing Credible Services and Service Providers 339

Figures

1.1 Partial Correlation between Service Exports and Human Capital and Electronic Infrastructure, 2007 6
2.1 Service Exports: A Comparison across Income Groups, 2000–08 26
2.2 Human Capital and Service Exports, 2007 30
3.1 Agriculture, Industry, and Services as a Share of India’s GDP, 1950–2010 85
3.2 Average Annual Growth Rates in India, by Sector, 1951–2009 86
3.3 Service Sector’s Share of India’s GDP and Log Per Capita Income, by Sector, 1950–2006 87
3.4 Manufacturing Sector’s Share of GDP and Per Capita Income, 1950–2006 88
3.5 Service Activities in Groups 1, 2, and 3 as a Share of GDP, 1950–2008 90
3.6 Per Capita Service Output and Tertiary Education across Indian States, 1980–2000 Averages 94
3.7 Importance of Service Exports in Aggregate Exports, 1970–2009 95
3.8 RCA in Disaggregate Services, 1980–2010 96
3.9 Composition of India’s Software Service Exports, 2002/03 and 2007/08 97
3.10 India’s Outward FDI, by Sector, 1970–2007 102
3.11 Ownership Structure of India’s Outward FDI, 1970–2007 104
3.12 India’s OCS Exports, Actual versus Predicted, 1990–2010 106
3.13 Export Growth from STP Units, 2000–09 111
4.1 Growth in Exports of Goods and Services, 1999–2009 124
4.2 Information and Business Services as a Proxy for BPO, 1999–2009 124
4.1.B New Deployment by Occupation and Gender, 2007 128
4.3 Comparative Financial Attractiveness Scores, 2011 139
4.4 Correlation between International Visitor Arrivals and Tourism Export Receipts, 1990–2009 145
4.5 Comparative Analyses of TTCI Rankings, 2009 147
4.6 Marketing Effectiveness, 2008 151
5.1 Value of Manufactured Exports and Transport Service Exports, 1995–2008 166
6.1 Structure of Egypt’s Exports of Commercial Services and Other Commercial Services, 2000 and 2008 197
6.3 Sources of Tourists in Egypt, 2007 227
7.1 Services’ Share of GDP in Kenya, 2000–08 239
7.2 Kenya’s Service Exports and Imports as a Share of Total Exports and Imports, 2000–08 239
7.3 Kenya’s Export Performance: Service Trade, 2004–08 241
7.4 IT, BPO, and KPO Services 243
7.5 Types of Activities That Can Be Outsourced across an Organization’s Value Chain 244
7.6 Evolution of Business Service Sectors 245
7.7 Export Turnover of Service Sectors, 2007 247
8.1 Service Exports by Category, 1970–2009 272
8.2 Composition of Service Exports, 2009 275
8.3 Brazilian Service Export Markets, 2008 276
8.6 Doing Business Rankings, Brazil versus India, 2010 280
8.7 Doing Business Rankings, Brazil versus China, 2010 280
8.8 Importance of Each Fundamental Aspect, BRASSCOM 281
8.9 Importance of Each Fundamental Aspect, ABES 284
8.10 Distribution of Brazilian Direct Investment Abroad, 2009 287
8.11 FDI in the Service Sector, 2004–09 288
8.12 FDI in Brazil, 2005–09 289
8.13 FDI Inflows as a Share of Total FDI, by Sector, 2009 290
8.14 BNDES’s Expenditures in Credit Lines to the Service Sector, 1998–2009 292
8.15 BPT Service Exports, 1999–2009 294
8.16 Cost of Dealing with Construction Permits, 2006–10 297
8.17 Importance of Each Fundamental Aspect, Construction 298
8.18 Competitiveness of Transport Infrastructure, Brazil versus the United States, 2009–10 299
9.1 Chile’s Exports of Goods and Services, 2000–10 310
9.2 Growth Rate of GDP and Services, 1990–2008 314
9.3 Chile’s Service Exports, 1998–2008 319
9.4 Service Export Composition, 1995–2008 321
9.5 Chilean Offshoring Exports 325
9.6 Firms’ Share in Service Exports 326
9.7 Stock of Chilean Investment Abroad, June 2010 329

Tables
1.A.1 Illustrative Barriers to Trade in Services 20
1.A.2 Inadequacies in Statistical Coverage on Trade in Services 22
2.1 Determinants of Service Exports: Gravity OLS Estimation, 2000–08 44
2.2 Determinants of Service Exports: Gravity OLS Estimation, Developing-Country Sample, 2000–08 49
2.A.1 Gravity Models for Explaining Service Trade 53
2.A.2 Results of Gravity Models 58
2.A.3 Definitions of Variables Used for Gravity Estimation 73
2.A.4 Partial Correlation of Variables on Electronic Infrastructure 75
3.1 Explaining Service Growth in India, 1980–2007 91
3.2 Service Share of SDP across Indian States, 1980–2005 93
3.3 Destination of Indian Software Service Exports, 2002/03 and 2007/08 98
3.4 Firm Characteristics and Software Service Exports from India, 2002/03 and 2007/08 100
3.5 Software Business by Indian-Owned Foreign Affiliates, by Activity, 2007/08 101
3.6 Allocation of India’s Outward FDI, by Sector, 1970–2007 103
3.7 India’s Position in OCS Exports, 1990–2008 105
4.1 Revealed Comparative Advantage Index, 1999–2009 125
4.1.A Numbers of Overseas Workers 128
4.1.B Destination of Deployment by Skill Category, 2007 130
4.2 Revenues and Employment, by BPO Category, 2000–09 134
4.3 BPO Export Destinations, 2005–08 136
4.4 Foreign Equity Participation, 2005–08 137
4.5 Number of Firms, by Ownership and by BPO Category, 2009 137
4.6 High or Low Philippine Performance in Key Buy Factors 138
4.7 Talent Pool, 2007 139
4.8 Proportion of Graduates Suitable for the BPO Sector 140
4.9 Incentives for IT-BPO Firms 142
4.10 Tourism Incentives 146
5.1 Multiplier Effect of Increased Demand of RM 1 (US$0.26) in Every Subsector in Each of the Sectors Shown on Other Sectors and the Economy 163
5.2 Revealed Comparative Advantage of Malaysia, 1999–2008 164
5.3 Investment Abroad of Telekom Malaysia Berhad, 2009 169
5.4 Operations Abroad of Malaysian Banks, 2009 170
5.5 Top Source Countries for International Students, 2003–07 171
5.6 Top Destination Countries for Medical Tourism Exports, 2003–07 172
5.7 Top Source Countries for Tourists, 1999–2009 173
5.8 Travel and Tourism Competitiveness Index, 2009 174
5.9 Ease of Starting a Business: Malaysia and Regional and Global Averages, 2010 175
5.10 Ease of Doing Business: Ranking of Malaysia and Selected Economies, 2006–10 176
5.11 Regulators and Regulations for Selected Services 184
5.12 Percentage of Adults with Tertiary Education 186
5.13 The Global Competitiveness Index, Selected Indicators for Skills, 2009–10 187
6.1 Service Exports in Egypt, 2000, 2006, and 2007 198
6.2 Revealed Comparative Advantage of Egypt’s Service Sectors 199
6.3 Distribution of the Labor Force and the Unemployed in Selected Middle Eastern and North African Economies, by Education 201
6.4 Egypt’s Ranking in the Doing Business Report 204
6.5 Rank of Egypt and Its Main Competitors in Different International Reports 206
6.6 Egyptian Banks Operating in Foreign Countries, 2009 209
6.7 Work Permits Granted to Egyptians in Arab Countries, by Occupation and Year, 1985, 1990, and 2002 214
6.8 Projections of IT Exports by 2010 219
6.9 Fields Where Multinational Companies Are Engaged 225
6.10 Main Tourism Indicators, 1985–2007 227
6.11 Ranks in Travel and Tourism Competitiveness Index, 2009 228
6.12 SWOT Analysis for Egypt’s Comparative Advantage in Services 230
7.1 Service Subsectors as a Share of Total Service Exports, 1998–2008 240
7.2 RCA in Kenyan Service Subsectors, 2008 240
7.3 Typical Export Destinations, by Service Sector 250
7.4 Exported Services, by Sector 252
7.5 Policy Recommendations 261
8.A.1 The Largest Nonfinancial Companies and Firms in Latin America and the Caribbean and Their Investments outside Their Countries of Origin, 2007 305
9.1 Share of Services in GDP, 1990–2008 313
<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.2</td>
<td>Trade as a Share of GDP, 1990–2008</td>
<td>317</td>
</tr>
<tr>
<td>9.3</td>
<td>Employment and Service Exports, 2008</td>
<td>318</td>
</tr>
<tr>
<td>9.4</td>
<td>Composition of Other Commercial Service Exports in Chile</td>
<td>323</td>
</tr>
<tr>
<td>9.5</td>
<td>Leading Chilean Companies Investing Abroad, 2004–05</td>
<td>330</td>
</tr>
<tr>
<td>9.6</td>
<td>Attracting High-Tech Companies to Chile</td>
<td>342</td>
</tr>
<tr>
<td>9.A.1</td>
<td>Chile’s Position in Commercial Service Exports</td>
<td>351</td>
</tr>
<tr>
<td>9.A.2</td>
<td>Commercial Service Exports from the Chilean Perspective</td>
<td>355</td>
</tr>
</tbody>
</table>
Editors

Aaditya Mattoo: Research Manager, Trade and International Integration, World Bank.

Sebastián Sáez: Senior Trade Economist, International Trade Department, World Bank.

Contributors
Mahani Zainal Abidin: Chief Executive, Institute of Strategic and International Studies (ISIS), Malaysia.


Ahmed Farouk Ghoneim: Professor of Economics, Faculty of Economics and Political Science, Cairo University; Research Fellow, Economic Research Forum (ERF) and Center for Economic and Social Research (CASE).
Richard Gicho: Principal Consultant, TriMagus Consulting, Nairobi, Kenya.

Poonam Gupta: RBI Chair Professor, National Institute of Public Finance and Policy, Delhi, India.

John Kashangaki: Executive Director, Strategic Business Advisors, Ltd., Nairobi, Kenya.

Mário Marconini: President, ManattJones Marconini, Global Strategies, São Paulo, Brazil.

Francisco J. Prieto: Consultant and Professor of International Economics, Universidad de Chile (Institute of International Studies) and Heidelberg Center for Latin America.

Loke Wai Heng: Senior Lecturer, Department of Economics Faculty of Economics and Administration University of Malaya.

Nicholas Strychacz: Project Analyst, Strategy and Analysis, Federal Reserve Bank of San Francisco.

Tham Siew Yean: Professor and Principal Research Fellow, Institute of Malaysian and International Studies (IKMAS), Universiti Kebangsaan Malaysia.

The role of services reform in development is widely recognized. The past two decades have seen exciting changes with developing countries emerging as exporters of services. Some countries have, of course, taken advantage of technological developments that make it easier to trade services across borders. But other avenues are also being exploited: tourists are coming, not just to sightsee but also to be treated and educated; service providers are moving abroad under innovative new schemes; and, interestingly, some developing countries are defying traditional notions by investing abroad in services.

Policy makers, preoccupied with tangible trade, have taken some time to come to terms with the rise of intangibles. But new and legitimate questions are being raised: How can this dynamism be sustained and how can it be replicated in other countries? Surprisingly, few studies address these questions. To provide credible answers, we need to delve deeper into the determinants of exporting success and confront another consequence of intangibility: the difficulty measuring trade flows and the policies that affect these flows have inhibited serious empirical research on services trade.

This book takes a brave approach, combining exploratory econometric analysis with detailed case studies of representative countries. It reviews the experience and performance of Brazil, Chile, the Arab Republic of Egypt, India, Kenya, Malaysia, and the Philippines. Several questions lead the analysis: How did these developing countries succeed in exporting services? What policy mix was successful, and what strategies did not deliver the expected results? The analysis evaluates the role of three sets of factors: First, the fundamentals, which include a country’s factor endowments (especially human capital), infrastructure (particularly telecommunication networks), and institutional quality (especially the regulatory environment for services); second, policies affecting trade, investment, and labor
mobility in services; and third, proactive policies in services designed to promote exports or investment.

The case studies illustrate the complex nature of reforms and policy making in the service sector as well as the benefits of well-implemented reforms. Although success seems to be explained by a set of conditions that are difficult to replicate, common features can also be identified. Countries in which the infrastructure for service delivery and the institutions governing services—such as regulatory frameworks—improved were, over time, able to become successful service exporters. Human capital and information technologies are crucial determinants of export success in modern services, such as business and professional services. Openness to foreign investment is also relevant because in some cases this investment provided the crucial first spark. Several countries have adopted policies to support exports, especially exports of information technology–related services. The book is refreshingly open to the role these proactive policies might have played.

We hope this resource will be valuable for policy makers, experts, and academics who are engaged in efforts to reform service and investment policies in their own country and that the questions raised here generate new research and guide further economic policy analysis on service trade.

Otaviano Canuto  Justin Yifu Lin
Vice President  Senior Vice President
Poverty Reduction and Economic Management  Development Economics
World Bank  World Bank
This book is a joint effort by the World Bank’s International Trade Department (PRMTR) and the Development Research Group Trade and Integration Unit (DECTI), which are part of the Poverty Reduction and Economic Management Vice Presidency and the Development Economics Vice Presidency, respectively. A team composed of Aaditya Mattoo (sector manager, DECTI), Sebastián Sáez (senior trade economist, PRMTR), and Arti Grover Goswami (consultant, DECTI and PRMTR) edited the book.

The editors would like to thank the authors of the individual chapters and the many individuals who contributed to the project. In particular, they would like to acknowledge contributions by Mahani Zainal Abidin, Nora Dihel, Ana Margarida Fernandes, Ahmed Farouk Ghoneim, Richard Gicho, Poonam Gupta, John Kashangaki, Mário Marconini, Francisco J. Prieto, Loke Wai Heng, Nicholas Strychacz, Tham Siew Yean, and Soonhwa Yi.

Many other people also contributed to this report. Michael Engman (World Bank) and Sherry Stephenson (Organization of American States) peer reviewed the concept note and provided important comments that helped direct the project. In addition, Michael Engman and Dale Honeck (World Trade Organization) peer reviewed an early draft of the book and provided valuable comments and suggestions that were incorporated into the final draft. Bernard Hoekman (World Bank), Daniel Lederman (World Bank), Carolina Lennon (United Nations Industrial Development Organization), Nanno Mulder (Economic Commission for Latin America and the Caribbean), and Maurice Schiff (World Bank) provided valuable comments and suggestions on individual chapters. Also, Guillermo Arenas, Jean-Francois Arvis, Olivier Cadot, Ejaz Ghani, Charles Kunaka, Jose Guilherme Reis, and Jose Daniel Reyes from the World Bank provided useful suggestions and comments in different stages of the project.
Pritam Banerjee and Mukul Gupta (Confederation of Indian Industry) prepared a background paper on specific policies promoting India’s services exports on which the relevant section of chapter 3 is based. Pumela Salela contributed information about South Africa’s experience in exporting information and communication technology–enabled services, which is included in chapter 7. Cynthia Abidin-Saurman, Shienny S. Lie, and Amelia Yuson provided excellent administrative assistance and helped to format the volume. Stacey Tai Sie Chow and Stephanie K. Chen provided support during the book’s preparation and coordinated with PRMTR’s publication program.

This project was supported in part by the governments of Finland, Norway, Sweden, and the United Kingdom through the Multi-donor Trust Fund for Trade and Development. Finally, the project and the book would not have been possible without the continuous support and guidance of the PRMTR staff and its management team, in particular Mona Haddad (sector manager) and Bernard Hoekman (director).

The editors would also like to thank the World Bank’s Office of the Publisher for the efficient management of the publication process, in particular, Theresa Marie Cooke, Stephen McGroarty, Andrés Meneses, and Janice Tuten, who provided excellent editorial, design, production, and printing services for this book and Linda Lee Stringer of Publications Professionals LLC, for editing an early draft.
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABES</td>
<td>Associação Brasileira das Empresas de Software, or Brazilian Association of Software Companies</td>
</tr>
<tr>
<td>AFAS</td>
<td>ASEAN Framework Agreement on Services</td>
</tr>
<tr>
<td>APEC</td>
<td>Asia-Pacific Economic Cooperation</td>
</tr>
<tr>
<td>ApexBrasil</td>
<td>Agência Brasileira de Promoção de Exportações e Investimentos, or Brazilian Trade and Investment Promotion Agency</td>
</tr>
<tr>
<td>ASEAN</td>
<td>Association of Southeast Asian Nations</td>
</tr>
<tr>
<td>BASA</td>
<td>bilateral air service agreement</td>
</tr>
<tr>
<td>BDIA</td>
<td>Brazilian direct investment abroad</td>
</tr>
<tr>
<td>BNDES</td>
<td>Banco Nacional de Desenvolvimento Econômico e Social, or Brazilian Development Bank</td>
</tr>
<tr>
<td>BOI</td>
<td>Board of Investments (Philippines)</td>
</tr>
<tr>
<td>BPAP</td>
<td>Business Processing Association of the Philippines</td>
</tr>
<tr>
<td>BPO</td>
<td>business process outsourcing</td>
</tr>
<tr>
<td>BPT</td>
<td>business, professional, and technical</td>
</tr>
<tr>
<td>BRASSCOM</td>
<td>Associação Brasileira de Empresas de Tecnologia da Informação e Comunicação, or Brazilian Association of Information Technology and Communication</td>
</tr>
<tr>
<td>BRIC</td>
<td>Brazil, the Russian Federation, India, and China</td>
</tr>
<tr>
<td>C&amp;RSs</td>
<td>construction and related services</td>
</tr>
<tr>
<td>CAD</td>
<td>computer-aided design</td>
</tr>
<tr>
<td>CBE</td>
<td>Central Bank of Egypt</td>
</tr>
<tr>
<td>CMMI</td>
<td>Capability Maturity Model Integration</td>
</tr>
<tr>
<td>CNIC</td>
<td>Consejo Nacional de Innovación para la Competitividad, or National Council for Innovation for Competitiveness (Chile)</td>
</tr>
<tr>
<td>CORFO</td>
<td>Corporación de Fomento, or Chilean Development Agency</td>
</tr>
<tr>
<td>Abbreviation</td>
<td>Full Form</td>
</tr>
<tr>
<td>--------------</td>
<td>-----------</td>
</tr>
<tr>
<td>DIRECON</td>
<td>Dirección General de Relaciones Económicas Internacionales, or Directorate General of International Economic Relations (Chile)</td>
</tr>
<tr>
<td>DL</td>
<td>Decree Law (Chile)</td>
</tr>
<tr>
<td>DSCI</td>
<td>Data Security Council of India</td>
</tr>
<tr>
<td>EAC</td>
<td>East African Community</td>
</tr>
<tr>
<td>EPC</td>
<td>Export Promotion Council (Kenya)</td>
</tr>
<tr>
<td>EPZ</td>
<td>export processing zone</td>
</tr>
<tr>
<td>EU</td>
<td>European Union</td>
</tr>
<tr>
<td>FDI</td>
<td>foreign direct investment</td>
</tr>
<tr>
<td>FIC</td>
<td>Foreign Investment Committee (Malaysia)</td>
</tr>
<tr>
<td>FIML</td>
<td>full information maximum likelihood</td>
</tr>
<tr>
<td>FiRe</td>
<td>Financial Reporting (Award)</td>
</tr>
<tr>
<td>FTE</td>
<td>full-time employee</td>
</tr>
<tr>
<td>GATS</td>
<td>General Agreement on Trade in Services</td>
</tr>
<tr>
<td>GCC</td>
<td>Gulf Cooperation Council</td>
</tr>
<tr>
<td>GDP</td>
<td>gross domestic product</td>
</tr>
<tr>
<td>GMM</td>
<td>generalized method of moments</td>
</tr>
<tr>
<td>GSC</td>
<td>global support center</td>
</tr>
<tr>
<td>GSLI</td>
<td>Global Services Location Index</td>
</tr>
<tr>
<td>GSM</td>
<td>Global System for Mobile Communication</td>
</tr>
<tr>
<td>HIPAA</td>
<td>Health Insurance and Portability and Accountability Act (United States)</td>
</tr>
<tr>
<td>ICA</td>
<td>Investment Climate Assessment</td>
</tr>
<tr>
<td>ICT</td>
<td>information and communication technology</td>
</tr>
<tr>
<td>IDA</td>
<td>Industrial Development Agency (Ireland)</td>
</tr>
<tr>
<td>IFRS</td>
<td>International Financial Reporting Standards</td>
</tr>
<tr>
<td>IMF</td>
<td>International Monetary Fund</td>
</tr>
<tr>
<td>INAPI</td>
<td>Instituto Nacional de Propiedad Industrial, or National Institute for Industrial Property (Chile)</td>
</tr>
<tr>
<td>IPP</td>
<td>Investment Priorities Plan (Philippines)</td>
</tr>
<tr>
<td>ISO</td>
<td>International Organization for Standardization</td>
</tr>
<tr>
<td>ISQua</td>
<td>International Society for Quality in Health</td>
</tr>
<tr>
<td>IT</td>
<td>information technology</td>
</tr>
<tr>
<td>ITeS</td>
<td>IT-enabled service</td>
</tr>
<tr>
<td>ITH</td>
<td>income tax holiday</td>
</tr>
<tr>
<td>ITIDA</td>
<td>Information Technology Industry Development Authority (Arab Republic of Egypt)</td>
</tr>
<tr>
<td>ITIL</td>
<td>IT Infrastructure Library</td>
</tr>
<tr>
<td>JCI</td>
<td>Joint Commission International</td>
</tr>
<tr>
<td>Abbreviation</td>
<td>Description</td>
</tr>
<tr>
<td>--------------</td>
<td>-------------</td>
</tr>
<tr>
<td>KPO</td>
<td>knowledge process outsourcing</td>
</tr>
<tr>
<td>MCIT</td>
<td>Ministry of Communications and Information Technology (Arab Republic of Egypt)</td>
</tr>
<tr>
<td>MTPDP</td>
<td>Medium-Term Philippine Development Plan 2004–2010</td>
</tr>
<tr>
<td>Mercosur</td>
<td>Mercado Común del Sur, or Southern Cone Common Market</td>
</tr>
<tr>
<td>MQA</td>
<td>Malaysian Qualifications Agency</td>
</tr>
<tr>
<td>MSC</td>
<td>Multimedia Super Corridor (Malaysia)</td>
</tr>
<tr>
<td>MSQH</td>
<td>Malaysian Society for Quality in Health</td>
</tr>
<tr>
<td>NAC</td>
<td>NASSCOM Assessment of Competence (India)</td>
</tr>
<tr>
<td>NAIA</td>
<td>Ninoy Aquino International Airport (Philippines)</td>
</tr>
<tr>
<td>NASSCOM</td>
<td>National Association of Software and Services Companies (India)</td>
</tr>
<tr>
<td>NEM</td>
<td>New Economic Model (Malaysia)</td>
</tr>
<tr>
<td>NIESA</td>
<td>NASSCOM’s India-Europe Software Alliance</td>
</tr>
<tr>
<td>NINJSA</td>
<td>NASSCOM’s India-Japan Software Alliance</td>
</tr>
<tr>
<td>NSR</td>
<td>National Skills Registry (India)</td>
</tr>
<tr>
<td>OBHE</td>
<td>Observatory on Borderless Higher Education</td>
</tr>
<tr>
<td>OBS</td>
<td>Orange Business Services</td>
</tr>
<tr>
<td>OCR</td>
<td>optical character recognition</td>
</tr>
<tr>
<td>OCSs</td>
<td>other commercial services</td>
</tr>
<tr>
<td>OECD</td>
<td>Organisation for Economic Co-operation and Development</td>
</tr>
<tr>
<td>OFW</td>
<td>overseas Filipino worker</td>
</tr>
<tr>
<td>OLS</td>
<td>ordinary least squares</td>
</tr>
<tr>
<td>PDP</td>
<td>Política de Desenvolvimento Produtivo, or Policy for Productive Development (Brazil)</td>
</tr>
<tr>
<td>PETRONAS</td>
<td>Petroliam Nasional Berhad (Malaysia)</td>
</tr>
<tr>
<td>PEZA</td>
<td>Philippine Economic Zone Authority</td>
</tr>
<tr>
<td>PFA</td>
<td>Philippine Franchise Association</td>
</tr>
<tr>
<td>PGMA</td>
<td>President Gloria Macapagal-Arroyo (Philippines)</td>
</tr>
<tr>
<td>PIATCO</td>
<td>Philippine International Air Terminals Co.</td>
</tr>
<tr>
<td>PISA</td>
<td>Programme for International Student Assessment</td>
</tr>
<tr>
<td>PMR</td>
<td>product market regulation</td>
</tr>
<tr>
<td>PPML</td>
<td>Poisson pseudo maximum likelihood</td>
</tr>
<tr>
<td>ProChile</td>
<td>Dirección de Promoción de Exportaciones, or Export Promotion Agency (Chile)</td>
</tr>
<tr>
<td>Procult</td>
<td>Programa para o Desenvolvimento da Economia da Cultura, or Program for the Development of the Economy of Culture (Brazil)</td>
</tr>
<tr>
<td>PTA</td>
<td>preferential trade agreement</td>
</tr>
<tr>
<td>QSIIS</td>
<td>Quarterly Survey of International Investment and Services</td>
</tr>
<tr>
<td>Abbreviation</td>
<td>Description</td>
</tr>
<tr>
<td>--------------</td>
<td>-------------</td>
</tr>
<tr>
<td>RBI</td>
<td>Reserve Bank of India</td>
</tr>
<tr>
<td>RCA</td>
<td>revealed comparative advantage</td>
</tr>
<tr>
<td>RTA</td>
<td>regional trade agreement</td>
</tr>
<tr>
<td>SAR</td>
<td>Special Administrative Region (China)</td>
</tr>
<tr>
<td>SARS</td>
<td>severe acute respiratory syndrome</td>
</tr>
<tr>
<td>SD</td>
<td>standard deviation</td>
</tr>
<tr>
<td>SDP</td>
<td>state domestic product</td>
</tr>
<tr>
<td>SECC</td>
<td>Software Engineering Competence Center</td>
</tr>
<tr>
<td>Sernatur</td>
<td>Servicio Nacional de Turismo, or National Tourism Service (Chile)</td>
</tr>
<tr>
<td>SIPA</td>
<td>Silicon Valley Indian Professionals Association</td>
</tr>
<tr>
<td>SMEs</td>
<td>small and medium-size enterprises</td>
</tr>
<tr>
<td>STP</td>
<td>software technology park</td>
</tr>
<tr>
<td>STPI</td>
<td>Software Technology Parks of India</td>
</tr>
<tr>
<td>SUR</td>
<td>seemingly unrelated regression</td>
</tr>
<tr>
<td>SWOT</td>
<td>strengths, weaknesses, opportunities, and threats</td>
</tr>
<tr>
<td>TESDA</td>
<td>Technical Education and Skills Development Agency (Philippines)</td>
</tr>
<tr>
<td>TEZ</td>
<td>tourism enterprise zone</td>
</tr>
<tr>
<td>TFP</td>
<td>total factor productivity</td>
</tr>
<tr>
<td>TiE</td>
<td>The Indus Entrepreneurs</td>
</tr>
<tr>
<td>TIEZA</td>
<td>Tourism Infrastructure and Enterprise Zone Authority (Philippines)</td>
</tr>
<tr>
<td>TOEFL</td>
<td>Test of English as a Foreign Language</td>
</tr>
<tr>
<td>TOKTEN</td>
<td>Transfer of Knowledge through Expatriate Nationals</td>
</tr>
<tr>
<td>TTCI</td>
<td>Travel and Tourism Competitiveness Index</td>
</tr>
<tr>
<td>UNSTATS</td>
<td>United Nations Statistical Division</td>
</tr>
<tr>
<td>VoIP</td>
<td>Voice over Internet Protocol</td>
</tr>
<tr>
<td>WiMax</td>
<td>Worldwide Interoperability for Microwave Access</td>
</tr>
</tbody>
</table>
Since the mid-1990s, service exports of 20 developing countries—including not just Brazil, India, the Russian Federation, and China, but also Cambodia, Ghana, Morocco, and Nigeria—have grown by over 15 percent annually. From 1990 to 2007, before the financial crisis, the average growth of service exports was about 8.7 percent for high-income countries, 10.0 percent for low-income, and 13.0 percent for lower-middle-income countries. The share of developing countries in exports of world services increased from 11 percent in 1990 to 21 percent in 2008. Developing countries are exporting not just traditional services, such as transportation and travel (or tourism) services, but also modern services, notably high-value, skill-intensive services, such as computer and information services and other business services.

The success of some countries in exporting services seems to be unrelated to their performance in trade in goods or to their industrial development. In fact, service sector exports of a number of developing countries are growing faster than their goods exports and are contributing to their export diversification. Some authors have suggested a “service revolution” is occurring that offers an alternative channel for accelerated economic growth and poverty alleviation (Ghani 2010).

At the start, clarifying certain aspects of trade in services is helpful (Copeland and Mattoo 2008; Francois and Hoekman 2010). Because many service transactions require face-to-face contact between the consumer and the provider (despite the increased scope for electronic delivery), defining trade in
services more broadly than trade in goods to encompass the following four modes of supply is now standard:

- **Mode 1: Cross-border trade in services.** Such trade is analogous to goods trade that involves shipping services such as software from one country to another.
- **Mode 2: Consumption abroad.** Such trade occurs when consumers (for example, tourists or students) travel across borders.
- **Mode 3: Commercial presence.** The producer of a service establishes a commercial presence (for example, a subsidiary or branch of a bank) in the country of the consumer.
- **Mode 4: Movement of natural persons.** In this case, the producer (for example, a mining engineer) travels across borders.

One important implication of this broad definition of trade in services is that it incorporates the international movement of factors—through foreign direct investment (FDI) and temporary labor mobility.

The modes of supply can either substitute for or complement one another in specific services. For example, in simple bookkeeping services, modes 1 and 4 may be substitutes, but in the design of software suited to a foreign firm’s needs, the two modes may be complements. The relationship between modes has implications for the analysis of the effect of regulations on the costs and quality of the services. If modes are perfect substitutes, the liberalization of one of them is enough to fully reap the gains from liberalization. But when modes are imperfect substitutes or complements, effective access to service markets requires the freedom to use a combination of modes.

Barriers to trade in services are more complex than are barriers to trade in goods. The ability of foreign service providers to contest markets depends not only on explicit restrictions to entry but also on policy and regulation of domestic services (see table 1.A.1 in annex 1.A). These regulations exist, in principle, because service markets are characterized by market failures such as imperfect and asymmetric information, especially in such knowledge-intensive sectors as professional and financial services, as well as lack of competition and natural barriers to entry, particularly in sectors with significant network externalities, such as communications and transport.

From a trade perspective, the first problem is that the presence of regulations to remedy information failures can become an impediment, either purely because countries differ in the choice and stringency of instruments (such as qualification or licensing requirements) or because sometimes these regulations are deliberately designed to protect domestic providers. The second problem is that the absence of regulations to remedy market power can enable incumbent providers
to frustrate entry by denying access to essential facilities (such as telecommunication networks, ports, and airports).

Are the factors that explain trade in services different from those that explain trade in goods? Broadly speaking, the two major explanations for trade between countries also apply to service trade and can be extended to include trade through different modes (Copeland and Mattoo 2008). First, the theory of comparative advantage sees trade as interindustry and the result of fundamental differences between countries. In the case of services, as for goods, differences in technology and relative endowments (including factors of production as well as institutions and infrastructure) determine comparative advantage. Thus, Kenya exports certain skill-intensive professional services to other African countries because it is relatively well endowed with skilled labor, and the United States exports satellite launch services to other countries because it is relatively well endowed with capital and the relevant technology. Differences in determinants are not static and may evolve over time depending on the policy and other choices a country makes. The second explanation for intraindustry trade between countries emphasizes the twin features of (a) consumers’ love of variety and (b) producers’ gains from specialization in specific varieties caused by increasing returns to scale or agglomeration. Many firms exist because they have specialized knowledge, distribution and supply networks, and differing reputations for quality and reliability. Thus, both Europe and the United States produce and sell banking services to each other because their respective banks—ranging from UBS to the Bank of America—specialize in slightly different services that appeal to different European and U.S. consumers.

Recent theoretical developments highlight the role of technology in the growth of trade in services. Technological changes are clearly reducing the need for proximity between the producer and the consumer. These changes are also allowing the fragmentation of production into tasks that may be performed in different locations (Feenstra 2010). Fragmentation, which affects the production of both goods and services, means that a vertically connected production process that takes place in one location can now be undertaken in different regions or countries (Jones 2000). Communication, logistics, and financial services, among others, allow connection of tasks from different locations. Developing countries are taking advantage of these new opportunities to export services. For example, the absence of internationally recognized professionals may be an impediment to a country’s ability to export complete architectural or accounting services to the final consumer in another country, but the country can still produce and export parts of these services (basic design and accounts) to foreign professionals who can assemble these parts and serve the final consumer.
Determinants of Trade in Services

This book attempts to disentangle the determinants of developing-country participation in service exports and to identify strategies for export success. It examines the role of the following factors:

- The “fundamentals,” which are given in the short run but can be influenced by policy in the longer term. These fundamentals include a country’s factor endowments, especially of human capital, including skills and entrepreneurial ability; natural resources and cultural endowments, such as those that attract tourism; infrastructure, especially telecommunication networks that facilitate the delivery of services; and institutional quality, especially the regulatory environment for services.

- Policies affecting trade, investment, and labor mobility in services. A broad range of policies affect cross-border trade, such as transport and financial services; consumption abroad in health and education services; foreign investment and the participation of multinational companies in banking, telecommunications, and business process outsourcing (BPO); and the movement of individual service providers in construction and information technology (IT) services.

- Proactive policies in services. Such policies include those designed to promote exports, investment, or both, for example, by creating special economic zones or allowing privileged access to land, infrastructure, or imported inputs; by providing fiscal incentives for exporters and investors in the form of subsidies or tax exemptions; and by establishing other trade promotion activities, such as trade fairs and information dissemination.

The book builds on previous research, including that by the World Bank, on trade in services. Such research includes analyses of the effect of liberalizing services in developing countries and sectoral studies on financial, transportation, telecommunications, and professional services, as well as on international negotiations. The conceptual framework for this book is based on the existing literature on the service sector (Francois and Hoekman 2010; Hoekman and Mattoo 2008). Recognizing the heterogeneity in both the economic structure of developing countries and their service exports, this book takes an eclectic approach to identifying successful strategies. Chapter 2 surveys the literature on determinants of service exports and presents an illustrative empirical model that synthesizes the available models on trade in services. Because trade data on services are scarce and have a number of weaknesses, rigorous econometric analysis has serious limits.

The subsequent chapters of the book examine the determinants of trade in services through case studies of the experiences of countries with varying degrees of success.
The book analyzes service export performance for the following countries: Brazil, Chile, the Arab Republic of Egypt, India, Kenya, Malaysia, and the Philippines. The countries were selected on the basis of their performance in global trade (especially trade in services), their regional role, and the availability of data and because they have consciously pursued policies to promote service exports. The case studies analyze and compare various policies and strategies that these countries have used. Several policy lessons emerge, which are grouped in accordance with the factors listed previously and discussed in the following three subsections.

The role of fundamentals

The empirical literature confirms that service sector performance critically depends on human capital, the quality of the telecommunication network, and the quality of institutions. The gravity framework has been widely used to explore the determinants of trade in services. Results of gravity models suggest that human capital skills and electronic infrastructure are important determinants of trade in services (Lennon 2006; Lennon, Mirza, and Nicoletti 2009; Shingal 2010). The literature also suggests that the quality of institutions, as measured by the degree of corruption, complexity of export procedures, and rigidity in employment law (Lennon 2006), or the economic freedom index (Kimura and Lee 2006) also positively influence trade in services. Additionally, bilateral trade in goods promotes trade in services. On the effect of geographic and cultural variables, most studies agree that distance dampens trade in services.

Identifying the reasons for the success or underperformance of developing countries in exporting services remains challenging because of the lack of reliable data. Mattoo (2005) and Maurer and others (2008) describe some of the inadequacies in the data relating to trade in services. Annex table 1.A.2 summarizes the main inadequacies in current statistical coverage of trade in services.

The illustrative empirical exercise conducted in chapter 2 of this book corroborates the findings of several studies regarding the importance of the telecommunication network, human capital, and institutions. Figure 1.1 shows a positive association between human capital and service exports (panel a) and electronic infrastructure and service exports (panel b).

To succeed in higher-end service exports, a country must be well endowed with human capital. This finding is evident from both the illustrative empirical exercise and the case studies. The estimation in chapter 2 finds that human capital, as measured by tertiary school enrollment in the source country, is significant in affecting bilateral service exports. Moreover, the coefficient for this variable is larger for the developing-country sample, implying that the return to investment in human capital in terms of exports is larger in countries that are not rich.
The fact that endowment of human capital matters for service exports is evident in many developing countries. The high quality of doctors and standard of treatment in Thailand explains its medical tourism exports. Even though the quality of Thai medical services compares well with that of developed countries, the prices are mostly lower than in other countries because of the low cost of doctors and infrastructure. For example, dental care in Thailand costs about 85 percent less than in the United States even when the cost of travel is included (see Arunanondchai and Fink 2007 for more details). Similarly, the quality and abundance of the engineering workforce in Tunisia explain its success in exporting engineering services. Tunisia’s
performance is the result of a policy that made human resources a driving factor for development (Cattaneo, Schmid, and Engman 2010).

The success in service exports of India or the Philippines is attributed to the high quality and large pools of human capital. Particularly revealing are the cases of Malaysia, where inadequate skills are seen as the reason that commercial service exports have not developed, and Egypt, where the poor quality of education is found to be an impediment to exporting those services. These cases mirror those of Chile, where inadequacies in the scale as well as the skill of labor deter service exports, and Brazil, where the insufficient quality of skills is the main concern for future development.

This book’s case studies do not provide guidance on the types of skills in which a country should invest. In many countries, investment in human capital is primarily state driven, whereas service exports are usually private sector driven. Several countries are experiencing a mismatch between skills required by the market and those being produced by the education system. For instance, Kenya is relatively well endowed with graduates who could work in various business service firms, including the BPO sector; however, new graduates need substantial postgraduate training to catch up with international standards. In the Philippines, experience suggests that not all college graduates are ready for the labor market. Only 10 percent of contact center applicants are immediately hired. The Technical Education and Skills Development Agency provides educational grants for BPO “near-hires.” Malaysian graduates lack the required skills needed in the market. As a result, in 2008, about 25 percent of local graduates from public universities remained unemployed six months after graduation. Thus, a shortage of skilled human capital exists in the country, and improving the situation is critical for Malaysia to enhance the export of knowledge-based services. In India, the derived demand for skills has prompted a powerful response from the private sector in terms of investment in education and training. Recognizing that the unavailability of skills disadvantages Egypt in comparison to its competitors (A.T. Kearney 2009), the Ministry of Communications and Information Technology has developed specific training programs for different segments of the industry to prepare graduates for work in the information and communication technology (ICT) industry. The Information Technology Industry Development Authority (ITIDA) is also running an education program called EduEgypt, which collaborates with universities to train students to enter the BPO industry.

The illustrative gravity model framework in chapter 2 also suggests that Internet penetration in the trading partner matters more than that in the exporter. These results imply that firms exporting services need access to high-quality electronic infrastructure that does not necessarily have to cover the general population of the exporter country. Therefore, Internet penetration among the general population in
the exporter country may not significantly affect service exports. An exporting firm in a developing country may own the equipment for better-quality telecommunications, or the government may be able to create special economic regimes, such as IT parks or software technology parks (STPs), as in the case of Egypt, India, and the Philippines, to overcome the handicap of technology penetration.

Neither does the state of electronic infrastructure by itself explain the success of developing countries in exporting services. For instance, India has been able to successfully export software services even with a low Internet penetration of 7 persons per 100, whereas Malaysia has been less successful in exporting such services despite a high Internet penetration of 63 persons per 100. In the Malaysian case, exports of ICT services are inhibited by low Internet penetration in potential export destination countries.

Service exports conform in certain respects to the predictions of the theory of comparative advantage with some degree of factor specificity. Broadly, a country’s exports of services depend on its endowments at any time of infrastructure, factors of production, and institutions relevant to services, in comparison to its endowments of these factors relevant to manufacturing. Thus, countries such as India and the Philippines are doing well in cross-border exports of skill-intensive services but are lagging in labor-intensive manufacturing exports, not because of their absolute advantage in services—they remain relatively abundant in unskilled labor—but because of their comparative disadvantage in manufacturing. In India, for example, the markets for skilled labor in services are relatively flexible, whereas those for unskilled labor in the formal manufacturing sector are rendered rigid by regulation and unions. Moreover, the infrastructure for service delivery (telecommunication networks) has improved dramatically, whereas that for goods delivery (roads and ports) is improving much more slowly. Also, the institutions governing trade in services—both public institutions such as the Telecommunications Regulatory Authority and private institutions such the National Association of Software and Services Companies (NASSCOM)—are widely seen as competent and honest, whereas the institutions governing trade in goods (such as the customs authorities) are widely seen as less competent and more corrupt. Conversely, the comparatively more limited success of countries such as Chile and Malaysia in exporting skill-intensive commercial services may have less to do with their absolute disadvantage in services than with their comparative advantage in exporting agricultural and manufacturing goods, respectively.

Transport and travel services are intensive in the use of physical infrastructure and are also sensitive to institutions such as customs and border management. This characteristic makes such exports appear similar to goods exports rather than to exports of other commercial services (box 1.1). In contrast, other commercial services, which are usually traded across borders, rely on
Box 1.1: Defining Commercial Services

Commercial services in this book are defined as transportation services, travel, and other commercial services, excluding government services (such as supplied or acquired by embassies, military bases, and international organizations, and so on).

Transportation services cover sea, air, and other modes of transportation, including land, internal waterway, space, and pipeline transport. Such services are performed by residents of one economy for those of another and involve the carriage of passengers, the movement of goods (freight), rentals (charters) of carriers with crew, and related supporting and auxiliary services.

Travel includes goods and services acquired by personal travelers for health, education, or other purposes and by business travelers. Unlike other services, travel is not a specific type of service but an assortment of goods and services consumed by travelers. The most common goods and services covered are lodging, food and beverages, entertainment, transportation (within the economy visited), and gifts and souvenirs.

Other commercial services include the following:

- **Communications services.** These services include telecommunication, postal, and courier services. The term telecommunication services encompasses the transmission of sound, images, or other information by telephone, telex, telegram, radio and television cable and broadcasting, satellite, electronic mail, facsimile services, and the like. Telecommunication services include business network, teleconferencing, and support services. They do not include the value of the information transported. Also included are cellular telephone services, Internet backbone services, and online access services (such as provision of access to the Internet).

- **Construction.** This type of service covers work performed on construction projects and installation by employees of an enterprise in locations outside the territory of the enterprise (the one-year rule to determine residency is applied flexibly). In addition, goods used by construction companies for their projects are included, which implies that the actual service component tends to be overestimated.

- **Insurance services.** These services cover the provision of various types of insurance to nonresidents by resident insurance enterprises, and vice versa. Such insurance may include freight insurance, direct insurance (such as life insurance), and reinsurance.

- **Financial services.** These services are the financial intermediation and auxiliary services provided by banks, stock exchanges, factoring enterprises, credit card enterprises, and other enterprises.

- **Computer and information services.** This category is subdivided into computer services (hardware- and software-related services and data processing services); news agency services (provision of news, photographs, and feature articles to the media); and other information provision services (database services and Web search portals).

- **Royalties and license fees.** These fees include payments and receipts for the use of intangible nonfinancial assets and proprietary rights, such as patents, copyrights, trademarks, industrial processes, and franchises.

- **Other business services.** This broad category comprises trade-related services; operational leasing (rentals); miscellaneous business, professional, and technical services such as legal, accounting, and management consulting; public relations, advertising, market research, and public opinion polling; research and development; architectural, engineering, and other technical services; and agricultural, mining, and onsite processing.
Personal, cultural, and recreational services. This category is subdivided into two components: (a) audiovisual services and (b) other cultural and recreational services. The first component includes services and fees related to the production of motion pictures, radio and television programs, and musical recordings. Other personal, cultural, and recreational services include those associated with museums, libraries, and archives, as well as other cultural, sporting, and recreational activities. Also included are services related to education, such as correspondence courses and education via television or the Internet, as well as services performed by teachers.

Health services comprise services provided by doctors, nurses, and paramedical and similar personnel, as well as laboratory and similar services, whether rendered remotely or on site.

Excluded from other personal expenditures is all expenditure by travelers on education and health. Such services are included in travel.

Sources: Adapted from IMF 2009; UN and others 2002; WTO 2010.
a. In IMF (2009), postal and courier services are included under transportation services, telecommunication services are included under computer and information services, and the royalties and license fees were changed to charges for the use of intellectual property not included elsewhere.

Telecommunication infrastructure and are sensitive to institutions that influence contract enforcement.

The case of Malaysia (chapter 5 in this book) is diametrically opposite to that of India. Exports of travel services contributed more than 50 percent of aggregate service exports from Malaysia in 2008. Between 2001 and 2008, exports of other commercial services as a share of total service exports from Malaysia declined from 34 percent to 27 percent even though Malaysia has very high Internet penetration rates and high tertiary school enrollment. Malaysia also has excellent-quality physical infrastructure and goods-related institutions that have boosted its exports of goods. Certain service exports have also benefited from the quality of basic infrastructure, particularly mode 2 service exports, such as travel, health tourism, and education services.

Chile (chapter 9 in this book) is another example of a country that seems to validate this hypothesis of the importance of the relative endowments, infrastructure, and institutions that matter for the service sector. Although many other developing countries are taking advantage of globalization in service provision and moving toward providing other commercial services, the composition of Chile’s exported services is moving toward transport services. Several supply-side factors, such as the limited pool of human resources specifically suited for other commercial services and the scarcity of English-language skills, affect the efficiency of labor in service provision and hence partly explain the comparatively moderate growth rate in exports of other commercial services from Chile. Chile’s excellent infrastructure, endowment, and institutions seem to favor exporting
goods rather than exporting services; hence, the country excels in exporting transport services that complement the trade in goods.

The case of the Philippines (chapter 4 in this book) also underscores the importance of the relative endowments, infrastructure, and institutions that matter for the service sector. The contribution of BPO service exports to gross domestic product surged from 0.5 percent in 2001 to 3.7 percent in 2008. The Philippines accounted for 15 percent of the global BPO market in 2008, after India (37 percent) and Canada (27 percent). The industry thrived at an annual growth rate of 40 to 50 percent from 2004 to 2007, before declining to 23 percent in 2008 and 19 percent in 2009. Philippine business service exports were encouraged by low labor costs, low telecommunication and Internet costs, a large pool of competent and English-speaking labor, and Filipinos’ affinity to the U.S. legal and educational system and to U.S. culture.

Policy and regulations can be an impediment to trade in services. The research literature reviewed in chapter 2 tends to confirm that regulatory barriers to service trade in both the reporter and the partner countries negatively affect trade. This finding is also confirmed in the case studies. For instance, in the case of Malaysia, progressive deregulation of the service sector, either through formal trade liberalization agreements or unilateral liberalization measures, has contributed to the increasing importance of the service sector by enhancing the potential of service exports. Also, in Brazil, the comparative advantage in service exports was significantly developed or deepened after the second half of the 1990s, which in turn indicates a strong correlation with the main economic policy reforms of that period—that is, liberalization and market opening. In the case of the Philippines, liberalization in the telecommunication industry in 1993 increased competitiveness in the industry and, hence, improved the quality and efficiency of telecommunication infrastructure. Also the special regime that benefits the BPO industry creates a more business-conducive environment by offering one-stop-shop services for business registration and extends an exemption of local government business permits, licenses, and fees.

**Investment, labor mobility, and trade policies**

Inward FDI may help initiate and even sustain service exports, as in the case of India, the Philippines, and (to a lesser extent) Chile. In India, multinational firms were among the first to recognize the scope for BPO (Athreye 2003). At the same time, foreign firms established by expatriate Indians—who were familiar with foreign markets and with new ideas for fragmenting the value chain—added to the competitive pressure. These developments generated a virtuous cycle drawing in domestic firms: for example, the tightening of labor markets, which was caused by
foreign competition, induced domestic firms to acquire unique organizational capabilities and multinational firms to devise improved value-adding strategies. In the case of the Philippines, of total equity investment in the BPO industry (US$2 billion), about 93 percent (US$1.8 billion) represented foreign equity participation. In 2008, the United States took up half the total foreign investment in the industry, while Japan made up 20.0 percent, the European Union 18.6 percent, and India 7.3 percent. A similar dynamic was unleashed in Chile—with one difference: whereas domestic firms dominate in exporting maritime and air transportation services, the bulk of ICT service exports is from multinational firms, even though they are relatively small in number. In contrast, countries such as Malaysia, which built their manufacturing export success on the back of foreign investment, remained much more tentative about openness to foreign investment in services. Moreover, inward FDI is known to have promoted service exports from Costa Rica after Intel’s initial investment.6

In 1993, liberalization in the Philippine telecommunication sector increased competition in the industry and hence improved the quality and efficiency of telecommunication infrastructure (World Bank 2010). Allowing competition in local long-distance services in 1995 and permitting international simple resale led to a greater reduction in accounting rates and retail prices in the Philippines than in other countries that liberalized their telecommunication sector (Fink, Mattoo, and Rathindran 2001). Lower communication costs shifted the comparative advantage of the Philippines toward the more communication-intensive BPO industry. According to the A.T. Kearney (2011) Global Services Location Index, the Philippines ranks among top destinations in terms of financial attractiveness and infrastructure costs.

A factor that explains Malaysia’s success in exporting services is liberalization, especially in the higher education and Islamic finance sectors. In the case of higher education, medical, and airline services, Malaysia first liberalized domestically because the public sector could not meet growing demand. For instance, when public universities could not enroll all students interested in getting a university degree, the government allowed the private sector, including foreign providers, to bridge this gap. This step then became a catalyst for the development of private higher education. The medical and airline services underwent the same process in which the private sector initially enhanced domestic capacity, which subsequently paved the way for export.7

Cross-border service exports may also be linked to outward FDI. In Brazil and Chile, companies that in the beginning supported foreign investments of domestic firms eventually became service exporters in their own right, confirming the importance of “jointness” and complementarities in the provision of services (Francois and Hoekman 2010). Brazil’s experiences exemplify how mode 3 service
exports (commercial presence abroad) can pave the way for mode 1 (cross-border) service exports. From 1990 to 2007, Brazil’s service exports grew at an average rate of 14 percent, compared with the world average of 9 percent. The recent phase of internationalization of services, led by new and small ICT firms, was encouraged by the demand created by a first wave of internationalization of Brazilian companies. Newly internationalized firms needed software capable of setting up and integrating systems, processing and storing data, devising programs, creating network services, and the like. Naturally, Brazilian companies looked to Brazilian ICT companies as a first choice for those services. Thus, from a policy perspective, outward FDI may be a channel for encouraging service exports.

Chile has also been a successful exporter of services through investment abroad in retail and other services, such as financial services, particularly in the Latin American region. The only evidence of service exports that grew because of their link to Chilean outward investment in the Latin American region is found in companies that initially provided services to retail companies. Among the service providers that supported domestic retail are a wide range of professional, logistics, human resource, marketing, and IT-related service providers.

Tapping service demand from migrants may be one way to launch service exports. In the cases of Brazil and Egypt (chapters 8 and 6, respectively, in this book), service providers have established a commercial presence abroad to better serve migrants. For example, exports of Brazilian and Egyptian soap operas were initially pitched at their respective diasporas before commanding wider international popularity. Financial service providers in the two countries also first catered to the needs of expatriate populations and firms operating abroad, such as construction enterprises. But two related developments have helped. First, the opening up of financial service markets in Latin America and, to a lesser extent, in the Middle East facilitated the establishment of financial institutions, and second, domestic regulations allowed overseas investment by financial institutions.

In the Philippines, remittances encouraged commercial banks to develop innovative banking products. With stagnant loan growth, remittances are an important line of business in the Philippines and thus contribute to stronger competition among the banks by reaching out to Filipinos abroad. In the United States, 8 of the 10 largest Philippine banks cater to U.S.-based overseas Filipino workers through their own remittance centers or branches or through partnerships with other institutions. A related lesson in this context is found in the case of Malaysia, where service exports in the health and education sector have been facilitated by easy visa and immigration policies.

Preferential (and multilateral) trade agreements in services have induced limited incremental liberalization and therefore could have helped boost service exports only insofar as they created greater security of market access. For example,
services have lagged goods in the Mercosur (Southern Cone Common Market, or Mercado Común del Sur) integration process, although they may play a significant role in the future. The main destination markets for Brazil’s service exports are the United States and Europe, where General Agreement on Trade in Services rules apply. In Chile, both investments abroad and service exports are intensively linked to the Latin American region—where service liberalization took place mainly on a unilateral basis—and only recently have rules on services been incorporated in subregional and bilateral trade agreements. In the Middle East and North Africa, where service exports from Egypt have developed, rules on trade in services are limited.

Proactive policies in services

Several countries have put in place targeted policies to support exports, especially for IT-related services, but establishing a causal link between support and performance is difficult. Usually, these policies aim to create an enabling business environment in which the private sector, national or foreign, has access to better infrastructure, benefits from incentives, and enjoys a more streamlined regulatory environment (Engman 2010). This situation is exemplified by this book’s case studies on Egypt, India, and the Philippines and, to a lesser extent, Brazil and Chile. The advantage of this approach is that governments focus on promoting a sector that enjoys an open environment where resistance to reform is less intense and where the government can easily win support from a business community eager to develop ICT-related service activities. From a political economy point of view, the government can avoid tackling far-reaching and politically difficult reforms that could take several years. Also, this approach may have the advantage of developing a sector that could become an example for motivating more significant reforms. These examples prove the benefits of a more open and transparent investment regime: investors respond positively to a transparent and more predictable regulatory environment. A major problem with this approach, however, is that it limits the benefits of improved quality and quantity of services to a specific section of the business community, rather than aiding the entire economy. This approach may also delay important reforms that could benefit a country’s population.

By allowing duty-free imports of computer hardware, Indian STPs aimed to promote software development. Firms in STPs were allowed tax exemptions, guaranteed access to high-speed satellite links, and provided reliable electric power. Benefits included core computer facilities, ready-to-use office space, and communication facilities. Firms in STPs were allowed to import equipment duty free and without licenses. Full foreign ownership was permitted in exchange for an export obligation. Firms were allowed to freely repatriate capital investment,
royalties, and dividends once they paid the taxes due. STPs played a major role in development of India’s IT sector in the 1990s. The share in India’s software exports of units located in STPs rose dramatically, from 8 percent in 1992–93 to 81 percent 10 years later. By 1995, about 400 companies were situated in STPs. By 2008–09, 8,455 units were registered as operating units in STPs, of which 7,214 were registered as exporting units, and India’s software service exports were US$47.1 billion.

The case of Egypt (chapter 6 in this book) evidences that targeted policies in a noncontroversial sector such as IT are playing a crucial role in service exports. Even though Egypt is not a top-ranked developing country in terms of quality of labor force education, it has still been able to succeed in exports of IT services and IT-enabled services (ITeSs), especially in the Arab region. In Egypt’s ICT sector, the government established ITIDA in 2004 with a mission to develop the ICT sector and boost its exports. ITIDA, a public-private partnership between the Ministry of Communications and Information Technology and the private sector, is dedicated to developing IT in Egypt. The government also created STPs for promoting ICT service exports. The idea behind establishing the “smart village,” which was inaugurated in 2004, was to create a space where IT companies could operate within a community conducive to their business needs.

As a response to a more moderate performance in ICT service exports, Chile has, since the mid-2000s, adopted a targeted set of policies administered by the Corporación de Fomento de la Producción de Chile (Production Development Corporation), Chile’s development agency, for attracting foreign investment to promote offshoring service exports.

In 2004, the Brazilian government selected software and related services as a priority sector for its industrial, technological, and trade policy. A special tax regime for the IT service export platform was implemented, as well as other tax incentives aimed at expanding Brazil’s exports of IT services. In addition, the Law of Technological Innovation, approved in 2005, encourages interaction between companies, research centers, and universities to stimulate development of new ideas and innovative products.

Except in IT and tourism, export promotion policies in the service sector similar to those in the goods sector are more recent. Countries such as Brazil and Chile pursued more traditional export promotion policies in sectors other than ICT through their respective export promotion agencies. In Brazil, the government has combined policies that provide financial support through the Brazilian Development Bank (Banco Nacional de Desenvolvimento Econômico e Social, or BNDES) with promotion programs through the Brazilian Trade and Investment Promotion Agency (Agência Brasileira de Promoção de Exportações e Investimentos, or ApexBrasil). BNDES financial support has targeted mainly construction and
construction-related exports. More recently, BNDES has had a special focus on supporting exports of services that have high intellectual content—software and computer services and engineering services in infrastructure projects. In the case of ApexBrasil, the promotion programs have a stronger emphasis on the so-called creative industries, including music, audiovisual, entertainment, and fashion. The ICT and health service sectors are also included in current ApexBrasil programs.

Similarly, in Chile, although efforts to promote service activities were initiated several years ago, the Export Promotion Agency (Dirección de Promoción de Exportaciones, or ProChile) started a promotion fund for service exports only in 2006. The fund covers a wide range of sectors and uses promotion strategies similar to those in the goods sector. The range of instruments available in ProChile covers two traditional areas: international trade fairs and strategic export sectoral plans. The latter include actions such as providing market intelligence, cofinancing business trips, and organizing business agendas with the assistance of ProChile.

Some of the sectors where targeted policies were implemented have been able to enhance their service exports, but how much credit goes to the targeted policies is not clear. Little doubt exists that service exports of India and the Philippines were driven primarily by the pool of skilled IT professionals and the availability of management and entrepreneurial skills. However, the establishment of STPs that helped in creating a favorable business environment to overcome the inadequacies in infrastructure and institutions may have further facilitated service exports.

A number of examples exist of targeted policies that did not work. In the Philippines, targeted policies in the tourism industry failed to attract tourists. Because tourism is not confined to one region but depends on the overall health of the economy, such targeted policies failed to make up for the poor quality of transport, travel, and infrastructure facilities and the country’s generally poor security environment. This experience suggests that although incentives can play a role in business decisions, the factors that influence private sector consumption and investment decisions are much wider and deeper and cannot be ignored by governments. For instance, most Kenyan service exporters feel that direct incentives, such as tax incentives for exporters, are unnecessary. Rather, they consider it crucial for the government to facilitate their access to foreign markets. In Chile, after several years of promotion efforts aimed at encouraging small and medium-size service exporters in several industries, the sectors chosen by ProChile are not really associated with significant service exports. In this case, the insufficient resources allocated to the program (US$1 million in total) probably explain a significant part of this result.

At the same time, targeted policies pose risks and must be carefully designed (OECD 2011). One obvious risk is the waste of public resources by directing them to a sector or firm that would have developed even without government support
or to sectors or firms that do not have any development prospects. Another risk is capture by incumbent sectors. For example, some Indian service exporters have lobbied fiercely for the continuation of fiscal and other incentives even though whether these incentives are still needed to support the sector is unclear. Finally and crucially, targeted assistance (for example, in the form of dedicated communication channels or streamlined approval procedures) can dilute political support for economywide reform (for example, in the nationwide telecommunication and business environment or by the buying off of important pro-reform constituencies). Therefore, governments must use care in designing such policies. In particular, they need to (a) identify clearly the market failure they want to address and establish that other instruments are not available to more directly address the failure; (b) subject such policies to rigorous cost-benefit analysis before implementation and rigorous impact evaluation afterward; (c) include credible sunset clauses to provide a clear horizon for, and a deterrent to capture by, investors; and (d) limit the use of such policies to areas where economywide reforms are clearly infeasible.

Cooperation by firms through an industry association can in some cases favorably influence policy at home and a country’s image abroad. Industry associations in India and the Philippines have had such an influence, but in Brazil, Chile, Egypt, and Kenya, their effects have been fewer. The industry association for India’s software services, NASSCOM, has given Indian IT and ITeS companies a unified voice and has played an instrumental role in the industry’s policy-making process. It worked in tandem with the Indian government to promote the sector’s interests (Kapur 2002). At the same time, NASSCOM played an active and influential role in building and strengthening the brand image of India as a premier global sourcing destination through various programs such as NIESA (NASSCOM’s India-Europe Software Alliance) and NINJSA (NASSCOM’s India-Japan Software Alliance). NASSCOM has also signed several trade contracts with countries such as Ireland, Israel, Mexico, Morocco, and Singapore to expand the geographic reach of Indian software companies beyond Japan, Western Europe, and North America. To ensure a steady supply of quality IT and ITeS professionals in India, NASSCOM started an assessment and certification framework called the NASSCOM Assessment of Competence.

Similarly, in the case of the Philippines, the Business Processing Association of the Philippines (BPAP), the umbrella BPO organization, plays a leading role in supporting and promoting the BPO industry. The association, together with stakeholders, has developed and acted on a blueprint designed to help bolster the competitiveness of the Philippines. The blueprint focuses on goals and specific action items to obtain success. In 2009, as part of the action items, BPAP produced the Next Wave Cities scorecard, which provides tools to help both investors and
local governments assess readiness and develop working capacities. Going forward, BPAP is creating another blueprint, Roadmap 2016, to guide the ever-evolving industry (BPAP 2007). In terms of talent management, BPAP launched programs on industry-specific training and career awareness. BPAP has advocated for the BPO sector, for example, to obtain passage of a house bill known as the Data Protection Act and to create the Department of Information and Communication Technology, which would provide stability and funds to market the BPO sector.

In the case of Kenya (chapter 7 in this book), the slow development of business service exports is attributed to poor brand quality, which a more active industry association might have developed. The Kenyan government, in contrast to its Indian and South African counterparts, for example, does not sponsor international conventions or events to showcase the BPO services available in Kenya.

Conclusion

Several developing countries have succeeded in diversifying their exports through services. Given the rising importance of service exports from developing countries, this book attempts to disentangle the determinants of this trend. Chapter 2 of this book starts with a survey of the available literature on determinants of trade in services and builds a nested model to illustrate the factors affecting service exports from developing countries. By analyzing the experiences of Brazil, Chile, Egypt, India, Kenya, Malaysia, and the Philippines, the book seeks to improve the understanding of what lies behind the growth of service exports from developing countries.

The book highlights several policy lessons. First, human capital is critical for certain service exports, which is confirmed in the empirical model of chapter 2 as well as the case studies. In the case studies, the book identifies human capital as the main driver of service exports from India and the Philippines, whereas the lack of human capital explains the more moderate performance of service exports in Chile, Egypt, and Malaysia. Second, the state of the economywide electronic infrastructure does not by itself explain the success of developing countries in exporting services. These results are confirmed in the case studies of India and Malaysia. Third, service exports in a developing country are driven by the quality of service-specific infrastructure, endowments, and institutions rather than those required for the manufacturing sector. Fourth, cross-border service exports may be encouraged by outward FDI, as has been true in the case of Brazil, where outward FDI led to ICT service exports. Fifth, inward FDI also seems to push service exports, as has been the case in India, the Philippines, and Chile, in offshoring services. Sixth, migrants have played an important role in service exports, and thus targeting service exports to migrants can be a starting point.
Seventh, preferential trade agreements in services have not yet played a key role in promoting service exports. Eighth, sectors where targeted policies created a conducive business environment saw their service exports expand, but establishing a causal link is hard. This situation is exemplified by the case studies on Egypt, India, and the Philippines. Most often, only politically noncontroversial sectors have been targeted for such policies. Finally, industry associations have been critical in reaching the international market for services, more so in the case of India and the Philippines than for Brazil, Chile, Egypt, and Kenya.

Caution and more research are needed to translate the lessons learned about service exports in this book into policy prescriptions. Although human capital matters, any investment in human capital should not be supply driven but rather should be guided by private sector requirements. Policies targeted to certain sectors, such as providing those sectors privileged access to infrastructure, may help promote the exports of such sectors but may delay reforms in the economy as a whole. Reforming public institutions and the business environment is desirable in general and usually safer than picking winners. It is too early, however, to pronounce definitive judgment on how long the experience of some developing countries in exporting services can be sustained and how much it can be replicated in other countries.
**Annex 1.A: Service Trade Barriers**

Barriers to trade in services differ from barriers to trade in goods. Table 1.A.1 provides examples of the types of barriers exporters face for the four modes of supply.

**Table 1.A.1. Illustrative Barriers to Trade in Services**

<table>
<thead>
<tr>
<th>Mode 1: Cross-border trade</th>
<th>Mode 2: Consumption abroad</th>
<th>Mode 3: Commercial presence</th>
<th>Mode 4: Movement of natural persons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local registration required for marketing or supply of services</td>
<td>Local registration of offshore provider required for marketing of services, applied on a transparent, readily accessible, and nondiscriminatory basis</td>
<td>Majority foreign ownership not permitted; only minority share in compulsory joint venture permitted</td>
<td>Bound only for definition of personnel permitted, with generally applicable time limits or conditions not specified, such that these may be arbitrarily or discriminatorily applied</td>
</tr>
<tr>
<td>Appointment of local agent and local professional address required</td>
<td>Provision of services permitted only through a designated local partner, to maintain supply advantage for permitted local providers</td>
<td>Acquisition of full or part share of existing business not permitted; restrictions on establishment of new businesses</td>
<td>Permission subject to approval and labor market tests for specific categories of personnel</td>
</tr>
<tr>
<td>Authorization, license, or permit required to market and supply services</td>
<td>Use by consumer of monopoly or otherwise specified network access or connection provider required</td>
<td>Reservation of some sectors or activities for state-owned enterprises or for investment only by nationals or permanent residents</td>
<td>Approval for intracorporate transferees and specialists subject to general economic needs test</td>
</tr>
<tr>
<td>Use of monopoly or otherwise specified network access or connection provider required</td>
<td>Consumer access or connection to Internet or other specified network access or connection provider required</td>
<td><strong>Legal form of foreign company</strong>&lt;br&gt;Only joint venture as limited liability company permitted</td>
<td>Requirement for local recognition of experience or qualifications for professionals and specialists, for which the criteria are vague, arbitrarily or</td>
</tr>
<tr>
<td>Access or connection to Internet or other forms of electronic network limited by specific government regulation</td>
<td>Cross-border transfer of capital, payments, and use of credit cards for such transactions subject to authorization</td>
<td>Only one legal form permitted (for example, joint stock)</td>
<td></td>
</tr>
<tr>
<td>Mode 4: Movement of natural persons</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(Table continues on the following page.)
<table>
<thead>
<tr>
<th>Mode 1: Cross-border trade</th>
<th>Mode 2: Consumption abroad</th>
<th>Mode 3: Commercial presence</th>
<th>Mode 4: Movement of natural persons</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Full commercial presence required; commercial presence required but granted only to specified brand-name entities; or local partnership required to maintain supply advantage for permitted local providers</td>
<td>• Transfer of capital, payments, and use of credit cards for such transactions subject to authorization</td>
<td>company, private limited liability corporation, joint venture) Licensing or authorization • Economic needs test to determine degree of restrictiveness Nationality or residency requirements • Providers established in one part of a country required to have a minimum number of resident providers or their agents for provision in another part of a country • All directors required to be residents of the host country • Prior residency required to obtain operating license, and residency not permitted without license</td>
<td>not transparently applied, or discriminatory • Numerical limitation on foreign nationals in senior positions (for example, company managers, executives, senior professionals, and specialists) or requirement of a specified number of host-country nationals relative to foreign nationals in each such category • Only intracorporate transferees permitted, subject to a limit of 2 foreign transferees per operation; training of local staff required • Provision of services by self-employed persons not permitted</td>
</tr>
</tbody>
</table>

Table 1.A.1. Illustrative Barriers to Trade in Services (continued)

Source: Adapted from Thompson and Nielson 2001.
<table>
<thead>
<tr>
<th>Mode of supply</th>
<th>Relevant data source</th>
<th>Inadequacies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cross-border trade</td>
<td>International Monetary Fund (IMF) balance of payment service statistics (categories other than travel)</td>
<td>IMF balance of payment statistics do not distinguish between cross-border supply, commercial presence (firms), and presence of natural persons (individuals) for less than 1 year.</td>
</tr>
<tr>
<td>Consumption abroad</td>
<td>IMF balance of payment statistics (mainly the travel category)</td>
<td>Travel also contains goods and is not subdivided into the different categories of services consumed by travelers. Some transactions related to this mode of supply also appear in other IMF balance of payment categories.</td>
</tr>
<tr>
<td>Commercial presence</td>
<td>FDI and foreign affiliate trade statistics</td>
<td>FDI statistics do not provide data on output (or sales); FDI definition does not match the definition of commercial presence. Until recently, foreign affiliate trade statistics existed only for the United States. Now other countries of the Organisation for Economic Co-operation and Development have started collecting such statistics using basic concepts and definitions contained in UN and others (2002).</td>
</tr>
<tr>
<td>Presence of natural persons (independent)</td>
<td>IMF balance of payment statistics (mostly categories other than transport and travel)</td>
<td>IMF balance of payment statistics do not distinguish between cross-border supply, presence of natural persons (individuals), and commercial presence for less than 1 year. Natural persons who are residents are not covered.</td>
</tr>
<tr>
<td>Presence of natural persons (employees)</td>
<td>Employment data from foreign affiliate trade statistics</td>
<td>Statistics are not yet available.</td>
</tr>
</tbody>
</table>

Source: Mattoo 2005.

Notes

1. In general, *infrastructure* in the text refers to electronic infrastructure, unless otherwise specified.

2. The importance of infrastructure, broadly defined, in development is widely acknowledged. For instance, World Bank research concluded that in most African countries, particularly the lower-income countries, infrastructure emerges as a major constraint on doing business. Infrastructure contributed significantly to per capita economic growth from 1990 to 2005 in Africa, but that contribution is almost entirely attributable to advances in the penetration of telecommunication services. In contrast, the deterioration in the quantity and quality of power infrastructure over the same period retarded growth. Moreover, infrastructure requirements in Africa are lagging, compared with other developing regions, and services are expensive. Finally, regulatory and administrative bottlenecks prevent adequate delivery of services (Foster and Briceño-Garmendia 2010).

4. Grünfeld and Moxnes (2003) also measure institutions through the corruption perception index and find that corruption negatively affects service trade.

5. NASSCOM is the premier trade body and the chamber of commerce of the IT BPO industries in India.

6. In this case, however, Intel invested in Costa Rica in the goods sector (computers) rather than in services.

7. Similarly, in Tunisia, an open engineering service sector with better-quality and more engineering graduates assisted in service exports. Along with the quality of human resources, engineering service exports has benefited from liberalization; the restrictiveness index for Tunisia is even lower than it is for several developed countries, such as Italy and Germany.

8. In the case of Egypt, education services have been exported by temporary migration as well; nevertheless, the extent of such service exports is declining over time (Engman 2009).

9. Mercosur is an economic and political agreement between Argentina, Brazil, Paraguay, and Uruguay. Although a services agreement has been in force since 2005, and commitments have been negotiated through periodic rounds of negotiations, the current commitments are more than 10 years old. New and improved commitments have yet to be implemented, but this situation could change in the future if the liberalization process among Mercosur members is strengthened.

10. Although Costa Rica and South Africa are not studied in this report, this situation applies to them as well.

References


The developing world has seen strong growth in service exports. The lower-middle-income countries have seen service exports grow at an average of 24 percent since 2001, compared with the world average growth rate of 15 percent during the same period. Their share in world exports of services has increased from 5 percent in 1982 to 11 percent in 2008, although these figures are highly influenced by growth in China and India, whose shares have increased from below 1.0 percent each to 3.7 and 2.6 percent, respectively. In fact, service exports are a growing proportion of both service value added and aggregate gross domestic product (GDP) in both lower-middle-income and low-income countries (figure 2.1). This chapter addresses two questions that may help explain how far these trends can be sustained and replicated: What factors have contributed to the success of certain countries in this area? And what policy lessons can other countries draw?

India’s success is well known: exports of software and business process services contributed about 33 percent of India’s exports in 2007–08. Less well known is that a large number of other developing countries are also successfully exporting services, both within their own regions and to high-income countries. Brazil, Costa Rica, and Uruguay export professional and information technology–related services.
services; Chile exports distribution and transportation services; and Mexico exports communication and distribution services. African countries are also participating. Kenya, Morocco, South Africa, and Tunisia provide professional services to Europe, and the Arab Republic of Egypt has developed a world-class call center sector. Exports of health services (known as health tourism) are successfully provided by a diverse group of countries in Asia (India and Thailand), as well as by countries in Latin America and the Caribbean, the Middle East, and North Africa. Capital-intensive and managerially complex services are also part of the story. Providers of construction services from developing countries are among the top 225 international contractors. Firms in developing countries engage in trade across a variety of sophisticated environmental service segments as well as in financial and telecommunication services (Cattaneo and others 2010).

The United Nations Conference on Trade and Development notes a number of interesting features of service exports from developing countries (UNCTAD 2005). First, such exports are not concentrated in a few areas but already span a wide variety of services. Second, developing countries have diversified their service export markets: the average developing country is reported to have 33 export markets. Third, south-south service trade is important, with developing countries accounting for two-thirds of the service export markets of other
developing countries. Fourth, the most widely used modes of supplying services from a developing country are mode 2 (consumption abroad, when foreigners visit the producing market) and mode 4 (movement of natural persons, when providers visit other markets), although recent studies suggest that the importance of mode 1 (cross-border) exports from developing countries is also increasing (see, for example, Deardorff and Stern 2008; Karsenty 2000).

**What Determines the Participation of a Developing Country in Service Trade?**

This chapter synthesizes the available literature on the determinants of service trade and presents some evidence illustrating the relative importance of factors such as a country’s endowment of human capital or educated people, its electronic infrastructure, its institutions, and other geographic and cultural factors.

To provide some empirical evidence, this chapter uses the gravity model to examine the determinants of service exports from developing countries (Francois and Hoekman 2010; Marshall and others 1987\(^1\)). The model has been used previously to estimate the effect of preferential trade agreements, the determinants of trade in services compared with those of trade in goods, the time trend in distance effect, and the effect of Internet penetration in partner countries on U.S. service imports.\(^2\)

The results presented here broadly corroborate the findings of several previous studies.\(^3\) For the entire cross-section of industrial and developing countries, availability of electronic infrastructure and tertiary education enrollment significantly affect service exports. For example, ordinary least squared (OLS) estimates suggest that one standard deviation (SD) increase in Internet penetration in the partner country increases bilateral service exports of the reporter by 15 percent. However, estimates over the smaller sample of nonrich countries reveal that electronic infrastructure does not seem to have been critical in promoting service exports from developing countries, whereas the effect of schooling has been significant and larger. The ability of large service-exporting firms in developing countries to create their own electronic infrastructure or to have access to dedicated infrastructure may reduce the relevance of economywide access indicators. For the entire sample, one SD increase in tertiary schooling enrollment in the reporter country increases bilateral service exports by 22 percent, but for the developing country–only sample, the increase is 37 percent.

Among other factors considered in the gravity models, bilateral goods exports are found to positively affect service exports: a 10 percent increase in bilateral goods exports increases service exports for developing countries by 5.6 percent, which is slightly larger than estimates for the full sample. For both the restricted
and the full sample, the effect of distance, language, and colonial history is found to be significant and of the expected sign; that is, distance negatively affects service exports whereas the latter two factors have a positive and statistically significant effect. The negative effect of distance suggests that despite the growth of electronically delivered services, proximity between suppliers and consumers still matters.

The chapter is organized as follows. The next section surveys the literature on the possible drivers of service exports. It surveys the main empirical results on the determinants of bilateral service trade. Using the United Nations Statistical Division (UNSTATS) bilateral service trade database, the section that follows presents an illustrative gravity model that nests together the main drivers of service exports. This section brings out the determinants of bilateral service trade. The subsequent section then asks whether determinants are different for developing countries. The final section concludes with policy lessons.

The Determinants of Aggregate Service Exports: Literature Survey

What are the necessary conditions for being a successful service exporter? Why are some countries so successful in exporting services while others are not? A large part of the dynamism in service sectors in developing countries has been attributed to factors such as the high income elasticity of demand for services, cost-reducing and variety-enhancing technological progress, and changes in the method of organizing production favoring increased outsourcing.

Factors that are said to have played a significant role in promoting service exports are the access to a growing (though still restricted) external market for services and the gradual (though partial) liberalization of domestic markets. The countries that have gained most from technological advances and changes in the method of organizing production are those that were ready to embrace foreign firms through liberalization. For instance, the impressive performance of the Indian software industry, which is so well documented, would not have been possible if the country were not outward oriented.

Quantifying the effect of various factors on service trade is challenging for the basic reason that data on service trade are insufficient and not free from measurement errors. To measure services, one has to consider different modes of supply, their costs, and the relationship between the different modes. This sort of complexity empowers governments to restrict service trade in many nontransparent ways. Moreover, a lack of consensus on basic definitions for various services further complicates measurement of service trade. Finally, unlike goods trade, where tracking of goods flow is facilitated by tariff imposition at the border, service trade that is transacted over the Internet is very difficult to track.
Thus, the limited data available on service trade are inherently imprecise.

Subject to these data limitations, a large body of literature has estimated the determinants of service trade using either the standard gravity model or country-level studies. A typical gravity model attempts to explain trade flows between two countries by referring to the size of their economies and the distance between them. Until recently, a gravity model has been used to explain trade in goods only because of lack of reliable data on bilateral trade in services. In 2002, the Organisation for Economic Co-operation and Development (OECD) put together trade data on bilateral services. Since then, many studies have been done to understand determinants of bilateral service trade in a gravity framework.

Studies on service subsectors indicate that an aggregate treatment of service trade determinants may be inappropriate. Different services have different roles to play in the economy, have dissimilar market structures, are governed by different sets of regulations, and rely on different modes of supply in competing in the international market. Thus, the determinants of service exports are likely to vary across subsectors. For instance, transport service exports rely more on the state of physical infrastructure than on that of electronic infrastructure, which makes the determinants of transportation services closer to those of goods trade than service trade. However, given the lack of reliable data on service trade, perhaps one cannot reasonably expect service data to be of good quality across various subsectors. For this reason, studies attempting to disentangle the determinants of service trade across various subsectors are few. In this chapter, the determinants of aggregate service exports are reviewed in detail, and the few attempts to explore service export determinants across various subsectors are briefly discussed.

**Fundamentals**

This section considers three main influences on service exports: education, institutions, and infrastructure. Several variables potentially affect service exports, as this chapter highlights; however, these variables are considered mainly because they form the backbone of any economy.

**The role of education**

A number of service sectors, ranging from business services to banking and telecommunications, are significantly more skill intensive than most goods production (Gibbs 1986; Jensen 2008; Nusbaumer 1987). Endowments of human capital can, therefore, be a critical determinant of output and export of services. The importance of skilled workers—engineers, in particular—to Indian software exports is widely recognized (Arora and Athreye 2002; Lakha 1994). Using data
from the World Bank’s World Development Indicators database, figure 2.2 presents the clearly positive association between tertiary schooling enrollment and service exports for 2007.

Recently, Arora and Bagde (2010) have evaluated the importance of human capital in software service exports from India more rigorously, using primary data. They empirically investigate how software exports by the 14 major states of India are conditioned on local levels of human capital, as measured by state-level engineering baccalaureate capacity, and argue that plenitude of engineers has created a comparative advantage for software service exports from India. Their estimate controls for potential endogeneity of human capital with software exports by exploiting the variations in state policy allowing private engineering colleges to develop an instrument for engineering college capacity. However, policy changes can also be introduced in response to the performance of software service exports in these states. Thus, the issue of causality remains open.

Amin and Mattoo (2008) examine the relative effect of skilled labor availability on per capita GDP and value added in agriculture, manufacturing, and services in 14 major states of India. Using panel data over the period 1980–2000 and controlling for possible endogeneity of human capital with service exports, their use of

Figure 2.2. Human Capital and Service Exports, 2007

Source: World Bank’s World Development Indicators database
GMM (generalized method of moments) estimators suggests that greater availability of skilled workers had a statistically significant and positive effect on per capita output of the aggregate service sector.

Chapter 9 of this book suggests that Chile’s difficulties in developing a strong comparative advantage in services may be linked to its educational shortcomings and the skill level of its labor force. Human capital also seems to be a major constraint hindering Egypt (chapter 6) from excelling as an industrial and service exporter. In the specific case of Brazil (chapter 8), studies have shown that a 1 percent increase in the average time devoted to education by workers improves the propensity of firms to export services by 0.68 percent, whereas the corresponding figure for the export of goods is only 0.02 percent (Moreira, Alves, and Kubota 2006).

In a bilateral setting, Mirza and Nicoletti (2004) use the O-ring theory to develop a theoretical model for explaining trade in services, particularly emphasizing that the quality of tasks in both the home country and the host country is important for successful service delivery. This model is quite unlike goods trade specification, where only the exporting country’s characteristics are assumed to affect exports. Using average number of years of education in the population as a measure of human capital, they find that skill levels in both the reporter and the partner country are important determinants of service exports. This result implies not only that the population in the exporting country has to be well educated to export services, but also that the population of the importing country must have the skill to absorb or demand service exports.

Shingal (2010) also works on the effect of human capital in the exporter and the importer countries on service trade. Using gross tertiary school enrollment as a proxy for human capital for 25 exporting and 53 importing countries from the OECD database over the period 1999–2003, his Hausman-Taylor estimation for aggregate service exports reveals that human capital in the exporter country is critical for promoting service exports whereas that in the importer country does not matter.

Lennon (2006) uses a standard OLS methodology to quantify the complementarity between bilateral trade in goods and services for OECD countries from 1999 to 2002. Using alternative measures of human capital relating to years of schooling, secondary school enrollment, and high school attainment, she finds that all three variables in both the importer and the exporter countries significantly affect other commercial service exports.

**The role of institutions**

That institutions play a critical role in economic development is now well established (Acemoğlu, Johnson, and Robinson 2000). Certain institutions may, however, play a more significant role in the development of service sectors for three
reasons: informational problems are more acute in many intermediation and knowledge-based services, natural monopoly or oligopoly is a feature of the “locational” services, and relationship-specific investments must be made by both consumers and suppliers in customized services.

The first reason for the institutional link is to be found in the nature of services, which are for the most part intangible and invisible and hence cannot be inspected by consumers before they are bought and consumed. Imagine trying to identify, before obtaining their services, all the relevant characteristics of service providers such as doctors and banks. A consequence is a greater incidence of market failure caused by asymmetric information in service markets. Although the market itself can provide solutions (for example, in the form of reputation building), institutions concerned with regulation also matter. In particular, the existence of credible regulators provides consumers with vital reassurance, through certification and licensing mechanisms, about the quality of the service.

Cattaneo and others (2010) identify as key factors in exporting services the quality of service exports and the international standing of service providers. They argue that the private sector, especially through institutions such as industry associations, can play a particularly important role in improving quality standards. Likewise, the government and quasi-governmental entities responsible for service regulation can facilitate improvements in the quality of service exports and endorse service exporters by introducing policy measures such as mutual recognition agreements of professional qualifications and adoption of international standards.11

The second reason for the importance of institutions is the need to remedy market failure attributable to the existence of natural monopoly or oligopoly in the “locational services,” which require specialized distribution networks: roads and rails for land transport, cables and satellites for communications, and pipes for energy distribution. Independent regulators are needed to promote competition in intermediate or final service markets. After some fits and starts, many countries have instituted regulators for a range of services (from telecommunications to air transport) to ensure that monopolistic suppliers do not exploit consumers or undermine market access by charging prohibitive rates for access to the essential facilities they control. Similar institutions may be needed in a variety of other network services, including transport (terminals and infrastructure) and energy services (distribution networks).

Third, unlike most goods, services tend to be customized, which means both the supplier and the consumer need to make relation-specific investments. Consider the specific investments both parties must make for a back-office service provider in India to become familiar with the needs of a large modern firm such as General Electric. Once the investments are made, big switching costs inhibit moving to another supplier (or consumer). In these circumstances, the fear of ex
post default can reduce the incentive to make ex ante investments. Therefore, contract-enforcing institutions arguably assume greater importance for services than they do for goods. Similarly, greater willingness exists to purchase an information-processing service outside the firm if the purchaser has confidence in the relevant laws and law enforcement of the host country. For example, a firm’s willingness to outsource the transcription of medical diagnosis or confidential financial information is going to be much greater if it has confidence in the privacy and data protection laws of the host country’s jurisdiction.

Finally, the quality of institutions matters in the design of proactive government policies to promote exports, although views differ on whether and where government intervention matters. Some argue that intervention has been critical for the development of information technology (IT) and IT-enabled service (ITeS) exports from several countries. For instance, the government in Canada offered special incentives to IT service–based companies that agreed to develop a significant volume of contact center operations in the Atlantic provinces. Similarly, Ireland emerged as a world-class, high-quality service exporter and international financial services center partly as a result of proactive government policies that encouraged investment in these industries. In the Philippines, the Board of Investments has actively targeted the IT and ITeS sector so that it now captures a very large share in the global ITeS market. In the case of Costa Rica, a number of special economic incentives and an aggressive policy of attracting foreign direct investment (FDI) in information and communication technology (ICT)–related services have transformed the country from an exporter of agricultural products to an exporter of services. A recent study (Ghani 2010) suggests that government intervention to promote exports from South Asia has been most important in dealing with higher education and telecommunication (Internet bandwidth) bottlenecks. Other privileges and targeted incentives, such as tax breaks, did not critically matter for service exports.

Several studies have researched the effect of institutions on service exports in a bilateral context. Lennon (2006) uses the index on corruption, complexity of export procedures, and rigidity in employment law of the partner and reporter countries as measures of institutions in the gravity model. These institutional variables are introduced one by one into the basic gravity model specification comprising GDP and GDP per capita in partner and reporter countries, language similarity, contiguity, and distance. She finds that the quality of institutions in both the reporter and the partner countries, measured by any of those variables, has a positive effect on other commercial service exports.

Using OECD data for 22 countries for the period 1999–2000, Grünfeld and Moxnes (2003) find that the corruption perception index (which is higher for countries with lower corruption) positively affects service trade. Kimura and Lee
(2006) use the economic freedom index as a measure of institutions and find that economic freedom in both the partner country and the reporter country has a positive and significant effect on service exports.

**The role of electronic infrastructure**

Telecommunication growth is the most powerful symbol of vitality of the service sector, while at the same time being critical for further development of other services. Modern ICT has reduced the cost of delivering many cross-border services from infinite to virtually zero. Therefore, electronic infrastructure would understandably increase service trade.

Freund and Weinhold (2002) assess whether the penetration of electronic infrastructure has been critical in altering the geography of service provision. The positive effect of electronic infrastructure on service exports may not be straightforward because the quality of certain services is critically influenced by physical proximity, close monitoring and communication, or customization. If these services are a large proportion of aggregate services, then Internet penetration may not greatly affect international trade. Measuring Internet penetration by the number of top-level domains in each country (obtained from the Internet Software Consortium), Freund and Weinhold estimate the growth in bilateral service trade for the United States with its partner countries over the period 1995–99. Their results indicate that Internet penetration in the partner country significantly affects aggregate growth in service trade for the United States. After controlling for GDP and exchange rate movements, they find that a 10 percent increase in Internet penetration in the partner country is associated with a 1.7 percent increase in export growth and a 1.1 percent increase in import growth, which, in a dynamic long-run setting, translates to a 6 percent increase in the level of U.S. imports and about a 4 percent increase in the level of U.S. exports.

Freund and Weinhold (2002) also estimate a gravity model for U.S. bilateral trade in services with partner countries. However, they do not find evidence that Internet penetration abroad has increased U.S. exports or import of aggregate services. On the contrary, when they run a gravity regression for U.S. imports of business professional and technical services, they observe that a 10 percent increase in Internet penetration in the partner country is associated with a 1.2 percent increase in the import of these services.

Shingal (2010) assesses the effect of the telecommunication density index, measured by fixed-line and mobile phone subscribers (per 1,000 people) as a proxy for infrastructure development in both the partner and the reporter countries, on aggregate service exports. Hausman-Taylor estimation reveals that the quality of infrastructure in the partner country rather than the exporting country
is very important for service exports. This result contrasts with that obtained by Mirza and Nicoletti (2004), who find that telecommunication (and transport) infrastructure in both the partner and the reporter countries are critical for service exports. Their measure of the quality and quantity of telecommunication infrastructure is the OECD’s telecommunication index, which is a weighted average of several components: mainlines per capita, mobiles per capita, percentage of digital lines, answer seizure ratio, and fault clearance rate. Mirza and Nicoletti (2004) explain the rationale for the use of infrastructure of both the partner and the reporter countries as possible determinants of service exports through the O-ring theory mechanism, which suggests that, for instance, one needs to have computers, reliable telephone cables, and so on, in both countries to set up telecommunication and export services through mode 1.

For disaggregate services, Lennon (2006) finds that Internet penetration in both the partner and the reporter countries is significant in affecting other commercial service exports. She used several other measures of the technological environment in the partner and the reporter countries, including the number of personal computers per 1,000 persons, Internet users per 1,000 persons, telephone mainlines per 1,000 persons, Internet hosts per 1,000 persons, and level of research and development expenditure as a share of GDP. All these alternative measures are tested one by one in a model with basic gravity variables and are found to significantly affect other commercial service exports.

In conclusion, whether using country-level data or trade data for bilateral services, researchers have found human capital to be critical for service exports. Several studies have researched the effect of institutions on service exports in a bilateral context. Specifically, level of corruption, complexity of export procedures, and rigidity in employment law of the partner and reporter country or a composite index of economic freedom is significant in affecting service exports. Finally, electronic infrastructure is also key in exporting services.

Policy, regulations, and service exports

Policy and regulations can impede trade in services. For instance, to export banking services through commercial presence in another country, the multinational bank must usually adhere to several prudential and nonprudential regulations of both the home and the host countries. Similarly, for service exports through movement of natural persons (mode 4), regulations affect recognition of qualifications from specific institutions or often require the professional to be proficient in the language spoken in the destination country. In addition, immigration requirements may also apply.
Lejour and de Paiva Verheijden (2004) contrast the determinants of bilateral service trade within the Canadian provinces with those within the member states of the European Union (EU) to bring out the importance of regulation in service trade, keeping in mind mode 1 and mode 3 service trade and measuring it through variable product market regulations (PMRs). The rationale for their comparison is that economic institutions or regulations are inconsequential for trade within a country, such as intraprovincial trade in Canada, whereas trade within the EU would be inhibited by those factors. Thus, by comparing bilateral service trade across these two regions, one can measure the extent of trade inhibited by institutional differences and regulations. They find that regulatory barriers to service trade in both the reporter and the partner countries, as measured by the OECD’s PMR indicator, negatively affect trade within the EU. Mirza and Nicoletti (2004) confirm this conclusion for a sample of 20 OECD countries in 1999 and 2000.

Kox and Lejour (2005) estimate bilateral service trade determinants for 9 of the 14 EU countries for the period 1999–2001, focusing specifically on the effect of the relative level of PMR as well as on the heterogeneity in PMR policy. Employing a variety of estimation techniques, such as OLS, a fixed-effects model, and an SUR model, they find a negative and significant effect of the level of regulations as well as the heterogeneity in PMR on service trade. Their full information maximum likelihood (FIML) estimates reveal that heterogeneity in regulatory opacity negatively and significantly affects bilateral service exports, whereas heterogeneity in administrative barriers to start up, heterogeneity in barriers to competition, heterogeneity in state control, and heterogeneity in trade and investment barriers are not critical for service exports.

Research suggests that policy that matters for aggregate services may not matter for disaggregate services. For instance, for other commercial service exports, policy regulations such as heterogeneity in barriers to competition and heterogeneity in trade and investment barriers are found to have a negative and significant effect in Kox and Lejour (2005), whereas heterogeneity in administrative barriers to start up and heterogeneity in state control do not matter. A policy variable that did matter for aggregate services in Kox and Lejour (2005)—heterogeneity in regulatory opacity—is not found to be critical for other commercial service exports.

Walsh (2006) has made a unique methodological contribution to the gravity literature on service trade. After testing the efficiency of several gravity estimation techniques, such as the fixed-effects model and the random-effects model, he uses Hausman-Taylor estimation to estimate a gravity model for trade in services, giving particular attention to the role of barriers to service trade. In contrast to the focus of previous studies on aggregate services, Walsh extends his analysis to four service sectors: government, travel, transport, and other commercial services.
Contrary to earlier studies, he finds that regulatory barriers in 27 OECD countries, as measured by the Australian Productivity Commission’s trade restrictiveness index, with their partner countries for the period 1999–2001 have not significantly hampered service imports. This finding is true not only for aggregate service imports but also for disaggregate services (that is, commercial, transport, travel, and government services).

Research findings on the effect of regulations relating to regional trade agreements (RTAs) on service trade do not always concur with each other. Grünfeld and Moxnes (2003), for instance, did not find that nontariff barriers or RTAs have any significant influence on service exports. They justify this result because RTAs do not cover trade in services. This finding, however, contrasts with the results obtained in Kimura and Lee (2006), who use an OLS estimation with time-fixed effects to compare the determinants of goods trade with that of services in a gravity model setting for 10 OECD member countries and their partners (ranging from 27 to 47) for 1999 and 2000. They find that RTAs positively and significantly affect service exports. That RTAs have a positive effect on bilateral service trade even though they do not explicitly cover services can be explained because the presence of RTAs indirectly facilitates service trade through goods trade. Kimura and Lee (2006) also find that trade in goods and trade in services are complementary in nature; that is, goods trade promotes service trade and vice versa. This finding implies that even RTAs that cover goods trade should promote service trade indirectly.

Shingal (2010) augments this literature by separating the trade effects of preferential trade agreements (PTAs) into those emanating from services-only and goods-only agreements. Moreover, he endogenizes the effect of preferentialism in estimating the trade effect within the gravity framework by using the Hausman-Taylor methodology. His estimates reveal that a services-only PTA increases bilateral service trade by 11.6 percent for all trading partners and by 12.7 percent for non-EU trading partners. Goods PTAs are also found to promote service trade, with an incremental effect of 2.4 percent for all countries and 2.3 percent for non-EU trading partners.

Other determinants of service exports

Other determinants also play a role, including geography; common language, colonial history, and culture; FDI; and management or entrepreneurial skills.

The role of geography

Distance, adjacency and contiguity, and remoteness all affect service trade, though less so in recent years than in the past.
Distance

Historically, cross-border service trade had been limited because it required geographic proximity between the buyer and the seller. For instance, a few years ago, trade in medical services was not feasible because the patient and the doctor had to be in the same location, thus suggesting that distance should have a negative effect on service trade. Recent innovations in ICT, however, have rendered several nontradable services tradable. For instance, an x-ray for a patient can be read and interpreted several miles away from the patient’s home location. Similarly, customer care for a U.S.-based credit card firm can be provided by agents located several thousands of miles away in cities of a developing country such as India.

The most prominent variable in gravity estimation is the physical distance between a bilateral pair. As discussed before, the effect of distance on service exports is not very clear. On the one hand, physical distance may negatively affect service exports not only because traditional services such as transport, travel, and construction services depend on physical distance but also because physical distance represents cultural barriers that hinder cross-border service exports of other commercial services such as business services or personal and recreation services. On the other hand, innovations in ICT have made free trade in services possible from one end of the world to the other. An optimally large distance also reflects time-zone differences that allow synchronization of work and, hence, should positively affect service exports as long as the exporting and the importing country have high-quality electronic infrastructure. Given the two opposing effects, the final effect of distance would depend on the composition of aggregate services.

Most research converges with respect to the qualitative findings on the effect of distance on service trade. Among the authors who found the effect of distance to negatively affect service trade are Grünfeld and Moxnes (2003); Head, Mayer, and Ries (2009); Kimura and Lee (2006); Kox and Lejour (2005); Lejour and de Paiva Verheijden (2004); Lennon (2006); Mirza and Nicoletti (2004); and Shingal (2010). However, when the effect of distance on service trade is compared to that on goods trade, this consensus is lost. For instance, Lejour and de Paiva Verheijden (2004) compare the effect of distance on service exports with that on goods exports by using a gravity model for intraregional trade in Canada and the EU. Unlike Kimura and Lee (2006), they find that the negative effect of distance is lower for service trade vis-à-vis goods trade. Similarly, within a gravity framework, Tharakan, Van Beveren, and Van Ourti (2005) do not find that distance significantly affects software service exports from India. The gravity estimation in Walsh (2006) also suggests that distance is not critical for service trade.

Given the poor quality of data, not many authors have attempted to disentangle the determinants of service exports at the subsectoral level. For travel services,
Walsh (2006) finds that after controlling for temperature in the exporting and the importing countries, larger distance actually promotes travel service trade (imports). Similarly, for the case of transport service imports, he finds distance to have a positive effect. This counterintuitive result is explained in terms of the value of service trade rather than the act of trade. Thus, a positive coefficient implies that, as distance increases, it costs more to transport; hence, the value of transport service trade increases.

For other commercial services, the Hausman-Taylor estimates of Walsh (2006) do not indicate that distance has a critical effect. OLS estimation of service trade data by Lennon (2006), however, suggests that other commercial service exports are negatively affected by physical distance. This finding is similar to that of Head, Mayer, and Ries (2009) on exports of other commercial services, finance, IT services, and miscellaneous business services. They build a theoretical foundation for a service gravity equation and estimate it using a recently popularized estimation technique for gravity models, Poisson pseudo maximum likelihood (PPML), and the two-step negative binomial model. Using Eurostat data for 27 EU countries, along with Croatia, Norway, Turkey, and the United States, and their 33 partner countries for the period 1992–2006, Head, Mayer, and Ries (2009) specifically focus in their model on whether service trade has managed to overcome the impediments created by geographic distance with time. They find that distance does dampen service trade; however, the effect of distance is declining over time (the coefficient for the time trend interaction with distance variable is found to be negative). They also estimate a model to check whether time-zone differences matter for service trade; however, because this variable is highly correlated with distance, it turns out to be insignificant for all disaggregate services except miscellaneous service exports and financial services.

Adjacency and contiguity
The estimates of Kimura and Lee (2006) for OECD countries suggest that countries closer to each other have higher bilateral service trade. This finding is also testified to in the estimation of Lejour and de Paiva Verheijden (2004) for intra-EU trade. Contrary to their findings for the EU, Lejour and de Paiva Verheijden contend that adjacency among Canadian provinces decreases their service trade, and their estimates seem to suggest that provinces closer to each other trade less in services. The Hausman-Taylor estimates of Walsh (2006), in contrast, do not find adjacency to be a significant driver of or deterrent to any disaggregate service exports, except transport, where contiguity helps in promoting service exports. Lennon (2006), however, attests that the positive effect of adjacency is seen in other commercial service exports and total service exports.
Remoteness

Kimura and Lee (2006) also evaluate the effect of remoteness on service trade, a variable owed to Anderson and van Wincoop (2003). Kimura and Lee find that remoteness of both the partner and the reporter positively affects service exports. In this way, service exports are quite unlike goods exports, for which remoteness of the reporter negatively influences exports whereas that of the partner has a positive effect. Contrary to the findings of Kimura and Lee (2006), however, Tharakan, Van Beveren, and Van Oorti (2005) did not find any significant effect of the remoteness of India’s bilateral partner on software service exports.

Common language, colonial history, and culture

Familiarity with the potential trading partner’s language and a common cultural or colonial history are likely to increase service exports because those factors ease the development of business ties. For instance, countries that share a colonial history are linked by a common legal system that facilitates transactions between them. Service exports usually involve intensive communication; therefore, a common language promotes service exports via translation as well as through direct communication effect (Mélitz 2008). Similarly, a shared cultural or colonial history affects the ability to communicate and hence is likely to positively influence service exports.

Most gravity model research on service trade has evaluated the effect of language similarity on service trade. Justifiably, this variable should promote bilateral service exports because communication is key to delivering services. Studies have found a positive effect of language similarity on total service exports (Grünfeld and Moxnes 2003; Head, Mayer, and Ries 2009; Kimura and Lee 2006; Kox and Lejour 2005; Lejour and de Paiva Verheijden 2004; Lennon 2006; Tharakan, Van Beveren, and Van Oorti 2005; Walsh 2006). Walsh (2006), however, suggests that language similarity is not critical for government or travel service exports, whereas Lennon (2006) and Head, Mayer, and Ries (2009) find language to be an important driver of other commercial service exports. The estimates of Head, Mayer, and Ries (2009) also suggest that shared language is not critical for financial service exports, whereas it is very important for promoting IT services or miscellaneous business service exports. Besides language similarity, Lennon (2006) and Head, Mayer, and Ries (2009) find shared colonial history to be important in encouraging disaggregate service exports.

Tharakan, Van Beveren, and Van Oorti (2005) use the threshold Tobit technique to estimate a gravity model of India’s service exports using National Association of Software and Services Companies (NASSCOM) data from 1998 to 2001 and compare India’s bilateral service export determinants with those of goods exports. A peculiar determinant of trade in their model is the inclusion of
population of Indian origin; that is, they estimate the effect of the Indian diaspora on trade in goods and services. For both goods and services, the coefficient for this variable is significant at a 1 percent level of significance. What is more interesting is that one cannot reject the hypothesis of this diaspora effect being equal for both goods and services.

**Foreign direct investment**

Several developing countries compete for FDI by offering tax incentives to large multinational companies or by reducing barriers to foreign investment. This strategy is motivated by a widely held view that multinationals act as a catalyst for export expansion and improve the competitiveness of the host country. FDI promotes exports of a host country by (a) augmenting domestic capital for exports, (b) transferring technology for new products for exports, (c) facilitating access to new and large foreign markets, and (d) training local workers and upgrading their technical and management skills. Ample empirical evidence in the literature (for instance, Blomström and Kokko 1998; Borzenstein, De Gregorio, and Lee 1998; UNCTAD 1999) suggests that FDI promotes trade in the host country through introduction of new technology and management techniques, diffusion of market information, and greater market access, as well as by stimulating competition in the host country. East Asian economies witnessed tremendous growth before the crisis of 1997–98. One can easily argue that these perceived benefits apply as much to service exports as they do to manufacturing, thereby suggesting a positive influence of inward FDI on service exports.

Using OECD data for 22 countries for the period 1999–2000, Grünfeld and Moxnes (2003) identify the determinants of service trade and foreign affiliate sales. Even though they use a standard OLS methodology for gauging service trade determinants, their contribution is special because of their emphasis on strong links between FDI and trade in services. They determine the complementarity or substitutability between service exports and outward FDI in services by regressing FDI residuals obtained from an FDI equation on service exports residuals obtained from the service exports equation. The coefficient for service exports residuals is found to be positive and significant at the 1 percent level, implying that outward FDI and service exports are complementary. This finding is interesting because a large proportion of trade is facilitated through foreign affiliate sales (mode 3).

The literature also suggests that FDI may be detrimental for exports if it lowers or replaces domestic savings and investment or transfers technologies that are low level or inappropriate for the host country’s factor proportions. Furthermore, if host countries do not meet the threshold human capital requirement (see, for instance, Blomström and Kokko 2003) or if most service exports are low in capital intensity, FDI may not influence service sector exports in a significant way.
Management or entrepreneurial skills
Microlevel studies in developing countries suggest that managerial skills play a key role in the adoption of modern technologies, which, in turn, are critical for producing a high-quality good for the export market. Because managerial skills can be learned by observing other competent managers, experience working in an efficient multinational firm has been found to be important for the development of such skills.

Some studies (see, for instance, Saxenian 1999, 2000, 2004) suggest that transnational entrepreneurial networks have played an essential role in the growth of exports from several developing countries. For instance, the development of the Indian software industry is attributed to entrepreneurs of Indian origin who had world-class training in management skills or who had the experience of working abroad in well-established multinational firms (Gregory, Nollen, and Tenev 2009). Another example is highlighted by Lall (1999), who describes the dramatic increase in the use of managers in the export-led, fast-growing East Asian economies. He also illustrates the critical role managers played in changing the traditional human resource attitudes and policies toward new technology and products that were in demand in advanced economies. Thus, one would expect a country rich in such managerial or entrepreneurial skills to be successful in exporting services. Unfortunately, no hard data are available on the quality of managerial skills at the country level; therefore, only anecdotal or case-by-case evidence exists on the significance of this variable.

Annex table 2.A.1 summarizes these papers, and table 2.A.2 points out their specific results.

The Determinants of Service Exports: An Illustration
Two main sources provide data on bilateral service trade: OECD and UNSTATS. The UNSTATS bilateral service trade database reports data for 47 reporter countries, of which 22 are developing countries. The data are reported for 2000–08. The data cover exclusively balance of payments statistics; therefore, they refer only to cross-border (mode 1) and consumption abroad (mode 2) statistics. No data cover service transactions through commercial presence (mode 3) for both developed and developing countries. In addition, the data used do not cover service exports through temporary labor mobility (mode 4). Finally, because the bilateral service trade between African countries is very small, they are excluded from this estimation exercise.

The dependent variable used is the log of service exports, and the base model includes basic gravity-type independent variables—that is, per capita incomes of the reporter and partner countries; their populations; bilateral distance between trading partners; and dummies for countries with a common border, with
colonial relationships, and with a common language. Fixed effects of partner and reporter countries, as well as fixed effects for each year in the period 2000–08, are included.

The following base gravity equation is estimated:

$$\log \text{Ser exp}_{ijt} = FE_i + FE_j + TE + \text{Per capita income}_i + \text{Per capita income}_j + \text{Population}_i + \text{Population}_j + \text{Cultural factors}_{ij} + \text{Geographic factors}_{ij} + \varepsilon_{ijt}.$$ (2.1)

The variables of interest are added one by one to this base estimation. Because the variables pertaining to electronic infrastructure, human capital, and institutions are of primary interest, the following variables are included:

- A proxy for telecommunication infrastructure—that is, Internet penetration for both the reporter and the partner
- Tertiary education (tertiary school enrollment, as a percentage of gross enrollment)$^{23}$
- An institutional variable—that is, shared legal origins between the reporter and the partner$^{24}$

The effect of net FDI inflows and bilateral goods trade are also evaluated. The final specification includes all these variables together.

The OLS regression results are presented in table 2.1. The regression output in table 2.1 suggests that per capita income and population in both the reporter and the partner countries positively affect service exports of the reporter country, whereas distance negatively influences bilateral service exports.$^{25}$ The negative effect of distance on service exports is rationalized by the fact that distance is not a proxy for transport costs alone (Anderson and van Wincoop 2003; Leamer 2007). It might also reflect cultural, linguistic, and legal differences; existence of RTAs; informational barriers; and differences in time zones.

This chapter’s conclusions on a common border positively affecting bilateral service trade are the same as those reported in Kimura and Lee (2006) and Lejour and de Paiva Verheijden (2004) but contrast with those found in Walsh (2006). The result confirms the positive effect of common language on service trade found in Head, Mayer, and Ries (2009); Kimura and Lee (2006); Kox and Lejour (2005); Lennon (2006); Tharakan, Van Beveren, and Van Ourti (2005); and Walsh (2006).$^{26}$ It also confirms the importance of near-shoring strategies in service exports.

In column 2 of table 2.1, Internet penetration of both the reporter and the partner countries are included because delivering services over electronic media requires both parties to have access to it. This specification is similar to Lennon’s (2006) specification. According to the findings, Internet penetration in the
## Table 2.1. Determinants of Service Exports: Gravity OLS Estimation, 2000–08

*Dependent variable: bilateral service exports, in log level*

<table>
<thead>
<tr>
<th>Variables</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
<th>(7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Per capita income, reporter</td>
<td>0.967***</td>
<td>0.877***</td>
<td>0.949***</td>
<td>0.972***</td>
<td>0.286</td>
<td>0.965***</td>
<td>0.228</td>
</tr>
<tr>
<td>Per capita income, partner</td>
<td>0.753***</td>
<td>0.791***</td>
<td>0.677**</td>
<td>0.658**</td>
<td>0.393*</td>
<td>0.760***</td>
<td>0.535**</td>
</tr>
<tr>
<td>Population, reporter</td>
<td>–0.572</td>
<td>0.225</td>
<td>1.163</td>
<td>–0.493</td>
<td>0.261</td>
<td>–0.627</td>
<td>2.495**</td>
</tr>
<tr>
<td>Common border</td>
<td>0.789***</td>
<td>0.738***</td>
<td>0.978***</td>
<td>0.804***</td>
<td>0.441***</td>
<td>0.775***</td>
<td>0.551***</td>
</tr>
<tr>
<td>Common language</td>
<td>0.355***</td>
<td>0.348***</td>
<td>0.411***</td>
<td>0.347***</td>
<td>0.201***</td>
<td>0.277***</td>
<td>0.194***</td>
</tr>
<tr>
<td>Common colonial history</td>
<td>0.631***</td>
<td>0.642***</td>
<td>0.634***</td>
<td>0.618***</td>
<td>0.328***</td>
<td>0.536***</td>
<td>0.294***</td>
</tr>
<tr>
<td>Distance, in logs</td>
<td>–1.115***</td>
<td>–1.108***</td>
<td>–1.111***</td>
<td>–1.111***</td>
<td>–0.454***</td>
<td>–1.091***</td>
<td>–0.432***</td>
</tr>
<tr>
<td>Internet penetration, reporter</td>
<td>0.002</td>
<td>–0.001</td>
<td>[0.631]</td>
<td>–0.001</td>
<td>[0.631]</td>
<td>–0.001</td>
<td>[0.631]</td>
</tr>
<tr>
<td>Variable</td>
<td>Coefficient</td>
<td>Standard Error</td>
<td>p-value</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----------------------------------------------</td>
<td>-------------</td>
<td>----------------</td>
<td>---------</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internet penetration, partner</td>
<td>0.010***</td>
<td>0.007***</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>School enrollment, tertiary (% of gross), reporter</td>
<td>0.011***</td>
<td>0.012***</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FDI net inflows (% of GDP)</td>
<td>–0.001</td>
<td>0.537***</td>
<td>0.526***</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bilateral goods trade, in logs</td>
<td>0.201***</td>
<td>0.116***</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shared legal origins</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>38.680***</td>
<td>28.669***</td>
<td>35.106***</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fixed effects (time and country)</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Observations</td>
<td>11,914</td>
<td>11,609</td>
<td>10,642</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$R^2$</td>
<td>0.836</td>
<td>0.837</td>
<td>0.832</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Authors’ calculations.
Note: Robust t-statistics in brackets.
*** = significant at the 1 percent level; ** = significant at the 5 percent level; * = significant at the 10 percent level.
reporter country does not significantly affect service exports, whereas that in the partner does. This result is robust to controlling for other determinants of service exports. In column 7 of table 2.1, Internet penetration in the partner country is found to positively and significantly affect service exports, whereas that in the reporting country is insignificant in affecting service exports. An increase in Internet penetration in the partner country by one SD (24.7 persons per 100 persons) is found to increase bilateral service exports by about 17 percent.

This finding could be driven by the fact that UNSTATS includes in its database many reporter countries that are in a low stage of development and that do not yet have basic infrastructural facilities; nevertheless, these countries are able to export services for special reasons. For instance, a country such as India may have a very low penetration of electronic infrastructure yet be able to export services because of its policy on higher education or because of recent policy initiatives on the establishment of software technology parks that fill the country’s infrastructural bottlenecks.

What is required for exporting services is that exporting firms have access to high-quality electronic infrastructure, which may not necessarily cover the general population of the reporter country. Therefore, Internet penetration among the general population in the reporter country may not significantly affect service exports. Exporting firms in developing countries may own the equipment for better-quality telecommunications where such equipment is not publicly available, or the government may be able to create software technology parks (as in the case of Egypt, India, or the Philippines) to overcome the handicap of technology penetration among the general population.

In contrast, for a country to successfully export services, consumers in the partner country must have better access to good-quality electronic infrastructure. This result is different from that of Lennon (2006), who found a positive effect for both countries’ Internet penetration. This difference perhaps reflects the large number of developing reporter countries in the sample that have low Internet penetration but export services to rich countries with high Internet penetration. This chapter’s result is, however, similar to the Hausman-Taylor estimation in Shingal (2010), who attributes the success of service exports to the partner’s telecommunication density rather than the reporter’s own telecommunication network penetration.

The base specification is augmented with variables pertaining to endowment of human capital as measured by tertiary schooling enrollment (column 3 of table 2.1), FDI (column 4), and bilateral goods exports (column 5), as well as an institutional variable (column 6)—that is, shared legal origins between the reporter and the partner countries.

One SD (18.7 percent) increase in tertiary school enrollment (as a percentage of gross enrollment) in the reporter country increases bilateral service exports
by 21 percent. This finding is similar to the conclusions that Lennon (2006) draws with OLS regression of commercial service exports using the OECD data from 1999 to 2002. Mirza and Nicoletti (2004) also confirm this result by using a three-stage least squares estimation of total bilateral service exports of OECD countries for 1999 and 2000, whereas Shingal (2010) does so with Hausman-Taylor estimation of OECD bilateral service export data for 1999–2003. In the complete specification of column 7, the effect of tertiary education on service exports remains positive and significant. One SD increase in the percentage of tertiary school enrollment of the reporter country increases bilateral service exports by 22 percent.

Column 4 results suggest that net FDI inflows do not significantly affect service exports of the reporter country, whereas bilateral goods exports increase bilateral service exports. Higher bilateral goods trade reflects better trading relationships between nations or intensive business networks that can potentially ease the export of bundled services as well (column 5).

In the complete specification of column 7, a 10 percent increase in bilateral goods export increases service exports by 5 percent. The magnitude of the distance coefficient falls from about −1.0 to −0.4 when bilateral goods exports are introduced as an explanatory variable; that is, about 60 percent of the negative effect of distance on service exports is absorbed by goods exports. This finding implies that the negative effect of distance on service exports materializes because of trade in services that is complementary to goods trade or embodied in the goods themselves.

Next, institutional variables were added to the base gravity model (column 6 of table 2.1) to evaluate whether institutions affect service trade: variables pertaining to business environment, rule of law, and regulatory quality in the reporter and partner countries act as a proxy for institutional factors in evaluating their effect on service exports. None were found to be significant in affecting service exports. As discussed before, institutions, as measured by implementation of intellectual property rights, business environment, and the like, have found a significant place in service exports. However, as is well known, the time variation in institutions is low, and therefore capturing such effects in panel estimation is difficult. This difficulty may be attributable to the absence of data on service exports through a commercial presence and the temporary movement of labor where these are important decision and market-access variables.

Finally, the model looks at the idea of Kox and Lejour (2005) that heterogeneity in policy between the reporter and the partner countries can affect service trade and the idea of Rose (2000) that countries with the same colonizers have similar institutions and therefore trade more. Head, Mayer, and Ries (2009) also evaluate whether a shared legal origin leads to greater bilateral service trade.
This chapter’s model uses this same variable to test whether shared legal origins matter for service exports and whether this determinant is valid even for developing countries. The variable is highly significant in specification of column 6 as well as in the complete specification (column 7) that controls for other determinants of service exports. Thus, this result confirms the findings of Head, Mayer, and Ries (2009).

**Are Determinants Different for Developing Countries?**

High-income countries are excluded from the sample, and the same models as those in table 2.1 are again estimated using the OLS methodology. The result of this estimate is given in table 2.2. Three important differences are seen with respect to the findings for developing countries: first, OLS estimates of the restricted sample suggest that the negative effect of distance is slightly lower for developing countries, whereas the effect of a common border on service exports is larger. This result is more pronounced in the complete specification of column 7. The role of both (a) distance and common borders and (b) language could be an indication of the importance of regional markets for service exports for these countries as well as of the positive effect that a deep integration may have for service exports.

Second, column 2 estimates in table 2.2 suggest that the effect of Internet penetration in the partner country increases service exports of the developing country; however, in the complete specification of column 7, this result does not hold true. Thus, the Internet penetration in neither the reporter nor the partner country explains service exports from developing countries. This finding may be explained by the composition of exports from developing countries, which is biased toward transport and travel services that are less ICT intensive.

Third, human capital emerges as an important determinant of bilateral service exports in the gravity framework, as indicated by the estimation results in columns 3 and 7 of table 2.2. In the complete specification, for one SD increase in tertiary schooling enrollment, service exports increase by a much higher 37 percent for the limited sample (compared with 22 percent for the full sample). Thus, the importance of education in promoting service exports is much higher in the case of developing countries. This finding may also be explained by the relative size of other commercial services in comparison to transportation and travel services.

The results with respect to other variables are similar for developing and developed countries. In a developing-country reporter, FDI does not significantly affect service exports. Similarly, bilateral goods exports are found to positively affect service exports of developing countries as well, although their
### Table 2.2. Determinants of Service Exports: Gravity OLS Estimation, Developing-Country Sample, 2000–08

*Dependent variable: bilateral service exports, in log level*

<table>
<thead>
<tr>
<th>Variables</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
<th>(7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Per capita income, reporter</td>
<td>1.042***</td>
<td>0.949***</td>
<td>1.082***</td>
<td>1.054***</td>
<td>0.268</td>
<td>1.036***</td>
<td>0.294</td>
</tr>
<tr>
<td></td>
<td>[3.443]</td>
<td>[3.005]</td>
<td>[3.333]</td>
<td>[3.445]</td>
<td>[0.947]</td>
<td>[3.433]</td>
<td>[0.938]</td>
</tr>
<tr>
<td>Per capita income, partner</td>
<td>0.756**</td>
<td>0.742**</td>
<td>0.879**</td>
<td>0.714**</td>
<td>0.401</td>
<td>0.753**</td>
<td>0.673**</td>
</tr>
<tr>
<td></td>
<td>[2.360]</td>
<td>[2.232]</td>
<td>[2.541]</td>
<td>[2.177]</td>
<td>[1.476]</td>
<td>[2.351]</td>
<td>[2.206]</td>
</tr>
<tr>
<td>Population, reporter</td>
<td>0.400</td>
<td>0.955</td>
<td>2.420*</td>
<td>0.578</td>
<td>1.469</td>
<td>0.333</td>
<td>3.403***</td>
</tr>
<tr>
<td></td>
<td>[0.352]</td>
<td>[0.846]</td>
<td>[1.824]</td>
<td>[0.481]</td>
<td>[1.434]</td>
<td>[0.293]</td>
<td>[3.004]</td>
</tr>
<tr>
<td>Population, partner</td>
<td>−2.959***</td>
<td>−2.020**</td>
<td>−3.187***</td>
<td>−3.269***</td>
<td>−2.073***</td>
<td>−2.925***</td>
<td>−1.418</td>
</tr>
<tr>
<td></td>
<td>[−3.518]</td>
<td>[−2.206]</td>
<td>[−3.372]</td>
<td>[−3.763]</td>
<td>[−2.762]</td>
<td>[−3.481]</td>
<td>[−1.570]</td>
</tr>
<tr>
<td>Common border</td>
<td>1.027***</td>
<td>0.965***</td>
<td>1.280***</td>
<td>1.039***</td>
<td>0.600***</td>
<td>1.026***</td>
<td>0.764***</td>
</tr>
<tr>
<td>Common language</td>
<td>0.386***</td>
<td>0.380***</td>
<td>0.466***</td>
<td>0.380***</td>
<td>0.231***</td>
<td>0.316***</td>
<td>0.253***</td>
</tr>
<tr>
<td></td>
<td>[6.660]</td>
<td>[6.618]</td>
<td>[7.407]</td>
<td>[6.511]</td>
<td>[4.641]</td>
<td>[5.369]</td>
<td>[4.674]</td>
</tr>
<tr>
<td>Common colonial history</td>
<td>0.576***</td>
<td>0.587***</td>
<td>0.529***</td>
<td>0.555***</td>
<td>0.264***</td>
<td>0.488***</td>
<td>0.219***</td>
</tr>
<tr>
<td></td>
<td>[7.271]</td>
<td>[7.498]</td>
<td>[6.225]</td>
<td>[6.923]</td>
<td>[3.912]</td>
<td>[6.036]</td>
<td>[3.033]</td>
</tr>
<tr>
<td>Distance, in logs</td>
<td>−0.979***</td>
<td>−0.961***</td>
<td>−0.979***</td>
<td>−0.978***</td>
<td>−0.287***</td>
<td>−0.955***</td>
<td>−0.260***</td>
</tr>
<tr>
<td></td>
<td>[−28.262]</td>
<td>[−27.392]</td>
<td>[−24.948]</td>
<td>[−28.037]</td>
<td>[−7.807]</td>
<td>[−27.349]</td>
<td>[−6.132]</td>
</tr>
<tr>
<td>Internet penetration, reporter</td>
<td>−0.003</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>−0.005</td>
</tr>
<tr>
<td></td>
<td>[−0.874]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>[−1.577]</td>
</tr>
</tbody>
</table>

(Table continues on the following page.)
<table>
<thead>
<tr>
<th>Variables</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
<th>(7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internet penetration, partner</td>
<td>0.009***</td>
<td></td>
<td></td>
<td></td>
<td>0.006**</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>[3.204]</td>
<td></td>
<td></td>
<td></td>
<td>[2.309]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>School enrollment, tertiary (% of gross), reporter</td>
<td>0.019***</td>
<td></td>
<td></td>
<td></td>
<td>0.019***</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>[5.172]</td>
<td></td>
<td></td>
<td></td>
<td>[5.725]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FDI net inflows (% of GDP)</td>
<td>–0.000</td>
<td></td>
<td></td>
<td></td>
<td>0.577***</td>
<td>0.558***</td>
<td></td>
</tr>
<tr>
<td></td>
<td>[–0.837]</td>
<td></td>
<td></td>
<td></td>
<td>[31.108]</td>
<td>[27.729]</td>
<td></td>
</tr>
<tr>
<td>Bilateral goods trade, in logs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.193***</td>
<td>0.094***</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>[6.133]</td>
<td>[3.236]</td>
<td></td>
</tr>
<tr>
<td></td>
<td>[1.061]</td>
<td>[1.693]</td>
<td>[2.147]</td>
<td>[3.545]</td>
<td>[2.190]</td>
<td>[1.084]</td>
<td>[1.580]</td>
</tr>
<tr>
<td>Constant</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fixed effects (time and country)</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Observations</td>
<td>8,500</td>
<td>8,229</td>
<td>7,723</td>
<td>8,412</td>
<td>8,488</td>
<td>8,500</td>
<td>7,510</td>
</tr>
<tr>
<td>$R^2$</td>
<td>0.825</td>
<td>0.826</td>
<td>0.822</td>
<td>0.823</td>
<td>0.866</td>
<td>0.825</td>
<td>0.863</td>
</tr>
</tbody>
</table>

Source: Authors’ calculations.
effect is marginally larger. Furthermore, as in the case of the full sample, relative to human capital and electronic infrastructure, shared legal origins (the proxy for the state and similarity of institutions between trading partners) are critical for service exports even in the case of developing countries, although their effect is slightly smaller.

As robustness checks, alternative measures for the quality of electronic infrastructure were tried, and the results are replicated in these estimations. Moreover, for the nonrich sample, upper-income countries were excluded, yet all the results were qualitatively similar and the coefficient estimates differed only marginally.

**Policy Conclusions**

This survey and empirical illustration suggest that electronic infrastructure, higher education, and institutional environment individually affect service exports. Among these variables, the effect of higher education on service exports stands out. Sudan and others (2010) find that countries that have succeeded in exporting IT-based services have generally seen their governments make serious efforts to catalyze the growth of the education sector. For instance, in a number of countries, such as Brazil, India, and South Africa, long-term investment in world-class technology institutes initially produced a critical mass of technology leaders able to compete globally. Subsequently, with growing derived demand for technical education, the power of the market was unleashed when private technology institutes were allowed to enter the tertiary education market, dramatically expanding the number of engineering graduates available for the IT sector in only a few years. Recently, countries such as Egypt have gone a step further by allowing the private sector to partner with universities to advance the technological capabilities of the ICT industry.

Electronic infrastructure is also found to be an important determinant of service trade. Again, efficient government policy can help. In a number of developing countries, governments have sought to overcome infrastructural and procedural constraints by providing data communication facilities, office space, and one-stop-shop statutory services, such as software parks in China, software technology parks in India, and ecozones in the Philippines. In Egypt, the local IT sector increasingly operates in the so-called smart villages. Given the poor state of electronic infrastructure, these technology parks have facilitated the growth of the industry. In parallel, liberalization of telecommunications in countries such as Egypt and India allowed private sector investment in the sector and cleared the path for establishment of alternative international gateways that were also critical to development of the IT service and ITeS industries.
Institutions also matter. The gravity model enabled affirmation of the importance of similarity in institutions, as reflected, for example, in shared legal origins. Even though other institutional variables, such as rule of law and ease of contract enforcement, turn out to be insignificant relative to higher education and infrastructure, that result could be because of limited variation over time in these variables, and they could nevertheless be important determinants of service exports. An example of how institutional efficiency promotes service exports is revealed in Ireland, where the Industrial Development Agency (IDA), a government-sponsored agency, has been very successful in attracting IT service and ITeS investments. An inward investment program launched by IDA gave export-oriented investors a one-stop shop that deals with all aspects of inward investment—planning, promoting, marketing, negotiating, and processing of investment proposals; providing financial incentives and property solutions; and helping new investors get started and working with them to maximize their contribution to the Irish economy.30 The case of India has been similar: the private sector industry association, NASSCOM, played a key role in building India’s brand image for offshoring services and in voicing industry concerns to the government.

Finally, the empirical finding results must be treated with some caution given the severe data limitations. Most empirical work deals with the determinants of aggregate service exports rather than exports of specific services. The determinants of other commercial service exports are bound to be different from those of travel services. Nyahoho (2010), for instance, assesses the importance of factor intensity as a determinant of trade in services. He finds that human capital endowments are critical for exports of computer and information services, whereas research and development intensity positively affects exports of construction services, public works, and computer and information services. The study in this book attempted to estimate the determinants of disaggregated services: transport, travel, tourism, and other commercial service exports; other business services; and computer and information services. However, the results obtained were not intuitive, perhaps because of a lack of reliable data on disaggregated service trade.

Annex 2.A: Definitions, Gravity Model Survey, Variables, and Data Sources

Tables 2.A.1 and 2.A.2 summarize the studies on the determinants of service exports and the results of the gravity models used in the literature, respectively. Table 2.A.3 defines the variables used in gravity OLS estimation in this study and describes the data sources. Table 2.A.4 shows the partial correlation of variables on electronic infrastructure.
<table>
<thead>
<tr>
<th>Authors</th>
<th>Objective</th>
<th>Special contribution</th>
<th>Empirical methodology</th>
<th>Country sample, period, and data sources</th>
</tr>
</thead>
</table>
| Grünfeld and Moxnes    | To identify the determinants of service trade and foreign affiliate sales | • Emphasized the strong links between service FDI and trade because a large proportion of trade is facilitated through foreign affiliate sales (mode 3)  
• Contributed new variables: corruption in the importing country, Trade Restrictiveness Index                                      | OLS and exporter country fixed-effect model                                                                                                                                         | Sample: 22 OECD countries for service trade and “approximately the same” OECD countries for FDI  
Period: 1999 and 2000 for service trade and 1999 for FDI  
Data sources: OECD for service trade and OECD International Direct Investment Statistics Yearbook                                                                                           |
| Lejour and de Paiva    | To (a) contrast bilateral trade between the provinces of Canada and that between EU member states to bring out the importance of regulation in service trade and (b) compare service trade determinants with those of goods trade | • Assumed that for within-country trade (Canada), the role of institutions and regulations could be ignored  
• Disaggregated trade data for 10 service sectors within Canada, which could be exploited                                                                                      | OLS                                                                                                           | Sample: 10 Canadian provinces and 11 service subsectors; 9 EU countries and 4 service subsectors  
Data sources: OECD and Statistics Canada                                                                                                                                         |

(Table continues on the following pages.)
<table>
<thead>
<tr>
<th>Authors</th>
<th>Objective</th>
<th>Special contribution</th>
<th>Empirical methodology</th>
<th>Country sample, period, and data sources</th>
</tr>
</thead>
</table>
| Mirza and Nicoletti (2004)      | To explain bilateral trade in services by emphasizing the importance of PMRs in both countries, as well as human capital, infrastructure in transport, and telecommunication networks in both countries | • Used the O-ring theory to explain trade in services  
• Emphasized that quality of tasks in both the home and the host country is important for successful service delivery, so modes of regulations of both countries affect the quality of final service, which is not the case with manufacturing trade where regulations in the importing country affect bilateral trade | OLS and SUR estimation of 2 (exporter and importer) equations obtained from the mean deviation method to deal with the multicollinearity problem in a 3-dimensional panel (country, partner, and time); 3-stage least squares regression, which is basically a SUR method with some endogenous variables, to which an instrumental variable estimation technique is applied | • Sample: 20 OECD countries and 27 partner countries  
• Period: 1999–2000  
• Data source: OECD |
| Kox and Lejour (2005)           | To study service trade determinants with a focus on the effects of policy heterogeneity | • Studied the effect of relative level and heterogeneity in PMRs on service trade  
• Focused on total services and commercial services | OLS (with and without fixed effects)  
FIML with fixed-effect and SUR model | Sample 9 of the 14 EU member countries because of limits on PMR data  
• Period: 1999–2001  
• Data source: OECD  
• Sample: India  
• Data source: NASSCOM |
| Tharakan, Van Beveren, and Van Ourti (2005) | To compare software service export determinants with those of goods trade | • Studied the effect of population of Indian origin on service and goods trade  
• Focused on a single developing country | Threshold Tobit model | Sample: India  
• Data source: NASSCOM |
<table>
<thead>
<tr>
<th>Author (Year)</th>
<th>Summary</th>
<th>Method</th>
<th>Sample</th>
<th>Period</th>
<th>Data Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kimura and Lee (2006)</td>
<td>To assess the effects of various factors on bilateral service trade relative to goods trade</td>
<td>OLS</td>
<td>10 OECD countries and their partner countries (ranging from 27 to 47)</td>
<td>1999 and 2000</td>
<td>OECD</td>
</tr>
<tr>
<td>Lennon (2006)</td>
<td>To contrast trade in goods with trade in services, with a special focus on other commercial services</td>
<td>OLS</td>
<td>28 OECD countries and their partners</td>
<td>1999–2002</td>
<td>OECD</td>
</tr>
<tr>
<td>Walsh (2006)</td>
<td>To study the determinants of trade in services using a gravity model, with particular attention to the role of barriers to service trade</td>
<td>Hausman-Taylor model</td>
<td>Imports between 27 OECD countries and up to 50 of their partner countries</td>
<td>1999–2001</td>
<td>OECD</td>
</tr>
</tbody>
</table>

(Table continues on the following pages.)
Table 2.A.1. Gravity Models for Explaining Service Trade (continued)

<table>
<thead>
<tr>
<th>Authors</th>
<th>Objective</th>
<th>Special contribution</th>
<th>Empirical methodology</th>
<th>Country sample, period, and data sources</th>
</tr>
</thead>
</table>
| Head, Mayer, and Ries (2009) | To focus on service trade determinants to see whether service trade has managed to overcome the impediments created by geographic distance and institutional differences | • Quantified nontariff barriers through a gravity model  
• As a methodological contribution, tested the efficiency of the fixed-effects and random-effects models using the Breusch Pagan Test  
• Proposed using Hausman-Taylor model, as done in goods trade gravity literature, for estimating service trade determinants, a method found to be most efficient  
• Explored the role of institutions and time zones in service trade  
• Calculated the wage premium a firm would be willing to pay to avoid the costs associated with remote provision of services  
• Examined disaggregated services, differentiating offshored from nonoffshored services | OLS; also estimated a PPML and 2-step negative binomial model for time trend of distance effect | Sample: 65 countries—27 EU countries, plus Croatia, Japan, Norway, Turkey, and the United States, and 33 partner countries (trade between 2 partner countries excluded)  
• Period: 1992–2006  
• Data source: Eurostat |
• Researched the theoretical foundations for a service gravity equation
• Examined whether the effect of distance in services trade has dampened over time

Shingal (2010) To assess the effect of PTAs on service exports
• Endogenized the effect of PTAs
• Distilled the trade effect of PTAs into that emanating from service-only and goods-only agreements

Hausman-Taylor model (also checked with OLS, PPML)

• Sample: 25 exporting and 53 importing countries
• Period: 1999–2003
• Data source: OECD

Source: Authors’ compilation.
a. Grünfeld and Moxnes (2003) determine the complementarity or substitutability between service exports and outward FDI in services by regressing FDI residuals obtained from an FDI determinants equation on service exports residuals obtained from a service exports equation. The coefficient for service exports residuals is positive and significant at the 1 percent level, implying complementarity between outward FDI and service exports.
b. To test for determinants of service exports relative to goods exports, Tharakan, Van Beveren, and Van Ourti (2005) do a t-test for equality in coefficients.
c. The estimation methodology was different. Goods exports residuals were regressed on service imports residuals and tested for significance. They were found significant at the 1 percent level.
d. To test for determinants of service exports relative to goods exports, Lennon (2006) followed an approach that is very different from usual gravity models of trade. Instead of having two dependent variables and two separate regressions for goods and service trade, total trade was regressed on a dummy variable for service trade, and independent variables interacted with the service trade dummy. To test whether goods exports encourage service exports, the model used instruments for goods trade and import tariff on nonagricultural goods. Bilateral trade in goods explained bilateral trade in services with an elasticity of 1.0, whereas service trade encouraged goods trade, but the elasticity is less than 0.5.
### Table 2.A.2. Results of Gravity Models

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total service exports</td>
<td>Service outward FDI stock</td>
<td>Service exports + service outward FDI stock</td>
<td>Service exports</td>
<td>Service imports</td>
<td>Aggregate service exports</td>
</tr>
<tr>
<td>GDP, reporter</td>
<td>(+)**</td>
<td>(+)**</td>
<td>(+)**</td>
<td>(+)**</td>
<td>(+)**</td>
<td>(+)**</td>
</tr>
<tr>
<td>GDP, partner</td>
<td>(+)**</td>
<td>(+)**</td>
<td>(+)**</td>
<td>(+)**</td>
<td>(+)**</td>
<td>(+)**</td>
</tr>
<tr>
<td>Population, partner</td>
<td>(+)**</td>
<td>(+)**</td>
<td>(+)**</td>
<td>(+)**</td>
<td>(+)**</td>
<td>(+)**</td>
</tr>
<tr>
<td>GDP per capita, reporter</td>
<td>(+)**</td>
<td>(+)**</td>
<td>(+)**</td>
<td>(+)**</td>
<td>(+)**</td>
<td>(+)**</td>
</tr>
<tr>
<td>GDP per capita, partner</td>
<td>(+)</td>
<td>(-)**</td>
<td>(-)**</td>
<td>(+)**</td>
<td>(+)**</td>
<td>(+)**</td>
</tr>
<tr>
<td>Distance</td>
<td>(-)**</td>
<td>(-)**</td>
<td>(-)**</td>
<td>(-)**</td>
<td>(-)**</td>
<td>(-)**</td>
</tr>
<tr>
<td>Distance × trend time zone difference</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Remoteness, reporter</td>
<td>(+)*</td>
<td>(+)*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Remoteness, partner</td>
<td>(+)**</td>
<td>(+)**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjacency</td>
<td>(+)*</td>
<td>(+)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Variable</td>
<td>(-)</td>
<td>(-)</td>
<td>(-)*</td>
<td>(+)**</td>
<td>(+)***</td>
<td>(+)*</td>
</tr>
<tr>
<td>-----------------------------------------------</td>
<td>-----</td>
<td>-----</td>
<td>------</td>
<td>-------</td>
<td>--------</td>
<td>------</td>
</tr>
<tr>
<td>Regional trading agreement</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Economic freedom, reporter</td>
<td></td>
<td></td>
<td></td>
<td>(+)***</td>
<td>(+)***</td>
<td></td>
</tr>
<tr>
<td>Economic freedom, partner</td>
<td></td>
<td></td>
<td></td>
<td>(+)***</td>
<td>(+)***</td>
<td></td>
</tr>
<tr>
<td>Language</td>
<td>(+)***</td>
<td>(+)***</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nontariff barriers</td>
<td></td>
<td></td>
<td></td>
<td>(-)***</td>
<td>(-)***</td>
<td></td>
</tr>
<tr>
<td>Temperature, reporter</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Temperature, partner</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Government effectiveness, reporter</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Government effectiveness, partner</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diaspora</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contiguity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>At least one country landlocked</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(Notes: (0) not significant; (-1) significant at 10%; (-2) significant at 5%; (-3) significant at 1%; (0) addition is significant at 1%)

(Table continues on the following pages.)
Table 2.A.2. Results of Gravity Models (continued)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total service exports</td>
<td>Service outward FDI stock</td>
<td>Service exports + service outward FDI stock</td>
<td>Service exports</td>
<td>Service imports</td>
</tr>
<tr>
<td>Trust in reporter from partner</td>
<td>(+)**</td>
<td>(+)**</td>
<td>(+)**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corruption perceptions index, reporter</td>
<td>(larger score implies low corruption)</td>
<td>(larger score implies low corruption)</td>
<td>(larger score implies low corruption)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corruption perceptions index, partner</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Complexity of procedures, reporter</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Complexity of procedures, partner</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Notes:**
- **(+)** indicates a positive coefficient.
- **(++)** indicates a stronger positive coefficient.
- **(++++)** indicates the strongest positive coefficient.

- **Corruption perceptions index:** Larger score implies lower corruption.
- **Complexity of procedures:** Higher score implies more complexity.

- **Inter-provincial Canadian total service exports** refers to the trade in services between provinces within Canada.
- **Intra-EU total service exports** refers to the trade in services within the EU.
- **Commercial service exports** and **Commercial service imports** refer specifically to commercial services.
- **Total service exports** and **Total service imports** cover both commercial and non-commercial services.

- **Grönfeld and Moxnes (2003), OLS estimation** uses ordinary least squares regression.
- **Mirza and Nicoletti (2004), 3-stage least squares estimation** uses a 3-stage least squares estimator.
- **Lejour and de Paiva Verheijden (2004)** uses FIML (fully modified least squares) estimation.
- **Kox and Lejour (2005), FIML estimation (deviation from mean from average exporter)** also uses FIML estimation with a focus on deviation from the mean of average exporters.
<table>
<thead>
<tr>
<th>Colonial relationship</th>
<th>Shared legal origins</th>
<th>Migration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average years of education, reporter</td>
<td>Average years of education, partner</td>
<td></td>
</tr>
<tr>
<td>High education population, reporter</td>
<td>High education population, partner</td>
<td></td>
</tr>
<tr>
<td>Secondary education population, reporter</td>
<td>Secondary education population, partner</td>
<td></td>
</tr>
<tr>
<td>Primary education population, reporter</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(Table continues on the following pages.)
**Table 2.A.2.** Results of Gravity Models (continued)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total service exports</td>
<td>Service outward FDI stock</td>
<td>Service exports</td>
<td>Service imports</td>
<td>Aggregate service exports</td>
<td>Total service exports</td>
</tr>
<tr>
<td>Primary education population, partner</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employment law rigidity index, reporter</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employment law rigidity index, partner</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internet users, reporter</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internet users, partner</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personal computers, reporter</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personal computers, partner</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: (+) indicates a positive relationship, (++) indicates a strong positive relationship, and (++) indicates a very strong positive relationship.
<table>
<thead>
<tr>
<th>Telephone mainlines, reporter</th>
<th>Internet hosts, reporter</th>
<th>Research and development expenditure (% of GDP), reporter</th>
<th>Internet hosts, partner</th>
<th>Telephone mainlines, partner</th>
<th>Research and development expenditure (% of GDP), partner</th>
<th>Regulation level (PMR), reporter</th>
<th>Regulation level (PMR), partner</th>
</tr>
</thead>
<tbody>
<tr>
<td>(-)**</td>
<td>(-)**</td>
<td>(-)**</td>
<td>(-)**</td>
<td>(-)**</td>
<td>(-)**</td>
<td>(-)**</td>
<td>(-)**</td>
</tr>
</tbody>
</table>

(Barriers to entrepreneurship)

(Table continues on the following pages.)
### Table 2.A.2. Results of Gravity Models (continued)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total service exports</td>
<td>Service exports + service exports + FDI stock</td>
<td>Service exports</td>
<td>Service imports</td>
<td>Aggregate service exports</td>
<td>Total service exports</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regulation heterogeneity variables</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heterogeneity in administrative barriers to start-up</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heterogeneity in barriers to competition</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heterogeneity in regulatory opacity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heterogeneity in state control</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heterogeneity in trade and investment barriers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Value added in service sector, reporter</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: (+) indicates a positive relationship, (-) indicates a negative relationship, (–) indicates no relationship, and (±) indicates a mixed relationship.
<table>
<thead>
<tr>
<th>Category</th>
<th>Reporter</th>
<th>Partner</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value added in service sector, partner</td>
<td>(+)**</td>
<td></td>
</tr>
<tr>
<td>Wages, reporter</td>
<td>(-)**</td>
<td></td>
</tr>
<tr>
<td>Wages, partner</td>
<td>(-)**</td>
<td></td>
</tr>
<tr>
<td>Human capital, reporter</td>
<td>(+)**</td>
<td>(+)**</td>
</tr>
<tr>
<td>Human capital, partner</td>
<td>(+)</td>
<td>(+)**</td>
</tr>
<tr>
<td>Transport infrastructure, reporter</td>
<td>(+)**</td>
<td></td>
</tr>
<tr>
<td>Transport infrastructure, partner</td>
<td>(+)**</td>
<td></td>
</tr>
<tr>
<td>Telecommunication infrastructure, reporter</td>
<td>(+)**</td>
<td></td>
</tr>
<tr>
<td>Telecommunication infrastructure, partner</td>
<td>(+)**</td>
<td></td>
</tr>
<tr>
<td>Entry barriers, reporter</td>
<td>(-)</td>
<td></td>
</tr>
<tr>
<td>Entry barriers, partner</td>
<td>(-)</td>
<td></td>
</tr>
</tbody>
</table>

(Table continues on the following pages.)
Table 2.A.2. Results of Gravity Models (continued)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total service imports</td>
<td>Travel service imports</td>
<td>Transport service imports</td>
<td>Government service imports</td>
</tr>
<tr>
<td>GDP, reporter</td>
<td>(+)</td>
<td>(+)***</td>
<td>(+)***</td>
<td>(+)***</td>
</tr>
<tr>
<td>GDP, partner</td>
<td>(+)</td>
<td>(+)***</td>
<td>(+)***</td>
<td>(+)***</td>
</tr>
<tr>
<td>Population, reporter</td>
<td>(+)</td>
<td>(+)***</td>
<td>(+)***</td>
<td>(+)***</td>
</tr>
<tr>
<td>Population, partner</td>
<td>(+)</td>
<td>(+)***</td>
<td>(+)***</td>
<td>(+)***</td>
</tr>
<tr>
<td>GDP per capita, reporter</td>
<td>(+)</td>
<td>(+)***</td>
<td>(+)***</td>
<td>(+)***</td>
</tr>
<tr>
<td>GDP per capita, partner</td>
<td>(+)</td>
<td>(+)***</td>
<td>(+)***</td>
<td>(+)***</td>
</tr>
<tr>
<td>Distance</td>
<td>(+)</td>
<td>(+)***</td>
<td>(+)***</td>
<td>(+)***</td>
</tr>
<tr>
<td>Distance × trend</td>
<td>(+)</td>
<td>(+)***</td>
<td>(+)***</td>
<td>(+)***</td>
</tr>
<tr>
<td>Time zone difference</td>
<td>(+)</td>
<td>(+)***</td>
<td>(+)***</td>
<td>(+)***</td>
</tr>
<tr>
<td>Remoteness, reporter</td>
<td>(+)</td>
<td>(+)***</td>
<td>(+)***</td>
<td>(+)***</td>
</tr>
<tr>
<td>Remoteness, partner</td>
<td>(+)</td>
<td>(+)***</td>
<td>(+)***</td>
<td>(+)***</td>
</tr>
<tr>
<td>Adjacency</td>
<td>(+)</td>
<td>(+)***</td>
<td>(+)***</td>
<td>(+)***</td>
</tr>
<tr>
<td>Regional trading agreement</td>
<td>(+)</td>
<td>(+)***</td>
<td>(+)***</td>
<td>(+)***</td>
</tr>
</tbody>
</table>

Note: (+) indicates a positive coefficient; (–) indicates a negative coefficient; *** indicates statistical significance at the 1% level; ** indicates significance at the 5% level; * indicates significance at the 10% level.
| Economic freedom, reporter | (-) | (+) |
| Economic freedom, partner | (-) | (+) |
| Language | (+)** | (+)*** | (+)*** | (+)*** | (+)*** | (-)*** | (-)** | (-) | (-)*** | (-)*** |
| Nontariff barriers | (-) | (+) | (+) | (-) | (+) |
| Temperature, reporter | (-) |
| Temperature, partner | (+)*** |
| Government effectiveness, reporter | (-) |
| Government effectiveness, partner | (+) |
| Diaspora | (+)*** | (+)*** | (+)** |
| Contiguity | (+)*** | (+)*** | (+) | (-) |

(Table continues on the following pages.)
Table 2.A.2. Results of Gravity Models (continued)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total service imports</td>
<td>Travel service imports</td>
<td>Transport service imports</td>
<td>Government service imports</td>
</tr>
<tr>
<td>Trust in reporter from partner</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corruption perceptions index, reporter</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corruption perceptions index, partner</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Complexity of procedures, reporter</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Complexity of procedures, partner</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Colonial relationship</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shared legal origins</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Migration</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(can be done skillwise for OECD countries)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Variable</td>
<td>Reporter</td>
<td>Partner</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>----------</td>
<td>---------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average years of education</td>
<td>(+)**</td>
<td>(+)**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High education population</td>
<td>(+)**</td>
<td>(+)**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Secondary education population</td>
<td>(+)**</td>
<td>(+)**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary education population</td>
<td>(-)**</td>
<td>(-)**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employment law rigidity index</td>
<td>(-)**</td>
<td>(-)**</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(Table continues on the following pages.)
### Table 2.A.2. Results of Gravity Models (continued)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Internet users, reporter</td>
<td>(+)**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internet users, partner</td>
<td>(+)**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personal computers, reporter</td>
<td>(+)**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personal computers, partner</td>
<td>(+)**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Telephone mainlines, reporter</td>
<td>(+)**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Telephone mainlines, partner</td>
<td>(+)**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internet hosts, reporter</td>
<td>(+)**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internet hosts, partner</td>
<td>(+)**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Research and development expenditure (% of GDP), reporter</td>
<td>(+)**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Variable</td>
<td>Reporter</td>
<td>Partner</td>
<td></td>
<td></td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>----------</td>
<td>---------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Research and development expenditure (% of GDP), partner</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regulation level (PMR), reporter</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regulation level (PMR), partner</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regulation heterogeneity variables</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heterogeneity in administrative barriers to start-up</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heterogeneity in barriers to competition</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heterogeneity in regulatory opacity</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heterogeneity in state control</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heterogeneity in trade and investment barriers</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Value added in service sector, reporter</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Value added in service sector, partner</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wages, reporter</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wages, partner</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(+)***

(Table continues on the following pages.)
Table 2.A.2. Results of Gravity Models (continued)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total service imports</td>
<td>Travel service imports</td>
<td>Government service imports</td>
<td>Commercial service imports</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Transport service imports</td>
<td></td>
<td>Software service exports</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Total service exports</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Commercial service exports</td>
</tr>
<tr>
<td>Human capital, reporter</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Human capital, partner</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transport infrastructure, reporter</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transport infrastructure, partner</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Telecommunication infrastructure, reporter</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Telecommunication infrastructure, partner</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Entry barriers, reporter</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Entry barriers, partner</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Authors’ calculations.

*** = significant at the 1 percent level; ** = significant at the 5 percent level; * = significant at the 10 percent level.
<table>
<thead>
<tr>
<th>Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service exports (balance of payments, current US$)</td>
</tr>
<tr>
<td>Source</td>
</tr>
<tr>
<td>World Bank’s World Development Indicators database</td>
</tr>
</tbody>
</table>

*Table 2.A.3. Definitions of Variables Used for Gravity Estimation*

<table>
<thead>
<tr>
<th>Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service exports (previously nonfactor services) refer to the economic output of intangible commodities that may be produced, transferred, and consumed simultaneously. <em>International transactions in services</em> are defined by the International Monetary Fund’s <em>Balance of Payments Manual</em> (IMF 1993), but definitions may vary among reporting economies.</td>
</tr>
<tr>
<td>Source</td>
</tr>
<tr>
<td>World Bank’s World Development Indicators database</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population (total)</td>
</tr>
<tr>
<td>Source</td>
</tr>
<tr>
<td>World Bank’s World Development Indicators database</td>
</tr>
</tbody>
</table>

*Total population* is based on the de facto definition of population, which includes all residents regardless of legal status or citizenship, except that refugees who are not permanently settled in the country of asylum are generally considered part of the population of their country of origin. The values shown are midyear estimates.

<table>
<thead>
<tr>
<th>Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Services, value added (current US$)</td>
</tr>
<tr>
<td>Source</td>
</tr>
<tr>
<td>World Bank’s World Development Indicators database</td>
</tr>
</tbody>
</table>

*Services* (previously nonfactor services) refer to the economic output of intangible commodities that may be produced, transferred, and consumed simultaneously. *International transactions in services* are defined by IMF (1993), but definitions may vary among reporting economies.

<table>
<thead>
<tr>
<th>Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP (constant 2000 US$)</td>
</tr>
<tr>
<td>Source</td>
</tr>
<tr>
<td>World Bank’s World Development Indicators database</td>
</tr>
</tbody>
</table>

*GDP at purchasers’ prices* is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources. Dollar figures for GDP are converted from domestic currencies using 2000 official exchange rates. For a few countries, where the official exchange rate does not reflect the rate effectively applied to actual foreign exchange transactions, an alternative conversion factor is used.

(Table continues on the following page.)
<table>
<thead>
<tr>
<th>Variable</th>
<th>Definition</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Per capita income</td>
<td><em>GDP per capita</em> is GDP divided by the midyear population. GDP is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources.</td>
<td>World Bank’s World Development Indicators database</td>
</tr>
<tr>
<td>FDI, net inflows (% of GDP)</td>
<td><em>FDI</em> is the net inflow of investment to acquire a lasting management interest (10% or more of voting stock) in an enterprise operating in an economy other than that of the investor. It is the sum of equity capital, reinvestment of earnings, other long-term capital, and short-term capital as shown in the balance of payments. This series shows net inflows in the reporting economy and is divided by GDP.</td>
<td>World Bank’s World Development Indicators database</td>
</tr>
<tr>
<td>Internet users per 100 inhabitants</td>
<td><em>Internet users</em> are people with access to the worldwide network. The variable Internet users per 100 inhabitants is obtained by dividing the number of Internet subscribers by the population and multiplying by 100.</td>
<td>International Telecommunication Union</td>
</tr>
<tr>
<td>School enrollment, tertiary (% of gross)</td>
<td><em>Gross enrollment ratio</em> is the ratio of total enrollment, regardless of age, to the population of the age group that officially corresponds to the level of education shown. Tertiary education, whether or not to an advanced research qualification, normally requires, as a minimum condition of admission, the successful completion of education at the secondary level.</td>
<td>World Bank’s World Development Indicators database</td>
</tr>
<tr>
<td>Bilateral service trade</td>
<td><em>Bilateral service trade</em> refers to trade in services between country pairs.</td>
<td>UNSTATS</td>
</tr>
<tr>
<td>Bilateral goods trade</td>
<td><em>Bilateral goods trade</em> refers to trade in goods between country pairs.</td>
<td>UNSTATS</td>
</tr>
<tr>
<td>Shared legal origins</td>
<td>Five different legal origins exist: English, French, German, Scandinavian, and socialist. A dummy variable is created that takes the value 1 if bilateral trading partners have the same legal origin and 0 otherwise.</td>
<td>Andrei Shleifer’s Data Sets webpage (<a href="http://www.economics.harvard.edu/faculty/shleifer/dataset">http://www.economics.harvard.edu/faculty/shleifer/dataset</a>)</td>
</tr>
</tbody>
</table>

*Source: Authors’ compilation.*
Notes

1. Marshall and others (1987) examined three regions in the United Kingdom and found that 80 percent of services purchased by a local manufacturer are supplied by a firm located in the same region.

2. These studies were Freund and Weinhold (2002); Head, Mayer, and Ries (2009); Kimura and Lee (2006); Lejour and de Paiva Verheijden (2004); Lennon (2006); Shingal (2010); and Tharakan, Van Beveren, and Van Ourti (2005).

3. The existing literature uses the database of the Organisation for Economic Co-operation and Development to explore service trade determinants and does not really focus on developing countries. This chapter uses the United Nations Statistical Division’s bilateral service trade database, which also covers the south-south trade dimension and therefore allows service exports from the developing world to be better accounted for. The database reports bilateral service exports for 2000–08 for 47 countries, of which 22 are nonrich countries that are not members of the Organisation for Economic Co-operation and Development. Building on previous models, this chapter adopts a unified approach to test for the relative importance of (a) human capital endowments, (b) electronic infrastructure, and (c) institutions in determining services exports.

4. For theoretical foundations of the gravity model, see Anderson (1979), Bergstrand (1985, 1989), and Harrigan (2002).

5. These studies include Grünfeld and Moxnes (2003); Head, Mayer, and Ries (2009); Kimura and Lee (2006); Kox and Lejour (2005); Lejour and de Paiva Verheijden (2004); Lennon (2006); Mirza and Nicoletti (2004); and Walsh (2006). Another valuable contribution to the literature is made by Tharakan, Van Beveren, and Van Ourti (2005), who built a gravity model of India’s bilateral software service exports. They use a unique data set from NASSCOM (the apex industry body managing India’s computer and business service exporting firms). Freund and Weinhold (2002) use U.S. bilateral trade data to assess the importance of electronic infrastructure in service exports.

6. In general, infrastructure in the text refers to electronic infrastructure unless otherwise specified.

7. Between 1985 and 2003, undergraduate engineering baccalaureate capacity increased from about 45,000 (59 per million) to about 440,000 (405 per million), even as the total population increased from 765 million to 1,086 million. The number of engineering colleges in India increased from 246 in 1987 to 353 in 1995 to more than 1,100 in 2003. Software exports were also growing.

Table 2.A.4. Partial Correlation of Variables on Electronic Infrastructure

<table>
<thead>
<tr>
<th>Variable</th>
<th>Broadband subscribers per 100 persons</th>
<th>Internet bandwidth, bits per person</th>
<th>Internet users per 100 persons</th>
<th>Mobile users per 100 persons</th>
<th>Telephone users per 100 persons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Broadband subscribers per 100 persons</td>
<td>1.0000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internet bandwidth, bits per person</td>
<td>0.7176</td>
<td>1.0000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internet users per 100 persons</td>
<td>0.8278</td>
<td>0.6100</td>
<td>1.0000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mobile users per 100 persons</td>
<td>0.6917</td>
<td>0.4784</td>
<td>0.8465</td>
<td>1.0000</td>
<td></td>
</tr>
<tr>
<td>Telephone users per 100 persons</td>
<td>0.4786</td>
<td>0.3835</td>
<td>0.5263</td>
<td>0.4408</td>
<td>1.0000</td>
</tr>
</tbody>
</table>

Source: Authors’ compilation based on World Development Indicators database.
rapidly during this period; therefore, software exports and engineering education capacity appear closely associated.

8. The O-ring theory of economic development is a model of economic development that proposes that tasks of production must be executed proficiently together for any of them to be of high value.

9. Lennon, Mirza, and Nicoletti (2009) use this theory to test their analytical framework of the O-ring theory using a specific industry data set on air passenger international transportation and find the results to be consistent with their theoretical framework—that is, policy and nonpolicy factors that affect the use of inputs in both the exporting and the importing countries have a symmetric effect on the bilateral flow of services between those countries.

10. Focusing on service trade of 20 high-income OECD countries with 27 of their partners for 1999 and 2000, Mirza and Nicoletti (2004) contribute methodologically to gravity literature by estimating the gravity model through seemingly unrelated regression (SUR) and three-stage least squares techniques, thereby dealing with the multicollinearity problem in a three-dimensional panel. SUR consists of several regression equations, each having its own dependent variable and potentially different sets of exogenous explanatory variables. Each equation is a valid linear regression on its own and can be estimated separately; however, the error terms are assumed to be correlated across the equations, and therefore a generalized least squares method is recommended. Three-stage least squares is a technique that combines two-stage least squares with SUR.

11. Cattaneo and others’ (2010) case studies also indicate that trade agreements for liberalizing the market, bilateral labor agreements for movement of natural persons, and partnerships with international suppliers can be critical in promoting service exports.

12. However, for services that require regular interaction and coordination for delivery, being in the same time zone may be helpful. Thus, the effect of distance on service trade is not straightforward.

13. In the next section, the findings of service trade research with respect to distance are discussed.


15. If foreign investment uses a capital-intensive production technique in a labor-rich country, it leaves the country’s vast resources underused and may also inhibit the country’s ability to take advantage of foreign technology.

16. Easterly (2002) evaluated the case where Daewoo trained 130 workers of a Bangladesh-based garment firm, Desh, under a collaborative agreement in 1979. During the 1980s, of the 130 Bangladeshi workers initially trained by Daewoo, 115 had left Desh to set up their own garment export firms. Similar cases for the success of Indonesian plywood or Colombian flower exports are discussed in Rhee and Bélot (1990).

17. See Enos, Kehrhahn, and Bell (2003) for a recent study and survey of the managerial studies evidence.

18. This work is referred to as illustrative because it does not deal with endogeneity of variables relating to electronic infrastructure, education, or institutions. For instance, the causality from Internet penetration to service exports could run in the reverse direction as well where higher trade in services leads firms to adopt better telecommunication technology that facilitates trade in services. Similar is the case of human capital and skill usage for service exports.

19. Annex table 2.A.3 provides details on data sources used in this chapter.

20. UNSTATS does not have bilateral service trade data for Mexico, New Zealand, and Turkey; however, these data are available in the OECD database.

21. The UNSTATS data come very close to the OECD data (the correlation between them is nearly 0.9) for the countries reported by both sources. Because this book’s focus is on developing countries, this chapter uses the UNSTATS database.

22. Mirrored flows were used when data on exports from the reporter were missing but data on imports from the trade partner were given.

23. The state of electronic infrastructure in a country can be gauged by variables such as telephone lines per 100 persons, number of Internet users per 100 persons or the use of computers per 100 persons, bandwidth of Internet connection, and number of mobile subscribers per 100 persons.
The correlation between these alternative measures of electronic infrastructure is given in annex table 2.A.4. As can be seen from the table, most of these variables have a high correlation with each other. Therefore this estimate chooses to use the most commonly used variable—that is, Internet penetration per 100 persons—as a measure of the quality of electronic infrastructure. For human capital, several variables measure the quality or the relative availability of human skills in a country. These variables include tertiary school enrollment, average years of schooling, percentage of population with tertiary education, and average years of tertiary schooling attained. All these variables except tertiary school enrollment can be obtained from Barro and Lee (2010).

24. Five different legal origins exist: English, French, German, Scandinavian, and socialist.
25. The negative effect of distance on service trade is confirmed in several studies using different time periods and different estimation methodologies, as was discussed in the previous section.
26. The effect on disaggregate services, such as transport or government services, is, however, insignificant.
27. The percentage of the population that has completed tertiary education was also tried as a measure of human capital. The results were qualitatively similar, but the effect of this variable on service exports was much higher (more than 40 percent). Various lags of tertiary schooling enrollment percentage were also tried as a measure of human capital on the assumption that tertiary schooling enrollment can affect service exports only after the passage of some years (Amin and Mattoo 2008). However, they were not found to be significant in affecting service exports in the OLS methodology.
28. This result is typical of gravity models such as those of Kimura and Lee (2006) and Lennon (2006). This chapter’s model has, however, a weak result because service exports can simultaneously affect bilateral goods exports, as found in Nordás (2008).
29. High-income countries are excluded from the exporters but are retained as importers. As before, the country fixed effects are used for both the partner and the reporter countries.
30. Similarly, development institutions in Chile and Malaysia have helped their countries advance service exports. The Corporación de Fomento de la Producción de Chile (Production Development Corporation), Chile’s economic development agency, partnered with management schools in the United States to undertake market research and establish contacts with key organizations such as the American Electronics Association and the San Jose Business Incubator. Malaysia set up an International Advisory Committee for its Multimedia Super Corridor to facilitate engagement with leading global players.

References


Following liberalization in 1991, the Indian economy grew rapidly, with the service sector leading the way. The share of service value added in gross domestic product (GDP) increased from 44 percent in 1990 to 55 percent in 2009. Service exports grew even faster, and their share in service value added increased from 3.6 percent in 1990 to 17.0 percent in 2009 (their share in GDP increased from 1.4 percent to 8.6 percent). India’s experience differs from the typical development of other countries because services, rather than manufacturing, are playing the leading role. This chapter first examines the evolution of the service sector in India. It then focuses on India’s service exports and the reasons for the country’s dynamism. The chapter addresses, in particular, the anomaly of a country exporting skill-intensive services although its comparative advantage is in low-skilled products.

Technology has played a critical role in the growth of India’s service exports. Advances in information and communication technology not only have made it possible to trade services that were historically regarded as nontradable, but also have made distance and delivery costs virtually irrelevant for some services. Therefore, a country such as India, which is thousands of miles away from North America, is still able to deliver services to the United States as efficiently as a U.S. border country. In fact, the distance between India and the United States may even encourage greater service trade because the time difference allows for round-the-clock service provision.
Beyond technology, this chapter explores, in particular, the role of four factors: human capital, electronic infrastructure, service-related institutions, and service policy. Because many of the business services that India exports are skill intensive, services normally originate in countries that are relatively well endowed with human capital. Furthermore, because electronic delivery has made these services tradable, the scope for such trade must be related to the availability of the relevant electronic infrastructure. Institutions play a key role in the development of service sectors. Because many services are invisible and intangible, regulatory institutions are needed to correct asymmetries of information between consumers and providers, thereby mitigating the risk of market failure. Because services are frequently customized and require providers and consumers to make relationship-specific investments, contract-enforcing institutions are also needed. Finally, policy-making institutions matter in terms of openness (for example, openness to foreign investment that brings technology, management, and exporting knowledge) and, perhaps, in terms of proactive export promotion (for example, through fiscal incentives and dedicated facilities).

India has clearly made progress along each of these dimensions, especially compared to other low-income countries. Its prolonged flirtation with import-substituting industrialization increased domestic capacity for high-quality technical and tertiary education. The growth has been sustained: the share of tertiary school enrollment rose from 6 percent of total school enrollment in 1990 to 12 percent in 2006, while tertiary school enrollment improved only marginally for other low-income countries (from 5 percent in 1990 to 7 percent in 2006). Similarly, as a rough measure of electronic infrastructure, Internet penetration per 100 inhabitants increased from 0.0001 in 1996 to 7.20 in 2007, while it increased from 0.01 to 3.70 for other low-income countries during the same period. Though India’s courts are clogged and there are signs of serious regulatory corruption (in the allocating spectrum, for example), India still compares favorably with other low-income countries in terms of its institutions. Also, in terms of policy, India has been atypically open to foreign investment in information technology (IT) and business services and was one of the few developing countries that signed the World Trade Organization’s Information Technology Agreement, which eliminated tariffs on IT products.

What is puzzling is that, notwithstanding favorable comparisons with the past and with other low-income countries across each dimension, India still compares poorly with a number of other countries that have similar advantages but fewer disadvantages. Why is India such a dynamic exporter of services while these other countries are not? For example, contract enforcement in India requires, on average, 46 procedures and 1,420 days. This requirement is much higher than that of
Eastern European countries such as Romania, where enforcing contracts requires 32 procedures and 537 days, or in other Asian countries such as the Philippines (which showed early, but unfulfilled, promise in service trade), where 37 procedures and 842 days are required.

A possible solution to the puzzle may lie in the fact that along each of these dimensions the service sector in India has been favored relative to the manufacturing sector. Although the market for skilled labor is fairly flexible, the market for low-skilled manufacturing labor is rigid because of regulations and unionization. Telecommunication networks have grown and improved rapidly, but the infrastructure required for delivering goods (such as roads and ports) is being developed much more slowly in India than in East Asia, for instance. Although service-related regulatory institutions—from telecommunications to finance—have a reputation of being competent and having integrity, the institutions affecting goods trade—from customs to export processing zones—have a reputation for being plagued by inefficiency and corruption. Even in terms of policy, liberalization of goods trade has been grudging and slow, but with respect to the most trade-related services (IT and business) and the most service-related goods (computers), India has embraced openness more rapidly than Brazil, for instance.

This chapter is organized in the following manner. The first section that follows describes the evolution of the service sector in India as a backdrop for the emergence of service exports. Research suggests that India was not an outlier in terms of the size of its service sector relative to other countries; however, India caught up with developed countries in the 2000s. Most of this incremental service output originates from growth in modern services and not in traditional services such as transport and travel. Research shows that the increased tradability of certain modern services, such as other business services or computer and information services in the late 1990s, as well as India’s liberalization reforms, explains the rise in the modern service sector. It also confirms that more than just positive factors explain service sector growth; relative to services, the poor quality of infrastructure and restrictive labor market regulations inhibited growth in manufacturing.

The chapter delves deeper into the characteristics of service exports from India in the second section. This section identifies that India’s growth in service value added and exports is linked to exports of other commercial services (OCSs). Within OCSs, growth in exports of computer and information services, as well as in exports of other business services, distinguishes India from other countries. Most of such service exports from India are destined for the developed-country markets of Europe, the United Kingdom, and the United States.
The third section presents an empirical model to estimate the influence of various drivers of service exports from India using cross-country data. The results suggest that, although factors such as human capital, telecommunication infrastructure, and institutions are critical to explaining a country’s service exports, these factors alone cannot explain the amount of India’s OCS exports.

Because a large part of India’s service exports remains unexplained econometrically, the fourth section evaluates the role of specific policy and other factors that drive India’s service exports. This section discusses the country’s import policy in intermediate goods and intellectual property protection, the role of the National Association of Software and Services Companies (NASSCOM), the incentive schemes, the establishment of software technology parks, and the interplay between the Indian diaspora and exports. Because there are no systematic and objective data available on these factors, this information cannot quantify the way the factors affect India’s service exports. The final section describes policy lessons.

The Growth of Services in India from an International Perspective

Services have played an important role in the Indian growth story, contributing nearly two-thirds to the growth of GDP in recent years, and this contribution has increased over time.1 Within the service sector, tradable and modern services have grown at the fastest pace, and, over time, the share of exports in service value added has increased. Thus, exports of services appear to have played an important part in India’s recent growth.

This section first documents the growth of services in India and places it in an international perspective. It then analyzes the factors that explain the growth of services in India using variation across Indian states. Finally, the section characterizes the services that have grown the fastest.

Sectoral shares and growth rates

Figure 3.1 displays agriculture, industry, and services as a share of India’s GDP during the postindependence period (1950–2010).2 The share of the service sector increased from 30 percent of GDP in 1950/51 to 57 percent in 2008/09, and the pace accelerated as the period progressed. The rise of industry, in contrast, has been less eventful in recent years. The share of manufacturing rose rapidly in the first 15 postindependence years, reflecting the country’s emphasis on heavy industry, but the share rose more modestly from the mid-1960s to the early 1990s. Following a small increase at the outset of the 1990s, which reflected a
wave of liberalization, industry’s share then stagnated. The share of agriculture has declined steadily over time. Figure 3.2 shows the average growth rates of agriculture, services, and manufacturing and industry over the same period. It shows even more clearly that the growth rate of services has accelerated while that of agriculture has declined.\(^3\)

Eichengreen and Gupta (2009) estimate the relationship between the share of services in GDP and per capita income as a quartic polynomial in log per capita income using data for some 80 countries for the 1950–2006 period.\(^4\) They show that the service sector grows in two waves (see figure 3.3). In the first wave its share of output rises at modest incomes but at a decelerating pace as growth proceeds, leveling out at a per capita income of US$1,800 U.S. purchasing-power-parity dollars for 2000. In the second wave, the share of the service sector begins climbing again at a per capita income of roughly US$4,000 before eventually leveling off again. The evidence also shows that the second wave starts at lower incomes after 1990 than in earlier years.\(^5\)

Comparing India against these cross-country relationships shows that the Indian service sector was stunted all through the 1950–90 period, with the gap widening after 1960. Although the share of services rose rapidly starting in the 1980s, India continued to lag the international norm. After 1990, there is rapid

---

**Figure 3.1.** Agriculture, Industry, and Services as a Share of India’s GDP, 1950–2010

Source: Data from the Central Statistical Organization.
convergence to the predicted values. As of 2005, India’s service sector share increased to a level significantly above that predicted by the international cross-section for a country with India’s level of per capita income.

The service share in India has two significant features. First is the size of the service share relative to GDP, and second is the growth rate of the sector. In terms of size, India remained at or below the level predicted by cross-country data until a few years ago; hence, it has not been an outlier for most of the 1950–2006 period. However, the pace of the sector’s growth has been much higher than the pace estimated for the sample. Thus, the relevant question to ask is, how did the Indian service share catch up to the cross-country data norms so fast?

Figure 3.4 is the analogous relationship for industry. It shows that the share of industry rises rapidly at low incomes, peaking around 40 percent of GDP and at an income level of US$8,000 (in U.S. purchasing-power-parity dollars for 2000). The figure also shows that the share of the industrial sector tends to peak at a lower level of per capita income. The observations for India suggest that until the mid-1990s the industrial sector was larger than the international norm.
Figure 3.3. Service Sector’s Share of India’s GDP and Log Per Capita Income, by Sector, 1950–2006


Note: The estimated relationship is based on regressions of the share of services in GDP on a quartic polynomial in log per capita income and country fixed effects. The regressions allow for a different intercept in the three periods indicated and for different slope parameters for the 1990–2006 period.
Figure 3.4. Manufacturing Sector’s Share of GDP and Per Capita Income, 1950–2006

Source: Eichengreen and Gupta 2010.

Note: The estimated relationship is based on regressions of the share of manufacturing in GDP on a cubic polynomial in log per capita income and country fixed effects. The regressions allow for a different intercept in the three periods indicated and for different slope parameters for the 1990–2006 period.
Since then, the pace of industry growth has been the same as that of overall GDP, thus keeping the share of industry stagnant.

**Where is service growth concentrated in India?**

Some observers have worried that the growth of services in India is concentrated in the informal sector, in personal services, and in public administration—activities with little scope for productivity improvement and with limited spillovers.

Eichengreen and Gupta (2009, 2010) look at the trends in various services in a sample of Organisation for Economic Co-operation and Development countries during the 1970–2005 period, and they place the Indian experience in that context. They divide services into three groups. Group 1 includes traditional services such as retail and wholesale trade, transport and storage, public administration, and defense. Its share in GDP tapers at the middle- and high-income levels. Group 2 includes a hybrid of traditional and modern services consumed mainly by households, such as education, health, and social work; hotels and restaurants; and other community, social, and personal services. Its share increases linearly with per capita income. Group 3 includes modern services consumed by households and companies, such as financial intermediation, computer and business services, communications, and legal and technical services. Its share increases at a faster rate as the per capita income increases. Eichengreen and Gupta show that, for India, the shares of group 1 and group 2 services are as predicted in the cross-country data, but the share of value added in group 3 services increases at a much faster rate in India than in other countries.

The fastest-growing services in India are business, communication, and banking, all of which belong to group 3. Business services include computer-related services, machinery rental, accounting, legal services, technical services, and research. The computer service sector constituted about 80 percent of business services in 2008/09, and it is the fastest-growing sector. Financial services include insurance and banking, which is the largest and fastest-growing sector. Other rapidly growing sectors include hotels, restaurants, education, and health (all of which are group 2 services), as well as trade and transport (group 1 services). The transport sector includes road, railway, air, and water transport. The most dynamic of these sectors is road transport, which has increased sixfold since 1991. The rapid growth of trade and transport, which are placed in group 1 on the basis of the experience of other countries, is presumably an effect of post-1991 reforms. The stagnant service sectors in India have been public administration and defense (the growth of which seems to have leveled off) and miscellaneous other personal services.
Figure 3.5 shows that the share of group 1 services stagnated following an early period of rapid growth. The share of group 2 services continued growing steadily, while that of group 3 has accelerated since 1990. Thus, overall, India has been moving toward high-tech services.

Some observers have dismissed the growth of modern services in India on the grounds that these activities are small as a percentage of GDP and, therefore, can contribute only modestly to the growth of GDP. However this critique is incorrect. The contribution of various services to GDP growth can be calculated by multiplying the share of each service sector in GDP by the service sector’s growth rate. Such calculations indicate that the contribution of communication, business services, financial services, education, health, and hotels and restaurants has increased over time to more than 4 percent of service growth (roughly half of total growth) from 2000 to 2008. These activities alone can explain most of the acceleration in service sector growth. The contribution of trade, transport, and public administration and defense to service growth has remained stable at 3.5 percent since the 1980s, indicating that these activities have not played a role in service growth acceleration.

**Figure 3.5. Service Activities in Groups 1, 2, and 3 as a Share of GDP, 1950–2008**

Source: Data from the Central Statistical Organization.

Note: Group 1 includes public administration and defense, as well as trade and transport; group 2 includes education, health, and hotels; and group 3 includes communication, financial services, and business services. Other personal and social services are excluded from group 2.
What factors can explain the growth of services in India?

Next, the proximate factors behind the growth in value added in services in India are analyzed. Using the annual service growth data of various services for 1980–2007, one may estimate the following equation:

\[
Growth_{it} = \alpha (\text{Size}_{EU \text{ KLEMS}, \text{initial}} - \text{Size}_{\text{ind.}, -1}) + \beta PCY_t + \text{Tradability services}_i + \lambda \text{Skilled labor}_i + \rho \text{Liberalization}_i + \tau \text{Correlation with ind}_i + \epsilon_{it}.
\]

The dependent variable is the growth in value added of service \(i\) in year \(t\). The first explanatory variable is the difference between service \(i\) as a percentage of GDP in other countries and service \(i\) as a percentage of GDP in India.\(^8\) This variable captures catch-up. For instance, if the initial share is unusually small, the service activity is likely to grow unusually rapidly, all other things being equal. Other explanatory variables include per capita income, tradability of the service in question, skilled-labor intensity, whether the sector has been liberalized, and whether growth of the activity in question is correlated with industrial growth (as a proxy for outsource capability).\(^9\)

Results are in table 3.1. They suggest that the growth is higher for services that have an unusually small share to begin with, measured against their share in the

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size gap</td>
<td>0.31</td>
<td>0.35**</td>
<td>0.48**</td>
<td>0.12</td>
<td>0.10</td>
<td></td>
</tr>
<tr>
<td>(1.48)</td>
<td></td>
<td>(1.98)</td>
<td>(2.46)</td>
<td>(0.54)</td>
<td>(0.27)</td>
<td></td>
</tr>
<tr>
<td>(6.17)</td>
<td>(7.78)</td>
<td>(8.03)</td>
<td>(7.51)</td>
<td>(7.20)</td>
<td>(7.42)</td>
<td></td>
</tr>
<tr>
<td>Tradable (dummy variable)</td>
<td>5.59***</td>
<td>5.62***</td>
<td>4.40***</td>
<td>4.28**</td>
<td>3.95***</td>
<td></td>
</tr>
<tr>
<td>(7.85)</td>
<td>(7.94)</td>
<td>(5.28)</td>
<td>(2.48)</td>
<td>(3.84)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Skilled labor intensity</td>
<td>-0.05**</td>
<td>-0.01</td>
<td>-0.01</td>
<td>-0.01</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(2.05)</td>
<td>(0.45)</td>
<td>(0.32)</td>
<td>(0.34)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Liberalization (index)</td>
<td>3.14**</td>
<td>3.25*</td>
<td>3.69***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(2.57)</td>
<td>(1.71)</td>
<td>(3.44)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Correlated with industrial growth (dummy variable)</td>
<td>-0.16</td>
<td>-0.47</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(0.09)</td>
<td>(0.45)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Observations</td>
<td>252</td>
<td>252</td>
<td>252</td>
<td>252</td>
<td>252</td>
<td>252</td>
</tr>
<tr>
<td>(R^2)</td>
<td>0.13</td>
<td>0.36</td>
<td>0.37</td>
<td>0.39</td>
<td>0.39</td>
<td>0.39</td>
</tr>
</tbody>
</table>

**Table 3.1.** Explaining Service Growth in India, 1980–2007

**Dependent variable: growth in value added of different services**

*Source:* Authors’ calculations.

*Note:* Regression equation estimated is in equation 3.1. Robust t-statistics are in parentheses.

\* = significant at the 1 percent level; \** = significant at the 5 percent level; \*** = significant at the 10 percent level.
advanced countries, which is consistent with the catch-up argument. For every 1.0 percent of GDP that the service share is lagging, growth is 0.4 percent higher. Tradable services and service sector activities that have been liberalized have grown faster, all other things being equal. Tradable services have grown by 4 percent a year, and liberalized sectors have grown by 3 percent a year.\footnote{10}

The difference between service sector growth and industrial sector growth remains somewhat puzzling. If the service and industrial sectors operate under the same broad regulatory framework in India, and with generally the same infrastructure, then why has the service sector been able to overcome these barriers while the industrial sector struggled?\footnote{11}

There can be two reasons for the difference. First, the service sector does not face the same regulations (including the labor laws) as the industrial sector. Second, services do not rely on infrastructure as much as industries do. Perhaps both explanations are correct. Gupta and Kumar (2010) use the state-level variation in the shares of services and industry and in the regulatory framework and infrastructure to examine if these factors are associated with the shares of services and industry in the domestic product of the states. They estimate the following regression for the period 1980–2005:

\[
\left( \frac{\text{Services}}{\text{SDP}} \right)_{jt} = \alpha \left( \frac{\text{Services}}{\text{SDP}} \right)_{j1980} + \beta (\text{LogPerCapitaNSDP})_{jt-5} + \gamma (\text{LogPopulation})_{jt-5} + \delta (\text{LiteracyRate})_{jt-5} + \lambda (\text{PhysicalInfra})_{j} + \chi (\text{LaborMarketRegulation})_{j} + \varphi (\text{ProductMarketRegulation})_{j} + \text{YearFE} + \varepsilon_{jt}. \tag{3.2}
\]

Results are shown in table 3.2. The dependent variable in the equation is the share of the service sector in the net state domestic product (SDP) of state \(j\) at time period \(t\). Among the variables included as explanatory variables is the initial share of services in SDP of the respective states in 1980 \(\left( \frac{\text{Services}}{\text{SDP}} \right)_{j1980}\). This variable also serves to capture initial conditions and state-specific features. Other variables include the lag of the log per capita income (as measured by net SDP per capita), lag of the total population of the state, and lag of the literacy rate. Measures of the state’s physical infrastructure, labor market regulation, and product market regulation are also included; all three of these variables are time invariant. The specification in equation 3.2 is estimated using ordinary least squares for the years 1980, 1985, 1990, 1995, 2000, and 2005, and all regressions include year fixed effects.

The analysis starts with a very parsimonious specification and then adds more state features to examine what influences the size of the service sector. Columns 1 through 5 of table 3.2 show the states that had a higher initial share of services in SDP continue to have a higher share over the next 25 years. Similarly, bigger states, as captured by the population, also have a larger share of services in SDP.
As mentioned earlier, a large number of services cater directly to the final consumer; therefore, a larger population translates into more demand and, hence, a bigger service sector in bigger states.

Another interesting pattern that emerges is the importance of literacy rates. States with a higher literacy rate tend also to have a bigger service sector. This pattern suggests that the service sector requires better-educated employees than other sectors, not only in terms of the need for highly qualified engineers, but also in terms of the need for workers with minimum education and language skills to staff call centers or customer services in a retail store or bank. This explanation is in line with previous research on the service sector by Amin and Mattoo (2008), who assess the importance of skilled labor availability to per capita GDP and value added in agriculture, manufacturing, and services in 14 major Indian states. Using panel data over the 1980–2000 period and controlling for other factors, their system (generalized method of moments) suggests that greater availability of skilled workers had a statistically significant and positive effect on per capita output of the aggregate service sector. Figure 3.6 shows that states that have been the most successful in creating institutions of higher learning have the highest per capita output of services.
Regarding the role of state features such as infrastructure and regulatory barriers, the estimates show that states with better physical infrastructure have a lower share of services in their SDP or a larger share of industry. One possible way to reconcile this finding is that in states with poor infrastructure, as determined by the level of per capita income and literacy, manufacturing activity is small; thus, services as a share of GDP is higher. Finally, states with a more regulated labor market have a higher share of services, which suggests that in such states businesses choose to avoid the manufacturing sector and opt for the less regulated service sector. This evidence regarding labor market regulations is weak in columns 1 through 5 of table 3.2 and stronger in columns 6 and 7 (when the initial share of services is not included).

An equation similar to equation 3.2 is also estimated for the industry sector, and, using an alternative approach, two equations (one for the share of industry and one for the share of services) are estimated using a seemingly unrelated regression estimation approach. The results show that the relative size of the service sector and the growth of services are not constrained by a heavy regulatory burden or by the deficiency of infrastructure. However, the factor that may have a bearing on the performance of the service sector is the availability of skills.

In summary, this section has established that Indian service growth has been exceptional in comparison to the cross-country standards and, in particular, in the growth of modern services. Commensurate with the high growth of services is the growth of tradable services and exports as a share of total service value added,
with their contribution to service growth increasing over time. The next section discusses the various characteristics of service exports from India.

**Characteristics of India’s Service Exports**

*Cross-border service exports from India*

The phenomenal increase in service exports over the past decade has raised India’s service exports to 34 percent of total exports in 2009, as shown in figure 3.7. Service exports as a percentage of GDP are also increasing rapidly—that is, from less than 2.0 percent in 1990, the preliberalization year, to more than 8.6 percent in 2009. India’s service export performance is outstanding, not only with respect to aggregate exports from the country, but also relative to global service export performance. India’s share in the world’s service exports has grown from 0.5 percent to 2.5 percent since liberalization in the early 1990s.

Which disaggregated service exports from India have been responsible for this phenomenal growth in aggregate service exports? Service trade is broadly concentrated in the following three categories: transport, travel, and OCSs. In the case of India, the share of OCS exports in commercial service exports increased dramatically from 45 percent in 1990 to 78 percent in 2008, with the corresponding shares

![Figure 3.7. Importance of Service Exports in Aggregate Exports, 1970–2009](source: World Bank’s World Development Indicators database.)
of transport and travel service exports each declining to 11 percent from 21 percent and 34 percent respectively.

OCSs comprise a gamut of services: communications; insurance; computer and information services; other business services; government services; construction; financial services; royalties and license fees; and personal, cultural, and recreational services. Within OCSs, the segments that have seen the sharpest relative increase in exports are (a) computer and information services and (b) other business services. These two segments are closely related to IT and IT-enabled service (ITeS) exports or to business process outsourcing (BPO) exports. Computer and information service exports from India have grown exponentially since 2000, and other business service exports have also increased rapidly, even during the recent global financial crisis.12

The traditional revealed comparative advantage (RCA) is also calculated using the International Monetary Fund’s balance of payments data, and figure 3.8 depicts the time trend in RCA. An RCA greater than 1.00 suggests that a country has a comparative advantage in the relevant segment, but of greater interest are trends. India’s RCA in service sector exports increased from around 1.00 in the mid-1990s to 1.94 in 2006. OCS exports, with an RCA of 3.33 in 2010, are driving India’s competitiveness in services. Within this broad category of services, computer and information services have maintained an

Figure 3.8. RCA in Disaggregate Services, 1980–2010

![RCA in Disaggregate Services, 1980–2010](image)

Source: World Bank’s World Development Indicators database.
average RCA of around 11.00 for several years, dwarfing the RCA in all other categories of service exports.

Given that computer and information services, as well as other business services from India, have shown remarkable growth in exports, the chapter focuses on the characteristics of these exports in more detail in the following section.

**A closer look at IT and ITeS exports**

Following the spectacular growth of software service exports in the early 1990s, the Reserve Bank of India (RBI) extensively surveyed Indian firms providing these services every three years starting in 2002/03. This section highlights the stylized facts of software service and ITeS exports from India using RBI surveys and NASSCOM data.\(^{13}\)

**How large are India’s software service exports?**

Figure 3.9 shows the composition of India’s software service exports with snapshots taken in 2002/03 and 2007/08 by the RBI (2005, 2009). The low contribution of ITeS exports compared with computer service exports is partly because ITeS exports began only toward the end of the 1990s, whereas computer services have been exported since the early 1980s. Within computer services, most came from IT service exports (US$23.4 billion in 2007/08), whereas software product development was small, implying that computer service exports from India are

---

**Figure 3.9.** Composition of India’s Software Service Exports, 2002/03 and 2007/08

```
<table>
<thead>
<tr>
<th>Year</th>
<th>ITeS (%)</th>
<th>Computer (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002/03</td>
<td>30% (US$2.7 billion)</td>
<td>70% (US$6.4 billion)</td>
</tr>
<tr>
<td>2007/08</td>
<td>23% (US$8.1 billion)</td>
<td>77% (US$26.7 billion)</td>
</tr>
</tbody>
</table>
```

*Sources: RBI 2005, 2009.*
on the low to medium end. Within ITeS exports, BPO services contributed US$7.0 billion, whereas engineering services accounted for only US$1.1 billion in export revenue.14

Where does India export? The destination markets
The share of the destination markets remained fairly stable over the two RBI survey periods (table 3.3). Canada and the United States accounted for about two-thirds of software service exports, and Europe for about one-fourth. The predominance of developed destination countries is explained by four factors. First, lower wages benefit developed destination countries more than they benefit Asian or Latin American economies. Second, developed countries are large consumers of services. Third, India shares a common language with the United Kingdom (a European country that alone accounted for 14 percent of software service exports) and the United States. Fourth, the time-zone difference between India and those countries helps also in conducting round-the-clock business.

Because the United States is the main destination market, more than 75 percent of invoicing is done in U.S. dollars, and that figure has remained stable over time, which makes the profitability of the business sensitive to the dollar-rupee exchange rate.15

What kind of firms export services and how?
Helpman, Melitz, and Yeaple (2004) suggest that differences in firm productivity within the sector can explain the structure of international trade and horizontal foreign direct investment (FDI). Their model goes beyond Melitz’s (2003) finding that serving international markets demands a threshold level of productivity, and

Table 3.3. Destination of Indian Software Service Exports, 2002/03 and 2007/08

<table>
<thead>
<tr>
<th>Country</th>
<th>Share in 2002/03 (%)</th>
<th>Share in 2007/08 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada and United States</td>
<td>63.7</td>
<td>64.0</td>
</tr>
<tr>
<td>Europe</td>
<td>23.7</td>
<td>26.6</td>
</tr>
<tr>
<td>East Asia</td>
<td>5.9</td>
<td>3.0</td>
</tr>
<tr>
<td>West Asia</td>
<td>1.9</td>
<td>0.5</td>
</tr>
<tr>
<td>Australia and New Zealand</td>
<td>1.5</td>
<td>1.6</td>
</tr>
<tr>
<td>South Asia</td>
<td>0.9</td>
<td>0.5</td>
</tr>
<tr>
<td>Latin America</td>
<td>0.2</td>
<td>..</td>
</tr>
<tr>
<td>Other</td>
<td>2.2</td>
<td>3.8</td>
</tr>
</tbody>
</table>

Note: .. = negligent.
their model suggests that, of the firms that export, only the most productive ones engage in FDI. This result is mainly driven by FDI’s involving larger fixed costs than does exporting; hence, only the most productive firms can invest abroad to avoid transport costs. Recently, Bhattacharya, Patnaik, and Shah (2010) have argued that this conclusion does not hold for services in which the marginal cost for transporting is virtually zero. They find that, in the provision of software services from India, distant buyers face uncertainty about the quality of the service contracted. Therefore, only the less productive firms need to invest abroad to reduce risk perception among consumers. Firm-level evidence from the RBI survey suggests that large exporting firms had an export strategy different from that of small firms.

Software service exporting firms from India have four striking features. First, a large proportion of service exporting firms are small (in 2002/03, 58 percent of firms had export revenues below Rs 10 million, whereas in 2007/08 this figure was 30 percent) and contribute less than 1 percent of total software service export revenue (table 3.4). In contrast, large firms constitute a very small proportion of total exporting firms (2.7 percent in 2002/03 and 8.5 percent in 2007/08) but contribute more than 80 percent of total revenue. This trend is in line with the recent literature, such as Eaton, Kortum, and Kramarz (2004) and Melitz (2003), on firm productivity (or size) and export volumes. Specifically, using NASSCOM firm-level data for the Indian software service industry, Manova and Shastry (2006) find that larger firms have higher export volumes.

The second striking feature is that the destination markets for small firms were mainly the same as those for large firms: Canada and the United States. However, as Manova and Shastry (2006) find in the Indian IT industry, the number of trading partners is higher for larger firms. This trend is likely true for the entire Indian software service industry as well.

Third, a larger proportion of small firms choose to deliver services offshore rather than onshore; in contrast, large firms tend to adopt a model with a balanced mix of onshore and offshore service delivery. Over time, however, this balance has shifted toward offshore delivery, perhaps as a result of “learning by doing” or of establishing a reputation of reliable service providers (table 3.4). The static result for small firms may be explained by Helpman, Melitz, and Yeaple (2004), who find that a high fixed cost for onsite delivery may deter small firms from choosing an onshore model. Once a firm chooses an onshore delivery model, the dynamics can be explained by Bhattacharya, Patnaik, and Shah (2010), where uncertainty in the quality of service delivered locks small firms into an onshore delivery model.

A fourth characteristic of successful firms concerns their modes of delivery—that is, whether they deliver the services through cross-border supply (mode 1) or...
Table 3.4. Firm Characteristics and Software Service Exports from India, 2002/03 and 2007/08

<table>
<thead>
<tr>
<th>Export volume (Rs million)</th>
<th>Share of firms (%)</th>
<th>Share of export revenue (%)</th>
<th>Destination of exports (%)</th>
<th>Shoring model (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Canada and United States</td>
<td>Europe</td>
</tr>
<tr>
<td>2002/03</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 10</td>
<td>58.00</td>
<td>0.90</td>
<td>66.27</td>
<td>15.98</td>
</tr>
<tr>
<td>10–100</td>
<td>31.47</td>
<td>5.19</td>
<td>69.30</td>
<td>13.37</td>
</tr>
<tr>
<td>100–1,000</td>
<td>7.79</td>
<td>11.17</td>
<td>65.74</td>
<td>21.73</td>
</tr>
<tr>
<td>&gt; 1,000</td>
<td>2.74</td>
<td>82.74</td>
<td>63.09</td>
<td>24.66</td>
</tr>
<tr>
<td>2007/08</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 10</td>
<td>29.7</td>
<td>0.1</td>
<td>69.3</td>
<td>17.0</td>
</tr>
<tr>
<td>10–100</td>
<td>38.5</td>
<td>1.4</td>
<td>71.7</td>
<td>17.3</td>
</tr>
<tr>
<td>100–1,000</td>
<td>23.4</td>
<td>6.3</td>
<td>69.0</td>
<td>20.8</td>
</tr>
<tr>
<td>&gt; 1,000</td>
<td>8.5</td>
<td>92.2</td>
<td>63.5</td>
<td>27.2</td>
</tr>
</tbody>
</table>

engage in horizontal FDI (mode 3). As suggested by Helpman, Melitz, and Yeaple (2004), a firm’s size may influence its choice of delivery mode.

When Indian software outsourcing firms engage in horizontal FDI, they prefer to provide multiple services. The RBI survey for 2007/08 found that 56.3 percent of exporting firms provided a combination of software services (IT, BPO, software development, or engineering services) through a subsidiary (table 3.5). Moreover, 85.6 percent of these exports were targeted at consumption in the host country, whereas only 10.6 percent were exported to other countries, excluding India. Subsidiaries of IT service firms are located in the destination markets themselves, whereas those of ITeS firms are located in a third country. The service is then exported from that third country to the destination market (which is India for 100 percent of exports in the case of engineering services). For instance, the Philippine subsidiary of EXL Service exports all customer care services to the United States. The underlying differences in the nature of work in the IT and ITeS sectors may explain this pattern.

The RBI survey also finds that 51 percent of outward FDI in the software service sector is destined for English-speaking markets (that is, the United Kingdom and the United States), and that share accounts for 72 percent of total revenue. In most cases, the FDI was market seeking, except in the case of Canada, which acted as a relatively cheap near-shore location for the United States.

**The growing importance of outward FDI from India**

India is widely known for its cross-border service exports (mode 1); however, less well known is that India’s outward FDI increased at a striking rate during the past decade.\(^\text{19}\) Although India started from a much lower base (Pradhan 2009), the country’s annual average growth of outward FDI from 2004 to 2007

<table>
<thead>
<tr>
<th>Service</th>
<th>Share of foreign affiliates (%)</th>
<th>Software business exported by foreign affiliates (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>To host country</td>
<td>To India</td>
</tr>
<tr>
<td>IT services</td>
<td>21.6</td>
<td>96.0</td>
</tr>
<tr>
<td>Software development</td>
<td>3.7</td>
<td>85.7</td>
</tr>
<tr>
<td>BPO services</td>
<td>17.6</td>
<td>22.9</td>
</tr>
<tr>
<td>Engineering services</td>
<td>0.8</td>
<td>0.0</td>
</tr>
<tr>
<td>Other (combination of services)</td>
<td>56.3</td>
<td>91.7</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>85.6</td>
</tr>
</tbody>
</table>

*Source: RBI 2009.*
was unprecedented at 98 percent and far ahead of outward FDI growth in other emerging markets, such as China (74 percent), Malaysia (70 percent), the Russian Federation (53 percent), and the Republic of Korea (51 percent). The percentage increase in recent decades has been higher in the service sector (430 percent) than in manufacturing and has mostly been fueled by overseas acquisitions.

Pradhan (2008a) divides the evolution of outward FDI from India into two periods: the first wave covers 1975–90, and the second wave covers 1991 to the present. The second wave has shown more dynamism with the rise in the number of Indian multinational companies, the emergence of new sectors (diversification), and the increase in exports to new destinations. Figure 3.10 shows the sectoral composition of India’s outward FDI from 1970 to 2007.

The first wave of outward FDI flows was largely driven by manufacturing firms, with internationalization primarily directed at developing countries with similar or lower levels of development relative to India. In the second wave, however, manufacturing outward FDI and service outward FDI were comparable; the service sector constituted 28 percent of total outward FDI, and the manufacturing sector 33 percent. This increase in service outward FDI was largely attributable to the IT industry and the broadcasting and publishing sectors.

Table 3.6 shows outward FDI for selected disaggregate service sectors as a percentage of total outward FDI from India. As in the case of India’s mode 1 exports, the software and ITeS sector stands out even for mode 3 exports, with

**Figure 3.10.** India’s Outward FDI, by Sector, 1970–2007

<table>
<thead>
<tr>
<th>Year</th>
<th>Share of Outward FDI (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1970–79</td>
<td>10</td>
</tr>
<tr>
<td>1980–89</td>
<td>20</td>
</tr>
<tr>
<td>1990–99</td>
<td>30</td>
</tr>
<tr>
<td>2000–07</td>
<td>40</td>
</tr>
</tbody>
</table>

Source: Authors’ calculations based on Pradhan 2008b.
that sector’s share increasing from 3.4 percent of total outward FDI in the 1980s to 13.8 percent in the 2000s.

Another important feature of cross-border Indian FDI during the 1975–90 period was that participants were joint ventures (minority owned) in a large number of outward FDI cases (figure 3.11). Policy that restricted Indian equity participation contributed to the minority participation trend. The 1991 liberalization reforms, however, relaxed such equity restrictions, resulting in outward FDI projects with majority ownership by Indian firms (that is, wholly owned subsidiaries).

**Factors behind the Success of India’s Service Exports: A Cross-Country Analysis**

As discussed earlier, India’s service sector grew dramatically in the 2000s, and service exports partly explain this trend. This section’s discussion moves away from service output and instead uses cross-country data to provide an international perspective on the success of India’s service exports. The following base model of service exports (log levels) controls for GDP, GDP per capita, size of the service sector, and country and time fixed effects. Additionally, the authors show explicitly the coefficient for India’s dummy variable. A positive and significant coefficient on India’s dummy variable indicates that OCS exports from India are higher than its economic fundamentals would suggest.
log(OCS exports)_{it} = FE_i + TE + log(Per capita income)_{it}
+ log(ServicesValueAdded)_{it} + log(GDP)_{it}
+ Indiadummy + \epsilon_{it}, \tag{3.3}

where \(i\) refers to the country and \(t\) represents time.

The estimation includes service exports from 1990 onward and excludes African
countries because of their small number of service exports. The results of the esti-
mation for equation 3.3 are shown in column 1 of table 3.7. The signs of the fun-
damental variables—GDP per capita, service value added, and GDP—are as
expected, and the coefficient for the India dummy variable is positive. Figure 3.12
shows that India’s actual OCS exports first overshot their predicted value in 1998,
which coincides with the growth spurt of India’s ITeS sector.

The next specification adds to the base model Internet penetration as a proxy
for the quality of electronic infrastructure for service delivery, which allows one to
evaluate whether innovations in information and communication technology sig-
nificant affect OCS exports. Column 2 of table 3.7 shows that Internet penetra-
tion does significantly affect OCS exports. The positive and significant coefficient
for the India dummy variable implies that the state of India’s telecommunications
does not explain the country’s success in exporting services.

Column 3 of table 3.7 adds an interaction term for Internet penetration to
India’s dummy variable to evaluate whether the effect of Internet penetration is
larger for India than for the rest of the countries in the sample. The positive and
significant coefficient for this interaction term suggests that the effect of Internet

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{figure311.png}
\caption{Ownership Structure of India’s Outward FDI, 1970–2007}
\end{figure}

\textbf{Figure 3.11.} Ownership Structure of India’s Outward FDI, 1970–2007

\begin{center}
\begin{tabular}{c c c c}
\hline
Year & Joint Ventures & Wholly Owned Subsidiaries \\
\hline
1970–79 & 100 & 0 \\
1980–89 & 70 & 30 \\
1990–99 & 50 & 50 \\
2000–07 & 30 & 70 \\
\hline
\end{tabular}
\end{center}

\textit{Source:} Authors’ calculations based on Pradhan 2008b.
Table 3.7. India’s Position in OCS Exports, 1990–2008  

Dependent variable: log level value of OCS exports (constant 2000 US$)

<table>
<thead>
<tr>
<th>Variable</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
<th>(7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP per capita (constant US$), in logs</td>
<td>3.572***</td>
<td>2.462***</td>
<td>2.430***</td>
<td>2.462***</td>
<td>2.434***</td>
<td>4.584***</td>
<td>4.584***</td>
</tr>
<tr>
<td>[10.096]</td>
<td>[5.116]</td>
<td>[5.090]</td>
<td>[3.772]</td>
<td>[3.785]</td>
<td>[3.288]</td>
<td>[3.288]</td>
<td></td>
</tr>
<tr>
<td>Services value added, in logs</td>
<td>0.966***</td>
<td>0.945***</td>
<td>0.940***</td>
<td>0.926***</td>
<td>0.921***</td>
<td>0.878***</td>
<td>0.878***</td>
</tr>
<tr>
<td>[31.060]</td>
<td>[32.115]</td>
<td>[32.812]</td>
<td>[35.307]</td>
<td>[35.298]</td>
<td>[4.250]</td>
<td>[4.250]</td>
<td></td>
</tr>
<tr>
<td>Internet users per 100</td>
<td>0.006***</td>
<td>0.007***</td>
<td>0.008***</td>
<td>0.009***</td>
<td>–0.006</td>
<td>–0.006</td>
<td></td>
</tr>
<tr>
<td>[3.694]</td>
<td>[4.443]</td>
<td>[4.298]</td>
<td>[5.062]</td>
<td>[–1.644]</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average years of schooling</td>
<td>0.192*</td>
<td>0.152</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>[1.777]</td>
<td>[1.344]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>India dummy</td>
<td>1.169*</td>
<td>2.112***</td>
<td>3.284***</td>
<td></td>
<td></td>
<td></td>
<td>19.319***</td>
</tr>
<tr>
<td>[1.948]</td>
<td>[3.071]</td>
<td>[2.613]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>[3.591]</td>
</tr>
<tr>
<td>Internet Penetration*India dummy</td>
<td>0.355***</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>[4.834]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Schooling years*India dummy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.325***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>[7.030]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost of contract enforcement</td>
<td>–0.012*</td>
<td>–0.012*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>[–1.815]</td>
<td>[–1.815]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contract enforcement cost*India dummy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.049**</td>
<td></td>
</tr>
<tr>
<td>[2.377]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>66.313***</td>
<td>35.827***</td>
<td>40.645***</td>
<td>34.498***</td>
<td>37.463***</td>
<td>69.948***</td>
<td>87.322***</td>
</tr>
<tr>
<td>[8.338]</td>
<td>[3.377]</td>
<td>[3.909]</td>
<td>[2.632]</td>
<td>[3.023]</td>
<td>[3.036]</td>
<td>[3.079]</td>
<td></td>
</tr>
<tr>
<td>Fixed effects (country and time)</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Observations</td>
<td>992</td>
<td>905</td>
<td>905</td>
<td>613</td>
<td>613</td>
<td>226</td>
<td>226</td>
</tr>
<tr>
<td>$R^2$</td>
<td>0.955</td>
<td>0.959</td>
<td>0.961</td>
<td>0.967</td>
<td>0.968</td>
<td>0.997</td>
<td>0.997</td>
</tr>
</tbody>
</table>

Source: Authors’ calculations.
Note: Robust t-statistics are in brackets.

* = significant at the 1 percent level; ** = significant at the 5 percent level; *** = significant at the 10 percent level.
penetration on Indian OCS exports is significantly larger than the effect on OCS exports of other countries.

Recently, Arora and Bagde (2010) noted the importance of human capital in software service exports from India. Between 1985 and 2003, undergraduate engineering baccalaureate capacity increased from about 45,000 (59 per million) to about 440,000 (405 per million), though the total population increased only from 765 million to 1,086 million. The number of engineering colleges in India increased from 246 in 1987, to 353 in 1995, and to more than 1,100 in 2003. Software exports also grew rapidly during this period, and software exports and engineering education capacity appear closely linked. Arora and Bagde’s empirical investigation in 14 states reveals that the relative availability of engineers has created a comparative advantage for India in software service exports.

As seen in column 4 of table 3.7, human capital, as proxied by average years of schooling, helps to explain OCS exports in the sample countries. The coefficient for the India dummy variable, however, is still positive and significant, which implies that schooling does not explain India’s success in OCS exports. In India, the average number of years of schooling was merely five years in 2005, and no other country in the sample with such low levels of schooling has been able to export OCS comparable to India’s value. India is, therefore, an outlier in OCS export performance, which is explained neither by the state of its telecommunication sector nor by the average skill level in the population. However, one needs to
understand that India has a population of more than 1 billion people, and averages in such a large population may not reflect regional variations in endowments. In column 5, the interaction term’s positive and significant coefficient for average years of schooling and India’s dummy variable suggests that the effect of human capital investment on India’s OCS exports would be positive and more significant than its effect on another sample country.

Column 6 of table 3.7 assesses whether the quality of institutions matters for OCS exports—specifically, for India. Literature on growth increasingly emphasizes efficient and properly functioning institutions as preconditions for investment, entrepreneurship, innovation, and, hence, long-term growth. Researchers have argued that institutions confer two types of benefits. First, they enhance long-term growth (Acemoglu, Johnson, and Robinson 2000; Collier and Gunning 1999). Second, they impart resilience to an economy, allowing it to adjust to exogenous shocks (Rodrik 1999). That institutions play a critical role in a country’s economic development and in the trade of different goods (Berkowitz, Moenius, and Pistor 2006) is now well established. Certain institutions may, however, play a more significant role in the development of service sectors for three reasons: (a) market failure caused by informational problems is more acute in many intangible and invisible intermediation and knowledge-based services; (b) market failure caused by natural monopoly or oligopoly is a serious issue for locational services such as roads, rails, or energy distribution, because they require specialized distribution networks; and (c) suppliers and consumers of customized services make relationship-specific investments that make them more sensitive to the contracting environment of the exporting country.

The cost of contract enforcement from the Doing Business database measures the quality of institutions. Because the variable for human capital collected by Barro and Lee (2010) ends in 2005, whereas the Doing Business variable starts in 2004, the variables cannot be used together in one regression because of limits on the number of observations. Column 6 of table 3.7 shows that the cost of contract enforcement negatively affects OCS exports; however, the quality of institutions also does not explain India’s success. In column 7, the positive and significant coefficient for the interaction term of India’s dummy variable and the contract enforcement variable reveals that the high cost of contracting is more taxing in India than it is for other countries sampled.

Researchers increasingly believe that the root cause of a country’s backwardness may lie in its history. For example, the quality of a country’s institutions may be related to its colonial history. Many institutions are slow to change, which prompts pessimism about the likelihood of a country’s residents escaping the poverty trap. An interesting question concerns whether building effective
educational institutions through a combination of domestic policy action and external assistance is feasible in the medium term. If it is feasible, then according to the finding that the quality of higher education is a key determinant of the service sector’s dynamism, investments in higher education could alleviate the constraints of inadequate institutional development in the medium term.

Overall, results indicate that comparing the quality of India’s telecommunication infrastructure, human skills, or institutions to those of other countries does not fully explain India’s success in exporting services. Thus, the contribution of specific factors, such as government policy and the role of the Indian diaspora, must be considered.

**The Role of Specific Factors in India’s Export Success**

The growth of the Indian IT and ITeS sectors, despite the apparent backwardness of India’s IT penetration levels, points to the concerted policies and vision espoused by the government and industry in the 1980s and especially in the 1990s to promote software exports and transfer of technology and telecommunication links. However, what is puzzling about the explosive growth of India’s IT sector is how and why India emerged as a global leader in a cutting-edge industry when, despite strenuous policy efforts, it failed to achieve such leadership in any other technology-intensive sector (except pharmaceuticals).

Although the conventional explanation of comparative advantage (low-cost, high-skilled human resources) may continue to hold true, concluding that the government played no role in the development of the sector may be wrong. The review of literature shows that, unlike other sectors of the Indian economy, the state intervention was markedly different in India’s IT sector (see, for example, Kapur 2002; Saxenian 1999, 2000, 2004; Srinivasan 2005). The literature also shows that the historical roots of industry lie in state intervention, whereas its later development owes some degree of success to the facilitative nature of state policies. Several policies, discussed next, have played a key role in promoting software service exports from India.

**Import policy**

Starting in the 1970s, tariffs on computer and software imports for training educational institutions were reduced. Software exporters were allowed quicker clearance from customs. The new computer policy of 1984 made the procedures for importing hardware quicker and easier. The import duty on hardware was reduced from 135 percent to 60 percent and on software from 100 percent to 60 percent. Later, this policy also allowed 50 percent of software export earnings,
well above the obligation in any given year, to be used to purchase foreign exchange permits to buy a range of goods (including more computers). In 1986, shifting from quantitative restrictions to tariff protection liberalized software import policy, and all firms were allowed to import software after paying the 60 percent import duty. However, the software export requirement was made more stringent; the export obligation from importing foreign computers had to be achieved in four years rather than five and needed to be backed by bonds and bank guarantees.

In 1988, a 10 crore rule was introduced, whereby large software firms (exporting more than Rs 100.0 million, or US$7.1 million) were allowed to pay off their export obligations in whatever manner they chose. This provision was expanded to include small firms in 1993. Software import policy also changed. The 1988/89 budget permitted accompanying software and start-up spares that were imported under the software export policy to be subject to duty at the same rate as the main hardware, rather than at the previous rate of 250 to 300 percent.

The five-year export-import policy of 1992 allowed free export and import of all products except those on the negative list. The products on the negative list that directly related to the software industry were computers (including personal computers) priced at or below Rs 150,000 (US$8,572.00) and keyboards and monitors priced at or below Rs 7,500 (US$428.50). Other measures included a guarantee of the exchangeability of the rupee and a reduction of import duties. Import duties on software imports were reduced to 110 percent in 1992 and to 85 percent in 1993. These duties were split in 1994 to 20 percent for application software and 65 percent for system software and were then reduced to 10 percent for both categories in 1995. The Export Promotion Capital Goods Scheme, which allows a 15 percent import duty for a 400 percent export obligation that is more than five years, was extended to include service exports in 1993.

**Export processing zones**

As long ago as 1976, IT firms were permitted to operate from export processing zones (EPZs), however, the software technology park (STP), an EPZ focused solely on software services, was formed in 1986. Under the STP project, a building furnished with communication and other utilities was to be shared by firms exporting 100 percent of the software they developed. The objectives of STPs were to establish and manage infrastructure resources such as data communication facilities, core computer facilities, built-up space, and other common amenities; to provide one-stop-shop statutory services such as project approvals, import certification, software valuation, and certification of exports for software exporters; to promote development and export of software services through
technology assessments, market analyses, market segmentation, and marketing support; and to train professionals and encourage design and development in the software technology and software engineering fields.

By allowing duty-free imports of computer hardware, STPs aimed to promote software development. Firms in STPs were allowed tax exemptions; were guaranteed access to high-speed satellite links; and were provided reliable electrical power, core computer facilities, ready-to-use office space, and communication facilities. They were allowed to import equipment free of duty and without licenses. Total foreign ownership was permitted in exchange for the obligation to export. Firms were allowed to repatriate capital investments, royalties, and dividends for free once they paid the taxes due.

Backed by the government of Karnataka, Texas Instruments was the first firm to take advantage of STP policy. It established its own STP by installing communication equipment on the roof of a building in Bangalore (RIDA 1996). Later, in 1991, an organization called Software Technology Parks of India (STPI) was established under the Department of Electronics and began constructing STPs in three cities: Bangalore, Pune, and Bhubaneswar. STPI’s efforts spread further with time. In 1992, the government permitted the construction of private STPs anywhere in India. By 1995, about 400 companies were recognized as companies situated in STPs. By 2008/09, 8,455 units were registered as operating units in STPs, of which 7,214 were registered as exporting units. Although data quantifying the benefits of STPs are not available, the tax and the duty incentives offered to companies in an STP considerably helped to expand India’s IT and ITeS exports. Figure 3.13 suggests the increase in exports resulted from STP policy.

**Foreign investment policy**

The new computer policy of 1984 allowed private companies, including the foreign-owned ones, to engage in the production of high-performance (32-bit) computers, which formerly only state-run companies could do. Similarly, under the 1984 policy, companies with up to 40 percent foreign equity holdings (covered by the Foreign Exchange Regulation Act) and very large companies (covered by Monopolistic and Restrictive Trade Practices Act) were allowed to produce software. In 1986, wholly foreign-owned software companies were allowed to produce software as long as the product was 100 percent export oriented. In addition, several policy changes were introduced to speed up foreign company applications. With the 1991 reforms, foreign investment in the Indian software and electronics sectors of up to 51 percent of the total capital was allowed under the automatic route, as long as the value of investment exceeded the value of the capital goods imported.
Investment in education and human capital

Besides establishing the famous Indian Institutes of Technology, the government has taken several steps to accumulate a large pool of service professionals. For instance, the computer policy of 1984 established several research institutes, private training institutes, and organizations for software development. Recently, a government-led program called Human Resource Development in IT has sought to make everyone computer literate, to increase Internet use in all aspects of life (including in banking), to improve the quality of IT education in all levels of schooling, and to train skilled IT workers.

Policy on intellectual property

In 1984, software was placed under the Copyright Act, which made software piracy punishable by fines or imprisonment. The 1995 agreement forming the World Trade Organization (which replaced the General Agreement on Tariffs and Trade) included provisions concerning intellectual property rights and confirmed that raids, fines, and imprisonment could be used against software pirates. The Copyright Act spurred domestic sales of authorized products.
and also stimulated development of Indian software products and packaged software.

The role of industry associations

In 1988, the industry organization NASSCOM was established to contribute to the development of the Indian software industry. NASSCOM gave Indian IT and ITeS companies a unified voice and played an instrumental role in the industry’s policy-making process at various levels. The organization worked with the Indian government to promote the sector’s interests (Kapur 2002). NASSCOM was very influential in building and strengthening India’s global reputation as a premier outsourcing destination. In 1999, NASSCOM initiated the India-Europe Software Alliance program to increase strategic alliances, joint ventures, and partnerships between companies in India and Europe. In 1999/2000, software exports to European countries reached 23.5 percent of total software exports (in 1997/98, software exports were 20.0 percent). In 2000, NASSCOM developed a software cooperation project with Japan, the India-Japan Software Alliance. NASSCOM has also signed several trade contracts with countries such as Ireland, Israel, Mexico, Morocco, and Singapore to expand the geographic reach of Indian software companies beyond Japan, North America, and Western Europe.

To ensure a steady supply of quality IT and ITeS professionals in India, NASSCOM started an assessment and certification framework called the NASSCOM Assessment of Competence (NAC). The aim of the NAC is to facilitate a continual flow of talent through a standard assessment and certification process. NASSCOM also set up the National Skills Registry (NSR) as a database of IT industry workers. NSR develops a fact sheet about each professional and compiles background check reports. NSR’s efforts constitute a security best practice for the industry and ensure that honest professionals receive identity security and industry acceptance.

To uphold a high level of data privacy and security standards, NASSCOM developed the Data Security Council of India (DSCI). DSCI’s mission is to ensure that Indian companies are trustworthy global sourcing providers and to send clients a worldwide message that India is a secure outsourcing destination where privacy and protection of customer data are enshrined in the industry’s global best practices.

The important role played by NASSCOM is visible in the steady increase in its membership. In 1988, NASSCOM had 38 members, which together contributed close to 65 percent of the revenue of the IT and ITeS industry. Since then, NASSCOM membership has grown significantly to reach more than 1,300 members in 2008. These members currently account for more than 95 percent of the revenues of the IT and ITeS industry in India.
The role of the Indian diaspora

The Indian diaspora has been very successful in knowledge-intensive sectors in the United States, especially in the IT sector. Almost simultaneously, a very competitive and successful IT industry emerged in India, which may be partly attributed to the Indian diaspora. Several nonprofit institutions, such as The Indus Entrepreneurs (TiE) and the Silicon Valley Indian Professionals Association (SIPA) were set up because of the diaspora. Members of TiE, which was originally designed as a Silicon Valley organization, mentored promising young IT expatriates. TiE and SIPA developed a worldwide network of Indian professionals and have substantially influenced the Indian IT industry and government policies. Some returning members of the Indian diaspora started several major software companies (such as Cognizant Technology Solutions, Techspan, and Mphasis), and others invested in nascent IT and Internet-based companies in India.

By 1999, Indian expatriates constituted 24 percent of the population of IT professionals in Silicon Valley (Mathur 2007). This high percentage was fueled, in part, by the success of Indian IT professionals abroad, which supported the positive reputation of Indian engineers. The growing diaspora in Silicon Valley allowed for offshoring of IT services to India because Indian employees, having firsthand knowledge about India, had credibility in assuring foreign clients that India’s well-known infrastructure and bureaucratic problems could be overcome. U.S. investment and outsourcing partly drove the Indian software industry’s annual growth to 40 percent during the 1990s.

By the late 1990s, the Indian government started to recognize that connections with Indian expatriates could help promote the domestic market for IT. To address the effects of “brain drain,” the Indian government instituted mechanisms that strengthened ties between the diaspora and India. India’s Ministry of Science and Technology formed a high-level committee on the Indian diaspora in 2000 to facilitate communication and interaction between expatriates and their home nation. The organization’s 2002 report recognized that Indian scientists abroad were keen to contribute to India. Thus, the government started various bilateral programs. The first of these programs was an exchange program called Transfer of Knowledge through Expatriate Nationals (TOKTEN). The concept, developed by the United Nations Human Development Program, encouraged expatriate nationals to undertake short-term consultancies in their home countries. In India, TOKTEN enabled 650 professionals to visit 250 institutions from 1980 to 2001 (Mathur 2007). Establishing alumni networks for the government-funded Indian Institutes of Technology was another method of encouraging interaction. Two other government initiatives for connecting with the diaspora were notable. First, the government set up advisory panels with eminent nonresident Indians. These panels spurred
investment and led to several IT joint ventures. Second, the government encouraged the placement of many nonresident Indians in honorary fellowships at universities through an effort funded by professional scientific and technical societies.

By 2000, Indian engineers were at the helm of 972 Silicon Valley–based technology companies, which accounted for approximately US$5 billion in sales and 25,811 jobs based out of Silicon Valley. Moreover, the pace of Indian entrepreneurship accelerated rapidly in the 1990s; Indians ran only 3 percent of the technology companies in the United States that were started between 1980 and 1983, but they ran 10 percent of such companies started between 1995 and 2000.

Conclusion

As part of its reform package during the economic crisis in 1991, India liberalized its service sector and opened the economy to trade. India now ranks as the largest exporter of software services from the developing world. The establishment of world-class educational institutes, such as the Indian Institute of Engineering, further allowed India to take advantage of IT innovations. Using other commercial service trade data from the World Bank’s World Development Indicators, this chapter tries to explain India’s success in exporting services and to compare India’s determinants with those of the rest of the world. Although fundamental variables such as human capital, electronic infrastructure, and institutions have a larger effect on India’s service exports, they cannot fully explain India’s success in exporting services. Thus, India’s service sector policy is examined to discover the reasons for its exporting success.

A descriptive analysis of software sector policy suggests that the import policy, which allowed for hardware and equipment imports at lower tariffs; the relaxation in foreign equity participation; and the establishment of STPs providing world-class infrastructure and tax incentives have also played a role in promoting service exports. NASSCOM, the industry association for software services, reinforced these policies, thereby deepening India’s ties with developed countries in Europe and Japan. Hence, NASSCOM played a key role in marketing the Indian brand and influenced the evolution of policy.

Annex 3.A: Variables, Definitions, and Data Sources

Table 2.A.1, in the annex to chapter 2, defines the variables used in this study and describes the data sources. Table 2.A.2, also in chapter 2, provides a partial correlation of the electronic infrastructure variables.
Notes

1. This section draws on Eichengreen and Gupta (2009, 2010).

2. The Central Statistical Organization, the main source of data for GDP and sectoral growth rates, defines agriculture as including forestry and fishing and defines industry as encompassing manufacturing, electricity, gas and water, mining and quarrying, and construction. Year 2007/08 refers to the period from April 2007 to March 2008 (fiscal 2008 in India); alternatively, the chapter refers to the period as 2007.

3. Contrary to the perception of poor industrial sector performance, the growth of industry has averaged 6 percent to 7 percent since 1990 and has improved since the turn of the century. Manufacturing (industry net of mining and quarrying; electricity, gas, and water; and construction) grew by a robust 8 percent a year from 2000 to 2007.

4. Regressions include country fixed effects, and they allow for a different intercept in the 1970–89 period and the 1990–2006 period and for a different slope in the 1990–2006 period. For more detail, see Eichengreen and Gupta (2009).

5. Data also show that this two-wave pattern—specifically, the greater importance of the second wave in middle- and high-income countries—is most evident in democratic economies, in economies that are close to major financial centers, and in economies that are relatively open to trade (both general trade and trade in services).

6. The estimated size of industry as a share of GDP is from Eichengreen and Gupta (2010) and is based on a cubic polynomial relationship between the industry share and the log per capita income. As discussed earlier, regressions include country fixed effects, and they allow for a different intercept in the 1970–89 period and the 1990–2006 period and for a different slope in the 1990–2006 period. India’s behavior in terms of agriculture as a share of GDP (not shown in figure 3.4) is unexceptional. The share matches the predicted downward-sloping relationship with respect to income.

7. In the 1990s, modern services contributed nearly as much to aggregate growth as did agriculture or manufacturing. Since 2000, communication services have contributed more to GDP growth than has agriculture.

8. The gap is calculated as the difference between the respective services as a share of GDP in the EU KLEMS sample. The 2008 EU KLEMS release spans 1970–2005 for the 15 founding (pre-2004) European Union (EU) member states and for Australia, Japan, the Republic of Korea, and the United States. Data from 1995 onward are available for states that joined the EU in 2004. Industries are classified according to the European NACE revision 1 classification, but the level of detail varies across countries, industries, and variables owing to differences in national statistical procedure. The analysis in this chapter does not include the new member states and also drops Luxembourg and Portugal, for which there are data availability problems. Thus, data are for Australia, Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Japan, Korea, Netherlands, Spain, Sweden, the United Kingdom, and the United States.

9. The correlation variable is based on the correlation coefficients between service growth and growth in manufacturing, calculated over various time periods. The correlation coefficients are consistently significantly different from zero for three services: trade, hotels and restaurants, and transport. Tradability is indicated by a dummy variable, which takes a value of one if the service is considered to be tradable and has a value of zero otherwise. This indicator is based on Jensen and Kletzer (2005). Details are in appendix C of Eichengreen and Gupta (2009).

10. The growth of tradable services and of services that have been liberalized has been much faster since the 1990s compared to the 1980s.

11. Some people suspect that one reason for the service sector’s fast growth and the industrial sector’s slow growth is the increasing outsourcing from industry to services over time. Thus, the stagnant share of industry in India and the increasing share of services could, in a sense, merely be a relabeling phenomenon. Eichengreen and Gupta (2010) do not find evidence to support the view that the outsourcing from industry to services is increasing. They show that only a small fraction of the growth of demand derives from the outsourcing of activities from manufacturing to services;
rather, most production that does not go toward exports derives from the growth of final demand at home.

12. Borchert and Mattoo (2010) find that India’s exports to the United States, which are relatively specialized in service exports, declined less during the global financial crisis than the exports of developing countries and regions for which services are less important, such as Africa (15 percent in aggregate exports), Brazil (12 percent), and China (9 percent). The contractions in those economies’ total exports (goods and services) to the United States in the fourth quarter of 2008 were as follows: Africa (36.0 percent), Brazil (13.0 percent), China (9.0 percent), and India (2.5 percent).

13. Computer service exports (as defined in IMF 1993 and UN and others 2002) is a much narrower category than software service exports, which includes both computer services as well as ITeS and BPO services. Computer services include development, production, supply, and documentation of customized software, including operating systems made on order for specific users; systems maintenance and other support services, such as training, provided as part of consulting; hardware and software consulting; analysis, design, and programming of systems that are ready to use (including webpage development and design); technical consulting related to software; data processing services such as data entry, tabulation, and processing on a timesharing basis; webpage hosting services; and so on. Most firms that export computer services provide the first two or three of these services because of the high demand for these services in developed countries. ITeS include BPO services and engineering services. A wide range of activities are covered under BPO services, such as customer interaction; finance, accounting, and auditing services; human resource administration; legal services; business and corporate research; medical transcription; content development management; and publishing services. Engineering services include embedded solutions, product design engineering, and architectural services.

14. This analysis is based on the firms that responded to the RBI survey: 912 firms in 2002/03 and 1,070 firms in 2007/08. On the basis of the survey, software exports from India during 2007/08 were estimated at US$34.841 billion. Adding this amount to the software business conducted by the Indian subsidiaries abroad in 2007/08 (US$6.3 billion) makes a total of US$41.1 billion. Thus, the survey estimates are very close to national aggregates published by NASSCOM (US$40.3 billion) in 2007/08.

15. Rupee appreciation in 2007 shaved off almost 15 percent in revenue growth, and IT firms have had to focus on getting only 2 to 3 percent price increases and higher labor productivity to protect their bottom lines (India Knowledge@Wharton 2008).

16. Services have a number of intangible characteristics. Thus, geographic distance introduces significant uncertainty about the true characteristics of the services that are being purchased.

17. The standard models of trade and firm heterogeneity explain why some firms are able to export while other firms are not; however, because the RBI survey covers only exporting firms, this issue is not relevant here. For details on these models, see Antoniades (2008); Bernard, Redding, and Schott (2007); and Melitz (2003).

18. Manova and Shastry (2006) find that larger (in terms of employment) IT firms in India offer a wider variety of services to a wider range of countries (and clients) and sell more products abroad.

19. The authors are grateful to Dr. Jay Pradhan for sharing his work on India’s outward FDI with us.

20. India may be more efficient at exporting services than exporting goods because the relative improvements in education, infrastructure, and institutions have favored growth in service trade more than manufacturing growth. However, given the data at hand, this hypothesis cannot be tested.

21. The state of electronic infrastructure in a country can be gauged by variables such as telephone lines per 100 persons, number of Internet users per 100 persons, use of computers per 100 persons, bandwidth of Internet connection, and number of mobile subscribers per 100 persons. The correlation between these alternative measures of electronic infrastructure is very high. Here the most commonly used variable—that is, Internet penetration per 100 persons—was selected as a measure of the quality of electronic infrastructure.

22. The service sector is characterized by higher skill intensity than is the manufacturing sector. There is a paucity of rigorous empirical literature on the role of human capital in promoting
service exports. For instance, Rodrik and Subramanian (2004) note that India’s productivity growth in the past two decades has benefited from India’s stock of highly educated labor, but they provide no formal evidence. Similarly, Gordon and Gupta (2004) highlight a number of factors behind India’s “service revolution,” but human capital is not one of them. Shand and Bhide (2000) and Ahluwalia (2000), however, include measures of human capital to analyze variations in growth rates across Indian states in the post-1980 period, but both of these studies rely entirely on literacy rates.

23. This study tried using the rule of law, obtained from Kaufmann, Kraay, and Mastruzzi (2006), as a measure of institutions. However, this variable has a high correlation with GDP per capita (0.78), Internet penetration (0.69), and human capital (0.81), and it also lacks time variation.

24. This section is based on the background paper prepared for this chapter by Banerjee and Gupta of the Confederation of Indian Industry.

25. The IT sector in India received the direct attention of policy makers only after 1984. However, state intervention in other sectors of the economy had a positive influence on India’s IT sector.

26. For example, a firm could pay off its debt at the expense of its onsite staff.

27. EPZs are industrial zones with special incentives set up to attract foreign investors. In EPZs, imported materials must undergo some degree of processing before being exported again.

28. Texas Instruments set up an office in Bangalore with a direct satellite link to the United States in 1985. The government announced plans for an STP project in 1986, and Texas Instruments was the first company to take advantage of these plans. It established its own STP in Bangalore, Karnataka, in 1987.

29. In the late 1970s, the Indian government passed the Foreign Exchange Regulation Act. Later repealed in 1992, the controversial act forced all multinationals to reduce their equity share in their Indian subsidiaries to less than 50 percent.

30. The 1969 Monopolistic and Restrictive Trade Practices Act ensured that the operation of the economic system did not result in the concentration of economic power in the hands of few, provided for the control of monopolies, and prohibited monopolistic and restrictive trade practices.

31. NSR was set up and is managed by NSDL Database Management Limited (a wholly owned subsidiary of National Securities Depository Limited) on behalf of NASSCOM. NSR is a centralized database of employees of Indian BPO and IT service companies. It contains any personal, qualifying, and career information of IT professionals that has been verified by a third party. NSR is an employee-friendly measure to minimize misuse of an employee’s identity, and the database allows employers to view the verified resumes of IT professionals. For more information, see NSR’s website at https://nationalskillsregistry.com/aboutus.htm.

32. DSCI is a not-for-profit organization that was established with the objective of building a credible and committed body to uphold a high level of data privacy and security standards.


References


Mathur, Somesh Kumar. 2007. “Indian IT Industry: A Performance Analysis and a Model for Possible Adoption.” MPRA Paper 2368, University Library of Munich, Munich, Germany.


Over the past decade, the Philippines has accounted for a small fraction (less than 0.3 percent) of world commercial service exports. Albeit small in terms of volume, service exports from the Philippines rose by 3.6 percent on average per year during that period, faster than for Asia as a group (1.5 percent average annual growth; Asia accounts for one-fourth of world service exports).¹ Philippine exports have been concentrated in transport, travel, and business process outsourcing (BPO) services. The BPO sector has performed remarkably well, as evidenced by its third-largest global BPO market share, whereas the transport sector has grown only mildly, and the travel sector has been, despite its short-lived uplift in 2006–07, largely stagnant.

The Philippines has been successful at exporting services through the movement of workers (mode 4). Remittances from overseas Filipino workers (OFWs) have been far greater than total commercial service exports, accounting for 10 percent of gross domestic product (GDP) in 2010. Even amid the global financing crisis, remittances increased by 5.6 percent in 2009 and by a further 8.2 percent in 2010. The government has been proactive in promoting the labor movement abroad. Since the enactment of the Labor Code in 1974, the government has set up public agencies (Orbeta, Abrigo, and Cabalfin 2009). Furthermore, the government has actively negotiated bilateral labor agreements to facilitate the movement of workers and to protect their rights in host countries.
This chapter attempts to shed some light on the factors behind the divergent performance of various service exports within the Philippines. In particular, it focuses on three questions:

- Which services performed well in exporting and which ones lagged?
- What are the characteristics of the sectors with relatively good or poor performance?
- What strategies, fundamentals, and policies contributed to service exports or failed to boost the sector to export?

In the Philippines, the private sector’s proactive involvement seems to be a key to successful export performance. Also, in 2004 the Philippine government recognized service exports as one of the priorities for employment generation and foreign exchange earnings (Executive Order No. 372 in 2004), resulting in the formation of a public-private partnership task force. Successful service exports from the Philippines can also be attributed to strong global demand as well as some supply-side characteristics such as factor endowments, price competitiveness, and to some extent, favorable fiscal incentives. The Philippine BPO sector has been well positioned to benefit from all of these advantages.

The Philippines offers an attractive holiday destination with abundant natural resources and strong price competitiveness. International tourist arrivals rebounded in 2009 with the waning of effects of the global financial crisis. The country has competitive prices and strength in English-speaking tourism, with further potential to expand in the field of medical and retirement tourism. Nevertheless, tourism export receipts have been flat at about 3 percent of GDP over the past two decades, reflecting supply-side constraints, particularly from the weak transport infrastructure. It is well documented that investments have been insufficient to upgrade transport infrastructure. Slow progress in deregulating air transport services lowers accessibility and impedes competition. The absence of online, one-stop travel portals generates some inconvenience associated with reserving airline tickets and hotel facilities.

In addition, the weak business environment may impede service exports, as it does other sectors. The World Bank’s *Doing Business 2011* ranking reports that starting a business takes 38 days. Business leaders point to corruption as the most problematic factor for productivity in the Philippines (Schwab 2010). Poor infrastructure and weak business environment can lower the productivity of an industry (for example, tourism) so much that even fiscal incentives or zones established under the Philippine Economic Zone Authority (PEZA) could become less effective in promoting foreign investments and exports. To counter the weak business environment, PEZA offers one-stop business registration services to PEZA-registered firms.
The rest of this chapter is organized as follows. The first section describes service exports in the context of the Philippine economy. The following section reports on factors behind the success of the BPO sector, including fundamentals and government policies and strategies. Next, impediments to exports for the tourism sector, whose performance is yet to reach its full potential, are discussed, followed by a concluding section.

**Service Exports in the Context of the Philippine Economy**

The Philippines stands out in East Asia and the Pacific as a country with a large service sector and high private consumption. Overall, the service sector has accounted for more than half of the Philippine GDP and employed about half of the country’s labor force in 2009. Despite the importance of the service sector in the economy, the direct contribution of cross-border service exports to GDP (value added) is rather small: it stands at 6.3 percent of GDP in 2009, or US$10 billion. In the world service export market, the Philippines is a marginal player, accounting for less than 0.5 percent of world service exports in 2009.

**Service exports from the Philippines: A snapshot**

Cross-border service exports (a proxy for modes 1 and 2) from the Philippines grew significantly faster than goods exports from 2005 to 2009 (figure 4.1). Service exports as a percentage of total exports increased from 9 percent in 1999 to 21 percent in 2009. Since 2006, unlike many developing countries, the Philippines has been a net exporter of services.

As in other developing countries, the largest receipt from service exporting was traditionally in tourism—expenditures from foreigners visiting the country (Karsenty 2000). The travel sector accounted for 74 percent of service exports in 1999. During recent years, however, the BPO industry took a quantum leap forward and is now the biggest service export sector, recording 60 percent of service exports in 2009 (figure 4.2). Furthermore, the sector exhibited its resilience to the global financial crisis.

As shown in table 4.1, the revealed comparative advantage (RCA) index (Balassa 1965) indicates that other business services and computer and information services have gained comparative advantage in recent years and that communication services has maintained comparative advantage over the past decade. The Philippines has maintained its comparative advantage in travel services over the past decade, but the level has decreased over time and turned into a comparative disadvantage in 2009 because of unfavorable external conditions. Comparative advantage in transport services was short lived—lasting only during the relatively
Figure 4.1. Growth in Exports of Goods and Services, 1999–2009

Source: Author’s calculations based on data from Bangko Sentral ng Pilipinas.

Figure 4.2. Information and Business Services as a Proxy for BPO, 1999–2009

Source: Author’s calculations based on data from Bangko Sentral ng Pilipinas.
Table 4.1. Revealed Comparative Advantage Index, 1999–2009

<table>
<thead>
<tr>
<th>Service sector</th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transport</td>
<td>0.39</td>
<td>0.60</td>
<td>0.85</td>
<td>1.18</td>
<td>1.31</td>
<td>1.12</td>
<td>0.95</td>
<td>0.81</td>
<td>0.61</td>
<td>0.58</td>
<td>0.61</td>
</tr>
<tr>
<td>Travel</td>
<td>2.39</td>
<td>2.09</td>
<td>1.91</td>
<td>1.76</td>
<td>1.61</td>
<td>1.79</td>
<td>1.85</td>
<td>2.09</td>
<td>2.01</td>
<td>1.05</td>
<td>0.95</td>
</tr>
<tr>
<td>Communication</td>
<td>1.89</td>
<td>2.50</td>
<td>4.77</td>
<td>5.27</td>
<td>5.90</td>
<td>5.51</td>
<td>5.13</td>
<td>3.74</td>
<td>2.29</td>
<td>1.79</td>
<td>1.39</td>
</tr>
<tr>
<td>Construction</td>
<td>0.69</td>
<td>1.50</td>
<td>1.06</td>
<td>0.46</td>
<td>0.74</td>
<td>0.94</td>
<td>0.73</td>
<td>0.51</td>
<td>0.54</td>
<td>0.37</td>
<td>0.30</td>
</tr>
<tr>
<td>Insurance</td>
<td>0.18</td>
<td>0.21</td>
<td>0.22</td>
<td>0.13</td>
<td>0.13</td>
<td>0.12</td>
<td>0.20</td>
<td>0.16</td>
<td>0.11</td>
<td>0.08</td>
<td>0.13</td>
</tr>
<tr>
<td>Financial</td>
<td>0.32</td>
<td>0.36</td>
<td>0.20</td>
<td>0.17</td>
<td>0.20</td>
<td>0.17</td>
<td>0.18</td>
<td>0.21</td>
<td>0.11</td>
<td>0.08</td>
<td>0.10</td>
</tr>
<tr>
<td>Computer and information</td>
<td>0.68</td>
<td>0.75</td>
<td>0.21</td>
<td>0.30</td>
<td>0.21</td>
<td>0.20</td>
<td>0.47</td>
<td>0.33</td>
<td>0.65</td>
<td>2.22</td>
<td>2.78</td>
</tr>
<tr>
<td>Royalties and license fees</td>
<td>0.03</td>
<td>0.04</td>
<td>0.01</td>
<td>0.01</td>
<td>0.02</td>
<td>0.06</td>
<td>0.03</td>
<td>0.02</td>
<td>0.01</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Other business services</td>
<td>0.29</td>
<td>0.38</td>
<td>0.37</td>
<td>0.37</td>
<td>0.40</td>
<td>0.38</td>
<td>0.50</td>
<td>0.61</td>
<td>1.06</td>
<td>1.81</td>
<td>1.94</td>
</tr>
</tbody>
</table>

Source: Author’s calculations based on International Monetary Fund balance of payments data.
high GDP growth period. The country has had a comparative disadvantage in insurance and financial services.

In contrast to mode 4 exports (described in box 4.1), mode 3 (outward foreign direct investment) service exports from the Philippines are notable in franchising. Although cross-border exports of royalties and license fees are small (about US$5 million in 2007), Philippine franchisors have penetrated foreign markets through mode 3, particularly in the United States, the Middle East, and Asia, targeting Filipino diasporas. According to the Philippine Franchise Association (PFA), they number, as of April 2009, 325 outlets of 17 Philippine franchise brands abroad. Nearly 60 percent of the franchise business abroad is related to food. Retail branches constitute 24 percent, and other service franchises account for 18 percent. The global franchising market accounts for 11 percent of total private sector outputs, or US$2.31 trillion in 2009, according to the PFA (http://www.franchisephilippinesonline.com/). To tap on this large global franchising market, somewhat similar to the way BPO stakeholders approached development of that industry, the PFA recently developed a master plan that includes strategies for export, including piloting franchise exports.

**Service trade environment: A broad picture**

The Philippines has a fairly open regime for foreign market access, with a tariff rate as low as 3.8 percent. In contrast, service trade openness is below the regional average. The country scores only 14.08 of 100.00 (best) in the overall General Agreement on Trade in Services (GATS) commitment index, ranking 83rd of 148 countries. Under the GATS, the Philippine government committed to bind all restrictions on market access and has applied national treatment in financial, transport, communications, and tourism and travel-related services. The Philippines made commitments under basic telecommunication and financial services, but their effectiveness is pending its senate’s ratification of the GATS Fourth (basic telecommunications) and Fifth Protocols (financial services) (USTR 2010).

As for movement of natural persons (mode 4), the Philippines has systems in place to help workers move abroad. The Philippines Overseas Employment Administration regulates the recruitment industry and manages the deployment process, the Overseas Workers Welfare Administration offers welfare services and predeparture seminars, and the National Reintegration Center for Overseas Filipino Workers provides returning migrant workers with services for reintegration into Philippine society. The government has been actively negotiating bilateral labor agreements. A recent agreement between Japan and the Philippines for an economic partnership allows Philippine nurses, care workers, and seafarers to work in Japan, provided that they meet certain requirements.
Box 4.1: Exporting Services through the Movement of Labor: The Pattern

After the larger economies of India, China, and Mexico, the Philippines is the world’s fourth-largest remittance recipient in absolute terms: the Philippines central bank, Bangko Sentral ng Pilipinas, expanded amid the global financial crisis and reported a record high level of remittances in 2010, US$19 billion. Remittances constitute about 10 percent of GDP, compared with 1, 2, and 3 percent in China, India, and Mexico, respectively, and far greater than the rest of the Association of Southeast Asian Nations (box figure 4.1.A). Remittances are the biggest source of foreign exchange earnings for the Philippines. They contribute markedly to the current account surplus and are a major vehicle fueling the economy’s strong consumption.

Box Figure 4.1.A. Remittances in the Philippines Compared with Neighboring Countries, 1980–2010

Sources: World Bank for remittance data; International Monetary Fund for GDP data.

Geographically diverse destinations of OFWs contribute to the stability of remittance inflows. Box table 4.1.A shows that workers from other Asian nations migrated to neighboring Asian countries. In contrast, the destinations of OFWs in 2007 are, in order of prominence, the United States, the United Arab Emirates, Singapore, Canada, and Australia. This diversification might have contributed to insulate the overall remittance flows from adverse shocks in one host country.

Greater demand in the personal care area boosted female deployment. Female migration is close to half of new deployment in 2007 and concentrated in the occupations of domestic household helper, caregiver, nurse, and cleaner. Male workers are deployed as general laborers, electrical wiremen, plumbers (including pipe fitters), and production workers. Waiters and other service workers are more or less equally distributed across the genders (box figure 4.1.B).

However, the number of higher-skilled migrants was again overtaken by that of production migrants. Box figure 4.1.C shows that the new deployment of workers in the production and professional (and technical) sectors is in opposite directions. Furthermore, the chart confirms the traditional view that a large share of OFWs are service providers.

(Box continues on the following pages.)
Box 4.1: Exporting Services through the Movement of Labor: The Pattern (continued)

Box Table 4.1.A. Numbers of Overseas Workers

<table>
<thead>
<tr>
<th>Origin country</th>
<th>Number of migrant workers</th>
<th>Main destination</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cambodia</td>
<td>183,541</td>
<td>Thailand</td>
<td>2006</td>
</tr>
<tr>
<td>China</td>
<td>530,000</td>
<td>Middle East, Asia and the Pacific, Africa</td>
<td>2004</td>
</tr>
<tr>
<td>Indonesia</td>
<td>2,700,000</td>
<td>Malaysia; Saudi Arabia; Taiwan, China; Singapore; Republic of Korea; United Arab Emirates</td>
<td>2007</td>
</tr>
<tr>
<td>Lao PDR</td>
<td>173,000</td>
<td>Thailand</td>
<td>2004</td>
</tr>
<tr>
<td>Malaysia</td>
<td>250,000</td>
<td>Japan; Taiwan, China</td>
<td>1995</td>
</tr>
<tr>
<td>Myanmar</td>
<td>1,840,000</td>
<td>Thailand</td>
<td>2006</td>
</tr>
<tr>
<td>Philippines</td>
<td>8,726,520</td>
<td>United States, United Arab Emirates, Singapore, Canada, Australia</td>
<td>2007</td>
</tr>
<tr>
<td>Singapore</td>
<td>150,000</td>
<td>—</td>
<td>2002</td>
</tr>
<tr>
<td>Thailand</td>
<td>340,000</td>
<td>Saudi Arabia; Taiwan, China; Myanmar; Singapore; Brunei Darussalam, Malaysia</td>
<td>2002</td>
</tr>
<tr>
<td>Vietnam</td>
<td>400,000</td>
<td>Republic of Korea; Japan; Malaysia; Taiwan, China</td>
<td>2005</td>
</tr>
</tbody>
</table>

Sources: Hugo and Young 2008; Philippine data are from the Philippines Overseas Employment Administration.

Note: — = not available.

Box Figure 4.1.B. New Deployment by Occupation and Gender, 2007

Source: Data from the Philippines Overseas Employment Administration.
Box Figure 4.1.C. New Deployment by Skill Category, 1995–2007

The Middle East absorbed the largest number of OFWs in 2007 (box table 4.1.B). Among the destinations for service providers, Hong Kong SAR, China, has been the main destination of domestic helpers, absorbing 46 percent of total deployment in 2007, followed by the Middle East. Taiwan, China, has hosted the largest number of caregivers. Saudi Arabia has absorbed the lion’s share of production-related workers, followed by Taiwan, China; the United Arab Emirates; and Qatar. For physiotherapists and teachers, the United States is the main destination.

Remittances encourage commercial banks to develop innovative banking products. With stagnant loan growth, remittances are an important line of business in the Philippines and thus contribute to stronger competition among the banks by reaching out to Filipinos abroad. New banking services have sprung up beside traditional ones. For instance, in 2007, MetroBank opened Internet money-transfer services in partnership with Xoom.com that allow OFWs to transfer money over the Internet. Banco de Oro, in alliance with the SM Group, allows beneficiaries to pick up remittances at SM malls or hypermarkets (SM’s supermarket) (Carroll 2008). Globe Telecom, a leading mobile network operator in the Philippines, developed GCASH, which allows users to send and receive remittances in the equivalent peso amount through a global mobile phone, make purchases and bill payments (including tuition fees), and give donations via short message service. Such a system helps lower transaction costs and further facilitates direct and convenient delivery of cross-border financial services.

(Box continues on the following pages.)
<table>
<thead>
<tr>
<th>Item</th>
<th>Americas</th>
<th>Middle East</th>
<th>Asia</th>
<th>Europe</th>
<th>Others</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administrative, clerical, and managerial workers</td>
<td>0.16</td>
<td>4.29</td>
<td>0.25</td>
<td>0.04</td>
<td>0.10</td>
<td>4.84</td>
</tr>
<tr>
<td>Agriculture-related workers (including fishermen and hunters)</td>
<td>0.06</td>
<td>0.18</td>
<td>0.01</td>
<td>0.01</td>
<td>0.06</td>
<td>0.31</td>
</tr>
<tr>
<td>Production-related workers (including laborers)</td>
<td>1.08</td>
<td>27.58</td>
<td>9.47</td>
<td>0.40</td>
<td>1.30</td>
<td>39.83</td>
</tr>
<tr>
<td>Professional, technical-related workers</td>
<td>0.85</td>
<td>9.60</td>
<td>2.86</td>
<td>0.20</td>
<td>0.37</td>
<td>13.89</td>
</tr>
<tr>
<td>Social workers, doctors, nurses, midwives, and medical assistants</td>
<td>0.10</td>
<td>2.83</td>
<td>0.17</td>
<td>0.06</td>
<td>0.02</td>
<td>3.20</td>
</tr>
<tr>
<td>Sales workers</td>
<td>0.04</td>
<td>2.39</td>
<td>0.11</td>
<td>0.01</td>
<td>0.05</td>
<td>2.60</td>
</tr>
<tr>
<td>Service workers</td>
<td>2.57</td>
<td>17.61</td>
<td>11.61</td>
<td>3.12</td>
<td>0.15</td>
<td>35.06</td>
</tr>
<tr>
<td>General services workers, domestic helpers, caregivers, and housekeepers</td>
<td>2.01</td>
<td>8.40</td>
<td>11.31</td>
<td>2.99</td>
<td>0.04</td>
<td>24.75</td>
</tr>
<tr>
<td>Not stated</td>
<td>0.26</td>
<td>2.74</td>
<td>0.21</td>
<td>0.11</td>
<td>0.15</td>
<td>3.47</td>
</tr>
<tr>
<td>Total</td>
<td>5.02</td>
<td>64.39</td>
<td>24.51</td>
<td>3.90</td>
<td>2.18</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Source: Data from the Philippines Overseas Employment Administration.

Note: Totals may not sum because of rounding.
Similarly, the investment regime in the Philippines is relatively open. The Philippines adopts the negative list approach with regard to investment liberalization. Foreign equity participation is allowed up to 100 percent in all activities except those identified in Foreign Investment Negative List A and List B. Under the Association of Southeast Asian Nations (ASEAN), the country plans to relax foreign ownership limits from 40 percent to 70 percent in the sectors of air transport, telecommunications, tourism, and health care by 2010, but implementation is pending at the time of this writing. The negative lists are applied only to domestic market enterprises. Export enterprises that export more than 60 percent of their output face no restrictions on the extent of foreign ownership.

The Philippines provides several forms of investment incentives to encourage foreign investment. Firms engaging in the activities set out in the government’s Investment Priorities Plan (IPP) are allowed to register with the Board of Investments (BOI) for fiscal incentives: income tax holidays (ITHs) of up to eight years, tax deductions equivalent to 50 percent of wages of direct-hire workers, and duty exemptions for imports of raw materials. For firms engaging in non-IPP activities, the incentives are limited to domestic-owned or foreign-owned (that is, 40 percent or more foreign ownership) firms that export at least 50 or 70 percent of production, respectively. Firms established in the PEZA and tourism enterprise zones (TEZs) enjoy additional incentives—such as a 5 percent gross income tax rate; exemption from all local government imposts, fees, licenses, or taxes; and exemption from expanded withholding tax—but PEZA firms are required to export at least 70 percent of their output.

Behind-the-border strengths include a large pool of labor ready to be tapped for service export areas. Unlike other countries at the initial factor-driven stage of development, the Philippines has a relatively large pool of skilled, English-proficient workers (Schwab 2010). The World Bank’s 2006 Investment Climate Assessment (ICA) and 2009 Enterprise Survey found that the Philippine business community perceives labor skills to be the least important obstacle to productivity, whereas businesses in Malaysia and Thailand see labor skills as the most important constraint.

The business environment calls for reforms. The World Bank’s Doing Business 2011 data for the Philippines rank the country 148th among 183 economies in terms of ease of doing business. The World Economic Forum’s 2010 Executive Opinion Survey and the World Bank’s 2009 Enterprise Survey and 2006 ICA report that firms perceive corruption as the most binding constraint to their business productivity, followed by inefficient government bureaucracy.

Weak infrastructure is a major constraint to the country’s competitiveness. The World Economic Forum’s 2010–11 Global Competitiveness Index ranks the Philippines 104th of 139 countries in the infrastructure pillar, far behind Indonesia.
(82nd) and Vietnam (83rd) (Schwab 2010). Business leaders consider inadequate supply of infrastructure as the third most problematic factor for productivity.

In infrastructure, high energy costs and occasional power shortages are of dire concern to Philippine businesses. The average value lost because of power outages is approximately 5 percent of sales in the Philippines and 3 percent in Indonesia. The average cost of electricity in the Philippines is the highest among the ASEAN economies: in 2007 the average cost in the Philippines was US$0.175 per kilowatt-hour. Even Singapore offers cheaper rates, US$0.1307 per kilowatt-hour.³ It is interesting to note that tourism sector studies find that energy is less of an obstacle to tourism productivity.

Despite the fiscal incentives in place, the 2006 ICA and 2009 Enterprise Survey found that the business community in the Philippines continues to perceive that tax rates (at 49.4 percent) and administration (47 payments annually) hinder productivity. In recent years, overall tax rates went down slightly, but they are still higher than the East Asian and Pacific regional average (36.1 percent). The tax payment frequency has a similar tendency (24.6 payments yearly for the region).

The BPO Sector and Factors behind Its Success

The Philippine BPO industry displayed impressive growth. According to the Business Processing Association of the Philippines (BPAP), full-time employment growth climbed to 340 percent—from 100,000 workers in 2000 to 443,000 in 2009—and BPO revenues soared by nearly 400 percent, from US$1.5 billion in 2004 to US$7.2 billion in 2009. Nearly 100 percent of revenues are exported according to BPAP.

Characteristics of BPO service exports from the Philippines

What are the characteristics of this sector? The Philippines has a long history of BPO, although multinational companies have mainly led the industry. For instance, HSBC has outsourced in the country since the 19th century, and IBM since the 1950s. The area of concentration in the early days was data entry, especially accounting. Benefiting from improved global connectivity, contact centers recently became the industry leader.⁴

Building on this initial status, Philippine BPO is now at the mature production stage. The country accounted for 15 percent of the global BPO market in 2008, after India (37 percent) and Canada (27 percent). Output boasted a quantum leap from US$0.3 billion in 2001 to US$6 billion in 2008. BPAP forecasts the sector’s growth at 26 percent in 2010 and 27 percent in 2011, to US$11.6 billion. The
industry had 515 information technology (IT)–BPO firms in 2009, comprising 279 foreign firms and 236 local firms, according to BPAP.\textsuperscript{5}

Naturally, BPO’s contribution to GDP surged, from 0.5 percent in 2001 to 3.7 percent in 2008. This figure implies that, of the country’s 3.8 percent GDP growth in 2008, 0.9 percentage points were owed to BPO service outputs. This figure is significant for a country with an average growth rate of 4.0 percent in the 2000s.

As shown in table 4.2, of BPO services, contact centers are the biggest industry.\textsuperscript{6} They had an average growth rate of 40 percent from 2004 to 2009, with revenues of US$5 billion and 280,000 full-time employees (FTEs) in 2009. Back-office function is the second-biggest BPO subsector and scored rapid growth, with an average growth rate of 58 percent from 2004 to 2009.

The industry has shown its resilience to adverse exogenous shocks. Despite the global financial crisis, BPO continues to grow: 19 percent growth year-on-year in 2009 in terms of both revenues and new FTEs (table 4.2). A substitution effect—outsourcing or offshoring to lower-cost locations—may explain this resilience (Gereffi and Fernández-Stark 2010). The Philippines has seen it in action. For instance, in September 2008, JPMorgan Chase opened its 14,050-seat call center facility in Taguig City, Metro Manila (Outsourcing Portal 2008). The company’s new office in Taguig City will house 6,100 additional seats (Remo 2010).

In the Philippines, both captive operations and third-party providers are well-established types of outsourcing operations. Multinational companies have a tendency to choose this captive model. A change in tax incentives in the home country of a foreign affiliate can influence the outsourcing firm type.\textsuperscript{7} Like JPMorgan Chase, firms may also choose a hybrid model, depending on the situation.

The global competitiveness of the Philippines has challenged India’s supremacy in the industry, but some indications of specialization exist. Going forward, the National Association of Software and Services Companies of India views China and the Philippines as the strongest competition to India. Everest Research Institute (2009, 2), in contrast, sees the Philippines as complementing India in providing specific services. The Philippines has a competitive advantage in contact centers (customer care) and has been gaining strength in back-office functions such as finance and accounting (A.T. Kearney 2009), whereas India is strong in IT and China is distinctive in engineering (BPAP 2007).

Traditionally, the United States has been the main export destination for the Philippine BPO sector, especially for contact center services, but demand from Japan has been increasing (table 4.3). Services outsourced by Japan are concentrated in the areas of software development, animation, and other IT-oriented BPOs. BPO service provision to Japan in the early days of the 1980s, as well as the geographic proximity of the Philippines to Japan, time-zone alignment, and high
<table>
<thead>
<tr>
<th>BPO category</th>
<th>2000</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>Percentage of total in 2009</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Revenues (US$ million)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BPO, voice</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contact centers</td>
<td>24</td>
<td>1,024</td>
<td>1,792</td>
<td>2,360</td>
<td>3,600</td>
<td>4,100</td>
<td>5,000</td>
<td>69.2</td>
</tr>
<tr>
<td>BPO, nonvoice</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Back office&lt;sup&gt;a&lt;/sup&gt;</td>
<td>120</td>
<td>180</td>
<td>288</td>
<td>398</td>
<td>827</td>
<td>1,118</td>
<td>15.5</td>
<td></td>
</tr>
<tr>
<td>Transcription</td>
<td>72</td>
<td>70</td>
<td>109</td>
<td>137</td>
<td>182</td>
<td>187</td>
<td>2.6</td>
<td></td>
</tr>
<tr>
<td>Medical</td>
<td>42</td>
<td>25</td>
<td>48</td>
<td>69</td>
<td>89</td>
<td>94</td>
<td>1.3</td>
<td></td>
</tr>
<tr>
<td>Legal</td>
<td>4</td>
<td>6</td>
<td>9</td>
<td>9</td>
<td>18</td>
<td>18</td>
<td>0.2</td>
<td></td>
</tr>
<tr>
<td>Other data</td>
<td>26</td>
<td>39</td>
<td>52</td>
<td>59</td>
<td>75</td>
<td>75</td>
<td>1.0</td>
<td></td>
</tr>
<tr>
<td>KPO</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Animation</td>
<td>52</td>
<td>74</td>
<td>97</td>
<td>105</td>
<td>120</td>
<td>120</td>
<td>1.7</td>
<td></td>
</tr>
<tr>
<td>ITO</td>
<td>170</td>
<td>204</td>
<td>272</td>
<td>423</td>
<td>601</td>
<td>568</td>
<td>7.9</td>
<td></td>
</tr>
<tr>
<td>ESO</td>
<td>37</td>
<td>55</td>
<td>81</td>
<td>153</td>
<td>231</td>
<td>233</td>
<td>3.2</td>
<td></td>
</tr>
<tr>
<td>Digital content or game</td>
<td>3</td>
<td>7</td>
<td>13</td>
<td>1</td>
<td>3</td>
<td>5</td>
<td>0.1</td>
<td></td>
</tr>
<tr>
<td>development portion</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1,475</td>
<td>2,375</td>
<td>3,207</td>
<td>4,816</td>
<td>6,061</td>
<td>7,225</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nominal year-on-year growth</td>
<td>61.0</td>
<td>35.0</td>
<td>50.2</td>
<td>25.8</td>
<td>19.2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>rate (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### FTEs (thousand)

**BPO, voice**

<table>
<thead>
<tr>
<th>Activity</th>
<th>2.4</th>
<th>64</th>
<th>112</th>
<th>160</th>
<th>198</th>
<th>227</th>
<th>280</th>
<th>3.9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact center</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BPO, nonvoice</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Back office a</td>
<td>15</td>
<td>23</td>
<td>36</td>
<td>40</td>
<td>69</td>
<td>86</td>
<td></td>
<td>1.2</td>
</tr>
<tr>
<td>Transcription</td>
<td>6</td>
<td>9</td>
<td>12</td>
<td>16</td>
<td>20</td>
<td>20</td>
<td></td>
<td>0.3</td>
</tr>
<tr>
<td>Medical</td>
<td>4</td>
<td>6</td>
<td>7</td>
<td>10</td>
<td>13</td>
<td>13</td>
<td></td>
<td>0.2</td>
</tr>
<tr>
<td>Legal</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>Other data</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>6</td>
<td></td>
<td>0.1</td>
</tr>
</tbody>
</table>

**KPO**

<table>
<thead>
<tr>
<th>Activity</th>
<th>3</th>
<th>5</th>
<th>7</th>
<th>7</th>
<th>8</th>
<th>8</th>
<th></th>
<th>0.1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Animation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ITO</td>
<td>10</td>
<td>12</td>
<td>16</td>
<td>29</td>
<td>35</td>
<td>35</td>
<td></td>
<td>0.5</td>
</tr>
<tr>
<td>ESO</td>
<td>2</td>
<td>3</td>
<td>5</td>
<td>8</td>
<td>13</td>
<td>13</td>
<td></td>
<td>0.2</td>
</tr>
<tr>
<td>Digital content or game development portion</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td></td>
<td>0</td>
</tr>
</tbody>
</table>

**Total**

<table>
<thead>
<tr>
<th></th>
<th>101</th>
<th>163</th>
<th>236</th>
<th>299</th>
<th>372</th>
<th>442</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal year-on-year growth rate (%)</td>
<td>62</td>
<td>44</td>
<td>27</td>
<td>24</td>
<td></td>
<td>19</td>
</tr>
</tbody>
</table>

*Source:* Data from BPAP.

*Note:* BPO = business process outsourcing; ESO = engineering services outsourcing; FTE = full-time employees; ITO = information technology outsourcing; KPO = knowledge process outsourcing. Totals may not sum because of rounding.

a. Includes BPAP estimates.
labor costs and changing demographics in Japan, could explain this increase of “near-shoring” to some extent.

Estimates obtained from BPAP data indicate that for contact centers, software development, and animation, labor productivity (proxied by revenue per worker) is independent of firm size. However, small and medium-size enterprises (SMEs) in the areas of back-office functions and medical transcription tend to have significantly lower labor productivity than large firms in their respective field. Whether any optimal firm size exists for these nonvoice BPO services is an interesting area for further research.

Foreign equity participation has been expansive (table 4.4), particularly in 2008. Of total equity investment in the industry (US$2 billion), about 93 percent (US$1.8 billion) represented foreign equity participation. U.S. investment was concentrated in contact centers, whereas Japanese investment has been in software development. Even developing countries such as India and Indonesia acquired contact center firms in the Philippines (BSP 2010).

Industry stakeholder informants indicated that U.S. equity participations tend to be in wholly owned firms rather than joint ventures, perhaps because of the U.S. Foreign Corrupt Practices Act of 1977 as well as data protection concerns. Smarzynska and Wei (2000) found that corruption increases the value of a local joint venture partner to a foreign investor. In contrast, a foreign investor with sophisticated technology that has concerns about leakage of technological know-how is less inclined to form a joint venture.

Although the majority of foreign BPO firms engage in contact centers, local BPO firms concentrate in transcription and animation (table 4.5). For instance, local medical transcription firms outnumber foreign ones by nearly three to one, whereas the reverse is the case for contact centers (local:foreign = 1:2). Many

<table>
<thead>
<tr>
<th>Destination</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>86.0</td>
<td>81.0</td>
<td>73.2</td>
<td>67.6</td>
</tr>
<tr>
<td>Japan</td>
<td>3.2</td>
<td>3.2</td>
<td>9.6</td>
<td>16.2</td>
</tr>
<tr>
<td>Europe</td>
<td>7.1</td>
<td>10.1</td>
<td>8.6</td>
<td>9.0</td>
</tr>
<tr>
<td>Other Asia</td>
<td>2.4</td>
<td>4.0</td>
<td>7.0</td>
<td>5.5</td>
</tr>
<tr>
<td>Australia and New Zealand</td>
<td>1.3</td>
<td>0.7</td>
<td>0.5</td>
<td>1.1</td>
</tr>
<tr>
<td>Canada</td>
<td>n.a.</td>
<td>1.0</td>
<td>0.2</td>
<td>0.2</td>
</tr>
<tr>
<td>Others</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.2</td>
</tr>
</tbody>
</table>

Source: Data from BPAP.
Note: n.a. = not applicable.
medical transcription firms are SMEs,\(^9\) and revenue per worker of SMEs is only one-tenth that of large medical transcription firms, corroborating the firm heterogeneity literature.

**Factors behind successful BPO service exports**

As mentioned earlier, the BPO sector made a staggering achievement. What made this growth possible in the Philippines when it had neither a designated nor an
independent regulatory body representing the industry? All the key factors for BPO operations are in the right place. The Philippines offers favorable factor conditions, industry conditions, and government supports for BPO operations (table 4.6). Nonetheless, BPO businesses have cited tight labor market conditions and corruption as key concerns to their business (BPAP 2010).

Low labor costs
According to A.T. Kearney’s (2011) Global Services Location Index, compensation costs in the Philippines are at par with those of India (figure 4.3). The average monthly wage paid to a Filipino BPO worker was ₱16,928 (or about US$385), according to Messenger and Ghosheh (2010). The Department of Trade and Industry reports that wages constitute 50 percent of total operating costs of a BPO firm, followed by buildings, facilities, and office infrastructure (20 percent); training and business trips (15 percent); and utilities and communications (10 percent).

Young talent pool, English proficiency, and affinities to U.S. culture and systems
A large pool of young talent fueled the industry’s fast growth. In terms of the number of graduates, 2008 saw 444,810 college graduates suitable to be tapped for the industry. Table 4.7 details the talent pool available across services as of 2009. A large resource pool in the medical field (in particular, nurses) is notable, largely because the subject offers better prospects for job opportunities abroad than other subjects.

Table 4.6. High or Low Philippine Performance in Key Buy Factors

<table>
<thead>
<tr>
<th>Key buy factors</th>
<th>Performance</th>
<th>Key points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suitable and abundant talent</td>
<td></td>
<td>• Considerable pool of generalist and specialist talent</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Strong English skills, both verbal and written</td>
</tr>
<tr>
<td>Operational performance</td>
<td></td>
<td>• Among the lowest in labor costs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Genuine global reputation in voice with multiple signature locators</td>
</tr>
<tr>
<td>Quality infrastructure</td>
<td></td>
<td>• World-class telecommunications</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Abundant and low-cost real estate in major urban areas</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Accessibility</td>
</tr>
<tr>
<td>Conductive business environment</td>
<td></td>
<td>• Competitive incentives (for example, income tax holiday)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Specialized programs addressing near-term issues (for example, near-hire voucher program)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Supportive local and national governments</td>
</tr>
</tbody>
</table>

Note: Gray indicates high performance; black indicates low performance.
Furthermore, the share of the labor force considered suitable for the BPO sector is as high as, or even higher than, that of other potential BPO destinations in Asia (BPAP 2007). Interviews with human resource managers, human resource agencies, and heads of global resourcing centers reveal that 20 percent of engineers, 30 percent of finance and accounting graduates, and 30 percent of generalists in the Philippines are suitable for work in multilateral settings, whereas the share is 10 percent, 15 percent, and 3 percent, respectively, for Chinese graduates (table 4.8).

Filipinos’ warm personality and their affinities to the U.S. culture, education, and legal system are other factors that have contributed to the success of contact centers, particularly customer care services. In addition, the Philippine legal and accounting systems are similar to those of the United States because of the close ties of those countries; hence, the Philippines is well equipped to meet the needs

**Figure 4.3.** Comparative Financial Attractiveness Scores, 2011

<table>
<thead>
<tr>
<th>Country</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Philippines</td>
<td>6.87</td>
</tr>
<tr>
<td>India</td>
<td>6.86</td>
</tr>
<tr>
<td>China</td>
<td>5.73</td>
</tr>
<tr>
<td>United States</td>
<td>0.54</td>
</tr>
</tbody>
</table>


**Table 4.7.** Talent Pool, 2007

<table>
<thead>
<tr>
<th>Talent pool</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colleges and universities that produce graduates suitable for the BPO sector</td>
<td>2,036</td>
</tr>
<tr>
<td>Graduates ready for the BPO sector</td>
<td></td>
</tr>
<tr>
<td>General</td>
<td>3,411</td>
</tr>
<tr>
<td>Business administration</td>
<td>95,646</td>
</tr>
<tr>
<td>Medical</td>
<td>110,312</td>
</tr>
<tr>
<td>Engineering</td>
<td>49,617</td>
</tr>
<tr>
<td>IT</td>
<td>35,901</td>
</tr>
</tbody>
</table>

*Source: Commission on Higher Education, Quezon City.*

*Note: Data as of February 2009.*


**Low telecommunication costs**

Telecommunications is a critical input for exporting BPO services. In contrast to the overall weak infrastructure in the Philippines, the telecommunication infrastructure is strong. According to the 2006 ICA, businesses in the Philippines perceive that, of possible business constraints, telecommunications is the least problematic: only 10 percent of businesses perceive it as a constraint to their operations.

Liberalization of the telecommunication industry in 1993 has increased competitiveness and hence improved the quality and efficiency of the telecommunication infrastructure (World Bank 2009). Allowing competition in local long-distance services in 1995 and permitting international simple resale led to a greater reduction in accounting rates and retail prices in the Philippines than is found in other countries that liberalized their telecommunication sector (Fink, Mattoo, and Rathindran 2001). Furthermore, the National Telecommunications Commission ruled that Voice over Internet Protocol (VoIP) is a value-added service and not a franchise, which resulted in an increase of VoIP providers and a decline in VoIP costs from US$0.40 to US$0.02 per minute. Lower communication costs shifted the country’s comparative advantage toward the more communication-intensive BPO industry.

**Low real estate costs**

Real estate availability in the Philippines is high, and rates are attractive. In the wake of the Asian financial crisis, many buildings in Makati City, the main business district in Manila, became vacant. As the BPO sector began to rise during 1999–2001, office facilities were readily available for BPO firms. Success in BPO business has boosted real estate development and changed the capital city’s

### Table 4.8. Proportion of Graduates Suitable for the BPO Sector

<table>
<thead>
<tr>
<th>Country</th>
<th>Engineer</th>
<th>Finance and accounting</th>
<th>Generalist</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>10</td>
<td>15</td>
<td>3</td>
</tr>
<tr>
<td>India</td>
<td>25</td>
<td>15</td>
<td>10</td>
</tr>
<tr>
<td>Malaysia</td>
<td>35</td>
<td>25</td>
<td>20</td>
</tr>
<tr>
<td>Philippines</td>
<td>20</td>
<td>30</td>
<td>30</td>
</tr>
</tbody>
</table>

_Sources: BPAP 2007, based on interviews with human resource managers, human resource agencies, and heads of global resourcing centers; McKinsey Global Institute._
landscape, especially in Taguig. According to BPAP (2007), Makati offers a lower rate (US$23 per square meter) than Beijing (US$29 per square meter) and Mumbai (US$100 per square meter).

**Government supports**

BPAP (2007) notes that the rapid growth of the BPO sector is in part owed to investment incentives provided by the Philippine government. As described earlier, foreign ownership in a BPO firm may be up to 100 percent. Since 2000, information and communication technology has been one of the IPP sectors, and therefore BPO firms registered with PEZA and located in designated IT parks and IT buildings have been eligible for PEZA incentives. See table 4.9 for a summary of these incentives.

Fiscal incentives of the Philippines seem to be competitive with those of India. BPAP (2007) reports that, according to analysis by McKinsey Global Institute, the net marginal corporate income tax rate is 11 to 21 percent for the Philippines during the ITH period. In comparison, the rate is 13 to 16 percent for India because of India’s minimum alternate tax. After the ITH period, the two countries are roughly at par: 9 to 14 percent for the Philippines and 10 to 13 percent for India.

Furthermore, PEZA has lowered the minimum space requirements to be declared as a PEZA IT park or building. In December 2000, the minimum land requirement for an IT park outside Metro Manila was reduced from the initial 25 hectares to 5 hectares. Most remarkably, PEZA allows a single building (or even some floors of a building) in Metro Manila to be registered as a PEZA IT building, as long as the total floor area is at least 5,000 square meters (including common areas and excluding parking space and roof gardens) (PEZA 2000).

Moreover, PEZA creates a more business-conducive environment. For companies registering under PEZA, it offers one-stop-shop services for business registration and extends an exemption from local government business permits, licenses, and fees. PEZA issues permits related to building and occupancy, import and export, and environment clearance. Such services, according to PEZA, reduce business start-up time and costs. In an effort to strive for no graft and no corruption, PEZA rotates staff members on a regular cycle.

Because data availability is limited, one cannot conclusively determine whether firms receiving PEZA incentives have generated more BPO exports than non-PEZA firms. PEZA reports that exports by PEZA IT-BPO firms amounted to US$4 billion in 2009. This figure seems low given that planned BPO investment in PEZA areas from 2003 to 2009 was about 85 percent of total planned BPO investment according to the BOI. A possible underestimation might have occurred owing to a discrepancy in the classification of IT-BPO firms by PEZA and BPAP. Given this limited data availability, PEZA effectiveness in terms of BPO exports is subject to
### Table 4.9. Incentives for IT-BPO Firms

<table>
<thead>
<tr>
<th>Qualification</th>
<th>PEZA-registered IT-BPO firm</th>
<th>BOI-registered IT-BPO firm</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Qualification</strong></td>
<td>Export-oriented enterprises that locate in any PEZA economic zone</td>
<td>Firms whose activities are listed in the current IPP, regardless of ownership*</td>
</tr>
<tr>
<td><strong>Fiscal incentives</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| ITHs up to 8 years\(^b\) | 6 years for pioneer enterprises,\(^c\) plus up to 2 more years if they comply with the following criteria (each criterion = 1-year extension):  
- Capital-to-labor ratio does not exceed US$10,000 to 1 for the year immediately preceding the ITH extension year being applied for.  
- Average net foreign exchange earnings for the first 3 years are at least US$500,000.  
3-year ITH applies to expansion projects (ITH limited to incremental sales revenue). | 6 years for pioneer enterprises,\(^c\) plus up to 2 more years if they comply with the following criteria (each criterion = 1-year extension):  
- Capital-to-labor ratio does not exceed US$10,000 to 1 for the year immediately preceding the ITH extension year being applied for.  
- Average net foreign exchange earnings for the first 3 years are at least US$500,000.  
3-year ITH applies to expansion and modernization projects (ITH limited to incremental sales revenue).  
New or expansion projects in less developed areas receive a 6-year ITH regardless of pioneer status. |
| Tax payment option after the end of the ITH | The following incentives apply:  
- Gross income tax of 5% (in lieu of regular corporate income taxes and all other national and local taxes)  
- Exemption from payment of any and all local government imposts, fees, licenses, or taxes  
- Under the ITH, no exemption from real estate tax, but machinery installed and operated in the economic zone for processing not subject to real estate taxes for the first 3 years of operation  
- Exemption from expanded withholding tax | Supplies receive a tax credit. |
Value added tax exemptions and deductions after the ITH ends

The following value added tax incentives apply:

- Locally purchased goods and services (for example, land-based telecommunications, electricity and water bills, and building lease) are exempt.
- Up to 150% deduction applies to training expenses if taxpayer opted to pay 5% gross income tax.

Import duty exemptions

The following import duty incentives apply:

- Zero duty on imported equipment (for example, computers and parts)
- Exemption from wharfage duties on import shipments of equipment

Nonfiscal incentives

Incentives are as follows:

- Nonresident foreign nationals may be employed in supervisory, technical, or advisory positions.
- Special nonimmigrant visa with multiple entry privileges are available for nonresident foreign nationals in a PEZA-registered firm (including investors; officers; employees in supervisory, technical, or advisory positions; and spouses and unmarried children under 21 years of age).
- PEZA extends visa facilitation assistance to foreign nationals, their spouses, and dependents.

Foreign nationals may be employed in supervisory, technical, or advisory positions for 5 years from date of registration, extendable for limited periods at BOI discretion.

Sources: Data from PEZA and BOI.

a. For firms in non-IPP activities, the following qualifications apply: at least 50 percent of the production is for export if ownership is 60 percent Filipino and 40 percent foreign, or at least 70 percent of production is for export if ownership is more than 40 percent foreign.

b. ITH applies from the start of commercial operations.

c. ITH is four years for nonpioneer projects.
future research. Currently, the BOI has been working on building a statistical
database on the performance of the BPO industry, and the completion of the
work would shed some light on this subject.

**Proactive private sector**
The BPO industry benefited from the adoption of an early strategic plan led by
industry players. Furthermore, BPAP, the umbrella BPO organization, has
taken the lead in marketing the brand—the Philippines as a BPO destination—
by conducting high-profile campaigns, including road shows, and attending
outsourcing-related conferences, such as the World Congress on Information
and Communication Technologies and the World BPO Forum.

BPAP plays a leading role in supporting and advocating the BPO industry. The
association, together with stakeholders, has developed a blueprint, named
*Roadmap 2010*, that focuses on goals and specific action items to obtain success
(BPAP 2007). As part of the action items in this blueprint, in 2009 BPAP pro-
duced the Next Wave Cities scorecard, which provides tools to help both
investors and local governments assess readiness and develop working capacities.
Going forward, BPAP has recently produced another blueprint, *Roadmap 2016*,
to guide the ever-evolving industry. BPAP has furthermore advocated the passage
of a house bill known as the Data Protection Act.

**The Tourism Sector and Factors behind Its Underperformance**
The tourism sector has yet to reach its potential and play a leading role in eco-
nomic growth and poverty reduction in the Philippines. On the production side,
the travel and tourism sector peaked at 11.2 percent of GDP in 1993 but slowly
dipped to 8.8 percent in 2007 before the global financial crisis and then further
slipped to 7 percent in 2009. The tourism sector employed 3.3 million workers in
2008, but over the past decade, employment has been flat at about 9.5 percent of
total employment in the Philippines. Travel exports were recorded at 3.4 percent
of GDP in 1999 and then remained between 2.0 and 3.0 percent until 2007, when
they rebounded to 3.4 percent.

In terms of absolute numbers, however, Philippine tourist arrivals rebounded
during the global financial crisis in 2009, whereas the adverse impact of the reces-
sion was deeper in both Thailand and Vietnam. This rebound in the number of
visitors mismatches with a continued dip in tourist export receipts. In 2009, travel
exports stumbled to 1.5 percent of GDP because of the worldwide financial crisis;
tourism spending is deemed to be sensitive to global economic conditions. The
correlation between the number of tourist arrivals and visitor exports is about
0.44 for the Philippines, which is much lower than that in Thailand (0.98) and
Vietnam (0.91) (figure 4.4). This mismatch poses important policy questions on attracting types of tourists and minimizing leakages, if any.

Nearly half of international tourists in the Philippines originate from three countries: the Republic of Korea (about 20 percent of total arrivals), the United States (18 percent), and Japan (11 percent). Korean tourists visit the Philippines not only for their holidays but also for English education. In contrast, visitors from the United States come largely to visit their relatives and friends. Only some 20 percent of U.S. visitors are on holiday.

The World Economic Forum’s 2009 Travel and Tourism Competitiveness Index (TTCI) ranks the Philippines 86th of 133 economies, five places behind Indonesia. The rank has deteriorated by five places since 2008. The country’s strength in attracting tourists lies in its natural resources (ranked 23rd in terms of the number of World Heritage sites and 40th in terms of total known species in the country); price competitiveness (ranked 16th), particularly in hotel prices; and policy, rules, and regulation (ranked 3rd in terms of visa requirements and 28th in terms of bilateral air services agreements) (WEF 2009, 21).

The tourism sector has received ample government support. Tourism has been a priority activity in the IPP and in overseas government sales and investment missions. In 2009, in support of tourism exports, the Tourism Act reorganized the Philippine Tourism Authority into the Tourism Infrastructure and Enterprise

**Figure 4.4.** Correlation between International Visitor Arrivals and Tourism Export Receipts, 1990–2009

Source: Data from the World Travel and Tourism Council.
Zone Authority (TIEZA). TIEZA’s mandate is to develop, manage, and supervise tourism projects in the country. The act establishes TEZs in strategic areas, including Bohol, Boracay, Cebu, Davao, and Palawan, to attract foreign investors and tourists. TIEZA provides fiscal and nonfiscal incentives to tourism enterprises, including an ITH of up to 12 years, as summarized in Table 4.10. Full foreign equity participation may be allowed in hotel development, subject to certain minimum levels of foreign investment (Gutierrez 2008). Otherwise, the limitation of 40 percent foreign ownership is generally applied. For development, foreign land ownership is allowed up to 40 percent, but leasing is permitted up to 75 years.

**Constraints for developing tourism exports**

Despite the country’s potential for attracting tourists, government efforts to increase tourism exports, and increasing demand for English education tourism from Korea, the Philippines has been losing its competitiveness to its neighboring ASEAN members. For instance, Indonesia and Thailand are neighboring competitors, and their product mix and target market segments are similar to those of the Philippines. Figure 4.5 shows that Indonesia and Thailand perform as poorly as the Philippines in terms of (a) safety and security and (b) health and hygiene. Yet they have been able to attract more tourists and earn more foreign exchange from tourism exports. So what are the factors that explain why the performance of the Philippines lags that of these neighboring countries with similar natural endowments?

**Table 4.10. Tourism Incentives**

<table>
<thead>
<tr>
<th>Fiscal incentives</th>
<th>Nonfiscal incentives</th>
</tr>
</thead>
<tbody>
<tr>
<td>• ITH of 6 years with provision for extension for another 6 years</td>
<td>• Employment of foreign nationals in executive, supervisory, technical, or advisory positions permitted</td>
</tr>
<tr>
<td>• Gross income tax for new enterprises of 5%</td>
<td>• Special investor’s resident visa for a foreign investor who invests at least US$200,000</td>
</tr>
<tr>
<td>• 100% exemption from all taxes and customs duties on import of capital investment and equipment</td>
<td>• Issuance of working visas by TIEZA renewable every 2 years to foreigners possessing highly technical skills that no Filipino within the TEZ possesses</td>
</tr>
<tr>
<td>• Duty-free import of transportation and spare parts</td>
<td>• Right to repatriate entire proceeds of the liquidation of an investment</td>
</tr>
<tr>
<td>• 100% exemption from all taxes and customs duties on importation of goods consumed in the course of services rendered by firms within a TEZ</td>
<td>• No property requisition of registered enterprises</td>
</tr>
<tr>
<td>• Tax deduction up to 50% of the cost of environmental protection, cultural heritage preservation, or other social responsibility activities</td>
<td>• Lease of land and buildings in a TEZ to foreign investors up to 75 years (50 years plus one-time renewal of up to 25 years)</td>
</tr>
<tr>
<td></td>
<td>• Transferability of the leasehold right</td>
</tr>
</tbody>
</table>

*Source: Data from BOI.*
Factor conditions: Weak transport infrastructure

Comparative analyses of the TTCI rankings of Indonesia, the Philippines, and Thailand suggest that the Philippine bottlenecks lie largely in infrastructure and prioritization of travel and tourism (figure 4.5), where the government has a greater role to play than the private sector.

Ground transport infrastructure

In ground transport infrastructure, the Philippines scores particularly low in terms of road quality. The 2010–11 Global Competitiveness Index ranks the Philippines 114th, one of the lowest rankings in East Asia and the Pacific. The majority of the 201,940-kilometer road network (as of 2008) continues to be in poor condition, with one-fifth of it paved (CIA 2010).

This weak ground transport infrastructure, together with the weak quality of the ground transport network, has adverse implications for tourism. First, it limits mobility of tourists who already have time constraints in place. Second, it restricts

Figure 4.5. Comparative Analyses of TTCI Rankings, 2009

Source: WEF 2009.
Note: Ranking in respective category is converted into percentile.
choices of transportation means. For instance, the journey to the 2,000-year-old Banaue Rice Terraces (recognized as a World Heritage site by the United Nations Educational, Scientific, and Cultural Organization and said to be the Eighth Wonder of the World) well illustrates these two points. Banaue is only 350 kilometers from Manila, but because of the weak ground transport network and narrow, winding roads, often congested around towns, tourists need 8 to 11 hours to reach Banaue by road and may only travel by car or bus. Neither air transport nor railway to Banaue is available. Upon arriving in Banaue, tourists need to rely on either jeepneys or tricycles on unpaved bumpy roads to reach most rice terraces. In contrast, Chiang Mai in Thailand is 696 kilometers north of Bangkok and can be reached from Bangkok within an hour by air (at least six airlines operate some 23 flights daily), 8 hours by car, 10 or 11 hours by bus, or 11 or 12 hours by train.

Third, the World Bank (2009) reports that the weak road quality translates into higher vehicle operating costs per kilometer. The Department of Public Works and Highways found that average vehicle operating costs doubled between 1999 and 2003, whereas the inflation rate was 20 percent.

The Medium-Term Philippine Development Plan 2004–2010 (MTPDP) identifies the improvement of air, sea, and land access to priority destinations (including Cordillera, the rice terrace region) from the country’s main air gateways as a strategic priority for tourism (NEDA 2009). Progress on road improvement, however, seems to be slow. The Department of Public Works and Highways Annual Report 2009 states that the 50.49-kilometer Mount Data–Bontoc–Banaue section is being improved and that the project, which began in September 2006, is 64.11 percent complete (DPWH 2009, 11). The government promotes public-private partnership in modernizing land transport and developing, implementing, and operating railways.

Air transport infrastructure

Airports require major upgrades. The literature shows a positive correlation between the quality of airports and the number of international arrivals. Businesses perceived that the Philippine passenger air transport infrastructure is underdeveloped: the 2009 TTCI ranks the Philippines 89th in terms of the quality of air transport infrastructure, far behind Thailand (28th) and Indonesia (75th). Ninoy Aquino International Airport (NAIA) in Manila, the country’s main international gateway, was designed in 1974 and completed in 1981; it now ranks at the bottom of Asian international airports because of its limited and outdated facilities, weak passenger comfort, and overcapacity (its design capacity was already met in 1991). NAIA-2 terminal has been in operation since 1999 but is used exclusively for Philippine airlines’ domestic and international flights. Disputes over the build-operate-transfer contract for NAIA-3, with its anticipated modern
facilities, have prevented the final completion and operation of the new airport.\textsuperscript{12} Currently, Cebu Pacific, Philippine Airlines, and Air Philippines operate from NAIA-3. Full use of the new airport would require further investment to upgrade the facilities.\textsuperscript{13}

\textbf{Government supports}

Liberalizing air transport services could improve accessibility to the Philippines and boost competition in international air transport services. Piermartini and Rousová (2008) find that air transport service liberalization has a positive and statistically significant effect on passenger flows. Furthermore, they find that the seventh freedom,\textsuperscript{14} cabotage, free determination of capacity, free pricing, and multiple designations in bilateral air service agreements (BASAs) have a positive and statistically significant relationship with passenger flows. The Philippines deregulated domestic air transport services, resulting in high scores on scheduled available domestic seat kilometers\textsuperscript{15} (158 million seat kilometers per week in 2008).\textsuperscript{16} However, its international available seat kilometers are only one-third those of Thailand (355 foreign carrier flights per week to the Philippines, compared with more than 1,000 to Thailand).

The government progressively liberalized BASAs in 1999 to boost tourism (WTO 2005), but competition in international air transport services is rather limited. The Philippines scores 13.1 in the World Trade Organization’s index on openness of BASAs (0 being most restrictive and 50 the most liberal), which is nearly at par with Singapore (13.0). However, BASAs remain restrictive in terms of controlling capacities and frequencies and in terms of requiring fare approval by both partners (WTO 2005). Airlines may also be required to be designated by their country of origin through BASAs with the Philippines and may be limited to third and fourth freedoms only.\textsuperscript{17} Philippine charter arrangements are restrictive unless scheduled services are not significantly interrupted, and cabotage is prohibited (WTO 2005). High international traffic at NAIA (95 percent) indicates that the country has not yet fully adopted multiple-gateway policies to boost tourism. Even though the government encourages foreign airlines to offer services to regional airports—Cebu, Davao, and Clark-Subic (Trace, Frielink, and Hew 2009)—such services are often subject to BASAs that inhibit entitlements.\textsuperscript{18}

The Philippines has not yet implemented ASEAN open-skies policies at the regional level, which might inhibit intra-ASEAN tourist arrivals. Indonesia and Malaysia adopted the full fifth freedom to facilitate tourism in the Brunei Darussalam–Indonesia–Malaysia–Philippines East Asian Growth Area, whereas the Philippines granted the fifth freedom to airlines designated by the participating countries (Trace, Frielink, and Hew 2009).\textsuperscript{19}
designated for fifth freedom rights are Davao City, General Santos City, Puerto Princesa City, and Zamboanga City.

In addition, the Philippines suffers from regulatory uncertainty, which reduces international seat availability. For instance, Executive Order No. 500, issued in 2006, increased the number of flights to more than 4,000 (accommodating 470,000 passengers) in 2006 from less than 500 (50,000 passengers) in 2004 (World Bank 2007) by allowing low-cost airlines to serve Diosdado Macapagal International Airport without limitations on traffic rights, capacity, and air freedom rights. This order was, however, retracted six months later because of domestic pressures (Estavillo 2007). This regulatory uncertainty led many airlines, such as Tiger Airways, to cut back on their flights to Diosdado Macapagal International Airport.

**Safety and security environment**

Safety and security are inevitably interwoven with tourism. In the wake of a health threat, crime, or terrorism, tourism is affected because such “security incidents cause changes in tourists’ perception of risk” (Pizam and Mansfeld 2006, 7). For instance, during the SARS (severe acute respiratory syndrome) outbreak in 2003, the Philippines experienced a dip in tourist arrivals and in tourism export receipts. Therefore, safety and security need to be an integral part of promoting tourism exports as good security is an integral part of overall service quality (Tarlow 2006).

The 2009 TTCI finds poor safety and security situations in the Philippines. The threat of terrorism in the Philippines imposes high costs on businesses (the TTCI ranked the Philippines 125th of 133 economies). Police services are not reliable in enforcing law and order (the Philippines ranked 98th). The incidence of common crime and violence imposes costs on businesses (the Philippines ranked 93rd). The *MTPDP* reports that the government will act on improving security situations in Mindanao to advance tourism (NEDA 2009).

**Marketing and product development**

The Philippines has adopted multipronged promotion strategies. As set out in the *MTPDP*, the country has prioritized aggressive promotion of short-haul beachgoer tourism to East Asian economies (NEDA 2009). For the European market, it has concentrated on promoting scuba-diving products, but European tourist access to the Philippines remains a bigger constraint. North America has been a traditional origin for tourists; therefore, the Department of Tourism allocates fewer promotion expenditures to that market.

The tourism marketing effort has been ineffective. Business executives in the Philippines still see the country’s tourism marketing as only moderately effective
in attracting tourists (marketing scored 4.9 of 7.0 on the 2009 TTCI). The World Tourism Council reports that the Philippine government spends 3.6 percent of its total budget for travel and tourism, which is higher than Thailand (2.7 percent), Malaysia (1.7 percent), and Vietnam (1.4 percent) (figure 4.6). The Tourism Act of 2009 makes greater financial resources available to the Tourism Promotion Board, a marketing body of the Department of Tourism; therefore, more effective marketing and branding should become much more important and will potentially augment tourism exports.\textsuperscript{20}

**Industry-specific conditions**

Aside from the poor condition of transport infrastructure in the Philippines, hotel room capacity in tourist destinations is also constrained. The Philippine Travel Agencies Association pointed out that prime tourist destinations such as Boracay, Cebu, Metro Manila, and Palawan need 30 percent more rooms to meet demand—especially during the peak season (Arcibel 2008). The Survey of Tourism Establishments administered by the Department of Tourism reports that, as of 2008, accommodation facilities have been expanding in prime travel destinations, so the looming issue in room capacity should be resolved.

**Figure 4.6.** Marketing Effectiveness, 2008

Sources: WEF 2009; World Tourism Council.
The BPO industry in the Philippines shows that an industry can be developed for the international market if “a champion with vision and the ability to organize people to implement plans and programs rises from within the sector” (Custodio 2005, 4). The Philippine Chamber of Commerce and Industry for Tourism launched Biztour5 in 2003 to augment the government’s efforts for sustainable tourism. Its objective is to bring in 5 million foreign tourists, to generate US$5 billion in tourism receipts, and to create 5 million jobs by investing US$5 billion by the fifth year through reforms in the air and sea transport sectors, better road connectivity between airports and seaports, railway upgrades, and investment in accommodation infrastructure. However, tourism stakeholders are still largely underrepresented, and the relationship between the Philippine government and private tourism institutions and allied enterprises needs to be improved. The private sector needs to intensify its work toward creating innovative tourism products. Recognizing these shortcomings, the Tourism Act of 2009 paved the way to form the Tourism Congress, comprising representatives of the tourism sector.

**Challenges Ahead**

The service sector is an important component of the Philippine economy, constituting some 50 percent of GDP and total employment. Service exports from the movement of workers have outperformed those of many developing countries. Remittances have positively affected the Philippine economy, fueling domestic consumption that includes increased spending on private health and education and encouraging entrepreneurial activities (Yang 2006). Service exports, in contrast, have a limited role, accounting for only 6 percent of GDP in 2009. Nonetheless, the Philippines is a net service exporter, and exports of services have been growing faster than exports of goods. The Philippines earns net export credits in sectors that are natural resource–based (tourism), that are labor intensive (construction), or that involve more intensive use of human capital and telecommunications (communications, computer and information services, and other business services).

The BPO industry has become the principal success story. The sector demonstrated continued growth even during the global financial crisis, whereas tourism exports declined substantially. The success of BPO exports rests on the favorable factor conditions: the sector benefited from low labor costs, low telecommunications and Internet costs, a large pool of competent and English-speaking labor, Filipinos’ affinity to the U.S. legal and accounting systems and to U.S. culture, and their warm personalities suitable for employment in contact centers. In addition, as pioneers under the IPP, BPO firms registered with either PEZA or the BOI receive favorable fiscal and nonfiscal incentives. Because PEZA offers one-stop-shop services, PEZA-registered BPO firms are less exposed to the weak business
climate, especially in terms of starting a business. Furthermore, the industry’s success rests on greater global outsourcing demand and the proactive leadership of the private sector, together with a strong business association (BPAP).

Yet the BPO sector faces challenges going forward. First, the supply of skilled labor could be challenged. BPAP forecasts that some 265,000 additional FTEs will be needed by 2011. The current trend in the number of college graduates suggests that labor supply can easily meet demand. Labor supply would face challenges on two fronts: one is English competency, and the other is the global mobility of skilled Filipino workers. Industry experience suggests that not all college graduates are ready to hit the shop floor immediately. In fact, only 10 percent of contact center applicants are immediately hired. Managers say that the main problem lies with deterioration in English proficiency. Workers who are competent in English proficiency, in contrast, are often hired by firms abroad; therefore, BPO firms must compete with firms abroad to retain competent workers, especially in the areas of software development and other IT-related services.

Second, the Philippines does not yet have comprehensive data protection laws in place. The absence of such laws may prevent third-party BPO providers from growing further in the Philippines. The issue of data secrecy is one of the chief drawbacks of third-party BPO providers, and contact centers have reported instances of theft of personal data. Recognizing the increasing need for privacy protection laws, the Philippine government proposed House Bill No. 3828, the Data Protection Act. The bill is in line with Asia-Pacific Economic Cooperation (APEC) Privacy Principles and “seeks to protect personal data in information and communication systems in the government and the private sector, and create a National Data Protection Commission to implement the law” (Committee Affairs Department 2009, 16–17). However, the bill is yet to be passed into law. Mira (2009) points to the measure to create the National Data Protection Commission as a cause for the delays.

Third, quality control is key to maintaining the country’s reputation as the best BPO destination. Quality control is particularly important in the legal and medical transcription areas. To support the country’s reputation, the government has enacted a certification process for all individual companies’ services in these areas. As for medical transcription BPO, Philippine firms may need to shift gears to meet demand from the United States, the largest market for such services. An interview with an industry participant found that the provision to implement electronic health recording systems, as set out in the American Recovery and Reinvestment Act of 2008, implies that the medical transcription BPO industry will need to add health care management outsourcing, such as medical coding and billing, electronic medical records, and claims management. In turn, the existing workforce would need to be retrained. Industry participants
noted that training a medical transcriptionist is painstaking and can easily take five to seven months (Estavillo 2010).

Making additional investments in human capital, strengthening intellectual property rights, and improving quality control may further promote the growth of high-value-added activities within BPO industries that are not yet fully exploited in the Philippines but have been successfully tapped by other countries, such as India.

The tourism sector has yet to reach its full potential and could develop more opportunities and diversify as a health tourism and retirement destination. The 2009 TTCI indicates that impediments to tourism competitiveness are largely associated with weak ground and air transport infrastructure—roads, railways, ground transport network, and airports. Weak physical infrastructure lowers accessibility to tourism destinations and discourages private sector investments in facilities to accommodate tourists. Investments in transport infrastructure would boost not only tourism exports but also transport and logistics exports. More broadly, infrastructure investment is a driver for growth. Agenor and Moreno-Dodson (2006) found that infrastructure investment indirectly improves labor productivity and affects adjustment or investment costs and the durability of capital.

The 2009 TTCI highlights two other constraints related to tourism exports: (a) safety and security concerns (as are found in Indonesia and Thailand) and (b) the government’s ineffective marketing to attract foreign tourists. One tourism industry association’s view is that tourism export performance would improve if air transport services were liberalized, leading to more available seats and lower airfares. As noted in the tourism literature, the tourism sector is very complex; thus, descriptive research on tourism exports alone may face some limitations. Quantitative research on the Philippine tourism industry is ongoing.

Recognizing local stakeholders and developing their capacity to participate in business environment reform is critical for successful and sustainable reforms. This capacity building can include strengthening the role and capacity of state agencies, the private sector, workers’ organizations, and other civil society structures, as well as supporting better dialogues and advocacy and building the capacity or ability of state agencies to manage reform programs. Although developing the capacity of state agencies can be a legitimate and useful response to the situations created by failed or weak states, working with other program partners such as the private sector is equally important.

Notes

1. Asia’s growth was counterbalanced by the 3.5 percent decline in North American countries’ exports, which still accounted for about one-fifth of world commercial service exports.
2. The RCA index is by sector, as evidenced by trade flows (Balassa 1965):

\[
RCA_{jt}^j = \left( \frac{X_{jt}^j}{\sum_{j} X_{jt}^j} \right) / \left( \frac{X_{jt}^w}{\sum_{j} X_{jt}^w} \right)
\]

where \( X \) is exports, \( p \) is the Philippines, \( w \) is the world, \( j \) is a service sector, and \( t \) is time. A comparative advantage is revealed if RCA is greater than one. If RCA is less than unity, the country is said to have a comparative disadvantage in the industry. As the formula shows, RCA is a dynamic concept, and therefore it can change over time.

3. These data are according to the heads of ASEAN power and utilities authorities (Adriano 2008).

4. Early movers included Accenture, eTelecare Global Solutions, SYKES, and PeopleSupport.

5. The figures exclude foreign back-office firms in the areas of (a) finance and accounting and (b) human resources.

6. In this chapter, the BPO sector refers to both outsourcing and offshoring, consistent with the Philippine statistics agency’s definition. (See Sako 2005, for clearer distinctions between outsourcing and offshoring.) Furthermore, to remain consistent with the scope of BPO data that are collected by BPAP, the sole BPO-related data compiler in the Philippines, this chapter includes BPO, IT outsourcing, and engineering services outsourcing in the BPO sector.

7. The Economic Times of India reported, “the recent statement by U.S. President Barack Obama ending the tax incentives on the overseas income of U.S. corporations has seen some of the [BPO] industry players predicting further exits of captives from India” (Abrar and Thimmaya 2009).


9. A medical transcription company can be as small as nine employees. Monchito Ibrahim, commissioner of the Commission on Information and Communications Technology, said that many Philippine start-ups are in the area of medical transcription and provide services for a large number of U.S.-based hospitals (Arellano 2010).


11. Four TEZs were proclaimed in 2003: (a) Boracay Eco-Cultural Village Resort, (b) Fort Ilocandia Tourism Ecozone, (c) Island Cove Resort and Leisure Park, and (d) Pamalican Island Tourism Ecozone. In 2006, two more TEZs were proclaimed: (a) Eco-Tourism Village and (b) Resort and Tourism Village, Retirement Village, and Vacation Villa (NEDA 2009).

12. The Arroyo government called the build-operate-transfer contract “onerous,” and the Supreme Court of the Philippines declared the contract “null and void.” In December 2004, the government expropriated the airport; payments to the Philippine International Air Terminals Co. (PIATCO) were made afterward. PIATCO, the main project contractor, together with its partner Fraport AG, submitted the dispute to arbitration (PIATCO in Singapore before the International Chamber of Commerce and Fraport AG in Washington, D.C., before the International Centre for Settlement of Investment Disputes). In October 2010, an International Centre for Settlement of Investment Disputes ad hoc committee declared the proceedings closed.

13. In May 2010, Cathay Pacific Airlines considered moving to NAIA-3, but the airport was not equipped to offer the airline its own lounge facilities.

14. The seventh freedom of the air is the right to fly between two foreign countries but not offer flights to one’s own country.

15. The term available seat kilometers captures the total flight passenger capacity of an airline in kilometers. It is obtained by multiplying the total number of seats available for scheduled passengers and the total number of kilometers those seats were flown.

16. Nonetheless, the level is lower than in Indonesia (628 million) and Thailand (206 million). However, one may need to consider the size of their territories when comparing these countries.
17. The freedoms of the air are a set of commercial aviation rights. The third freedom is the right to fly from one’s own country to another. The fourth freedom is the right to fly from another country to one’s own.

18. The government recently announced adopting the open sky policy in regional airports, except those international gateways in Manila.

19. The fifth freedom of the air is the right to fly between two foreign countries during a flight that originates or ends in one’s own country.

20. However, it should be noted that Crouch and Ritchie (1999) find that demand for international travel is generally not very responsive to the promotional or marketing expenditures of national tourist offices.

21. About 30 to 40 percent of applicants are classified as near-hires, and they must take an intensive two-week training course prior to being employed. Some 60 percent of near-hires are hired after they complete the training. The Technical Education and Skills Development Agency (TESDA) has earmarked educational grants for BPO near-hires. For example, the PGMA (President Gloria Macapagal-Arroyo) Training for Work Scholarship Program offered scholarships in the amount of ₱350 million for 2008 and 2009. TESDA accredited private training institutions and paid the institutions for each successful graduate who was hired by a BPO firm. After receiving close to two months of training, many near-hires found jobs (Oliva 2007).

22. The United States passed the Health Insurance and Portability and Accountability Act (HIPAA) in 1996 to protect individuals’ medical records and other health care–related data. To ensure that their clients’ data is protected, some U.S. firms require their future outsourcing partners in the Philippines to be HIPAA compliant (Mira 2009).

23. As a member of APEC, the Philippines has followed the development path of the APEC Privacy Principles, which seek to provide an alternative to the European Union data protection model that was finalized in November 2004. The principles are viewed as facilitating offshore outsourcing and are seen as more business friendly. The laws stemming from the principles will recognize the need for appropriate processing and transfer of personal information and will permit outsourcing if appropriate (not overly burdensome) protections are in place. Furthermore, the laws will recognize that global data flows are facilitated if the laws focus on ensuring that local firms are accountable for data processing activities (Eisenhauer 2005).

24. The Commission on Information and Communication Technology notes that, nonetheless, the Philippines has in place data privacy guidelines issued by various government bodies and that these guidelines currently serve to protect data shared by consumers with private firms.

25. Myla Rose M. Reyes, president of the Medical Transcription Industry Association of the Philippines and managing director of Total Transcription Solutions Inc., expressed similar concerns during her interview with *BusinessWorld* (Estavillo 2010).

26. In an interview with the author, a logistics industry participant stated that high logistics costs are associated with poor road transport networks. For instance, a producer who is geographically located closer to the Subic port must instead transport goods to the Manila port because of the absence of a highway connecting the city to the port. Other logistics bottlenecks for exports are poor port facilities (poor Subic port facilities result in congestion in the Manila port), weak IT use, and arbitrarily high shipping charges.

**References**


Eisenhauer, Margaret P. 2005. “Privacy and Security Law Issues in Off-shore Outsourcing Transactions.” Hunton & Williams, Atlanta, GA.


The technological revolution has changed the way services can be provided from one end of the world to the other. Service provision no longer requires the customer and provider to interact in a shared environment through physical presence. The ability to provide services from a distance has facilitated the globalization of services, making knowledge-based and technology-intensive intermediate services the new sources of growth. Furthermore, progressive deregulation of the service sector through either formal trade liberalization agreements or unilateral liberalization measures has contributed to the increasing importance of the service sector by enhancing the potential of service exports (Behuria and Khullar 1994). Thus, service exports present a promising way to push economic growth. The United Nations Conference on Trade and Development found service exports to be a significant factor in explaining the growth performances of developed countries in the 1990s, though this nexus is somewhat weaker in developing countries (Gabriele 2004, 20).

Malaysia’s gross domestic product (GDP) has enjoyed a high growth rate (about 5 percent) since 2000, which increased the demand for several consumer and producer services and hence the contribution of the service sector. The Malaysian government believes that the service sector is potentially an engine of economic growth and aims to increase its contribution to GDP from 56 percent in 2009 to 67 percent—the contribution observed in developed countries—by 2020 (NEAC 2010, 103). To achieve this target, the government has been proactive in
introducing policies and strategies to grow the service sector and its exports. Examples can be seen in the Second and Third Industrial Master Plans as well as the New Economic Model (NEM) (MITI 1996, 2006; NEAC 2010). In the Second Industrial Master Plan, the service sector was intended to enhance manufacturing development; in the Third Industrial Master Plan and the NEM, selected services such as health and education were targeted as new sources of export revenues.

This chapter characterizes the nature of service exports in Malaysia and analyzes the factors that have contributed to the success (or otherwise) of specific services relative to others. Factors that could influence the success or failure of the service exports are grouped into three categories: (a) endowments such as availability of human capital and telecommunication infrastructure; (b) government policies such as promotion initiatives and unilateral, bilateral, or regional liberalization; and (c) access to service export markets.

The chapter is organized as follows. An overall picture of the service sector and service exports in the Malaysian economy is followed by a detailed analysis of the characteristics of service exports from Malaysia. The next section details the fundamental factors that have contributed to the success of these exports. The subsequent section explores some specific factors that also may have constrained service exports. Finally, the chapter concludes with policy lessons.

**The Service Sector in Malaysia**

Since its independence in 1957, Malaysia has traditionally been a net importer of services. After a long period of persistent deficit, a positive balance in service trade started to emerge in 2007 and 2008. Nevertheless, the sector is an important one for the Malaysian economy in terms of its share in GDP, employment, and inter- and intrasectoral links. The service sector has been the largest sector in the Malaysian economy from 1978 to 2009. In 2009, this sector contributed 56 percent of GDP and 59 percent of total employment, including employment in government services (Tham and Loke 2010, 3).

The service sector has the second highest multiplier effect on the economy, after the manufacturing sector. An increase in demand in every service subsector by RM 1.00 (US$0.26) is expected to increase the output in the whole economy by RM 40.04 (US$10.53) while it increases the output in the manufacturing sector by RM 3.73 (US$0.97) (table 5.1). Conversely, an increase in demand by RM 1.00 (US$0.26) in every manufacturing subsector will increase service output by RM 9.80 (US$2.58).

For input requirements, the service sector depends more heavily on its own industries (linkage index of 6.00) than on other sectors in the economy. The
The Case of Malaysia

The manufacturing sector seems to depend more on the service sector (linkage index of 1.67), relative to the service sector’s dependence on the manufacturing sector.

Among service subsectors, government services (public administration and other government services) in general have higher dependency on the manufacturing sector than do nongovernmental services. Among the nongovernmental services, hotel and restaurant services depend relatively highly on the manufacturing sector for inputs, particularly from the food processing subsector (linkage index of 15.17). Other examples are transport and storage services, which depend relatively highly on the petroleum products subsector (linkage index of 6.64); communication services, which have high dependency on the electrical machinery subsector (6.18); education services, which depend on the food processing subsector (3.99); and health services, which depend on the industrial chemicals subsector (2.49).

In terms of the degree of importance of service subsectors as inputs to the manufacturing subsectors, the wholesale and retail trade service subsector is an important input to all manufacturing subsectors particularly to the food processing subsector (linkage index of 22.60), because its forward linkage index values are all greater than 1.00. Other services that are relatively more important to the manufacturing sector are transport and storage services (particularly to food processing, with an index of 6.23) and business services (particularly to food processing, with an index of 6.59).

In short, the linkage analysis shows that the service and manufacturing sectors are interdependent. Growth in the service sector (in terms of size or quality) is likely to promote the manufacturing sector and vice versa.

Table 5.1. Multiplier Effect of Increased Demand of RM 1 (US$0.26) in Every Subsector in Each of the Sectors Shown on Other Sectors and the Economy

<table>
<thead>
<tr>
<th>Sector</th>
<th>Services</th>
<th>Agriculture, fishery, and forestry</th>
<th>Mining and quarrying</th>
<th>Manufacturing</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Services</td>
<td>35.231</td>
<td>0.752</td>
<td>0.577</td>
<td>9.778</td>
<td>0.212</td>
</tr>
<tr>
<td>Agriculture, fishery, and forestry</td>
<td>0.464</td>
<td>8.736</td>
<td>0.011</td>
<td>5.139</td>
<td>0.014</td>
</tr>
<tr>
<td>Mining and quarrying</td>
<td>0.291</td>
<td>0.161</td>
<td>3.111</td>
<td>1.526</td>
<td>0.054</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>3.734</td>
<td>1.614</td>
<td>0.340</td>
<td>72.553</td>
<td>0.390</td>
</tr>
<tr>
<td>Construction</td>
<td>0.321</td>
<td>0.031</td>
<td>0.146</td>
<td>0.496</td>
<td>1.008</td>
</tr>
<tr>
<td>Total economy</td>
<td>40.040</td>
<td>11.294</td>
<td>4.185</td>
<td>89.492</td>
<td>1.678</td>
</tr>
</tbody>
</table>

Source: Authors’ computation based on Department of Statistics 2005, table 15.
Hence, the service sector is an important sector in the domestic economy in terms of its contribution to GDP, employment, and inter- and intrasectoral links in the country. However, its contribution to total exports is much smaller than the contribution of manufacturing. Overall, Malaysia is not a big exporter of services in the global arena. Because of the dominance of multinational corporations in the manufacturing sector, Malaysia’s export of manufactured goods is facilitated through the import of transport services.

Significance of service exports

Malaysia’s exports comprise mainly manufactured goods. The share of service exports in total exports stagnated between 12 and 14 percent from 1998 to 2008, while its share in GDP remained within 12 to 16 percent. The share of service exports in service value added stood at 36 percent in 2007 before falling to 25 percent in 2008. This finding indicates that a larger share of service output in the country is directed toward the domestic economy.

Table 5.2 shows the revealed comparative advantage for Malaysia for four broad categories of services. The results suggest that Malaysia has a strong and growing comparative advantage in travel services. Transport services indicated a comparative advantage for one year (2007). The comparative advantage that Malaysia held in computer, communication, and other services in 1999 to 2000 has deteriorated over time. These revealed comparative advantages should be interpreted with caution because these indicators are calculated for a fairly aggregated group of services; further disaggregation is not possible owing to the unavailability of data.

Table 5.2. Revealed Comparative Advantage of Malaysia, 1999–2008

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer, communication, and other services</td>
<td>1.21</td>
<td>1.07</td>
<td>0.77</td>
<td>0.78</td>
<td>0.81</td>
<td>0.75</td>
<td>0.78</td>
<td>0.74</td>
<td>0.64</td>
<td>0.61</td>
</tr>
<tr>
<td>Insurance and financial services</td>
<td>0.39</td>
<td>0.36</td>
<td>0.42</td>
<td>0.20</td>
<td>0.35</td>
<td>0.32</td>
<td>0.25</td>
<td>0.21</td>
<td>0.18</td>
<td>0.19</td>
</tr>
<tr>
<td>Transport services</td>
<td>0.85</td>
<td>0.82</td>
<td>0.78</td>
<td>0.81</td>
<td>0.87</td>
<td>0.78</td>
<td>0.86</td>
<td>0.80</td>
<td>1.02</td>
<td>0.91</td>
</tr>
<tr>
<td>Travel</td>
<td>0.95</td>
<td>1.15</td>
<td>1.55</td>
<td>1.62</td>
<td>1.51</td>
<td>1.68</td>
<td>1.63</td>
<td>1.80</td>
<td>1.82</td>
<td>1.95</td>
</tr>
</tbody>
</table>

Source: Authors’ calculation based on Balassa’s (1965) formula and balance of payments data from the World Bank’s World Development Indicators database.
Composition of cross-border service exports

This section identifies the major service exports of the country through its balance of payments statistics, which are the primary source of data for the country’s exports of services. A shift occurred in the share of the three main categories of exports over time. From 1995 to 2000, the largest share in exports accrued to other services, followed by travel and transport. The share of travel in exports increased steadily over time, and it became the largest component in service exports from 2001 onward. Although the share of travel ranged between 21 and 35 percent in the 1990s, it rose to over 40 percent for all years during the 2000s. In 2008, travel constituted 50 percent of total service exports. The largest share of the travel export is business travel. Personal travel exports are less than 1 percent, though that figure is increasing. The share of health- and education-related services was reported for the first time for the years 2004–07.

Although other services constituted the second-largest component in service exports from 2001 onward, their share has decreased over time, falling from 34 percent in 2001 to 27 percent in 2008. This decrease does not imply that the absolute value of other service exports has fallen but rather that the value of exports in this category has not increased as fast as the value of service exports in transport and travel.

Nevertheless, within other services, the shares of some services are increasing, including computer and information services. The share of information and communication technology (ICT) service exports in aggregate service exports grew from 1.2 percent to 3.4 percent from 1993 to 2008. Total cumulative ICT service exports from the Multimedia Super Corridor (MSC), a government-designated zone for the development of multimedia technology, amounted to RM 7.2 billion (US$2.0 billion) in 2009. Annual ICT service exports from the MSC as a percentage of total computer and information service exports grew from 66 percent in 2005 to 70 percent in 2006 but slowed to 43 percent in 2008.

Transport service exports are the third major group of service exports, with a share of about 20 percent of total service exports throughout the period 1995–2006. However, the share of passenger transport in aggregate service exports increased significantly from 5.3 percent in 2001 to 10.8 percent in 2008. The increase in passenger transport was facilitated by the emergence of low-cost carriers in Malaysia and subsequently in other countries in the region. These carriers further enhanced tourism within the region as well as business travel. Tourism in Malaysia is also boosted by the presence of an increasing number of middle-income consumers in Asia, thanks to overall economic growth in the region.

The slow growth of transport service exports can be attributed to the fact that Malaysia has not been able to capitalize on its manufacturing exports to deepen its
service exports. Figure 5.1 plots the value of manufactured exports and transport service exports over time (1995–2008). Both have clearly increased over time; however, they do not seem to have high correlation with each other. Manufactured exports increased at a faster rate than transport service exports, leading to a widening gap between manufactured exports and transport service exports over time. This finding indicates that Malaysia still very much depends on the import of transport services to facilitate its exports of manufactured goods.

The heavy dependence on foreign transport services, particularly foreign shipping lines, was noted in a study by Sieh Lee, Abidin, and Loke (2000, 132), which found that only 15 percent of Malaysia’s total trade was carried by Malaysian ships. This phenomenon has continued in recent years as an estimated 85 percent of total trade is carried by foreign ships (Baird Maritime 2010). Data from the Ministry of Transport show that, in 2005, Maersk Line handled approximately 78 percent of the total cargo in Port Klang and Tanjung Pelepas, two of the major ports in the country. Maersk’s share increased to 82 percent in 2009. The dominance of multinational corporations in manufacturing exports and their preference for using transport services from other multinational corporations in their home countries has contributed to this dependence.

In 2007, for the first time since independence, the services account shifted from negative to positive in Malaysia’s balance of payments (WTO 2009, 8). Increasing exports of travel services and passenger transportation contributed to this shift. This surplus was retained in 2008, although there was a slight decrease compared to 2007.
Mode 2: Key service exports not fully reflected in balance of payments data

The balance of payments data do not describe the full extent of service exports because they capture only cross-border financial transactions made through the banking system. An important omission is the domestic expenditure involved in mode 2 service exports. Even for financial services, there are some restrictions in the use of balance of payments data. First, it is not possible to identify the types of financial services that are exported, because there are no domestic data on this topic. Second, financial services in the balance of payments data do not completely capture the export of some financial instruments and bonds. For example, no published data are available on the extent to which Islamic financial instruments and bonds in Malaysia have been subscribed in the global market. Malaysian and non-Malaysian corporations and multinationals have issued Sukuk (Islamic bonds), which were subscribed by both domestic and international investors. In 2002, Kumpulan Guthrie Berhad issued the US$150 million Global Sukuk (Sukuk Ijarah), the first global corporate Islamic bond issue that was launched in Malaysia (Laldin 2008, 12). The Malaysian government also launched the Malaysian Sukuk Ijarah, worth US$600 million, in 2002. To date, Malaysia captures about 40 percent of the global Sukuk issuance, but there is no apparent indicator to show the expansion of the related service activities.

Similarly, tourism is the largest service industry in Malaysia, employing about 451,000 in 2005. The number of tourist arrivals increased from 10.2 million in 2000 to 16.4 million in 2005 and is expected to reach 24.6 million in 2010 (under the Ninth Malaysia Plan). This average annual rate of increase of 10 percent has surpassed the target of 6.9 percent. A major difficulty is determining the amount of tourist receipts spent domestically on related services such as restaurants, transportation, and entertainment. The government estimated that tourist receipts in 2000 totaled RM 17.3 billion (US$4.6 billion), and this figure rose to RM 31 billion (US$8.2 billion) in 2005. The expected tourist receipts in 2010 were RM 59.4 billion (US$19.2 billion).

Mode 3: Foreign direct investment outflows

Data on outflows of foreign direct investment (FDI) by sectors and by public and private companies were not published in Malaysia at the time of writing of this chapter. According to the 2009 annual report of the Malaysian central bank, Bank Negara Malaysia, cumulative outflows grew from RM 32 billion (US$10.3 billion) for the period 1995–99 to RM 182 billion (US$49.5 billion) for the period 2000–09 (Bank Negara Malaysia 2010, 37). The share accruing to services in the cumulative outflows from 1995 to 1999 grew from 49 percent to 70 percent for the period from 2000 to 2009. Financial services, telecommunication, and
utilities are the main subsectors in services that are investing abroad. Government-linked companies play a big role in outward investment, although private companies are also involved. The investment is focused in the region, especially in the Association of Southeast Asian Nations (ASEAN), the Asian newly industrialized economies, China, and West Asia.

Anecdotal evidence, as well as data from annual reports, indicates that government-linked companies that have investment abroad are Telekom Malaysia Berhad and banks, including private banks, as shown in tables 5.3 and 5.4. Tenaga Nasional Berhad, the national electricity company, reported in its 2009 annual report that it has investment holding companies in India, Mauritius, and Pakistan. It also operates a power plant and generates electricity in Pakistan.

AirAsia, the low-cost carrier, has joint ventures in Indonesia and Thailand (Indonesia AirAsia and Thai AirAsia). Private hospitals and higher education institutions have also ventured overseas. For example, KPJ Healthcare has facilities in Bangladesh, Indonesia, and Saudi Arabia. Eight private higher education institutions in the country have reported having branch campuses overseas, mainly in other developing countries such as Bangladesh, China, India, Indonesia, and various countries in Africa. The exception is Limkokwing University, which has reported the establishment of an affiliate in the United Kingdom.

**Mode 4: Service exports from Malaysia**

Many Malaysians work in Singapore, particularly in health and education services. An estimated 350,000 Malaysians are working in Singapore, with 150,000 commuting from Johor Bahru and the rest residing in Singapore (New Straits Times 2009). The number of Malaysian migrants with tertiary education reported in the countries of the Organisation for Economic Co-operation and Development has increased from 72,649 in 1999 to 102,321 in 2000 (Fong 2010). Fong (2010) also reported that there were 7,955 Malaysian science and technology researchers in the United States in 2003 compared with 10,419 at home.

**Destination of service exports**

Malaysia has information on the destination markets for selected subsectors, which permits an analysis of bilateral service exports.

In the case of higher education, the top countries in terms of inflows of international students are China, Bangladesh, and the Islamic Republic of Iran,
Table 5.3. Investment Abroad of Telekom Malaysia Berhad, 2009

<table>
<thead>
<tr>
<th>Country</th>
<th>Subsidiaries, associates, and affiliates</th>
<th>Shareholding (%)</th>
<th>Nature of business</th>
<th>Number of subscribers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bangladesh</td>
<td>TM International (Bangladesh) Limited</td>
<td>70.0</td>
<td>Cellular</td>
<td>8,700,000</td>
</tr>
<tr>
<td>Cambodia</td>
<td>Telekom Malaysia International (Cambodia) Company Limited</td>
<td>100.0</td>
<td>Cellular</td>
<td>591,515</td>
</tr>
<tr>
<td>India</td>
<td>Idea Cellular Limited</td>
<td>15.0</td>
<td>Cellular</td>
<td>34,200,000</td>
</tr>
<tr>
<td></td>
<td>Spice Communications Limited</td>
<td>49.0</td>
<td>Cellular</td>
<td>3,800,000</td>
</tr>
<tr>
<td>Indonesia</td>
<td>PT Excelcomindo Pratama Tbk</td>
<td>83.8</td>
<td>Cellular</td>
<td>26,000,000</td>
</tr>
<tr>
<td>Iran, Islamic Rep.</td>
<td>Mobile Telecommunication Company of Esfahan</td>
<td>49.0</td>
<td>Cellular</td>
<td>13,696</td>
</tr>
<tr>
<td>Pakistan</td>
<td>Multinet Pakistan (Private) Limited</td>
<td>89.0</td>
<td>Broadband, long-distance, and international services</td>
<td>—</td>
</tr>
<tr>
<td>Singapore</td>
<td>Mobileone Ltd</td>
<td>29.7</td>
<td>Cellular and broadband</td>
<td>1,600,000</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>Dialog Telekom PLC</td>
<td>85.0</td>
<td>Mobile, Internet, international data and backbone, fixed wireless, transmission infrastructure, and media-related services</td>
<td>5,500,000</td>
</tr>
<tr>
<td>Thailand</td>
<td>Samart Corporation Public Company Limited</td>
<td>19.0</td>
<td>Mobile services, multimedia services, ICT solutions and services, and technology-related businesses</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>Samart I-Mobile Public Company Limited</td>
<td>24.4</td>
<td>Mobile, multimedia, and international business services</td>
<td>—</td>
</tr>
</tbody>
</table>

Source: Telekom Malaysia Berhad 2009.
Note: — = not available.
respectively, followed by countries in ASEAN (table 5.5). The most popular undergraduate programs for international students are the transnational programs that are conducted locally in English. International students, including students from China, aspire to obtain the foreign degrees that are awarded by the parent institutions of these transnational programs. The lower cost of living in Malaysia is an added attraction. Because Malaysia has multiethnic groups, including a substantial Chinese population, cultural diversity is another comparative advantage. Over time, the share of students from Bangladesh and China has been declining. The share of Chinese students coming to Malaysia for higher education declined from 34 percent in 2003 to less than 14 percent in 2007 while the share of Bangladeshi students declined from 7 percent to 5 percent in the same period. By contrast, more students from the Islamic Republic of Iran were attracted to Malaysia for higher education. Their share increased from barely 1 percent to 8 percent.

An Observatory on Borderless Higher Education (OBHE) analysis of the market share of the major and minor players for international students in higher education from 2007 to 2009 reveals some interesting shifts (Lasanowski 2009, appendix C; Verbik and Lasanowski 2007). According to OBHE, the market share of the major players (namely, Australia, the United Kingdom, and the United States) dropped slightly from 45 percent to 44 percent of the world’s

### Table 5.4. Operations Abroad of Malaysian Banks, 2009

<table>
<thead>
<tr>
<th>Bank</th>
<th>Number of subsidiaries</th>
<th>Location of subsidiaries</th>
<th>Number of branches&lt;sup&gt;a&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>AmBank Group</td>
<td>3</td>
<td>Brunei Darussalam, Indonesia, Singapore</td>
<td>3</td>
</tr>
<tr>
<td>CIMB</td>
<td>17</td>
<td>Bahrain; Brunei Darussalam; China; Hong Kong SAR, China; Indonesia; Malaysia; Singapore; Thailand; United Kingdom; United States</td>
<td>212</td>
</tr>
<tr>
<td>Hong Leong Bank</td>
<td>2</td>
<td>Hong Kong SAR, China; Singapore</td>
<td>2</td>
</tr>
<tr>
<td>Maybank</td>
<td>14</td>
<td>Bahrain; Brunei Darussalam; Cambodia; China; Hong Kong SAR, China; Indonesia; Papua New Guinea; Philippines; Singapore; United States; Uzbekistan; Vietnam</td>
<td>342</td>
</tr>
<tr>
<td>Public Bank</td>
<td>5</td>
<td>Cambodia; Hong Kong SAR, China; Lao PDR; Sri Lanka; Vietnam</td>
<td>51</td>
</tr>
<tr>
<td>RHB Bank</td>
<td>4</td>
<td>Brunei Darussalam, Singapore, Thailand, Vietnam</td>
<td>10</td>
</tr>
</tbody>
</table>

<sup>a</sup> Includes representative offices and offshore banking units.

Sources: Annual reports of banks for 2009.
overseas students. China, an emerging player in 2007, has joined the league of the “middle powers” in this market, although its market share remains at 7 percent. In contrast, France and Germany (the other two players in this group) experienced a drop in their shares from 10 percent each to 9 percent each. The evolving destinations (Canada, Japan, and New Zealand) have also experienced a drop in their respective market shares from 5 percent, 5 percent, and 3 percent to 4 percent, 4 percent, and 2 percent during the same period. Malaysia and Singapore, classified as emerging contenders, maintained their respective market shares at 2 percent each. The Republic of Korea joined the group of emerging contenders in 2009, with a market share of 1.5 percent.

Table 5.5. Top Source Countries for International Students, 2003–07

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Bangladesh</td>
<td>2,136</td>
<td>1,635</td>
<td>5,712</td>
<td>6,517</td>
<td>2,506</td>
<td>18,506</td>
</tr>
<tr>
<td></td>
<td>(7.03)</td>
<td>(5.16)</td>
<td>(14.10)</td>
<td>(14.68)</td>
<td>(5.23)</td>
<td>(9.49)</td>
</tr>
<tr>
<td>China</td>
<td>10,349</td>
<td>9,250</td>
<td>9,317</td>
<td>7,310</td>
<td>6,468</td>
<td>42,694</td>
</tr>
<tr>
<td></td>
<td>(34.05)</td>
<td>(29.20)</td>
<td>(22.99)</td>
<td>(16.47)</td>
<td>(13.50)</td>
<td>(21.90)</td>
</tr>
<tr>
<td>Iran, Islamic Rep.</td>
<td>374</td>
<td>703</td>
<td>1,181</td>
<td>1,784</td>
<td>3,678</td>
<td>7,720</td>
</tr>
<tr>
<td></td>
<td>(1.23)</td>
<td>(2.22)</td>
<td>(2.91)</td>
<td>(3.72)</td>
<td>(7.67)</td>
<td>(3.96)</td>
</tr>
<tr>
<td>ASEAN</td>
<td>8,350</td>
<td>9,312</td>
<td>10,150</td>
<td>11,099</td>
<td>12,317</td>
<td>51,228</td>
</tr>
<tr>
<td></td>
<td>(27.47)</td>
<td>(29.40)</td>
<td>(25.05)</td>
<td>(25.00)</td>
<td>(25.70)</td>
<td>(25.80)</td>
</tr>
<tr>
<td>Brunei Darussalam</td>
<td>241</td>
<td>234</td>
<td>218</td>
<td>241</td>
<td>325</td>
<td>1,259</td>
</tr>
<tr>
<td></td>
<td>(0.79)</td>
<td>(0.74)</td>
<td>(0.54)</td>
<td>(0.54)</td>
<td>(0.68)</td>
<td>(0.65)</td>
</tr>
<tr>
<td>Cambodia</td>
<td>95</td>
<td>85</td>
<td>130</td>
<td>213</td>
<td>218</td>
<td>741</td>
</tr>
<tr>
<td></td>
<td>(0.31)</td>
<td>(0.27)</td>
<td>(0.32)</td>
<td>(0.48)</td>
<td>(0.45)</td>
<td>(0.38)</td>
</tr>
<tr>
<td>Indonesia</td>
<td>5,634</td>
<td>6,520</td>
<td>6,866</td>
<td>7,541</td>
<td>8,454</td>
<td>35,015</td>
</tr>
<tr>
<td></td>
<td>(18.53)</td>
<td>(20.58)</td>
<td>(16.94)</td>
<td>(16.99)</td>
<td>(17.64)</td>
<td>(17.96)</td>
</tr>
<tr>
<td>Lao PDR</td>
<td>29</td>
<td>14</td>
<td>19</td>
<td>27</td>
<td>27</td>
<td>116</td>
</tr>
<tr>
<td></td>
<td>(0.10)</td>
<td>(0.04)</td>
<td>(0.05)</td>
<td>(0.06)</td>
<td>(0.06)</td>
<td>(0.06)</td>
</tr>
<tr>
<td>Myanmar</td>
<td>458</td>
<td>495</td>
<td>566</td>
<td>503</td>
<td>500</td>
<td>2,522</td>
</tr>
<tr>
<td></td>
<td>(1.51)</td>
<td>(1.56)</td>
<td>(1.40)</td>
<td>(1.13)</td>
<td>(1.04)</td>
<td>(1.29)</td>
</tr>
<tr>
<td>Philippines</td>
<td>130</td>
<td>126</td>
<td>199</td>
<td>300</td>
<td>289</td>
<td>1,044</td>
</tr>
<tr>
<td></td>
<td>(0.43)</td>
<td>(0.40)</td>
<td>(0.49)</td>
<td>(0.68)</td>
<td>(0.60)</td>
<td>(0.54)</td>
</tr>
<tr>
<td>Singapore</td>
<td>462</td>
<td>537</td>
<td>550</td>
<td>618</td>
<td>725</td>
<td>2,892</td>
</tr>
<tr>
<td></td>
<td>(1.52)</td>
<td>(1.70)</td>
<td>(1.36)</td>
<td>(1.39)</td>
<td>(1.51)</td>
<td>(1.48)</td>
</tr>
<tr>
<td>Thailand</td>
<td>881</td>
<td>835</td>
<td>994</td>
<td>944</td>
<td>1,148</td>
<td>4,802</td>
</tr>
<tr>
<td></td>
<td>(2.90)</td>
<td>(2.64)</td>
<td>(2.45)</td>
<td>(2.13)</td>
<td>(2.40)</td>
<td>(1.98)</td>
</tr>
<tr>
<td>Vietnam</td>
<td>420</td>
<td>466</td>
<td>608</td>
<td>712</td>
<td>631</td>
<td>2,837</td>
</tr>
<tr>
<td></td>
<td>(1.38)</td>
<td>(1.47)</td>
<td>(1.50)</td>
<td>(1.60)</td>
<td>(1.32)</td>
<td>(1.46)</td>
</tr>
</tbody>
</table>

Source: Data from the Ministry of Higher Education.
Most medical services from Malaysia are exported within the ASEAN region (80 percent in 2007), although Malaysia also attracts European and Japanese patients (table 5.6). Policy measures have not identified specific niches for medical treatment in the country; however, the procedures in demand by medical tourists are procedures for coronary heart disease, plastic surgery, hip and knee implants, dental implants, and high-end diagnostic services (Chee 2007). The share of patients visiting Malaysia for treatment who are from ASEAN countries increased from 75 percent in 2003 to 80 percent in 2007. Within the ASEAN region, Indonesia accounts for more than 95 percent of patients visiting Malaysia for treatment. Most of the increase in patients coming from ASEAN countries was due to an increase in patients from Indonesia.

In the case of medical tourism, Malaysia’s share in the global market is less than that of Thailand, Singapore, and the Philippines. Malaysia’s share in the global medical tourism market, estimated at US$20 billion in 2006, is currently 0.27 percent (US$54 million). Thailand comes in at 3.75 percent (US$750 million), followed by Singapore at 2.13 percent (US$425 million) and the Philippines at 0.63 percent (US$125 million) (Choy 2010).

In the case of general tourism, the top source country is Singapore, followed by Thailand, Indonesia, China, Brunei Darussalam, Japan, and Australia (table 5.7).

| Table 5.6. Top Destination Countries for Medical Tourism Exports, 2003–07 |
|-----------------|---|---|---|---|---|---|---|
| Total           | 102,883 | 174,189 | 232,161 | 296,687 | 341,288 | 1,147,208 |
| China           | 1,829 | 1,974 | 2,664 | 3,765 | 5,099 | 15,331 |
| (1.77)          | (1.13) | (1.15) | (1.27) | (1.49) | (1.34) |
| Japan           | 7,213 | 7,166 | 9,006 | 11,382 | 11,210 | 45,977 |
| (7.01)          | (4.11) | (3.88) | (3.84) | (3.28) | (3.13) |
| European countries | 3,270 | 3,776 | 5,563 | 7,383 | 9,219 | 29,211 |
| (3.18)          | (2.17) | (2.40) | (2.49) | (2.70) | (2.55) |
| ASEAN⁰         | 77,406 | 142,587 | 189,247 | 235,692 | 274,998 | 919,930 |
| (75.24)        | (81.86) | (81.52) | (79.44) | (80.58) | (80.19) |
| Brunei Darussalam | 209 | 449 | 788 | 711 | 1,028 | 3,185 |
| (0.20)         | (0.26) | (0.34) | (0.24) | (0.30) | (0.28) |
| Indonesia      | 74,579 | 138,387 | 183,503 | 228,486 | 266,227 | 891,182 |
| (72.49)        | (79.45) | (79.04) | (77.01) | (78.01) | (77.68) |
| Philippines    | 579 | 631 | 1,090 | 1,878 | 1,902 | 6,080 |
| (0.56)         | (0.36) | (0.47) | (0.63) | (0.56) | (0.53) |
| Singapore      | 1,248 | 2,184 | 2,656 | 3,141 | 3,812 | 13,041 |
| (1.21)         | (1.25) | (1.14) | (1.06) | (1.12) | (1.14) |
| Thailand       | 791 | 936 | 1,210 | 1,476 | 2,029 | 6,442 |
| (0.77)         | (0.54) | (0.52) | (0.50) | (0.59) | (0.56) |

Source: Data from the Ministry of Health.

a. Figures for ASEAN countries include only the countries shown.
### Table 5.7. Top Source Countries for Tourists, 1999–2009

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>7,931,149</td>
<td>10,221,582</td>
<td>12,775,073</td>
<td>13,292,010</td>
<td>10,576,915</td>
<td>15,703,406</td>
<td>16,431,055</td>
<td>17,546,863</td>
<td>20,972,822</td>
<td>22,052,488</td>
<td>23,646,191</td>
<td>171,149,554</td>
</tr>
<tr>
<td>Share (%)</td>
<td>3.25</td>
<td>4.91</td>
<td>4.68</td>
<td>4.00</td>
<td>4.03</td>
<td>2.63</td>
<td>3.04</td>
<td>3.77</td>
<td>4.31</td>
<td>4.31</td>
<td>3.98</td>
<td>1,149,554</td>
</tr>
<tr>
<td>Share (%)</td>
<td>3.62</td>
<td>4.46</td>
<td>3.11</td>
<td>2.67</td>
<td>2.02</td>
<td>1.92</td>
<td>2.07</td>
<td>1.75</td>
<td>1.67</td>
<td>2.28</td>
<td>2.28</td>
<td>295,072</td>
</tr>
<tr>
<td>Share (%)</td>
<td>3.62</td>
<td>4.46</td>
<td>3.11</td>
<td>2.67</td>
<td>2.02</td>
<td>1.92</td>
<td>2.07</td>
<td>1.75</td>
<td>1.67</td>
<td>2.28</td>
<td>2.28</td>
<td>295,072</td>
</tr>
<tr>
<td>Australia</td>
<td>134,311</td>
<td>236,775</td>
<td>222,340</td>
<td>193,794</td>
<td>144,507</td>
<td>204,053</td>
<td>265,346</td>
<td>277,125</td>
<td>320,363</td>
<td>427,076</td>
<td>533,382</td>
<td>2,959,072</td>
</tr>
<tr>
<td>Share (%)</td>
<td>1.69</td>
<td>2.32</td>
<td>1.74</td>
<td>1.46</td>
<td>1.37</td>
<td>1.30</td>
<td>1.61</td>
<td>1.58</td>
<td>1.53</td>
<td>1.94</td>
<td>2.26</td>
<td>1.73</td>
</tr>
<tr>
<td>ASEAN</td>
<td>5,944,804</td>
<td>7,190,421</td>
<td>12,868,029</td>
<td>9,877,168</td>
<td>8,032,705</td>
<td>12,479,185</td>
<td>13,226,107</td>
<td>13,839,325</td>
<td>15,565,385</td>
<td>16,567,282</td>
<td>18,289,362</td>
<td>133,879,773</td>
</tr>
<tr>
<td>Share (%)</td>
<td>74.96</td>
<td>70.35</td>
<td>100.73</td>
<td>74.31</td>
<td>75.95</td>
<td>79.47</td>
<td>80.49</td>
<td>78.87</td>
<td>74.22</td>
<td>75.13</td>
<td>77.35</td>
<td>78.22</td>
</tr>
<tr>
<td>Singapore</td>
<td>4,900,084</td>
<td>5,410,192</td>
<td>6,951,594</td>
<td>7,547,761</td>
<td>5,922,306</td>
<td>9,520,306</td>
<td>9,634,506</td>
<td>9,656,251</td>
<td>10,492,692</td>
<td>11,003,492</td>
<td>12,733,082</td>
<td>93,782,274</td>
</tr>
<tr>
<td>Share (%)</td>
<td>61.78</td>
<td>53.03</td>
<td>54.42</td>
<td>56.78</td>
<td>55.99</td>
<td>60.63</td>
<td>58.64</td>
<td>55.03</td>
<td>50.03</td>
<td>49.90</td>
<td>53.85</td>
<td>54.80</td>
</tr>
<tr>
<td>Thailand</td>
<td>498,578</td>
<td>940,215</td>
<td>1,018,797</td>
<td>1,166,937</td>
<td>1,152,296</td>
<td>1,518,452</td>
<td>1,900,839</td>
<td>1,891,921</td>
<td>1,625,698</td>
<td>1,493,789</td>
<td>1,449,262</td>
<td>14,656,784</td>
</tr>
<tr>
<td>Indonesia</td>
<td>307,373</td>
<td>545,051</td>
<td>774,447</td>
<td>769,128</td>
<td>621,651</td>
<td>788,925</td>
<td>962,957</td>
<td>1,217,024</td>
<td>1,804,535</td>
<td>2,428,605</td>
<td>2,405,360</td>
<td>12,629,058</td>
</tr>
<tr>
<td>Share (%)</td>
<td>3.88</td>
<td>5.33</td>
<td>6.09</td>
<td>5.79</td>
<td>5.88</td>
<td>5.88</td>
<td>5.88</td>
<td>8.60</td>
<td>11.01</td>
<td>10.17</td>
<td>7.38</td>
<td>7.88</td>
</tr>
<tr>
<td>Brunei</td>
<td>187,704</td>
<td>195,059</td>
<td>309,529</td>
<td>256,952</td>
<td>215,634</td>
<td>453,664</td>
<td>486,344</td>
<td>784,466</td>
<td>1,172,154</td>
<td>1,085,115</td>
<td>1,061,357</td>
<td>6,207,958</td>
</tr>
<tr>
<td>Share (%)</td>
<td>2.37</td>
<td>1.91</td>
<td>2.42</td>
<td>1.93</td>
<td>2.04</td>
<td>2.89</td>
<td>8.47</td>
<td>5.59</td>
<td>4.92</td>
<td>4.49</td>
<td>3.63</td>
<td>3.63</td>
</tr>
<tr>
<td>Philippines</td>
<td>47,238</td>
<td>81,927</td>
<td>122,428</td>
<td>107,527</td>
<td>90,430</td>
<td>143,799</td>
<td>178,961</td>
<td>211,123</td>
<td>327,140</td>
<td>397,884</td>
<td>447,470</td>
<td>2,155,927</td>
</tr>
<tr>
<td>Share (%)</td>
<td>0.60</td>
<td>0.80</td>
<td>0.96</td>
<td>0.81</td>
<td>0.85</td>
<td>0.92</td>
<td>1.09</td>
<td>1.20</td>
<td>1.56</td>
<td>1.80</td>
<td>1.89</td>
<td>1.26</td>
</tr>
<tr>
<td>Vietnam</td>
<td>3,827</td>
<td>7,969</td>
<td>18,729</td>
<td>21,158</td>
<td>21,663</td>
<td>42,088</td>
<td>52,543</td>
<td>63,866</td>
<td>119,973</td>
<td>122,933</td>
<td>149,685</td>
<td>624,434</td>
</tr>
<tr>
<td>Share (%)</td>
<td>0.05</td>
<td>0.08</td>
<td>0.15</td>
<td>0.16</td>
<td>0.20</td>
<td>0.27</td>
<td>0.32</td>
<td>0.36</td>
<td>0.57</td>
<td>0.63</td>
<td>0.36</td>
<td>0.36</td>
</tr>
<tr>
<td>Cambodia</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>7,705</td>
<td>8,725</td>
<td>10,951</td>
<td>9,957</td>
<td>14,694</td>
<td>23,193</td>
<td>35,464</td>
<td>43,146</td>
<td>153,835</td>
</tr>
<tr>
<td>Share (%)</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>0.06</td>
<td>0.08</td>
<td>0.07</td>
<td>0.06</td>
<td>0.08</td>
<td>0.11</td>
<td>0.16</td>
<td>0.18</td>
<td>0.09</td>
</tr>
</tbody>
</table>


Note: — = not available.

a. Figures for ASEAN countries include only the countries shown.
Singapore’s share declined in the past decade, from 62 percent in 1999 to 54 percent, whereas Indonesians’ interest in visiting Malaysia increased, rising from 4 percent to 10 percent. Thailand’s share increased to 12 percent in 2005 but in 2009 declined to its 1999 level of 6 percent.

On the basis of available data, the World Economic Forum travel and tourism competitiveness index ranked Malaysia ahead of Thailand, Indonesia, and the Philippines but behind Singapore in terms of competitiveness in travel and tourism (table 5.8). Malaysia was ranked higher than Singapore for subindexes on human, cultural, and natural resources, probably because of the lack of resource availability in Singapore.

The emergence and subsequent expansion of Malaysia’s first low-cost carrier, AirAsia, has facilitated regional travel for inflows and outflows of tourists by making regional travel much more affordable than before. The emergence of low-cost carriers in other countries in Southeast Asia has also enhanced tourist flows in the region. The rise of the middle class in the countries in the region is another factor contributing to increased regional travel. Hence, intraindustry trade is expected to be higher in this subsector than in other subsectors. Because Malaysia and the Gulf Cooperation Council are the two main centers in the application of Islamic finance contracts to financial products and cover a major portion of the total market of global Islamic finance, intraindustry trade is expected to prevail in the Islamic financial sector. Despite differences in Shariah opinions between the two Islamic financial centers, some contracts are universally accepted—namely, the mudaraba contract for project financing and deposits (Gintzburger 2010). Hence, it is expected that for universally accepted contracts there will be cross-border flows between the two centers.

### Factors behind the Success of Service Exports

Several factors explain the success behind Malaysia’s service exports. The fundamentals are covered here.

**Table 5.8.** Travel and Tourism Competitiveness Index, 2009

<table>
<thead>
<tr>
<th>Country</th>
<th>Regional index</th>
<th>Overall index</th>
<th>Regulatory framework</th>
<th>Business environment and infrastructure</th>
<th>Human, cultural, and natural resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Singapore</td>
<td>2</td>
<td>10</td>
<td>6</td>
<td>5</td>
<td>23</td>
</tr>
<tr>
<td>Malaysia</td>
<td>7</td>
<td>32</td>
<td>42</td>
<td>38</td>
<td>14</td>
</tr>
<tr>
<td>Thailand</td>
<td>8</td>
<td>39</td>
<td>70</td>
<td>40</td>
<td>19</td>
</tr>
<tr>
<td>Indonesia</td>
<td>15</td>
<td>81</td>
<td>113</td>
<td>79</td>
<td>40</td>
</tr>
<tr>
<td>Philippines</td>
<td>16</td>
<td>86</td>
<td>85</td>
<td>89</td>
<td>70</td>
</tr>
</tbody>
</table>

Source: Blanke and Chiesa 2009.
**Economic performance**

Political and economic stability are important for attracting providers and consumers of services. Malaysia’s overall economic performance has been very satisfactory over the 14 years from 1995 to 2008. Annual GDP has risen, with growth rates of well over 5 percent in most years during that period, with one exception during the Asian financial crisis in 1998, when negative growth was recorded. As a result of the continued positive economic growth, Malaysia’s GDP per capita almost doubled, from US$4,479 in 1995 to US$8,197 in 2008.

Although the economy grew at high rates, inflation was relatively well managed, with rates below 3.6 percent in most years. The exceptions were in 1998 and 2008, when inflation rates exceeded 5 percent. One main factor for the higher inflation rates was the world price of oil, particularly in 2008.

Unemployment rates in the period from 1998 to 2008 also were relatively low, at about 3 percent every year. The country’s domestic supply of labor has not been able to meet market demand. Labor shortage is particularly acute for low-skilled jobs such as plant assemblers and shop floor workers. Malaysia relies on foreign labor, mainly from neighboring countries such as Cambodia, Indonesia, Myanmar, Nepal, and Vietnam.

**Business climate**

In general, Malaysia’s business climate is relatively conducive to both domestic and multinational corporations. It is still relatively easy to start a business in Malaysia, as compared to other countries in the region and throughout the world (table 5.9). However, increasing competition from other countries and the emergence of new markets in the world in recent years, coupled with some other domestic factors such as the perception of increasing corruption and deteriorating safety in the country, have caused Malaysia’s ranking to deteriorate (table 5.10). According to the World Bank’s *Doing Business* indicators for 2006,

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Malaysia</th>
<th>East Asian and Pacific average</th>
<th>Global average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Procedures (number)</td>
<td>9</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Time (days)</td>
<td>30</td>
<td>41</td>
<td>36</td>
</tr>
<tr>
<td>Cost (% of income per capita)</td>
<td>25</td>
<td>26</td>
<td>41</td>
</tr>
<tr>
<td>Paid-in minimum capital</td>
<td>0</td>
<td>21</td>
<td>60</td>
</tr>
</tbody>
</table>

Malaysia was preferred to countries such as Korea and almost equal to Thailand for locating a business. However, in 2010, Korea improved in its ranking, whereas Malaysia dropped in its ranking.

Nevertheless, basic political and macroeconomic stability as well as ease of doing business in Malaysia are only three prerequisites for attracting consumers and providers of services to Malaysia. Other factors need to be in place, as explained in the following sections.

**Natural endowment and cultural factors**

Malaysia has abundant natural resources to support tourism, especially ecotourism in East Malaysia (Sabah and Sarawak). East Malaysia has extensive forest and tree cover that supports its megabiologically diverse endowments, including exotic flora and fauna as well as different species of mammals, invertebrates, fish, and birds. A number of national and state parks have caves, including some of the largest and longest in the world. The country also hosts a large variety of bird species as well as migratory birds, because it is located on the Australasian cross-migratory bird paths.

A number of tourism destinations have been established as gazetted terrestrial or marine protected areas. Daud (2002, 129) reports that 5 percent of the terrestrial area, covering 1,464,973 hectares, is protected. This protected area includes 1 national park, 18 state parks, 18 wildlife reserves, 3 wildlife sanctuaries, 3 bird reserves, and 2 protected landscapes. Marine protected areas include more than 40 islands. The protected areas are managed by the Department of Wildlife and National Parks, the Forestry Department, the Fisheries Department, and various state park authorities.

Malaysia is well known as a multiethnic society. Its population of 28 million in 2009 comprises Malays (53 percent), indigenous or other *Bumiputera* groups...
(12 percent of the population), Chinese (26 percent), Indians (8 percent), and other unlisted ethnic groups (1 percent). This multiethnic composition inevitably implies a multicultural society. In addition, Malaysia’s long-standing openness to international trade and FDI in the manufacturing sector has also led to a significant population of expatriates working in the country, thereby further enhancing the diversity of cultures. The increasing presence of foreign workers since the early 1990s, estimated at 1.9 million in 2009, has further added to the country’s diversity. This diversity is a source of advantage for Malaysia because Malaysian workers are comfortable working with other ethnic groups and foreigners find it relatively easy to adapt to working with Malaysians. The Chinese and Indian diasporas in Malaysia may be able to use kinship ties to penetrate the markets in China and India.

**Special factors**

A number of special factors have also encouraged the development of service exports.

**Government support of service exports**

The Multimedia Super Corridor was established in 1996 to build a competitive cluster of local ICT companies and a sustainable ICT industry. Malaysia developed the MSC by providing financial and nonfinancial incentives such as 100 percent foreign equity ownership and no restrictions on the employment of foreign knowledge workers. By 2005, a total of 1,421 companies had been established in the MSC and were given MSC status. Of these, 349 companies were foreign owned and 39 were 50-50 joint ventures. By 2009, the number of firms in the MSC had grown to 2,520, of which 25 percent were foreign, including joint ventures. Cumulative FDI in 2009 amounted to RM 5.8 billion (US$1.65 billion).

For travel service exports, the government approved the establishment of the first low-cost carrier in 2001. Although AirAsia is not the first low-cost carrier in Southeast Asia, it is certainly the most successful—partly because it did not intend to remain a domestic carrier even though it was established as one. By 2007, AirAsia had captured 48.6 percent of the domestic air traffic volume, leaving 51.4 percent of the domestic market to the national carrier, Malaysian Airlines (WTO 2009, 65).

In line with its regional ambitions, AirAsia quickly formed joint ventures in Indonesia and Thailand to capture those markets as well as to position itself for the ASEAN open-skies policy (Tham 2008, 24). It is the biggest low-cost carrier in Southeast Asia, measured by fleet size, and has since ventured into long-haul travel by establishing AirAsia X. After AirAsia’s entry into the domestic market, the government deregulated the underserved, lucrative Malaysia-Singapore
monopoly in 2008. This route previously had been served by the national carriers of the two countries.

The establishment of the Low-Cost Carrier Terminal in 2006 boosted travelers’ use of AirAsia. The rapid expansion of AirAsia has led to the expansion of the current facilities as well as to plans to build a similar terminal in the near future.

The enactment of the Islamic Banking Act in 1983 introduced Islamic banking into the country. Islamic banks offer the entire range of Islamic products. Although conventional banks offer conventional products, they are also allowed to offer Islamic products. A national Shariah Advisory Council was established by the Securities Commission in 1996 to facilitate the development of the Islamic capital market in the country (Securities Commission 2009). Members of the council are highly qualified Malaysians with wide international exposure and international scholars in the region. The council serves as the sole authority for the issuance of rulings and guidelines on the Islamic capital market. The provision of specialized institutions gave Malaysia a first-mover advantage in setting standards for Shariah-compliant equities for the stock market in Malaysia. Subsequently, other stock markets around the world followed suit, thereby increasing competition in the Islamic capital market.

**Strategic positioning of Malaysia**

Malaysia has leveraged its relative strengths to focus on selected service subsectors. First, Malaysia has strategically positioned itself to benefit from its geographic proximity to Singapore and its historical links to Singapore. Key factors are Malaysia’s lower costs of services, Malaysians’ proficiency in the English language, and the central role of Islam in the country. Malaysians’ English-language skills have also helped Malaysia to position itself against large countries in ASEAN such as Indonesia and Thailand, where English proficiency is lower. The University of Nottingham has acknowledged that Malaysians’ proficiency in English was one of the main factors that led to it to choose Malaysia over Thailand for its branch campus in the region.

The relatively lower cost of living in the country has distinguished Malaysia from Singapore. Although Singapore has numerous strengths relative to Malaysia, it is considerably more expensive to live there. Private hospitals that are based in Singapore have invested in Malaysian hospitals in order to tap the lower cost of facilities in the country. Patients who have found Singapore hospitals to be too expensive are diverted to the Malaysian counterparts, which can perform the same procedures at lower cost. Similarly, branch campuses in Malaysia are less expensive than branch campuses in Singapore.

Consequently, complementary services have developed between the two countries in three areas of service exports: higher education, medical services, and
tourism. Malaysia provides services in the lower-priced market according to its lower-cost advantage, while Singapore provides the same services for the higher end of the market. This complementarity has also attracted Singaporean investment in Malaysian services in the case of medical tourism. U.S.-owned Singapore hospitals (such as Parkway Holdings) have invested in Malaysian hospitals to tap the synergies of complementary services. In that way, foreign patients can be directed to either Malaysian or Singaporean hospitals according to their budget constraints. The launch of the Iskandar Development Region in 2006 was expected to capture more of the potential synergies between Singapore and the southern part of Malaysia for the development of complementary services.

Finally, the Muslim population in Malaysia has led to the creation of an alternative banking system that can serve the needs of Muslims and to the subsequent vision of making Malaysia a hub for Islamic finance. By positioning itself as a modern Islamic country, Malaysia has been able to draw tourists, students, and patients to the country.

Unilateral liberalization and fostering of domestic competition

The provision of certain public goods such as higher education and health by the Malaysian government has been limited by financial constraints. Consequently, the government has permitted private operators to provide for such services in the country. The number of private providers grew rapidly in response to the excess demand in the country, leading to a substantial presence of private providers in both the higher education and the health sectors. In 2009, there were 454 private higher education institutions and 222 private hospitals, including private maternity and nursing homes. Although local providers predominate in those two sectors, foreign providers also exist. For example, in the case of higher education, five branch campuses are operating in the country.

The large pool of domestic health and higher education providers has created a competitive domestic environment. It has also created increasing pressures to extend the services of these providers to international students and patients, which in turn has led to increasing exports of these services, primarily in the form of mode 2. Moreover, as discussed earlier, domestic providers are also venturing overseas.

Progressive liberalization at the national, regional, bilateral, and multilateral levels

Malaysia is progressively liberalizing the service sector at the national, regional, bilateral, and multilateral levels. In particular, the lack of progress at the multilateral level has accelerated the liberalization process at the regional and bilateral levels. Under the ASEAN Framework Agreement on Services (AFAS), seven
packages of liberalization have been undertaken thus far. Malaysia is also party to additional ASEAN agreements that cover services, such as the ASEAN-China, ASEAN-Japan, and ASEAN-Korea agreements. At the bilateral level, Malaysia has signed agreements with Japan, New Zealand, and Pakistan.

Although no study has been conducted to assess the extent to which the recent commitments have pushed domestic liberalization, the number of sectors that have been committed has progressively increased over time. For example, in the case of AFAS, Tham (2009) has shown that the number of sectors committed at the three-, four-, and five-digit level increased substantially from AFAS 2 to AFAS 7. There are also three sectors with 100 percent coverage: construction, education, and tourism and travel-related services. At the bilateral level, Malaysia increased the extent of foreign equity permitted in the higher education sector from less than 50 percent to 70 percent in the Malaysia–New Zealand agreement because this sector is important to New Zealand.

Domestically, Malaysia has undertaken unilateral liberalization, but only after local providers secured a competitive capacity for providing the selected services. Some examples are higher education, medical, telecommunication, and airline services, all of which were originally provided by the public sector. When the public sector could not provide sufficient services to meet the growing demand, the government introduced the first stage of liberalization by allowing the private sector to offer similar services. For example, because public universities are unable to offer enough places of study, the government allowed the private sector to fill this shortfall. This change then became a catalyst for the development of private higher education. A similar process took place in the case of medical, telecommunication, and airline services. Subsequently these service sectors were liberalized, which led to foreign service providers participating in the local market and domestic providers exporting their services and investing abroad with their enhanced capacity.

Encouragement of inward FDI in Islamic finance and higher education

In Malaysia, there are significantly more local establishments in most services than foreign establishments, partly because of foreign equity restrictions in the service sector. The New Economic Policy allocated equity ownership in Malaysia to 30 percent for Bumiputera, 40 percent for non-Bumiputera, and 30 percent for foreigners. The Foreign Investment Committee (FIC) was set up in 1974 for the approval of nonmanufacturing activities that are not under the jurisdiction of any ministry as well as for the acquisition of corporate ownership (under the Guidelines for the Acquisition of Assets, Mergers, and Takeovers) and property ownership (under the Guidelines for the Acquisition of Property by Local and Foreign Interests). After the Asian financial crisis in 1999, this restriction on foreign equity
ownership was removed for the manufacturing sector. It was also relaxed for selected service subsectors such as telecommunications and ports. But the banking and insurance sector is an exception to the pattern. Unlike other sectors, 100 percent foreign equity ownership is permitted for locally incorporated foreign banks, foreign Islamic banks, international Islamic banks, international *takaful* operators, and Islamic reinsurers.

The restrictions on equity ownership have limited FDI inflow, which consequently might have retarded the growth of the service sector, except in the case of Islamic finance where there is large participation by multinational firms: 61 percent of commercial banks and 34 percent of Islamic finance banks are foreign owned. In addition, there are 4 international Islamic banks and 11 foreign-owned Islamic banks.

Similarly, the higher education subsector was liberalized unilaterally in 1995, when foreign higher education providers were given licenses to operate. Five foreign universities have since established their branch campuses in Malaysia.

Because of increasing concern over the inflows of FDI, the Department of Statistics has published—for the first time—data on inflows by sectors and countries of origin. Data from the Quarterly Survey of International Investment and Services indicates that the stock of FDI in the country grew from RM 129.1 billion (US$33.97 billion) in 2001 to RM 253.8 billion (US$73.83 billion) in 2007. Equity capital is the largest component in the stock of FDI, followed by reinvested earnings; other capital is the smallest component. Although data on the first two components revealed an upward trend, data on other capital showed a converse downward trend.

It is worth noting that the service sector had the largest increase in its share, from 1 percent in 2003 to 9 percent in 2007. However, manufacturing remained the largest recipient of FDI for the period, even though its share in total FDI declined from 58 percent in 2003 to 53 percent in 2007. The share of financial intermediation, including insurance (the second-largest recipient in 2003), also fell—from 29 percent to 16 percent. In contrast, the share of mining (the third-largest recipient in 2003) increased, from 5 percent to 8 percent. Investment in upstream activity constituted an important component in this sector, as Petronium Nasional Berhad (PETRONAS) and its foreign partners continue their exploration, production, and development of the oil and gas resources in the country. The share of trade and commerce (the fourth-largest recipient in 2003) also increased, from 5 percent to 8 percent.

According to Bank Negara Malaysia, net inflows fell from RM 29.1 billion in 2005 to RM 26.7 billion in 2008, partly because FDI was rechanneled to the service sector, where the scale of investment is smaller because it is less capital intensive (Bank Negara Malaysia 2010, 36; WTO 2009, 11). Competition for FDI
from China, India, and Vietnam (as well as from Hong Kong SAR, China, and from Singapore) is also cited as a reason for moderation in net inflows into Malaysia. Bank Negara Malaysia’s 2009 annual report estimated that net inflow into the financial sector, including Islamic finance, amounted to RM 41.6 billion (US$11.8 billion) from 1999 to 2009, after the liberalization of that sector (Bank Negara Malaysia 2010). This figure is in line with the government’s plan to build Malaysia as a hub for Islamic finance.

The relaxation of foreign equity restrictions in financial services has been mapped out in the Financial Services Master Plan of 2001. For example, foreign equity limits for investment banks, insurance companies, and Islamic insurers were raised from 30 percent to 49 percent in 2005 and then to 70 percent in 2009 (WTO 2009, 60). An increasing number of banking licenses with 100 percent foreign equity have been given for Islamic banks over time. Hence, there was net inflow in the financial sector for the period 1999–2009. On April 22, 2009, foreign equity restrictions on 27 service subsectors were removed. This move was followed a week later by the relaxation of foreign equity ownership in financial services. In June 2009, the government announced that the FIC guidelines would be deregulated and that limitations on foreign equity would be decided by the regulator of the industry. These changes in equity restrictions indicate that the government has been progressively opening up the service sector to foreign investment.

Quality assurance
In higher education, quality assurance is provided by the Malaysian Qualifications Framework for higher education in the country. The framework is a description of the national education system, including all qualifications and learning achievements in higher education. It is governed by the Malaysian Qualifications Agency (MQA). In 2009, 7,074 programs were offered in the country, of which 2,298 had achieved minimum standards while 2,167 (or 35 percent of the total number of programs) had received full accreditation. Quality assurance is provided for international students, because only accredited programs are allowed to recruit international students. The MQA’s accreditation does not imply recognition.

There are ongoing efforts to increase recognition through the MQA’s collaborative links with several international networks in quality assurance, such as the International Network for Quality Assurance Agencies in Higher Education. At the ASEAN level, mutual recognition agreements have been signed for seven areas: engineering services, nursing services, architectural services, survey qualifications, medical practitioner services, dental practitioner services, and accounting services. Malaysia is also a member of the Washington Accord, which provides recognition for engineering degrees for its member countries.
In the health sector, the Malaysian Society for Quality in Health (MSQH) is the only body that is recognized to carry out accreditation. The MSQH emphasizes patient safety and medical audits. It was formed through the initiative of the Ministry of Health, the Association of Private Hospitals of Malaysia, and the Malaysian Medical Association. It is based on international standards with local modifications, and it is affiliated with international health care accreditation bodies such as the International Society for Quality in Health (ISQua) and the Joint Commission International (JCI). Both the MSQH and the JCI are recognized members of the International Accreditation Federation Council. MSQH is also in the process of forming ASQua, or the Asian equivalent of ISQua. As of 2009, 79 hospitals were accredited by MSQH, of which 24 were private (Tham 2009). Only accredited hospitals are allowed to take in international patients. JCI standards are internationally accepted, so JCI accreditation has implications for the insurance coverage of the patient. Malaysia has six JCI-accredited hospitals and health-related establishments (Choy 2010).

These quality assurance efforts are more effective for mode 2 rather than mode 4 exports. International students and patients are drawn to Malaysia because these quality assurance factors work in conjunction with other factors, such as costs, marketing, and the recruitment initiatives of the providers and the government. Malaysian domestic regulations do not hinder the movement of these students and patients.

In contrast, domestic providers seeking to export their services through mode 4 may face other problems, because quality assurance and recognition are not the only factors that determine the mobility of Malaysian providers to other countries. For example, Malaysian architects who seek to export their services abroad must satisfy regulations in the country to which they plan to export, which will include factors besides recognition. They must have the necessary network to find a local partner for an overseas project if domestic regulations so require.5

Regulatory framework
The service sector is regulated by various government ministries, departments, and agencies. Table 5.11 summarizes the relevant regulators and regulations for selected services: Islamic banking and finance services, private health care services, private tertiary education services, and tourism and travel-related services.

As shown in table 5.11, the regulatory framework for these services is relatively well laid out in the domestic legislation. Each of the acts listed spells out the procedures for obtaining a license to operate and the guidelines for conduct for establishments covered by the act. The licensing system ensures that operators conform to minimum standards before they are given the license to operate. The governance of the system is made readily available to the public through the
act, and it is transparent to the providers. For example, in the case of Islamic finance, domestic regulations as specified in the legislation reflect the distinct features of Islamic finance and aim to instill financial stability, market discipline, and public confidence (bin Ibrahim 2007). There are, therefore, guidelines on corporate governance, a framework for the rate of return, guidelines on financial disclosure and Shariah governance, and Islamic money market and

### Table 5.11. Regulators and Regulations for Selected Services

<table>
<thead>
<tr>
<th>Services</th>
<th>Regulators and promoters</th>
<th>Regulations</th>
</tr>
</thead>
</table>

Source: Authors’ compilation based on data from the website of the Attorney General’s Chambers of Malaysia (http://www.agc.gov.my) and information provided by the respective ministries.
capital adequacy standards. A dedicated high court adjudicates cases that are related to Islamic finance.

The respective regulators also ensure that the standards required are adhered to. For example, the Ministry of Higher Education works with the MQA on issues related to course accreditation. The ministry also reviews the licenses that have been awarded. There is also benchmarking to international best practices to ensure that the standards conform to best practices. Dialogues between the regulators and the providers (which are represented by their respective associations) are held at regular intervals. These dialogues serve as important lines of communication between the providers and regulators, so that problems that emerge in the respective sectors are resolved. Malaysia, therefore, has a well-developed system in place to govern the sectors listed in table 5.11.

Factors Constraining Service Exports

A number of factors constrain service factors, as described in this section.

Trade restrictions by other countries

The service sector is highly regulated in most countries. Even though there are ongoing liberalization efforts at both the regional and the bilateral levels, the outcomes of these negotiations do not necessarily enable Malaysian exporters to penetrate and capture the markets of partner countries in these agreements because there are domestic regulations to contend with. Understanding the domestic regulations of the targeted export country is essential if Malaysian exporters are to penetrate the markets of partner countries to these agreements. For example, a moratorium on the establishment of new institutions of higher learning in a country will render the country’s offer of no limitations in mode 3 meaningless.

As identified by Mattoo (2003), the main barriers to trade in services in mode 4 are immigration issues, especially visa-related barriers, discriminatory treatment of foreign service providers, and inadequate recognition of qualifications. Structural barriers, such as limited opportunities for gaining local experience, also exist. Communication skills, lack of a professional network, and limited knowledge of the local job market are other barriers.

Shortage of skills in Malaysia

The recently released NEM notes that, in 2007, only 25 percent of Malaysia’s labor force was in the highly skilled category. This percentage is alarmingly low compared with neighboring countries such as Korea (35 percent); Singapore
The share of highly skilled labor also declined across various industries in the country between 2002 and 2007. The electrical and electronic sector, for example, experienced a notable decline in the share of highly skilled labor usage, from 54 percent in 2002 to 46 percent in 2007 (NEAC 2010, 50, figure 10).

The lack of highly skilled workers in the labor force is due to at least two factors: (a) the weaknesses of the country’s education system and (b) a constant outflow of talented workforce. The percentage of adults with tertiary education in the country is relatively low compared with countries such as Korea and Singapore (table 5.12). The *Human Development Report 2009* (UNDP 2009) noted that only 8.0 percent of Malaysian adults had tertiary education. This percentage is far lower than in Hong Kong SAR, China (15.2 percent); Korea (23.4 percent); and Singapore (19.6 percent). Even the Philippines has a slightly higher percentage (8.4 percent).

The recent *Global Competitiveness Report 2009–2010* (Schwab 2009) confirms the relatively low level of skills in the labor force (table 5.13). Although Malaysia performs much better than other ASEAN economies such as Thailand in terms of labor force skills, the skills level is still low for most of the indicators when compared with Singapore and Taiwan, China. In the case of India and Korea, the relative performance is mixed, with some indicators in Malaysia scoring higher (such as quality of education system, local availability of research and training services, and extent of staff training) and other indicators scoring lower.

In addition to the low percentage of highly skilled workers in the country, feedback from many industry players indicates that Malaysian graduates lack the skills needed in the market. As a result, in 2008, about 25 percent of local graduates from public universities remained unemployed six months after graduation (NEAC 2010). The 2007 Trends in International Mathematics and Science Study (TIMSS and PIRLS International Study Center 2007) shows that Malaysia’s scores in both mathematics and science were below the international average scores,

<table>
<thead>
<tr>
<th>Economy</th>
<th>Share (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Malaysia</td>
<td>8.0</td>
</tr>
<tr>
<td>Philippines</td>
<td>8.4</td>
</tr>
<tr>
<td>Hong Kong SAR, China</td>
<td>15.2</td>
</tr>
<tr>
<td>Singapore</td>
<td>19.6</td>
</tr>
<tr>
<td>Korea, Rep.</td>
<td>23.4</td>
</tr>
</tbody>
</table>

*Source: UNDP 2009.*

*Note: Percentage of the population age 25 years and older who have attained tertiary education.*
thereby implying that Malaysia is not producing good-quality students. Thus, there is a shortage of skilled human capital in the country, and improving the situation is critical if Malaysia is to enhance its export of knowledge-based services. To a great extent, this constraint has affected Malaysia’s ability to export ICT services, despite the early advantages offered by the MSC, because Malaysia’s size and the availability of the labor force—as well as the country’s financial incentives for business process outsourcing services—are less attractive than those of India and the Philippines (A.T. Kearney 2009).

The large inflow of low-skilled migrant workers into the country since 1990 has contributed to the reluctance of industries to move to high-value-added activities using more skilled workers. The availability of low-skilled labor has encouraged industries in the agriculture, manufacturing, and service sectors to continue their activities and maintain the same level of profitability. As a result, industries are unwilling to train and upgrade the skills of local workers.

**Increasing competition from other countries**

The initial advantages of Malaysia in the case of low-cost carriers and Islamic finance are being challenged by the rapid emergence of competitors, especially from countries within the region. Low-cost carriers have been established in other

### Table 5.13. The Global Competitiveness Index, Selected Indicators for Skills, 2009–10

<table>
<thead>
<tr>
<th>Indicator</th>
<th>India</th>
<th>Korea, Rep.</th>
<th>Malaysia</th>
<th>Singapore</th>
<th>Taiwan, China</th>
<th>Thailand</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality of education system</td>
<td>37</td>
<td>47</td>
<td>23</td>
<td>1</td>
<td>17</td>
<td>67</td>
</tr>
<tr>
<td>Quality of math and science education</td>
<td>22</td>
<td>18</td>
<td>34</td>
<td>1</td>
<td>6</td>
<td>62</td>
</tr>
<tr>
<td>Quality of management schools</td>
<td>15</td>
<td>44</td>
<td>34</td>
<td>5</td>
<td>31</td>
<td>59</td>
</tr>
<tr>
<td>Local availability of research and training services</td>
<td>32</td>
<td>35</td>
<td>26</td>
<td>14</td>
<td>22</td>
<td>61</td>
</tr>
<tr>
<td>Extent of staff training</td>
<td>34</td>
<td>29</td>
<td>16</td>
<td>2</td>
<td>19</td>
<td>62</td>
</tr>
<tr>
<td>Availability of scientists and engineers</td>
<td>4</td>
<td>25</td>
<td>33</td>
<td>14</td>
<td>7</td>
<td>54</td>
</tr>
</tbody>
</table>

*Source: Schwab 2009.*

*Note: Rankings are out of 133 economies.*
countries, such as One-Two-Go and Nok Air, which were established in Thailand in 2003 and 2004, respectively (Zhang and others 2009). Singapore established Tiger Airways in 2004. The Australian carrier Qantas established Jetstar in 2004 also. Similarly, Singapore has established terminals for low-cost carriers.

In the case of Islamic finance, the general increase in interest in Islamic instruments in the world has led Singapore to also focus on Islamic finance to strengthen its position as a financial center. Korea is also venturing into Islamic finance.

Similarly, economies such as Bahrain; China; Hong Kong SAR, China; India; Qatar; Singapore; Thailand; and the United Arab Emirates are also aiming to be hubs for higher education as well as for medical tourism. Increasing competition will require Malaysia to innovate constantly in terms of products and costs to provide a competitive edge for the country.

**Broadband penetration, speed, and cost**

In general, the pattern of service exports shows that Malaysia has been able to exploit its geographic and cultural proximity to other countries in the region. Most countries in this region are in the developing phase of their economy. Given the state of infrastructure in developing countries, Malaysian providers are limited by the infrastructure facilities available in the partner countries. Even though Malaysia has a high-quality telecommunication network, for instance, and an Internet penetration of 62 persons per 100 population, mode 1 service exports are inhibited by the quality of the telecommunication networks in destination developing countries. Moreover, although Malaysia has six higher education institutions that specialize in providing e-learning, these institutions have limited opportunities to expand their services to the less developed countries in the region (such as Cambodia, the Lao People’s Democratic Republic, Myanmar, and Vietnam) because of those countries’ limited infrastructure support for this type of learning. It would appear that mode 3 exports may be more useful than mode 1 exports to other developing countries until they have developed the infrastructure necessary to handle mode 1 exports from Malaysia.

**Conclusion**

Overall, exports of some selected services, such as higher education, medical tourism, and Islamic finance, are beginning to emerge as potential revenue earners for the country. These industries are expected to join tourism as major exporting sectors that can balance the present dependency on manufacturing exports. Malaysia is relatively more successful in exporting services under mode 2 (that is,
bringing international consumers in the form of students, patients, or tourists into the country). The ability to bring investors into the country is improving over time with the increasing relaxation of the equity restrictions on foreign ownership. Limited data on mode 4 exports also suggest that the number of Malaysian professionals working in other countries has increased over time.

Several factors assist these emerging exports, including a stable political and macroeconomic regime and a relatively business-friendly environment. In particular, Malaysia’s first-mover advantage in developing low-cost carriers, the MSC, and Islamic finance have provided an edge that has helped the country compete in the region. The fact that Malaysia ventured into certain service sectors has helped the country be a pioneer exporting these services. The success of these exports was facilitated by strong government support that recognized the potential of these service exports. Malaysia’s natural endowment and a culturally diverse society enhanced its appeal not just in the tourist sector but also in higher education and medical tourism.

Another factor that explains Malaysia’s success in exporting services is liberalization, especially in the higher education and Islamic finance sectors. For the higher education, medical, and airline services, Malaysia first liberalized domestically because the public sector could not provide sufficient services to meet the growing demand. Because public universities are unable to offer enough places of study, the government allowed the private sector to fill this shortfall. This move then became a catalyst for the development of private higher education. The medical and airline services underwent the same process, in which the private sector initially enhanced domestic capacity and later began to export. At the same time, at the bilateral and regional levels, Malaysia has progressively increased the number of committed sectors. For example, under the AFAS, Malaysia has made commitments in all the major service categories.

Finally, government policies have also significantly aided the provision of services in the international market. Policies that have worked for the country include quality assurance and a sound regulatory framework. In the case of higher education and medical tourism, the endowment was not natural but was built by developing domestic capacity and by setting international standards and a sound regulatory framework for domestic providers to adhere to. In the case of tourism, the government invested in global campaigns such as Malaysia Truly Asia, to promote the country as a major tourist destination in addition to providing the necessary infrastructure, such as airports, roads, and railways, to facilitate the movement of goods and people.

However, while the country has been relatively successful in bringing the world to Malaysia, it has been less successful in bringing Malaysia to the world. The main factors that are constraining Malaysia in penetrating the world service market in
terms of mode 4 are trade barriers encountered in other countries. Because it is relatively easier to enter other developing countries, Malaysia is also constrained by the availability of suitable infrastructure in other developing countries for the provision of mode 1 supply. For example, Vietnam, Indonesia, and Pakistan have e-readiness scores of 64, 65, and 66, respectively, of 70 countries ranked (EIU 2009). At the same time, the country is challenged by increasing competition from other countries in all the main export subsectors. Finally, human capital constraints are increasing over time. In the short term, importing foreign skilled workers will help, because the development of human capital has a rather long gestation period. Attracting Malaysian expatriates back to the country is another intermediate solution. These improvements will also help restore the relative attractiveness of Malaysia as a host country for knowledge-based and technology services.

Notes

1. According to the linkage index, a backward linkage that is greater (less) than 1.00 implies that the sector or industry has an above (below) average dependency on a particular domestic industry for its input requirements. A forward linkage that is greater (less) than 1.00 implies that a particular domestic industry has an above (below) average dependency on the sector or industry in question for its input requirements.

2. Financial services covered in the balance of payments are defined as financial intermediary and auxiliary services, except insurance and pension fund services. They include deposit taking and lending, letters of credit, credit card services, commissions and charges related to financial leasing, factoring, underwriting, and clearing of payments. Also included are financial advisory services; custody of financial assets or bullion; financial asset management; monitoring services; liquidity provision services; risk assumption services other than insurance, merger, and acquisition services; credit-rating services; stock exchange services; and trust services (IMF 2009).

3. FDI is defined as equity capital, reinvested earnings, and other capital (defined as debt securities, trade credits, loans, deposits, and so forth).

4. The findings of the Quarterly Survey of International Investment and Services (QSIIS) are described by Masud and others (2008, 1). The QSIIS was first conducted in the first quarter of 1999, in conformity with the fifth edition of the Balance of Payments Manual (IMF 1993). The survey covered 2,500 companies with significant international transactions in financial assets, liabilities, or services that were incorporated or registered in Malaysia. Of these companies, 1,300 were classified as FDI companies.


References


The service sector has been a major driver of growth in the Arab Republic of Egypt. The contribution of the service sector to gross domestic product (GDP) increased from 54 percent in 1990 to 62 percent in 2006, while the service sector’s share in employment and exports increased by modest amounts. Service exports now occupy a central place in the Egyptian economy. Recent research by Mishra, Lundstrom, and Anand (2011) finds that the sophistication of service exports drives growth, and given Egypt’s endeavor to export services, the country could very well be on its way to proving this proposition. This chapter provides a better understanding of the factors behind the export performance and comparative advantage of some of the main Egyptian service sectors.

The chapter differentiates between (a) fundamental reasons for comparative advantage arising from geography and abundant natural resources and (b) special reasons arising from adoption of trade promotion policies and regulations or firm-specific strategies. In addition, the chapter highlights sector-specific comparative advantage and the interaction between different service sectors in shaping the comparative advantage of a specific sector.

Service exports in Egypt are based on two sources of natural comparative advantage. The first is the geographic advantage of location, because the Suez Canal connects Egypt (and Africa) with Asia and Europe and primarily benefits maritime transportation service exports. The second is cultural, which together with the geographic advantage, is beneficial for the tourism sector. A third potential source of comparative advantage for Egypt remains somewhat unexploited: its

The author would like to thank Hanan Nazier and Yasmin Fahim for research assistance.
large labor force. Its huge potential labor pool, accompanied by relatively low wage levels, provides Egypt an opportunity to become a hub for exporting labor-intensive services. However, as has been noted by domestic and foreign businesses operating in Egypt as well as several international reports, the quality of workforce education and skills seems to be a major constraint in developing service exports.

In the Arab region, Egypt is a crucial provider of mode 4 service exports in the field of teaching and nursing. Although the quality of education in Egypt is generally not very high, its nurses and teachers are well trained, have low wages, and remain largely unemployed in Egypt. Familiarity with the Arab culture and knowledge of the Arabic language helps Egyptians emigrate to nearby countries. A favorable government policy for emigrants also facilitates emigration.

Another emerging sector where service exports from Egypt have grown is the information and communication technology (ICT) sector. Since the 1990s, Egypt has been supplying 70 percent of the demand for software from the Gulf region, primarily represented by Saudi Arabia and the United Arab Emirates. The availability of a multilingual workforce that can provide services in Arabic along with a broad range of European languages encourages ICT service exports. This linguistic aspect gives Egypt a competitive edge over India, which mainly offers English-language service exports. In addition, the cost of an ICT service employee is lower in Egypt. Only a few countries, such as China, India, and the Philippines, can compete with Egypt in terms of low labor costs. For example, one can hire high-quality business process outsourcing (BPO) agents in Cairo for US$225 to US$250 per month, whereas for other established and emerging countries—such as India and the Philippines—the figure is about twice as high. The annual average salary of a programmer is approximately US$16,000, which is less than in India and slightly more than in Vietnam.

In the ICT sector, targeted government policy, more than any other factor, has played a vital role. In 2004, the government established the Information Technology Industry Development Authority (ITIDA) to develop the ICT sector and boost its exports. ITIDA, a partnership between the Ministry of Communications and Information Technology (MCIT) and the private sector, is dedicated to developing information technology (IT) in Egypt. The MCIT has developed specific training programs for different segments of the industry to prepare graduates for work in the IT industry. ITIDA also runs an education program. Called EduEgypt, the program liaises with universities to train students to enter the BPO industry. The government also created special technology parks for promoting ICT service exports. The idea behind establishing the Smart Village, which was inaugurated in 2004, was to create a space where IT companies could operate within a community conducive to their business needs.

Egypt exports banking and financial services to some extent. The provision of such services did not begin with the aim of exporting, but certain conditions
related to domestic market constraints, firm size, and mandates from the government to operate regionally to attract investments from emigrants forced providers of banking and financial services to look abroad. In this regard, the regulatory reform of the banking sector, which started with issuance of Law 88/2003, has positively affected the exporting process by allowing banks to focus more on overseas operations.

Tourism exports contribute about 3 or 4 percent of GDP, and with the indirect effect of tourism, this figure increases to 11 percent. Even though Egypt has significant historical importance, a diverse cultural heritage, and attractive natural resources, it is not able to realize its full potential in exporting tourism services. A number of weaknesses are a drag on this sector, including weak infrastructure (especially ground infrastructure), modest human skills, and lack of environmental sustainability. Although Egypt has low-cost labor, the relatively low quality of its labor has been cited as a reason for the declining comparative advantage in this sector. The lack of employees trained according to international standards is certainly a factor affecting the quality of services provided. Furthermore, a lack of coordination among the several authorities engaged in overseeing tourism activities has resulted in delays in issuing licenses and allocating land permits and in difficulties in dealing with local governorates’ authorities.

The rest of this chapter is organized as follows. It first highlights the importance of the service sector in Egypt. Next, the liberalization of the Egyptian economy, which was crucial in contributing to service exports from Egypt, is discussed. Then, the sources of comparative advantage for service exports from Egypt are analyzed, and subsequently the successful and less successful service sectors for Egypt are identified. Conclusions follow, including a synthesis of the main reasons behind the comparative advantage of exporting services.

**Importance of Services in the Egyptian Economy**

The importance of services in the Egyptian economy increased over time, as the percentage of services to GDP increased from 54.6 percent in 1990/91 to 61.8 percent in 2006/07 and declined to 53.0 percent in 2008/09, mainly as a result of the changing share of production services, which was hit by the global financial crisis. The share of private sector services in GDP increased from 45.1 percent in 1990/91 to 62.0 percent in 2006/07 and 51.0 percent in 2008/09, and its share in production services increased from 62.1 percent in 1990/91 to 83.0 percent in 2008/09.\(^1\)

The structural composition of services changed over time as the share of production services, such as construction, transportation, telecommunication, communication, and financial and insurance services, as a percentage of GDP, increased relative to that of social services and public utilities, partially reflecting
the increasing tradability of such services and the increased engagement of the private sector in the whole economy, in general, and in provision of production services, in particular. Within production services, finance and telecommunications, transport, and housing experienced relatively higher growth rates starting in 2000. Hotels and restaurants (including tourism) experienced a substantial increase, and their share in GDP increased from 1.7 percent in 1990/91 to 3.3 percent despite the global financial crisis in 2008–09.

Services’ share in employment increased from 54 percent of total employment in 1990/91, exceeding 57.5 percent by 2007/08, with the largest share of employment concentrated in social services. However, the share of social services in employment has increased rather slowly, whereas that of production services jumped from about 20 percent in 1990/91 to 28.3 percent in 2007/08. The private sector’s share in employment for production services increased from 15.4 percent to about 25 percent over the same period, reflecting the structural changes in the Egyptian economy that affected the service sectors. Such structural changes included (a) the general transformation of the economy from a state-planned system to a free market economy (mainly as a result of the economic reform and structural adjustment program adopted in 1991) and (b) the vast privatization attempts undertaken in some service sectors (for example, the banking sector) and the enhanced role of the private sector in telecommunications and ICT.

The increase in the relative importance of services in GDP was matched by an increase in their contribution to the balance of payments. Exports of services played an important role in turning the current account deficit into a surplus. For example, in 2008, the deficit in the trade balance reached US$18.3 billion, whereas net exports of services reached US$7.3 billion.

Liberalization Steps and Export Potential

Egypt ranked 33rd among the leading exporters of commercial services in 2008, with the value of exports reaching US$25 billion and a share of 0.7 percent of the world exports of commercial services (WTO 2009). Figure 6.1, which provides the classification of Egypt’s commercial exports, shows that the composition of commercial service exports did not change much between 2000 and 2008.

Egypt has an excellent geographic location, and the presence of the Suez Canal smoothly connects it across continents. In such a situation, expecting large transport service exports from Egypt is natural. However, the potential importance of other services that could be exported if the quality of Egypt’s infrastructure and human resources improved should not be underestimated.
Figure 6.1. Structure of Egypt’s Exports of Commercial Services and Other Commercial Services, 2000 and 2008

a. 2000

other commercial services 28%
transport 27%
travel 45%

b. 2008

other commercial services 23%
transport 34%
travel 43%

c. other commercial services, 2008

personal, cultural, and recreational services 2.5%
other business services 43.9%
computers and information services 4.2%
financial services 4.8%
communication services 20.7%
construction 16.6%
government services n.i.e. 5.4%
insurance services 1.9%

Source: UNCTAD 2009a.
Note: Panel c details the subset of other commercial services in panel b.
Table 6.1 identifies the exports of services in some sectors together with Egypt’s ranking relative to other main developing countries that are exporters of services. Table 6.2 shows that Egypt enjoys a revealed comparative advantage (RCA) in transport (mainly because of the Suez Canal), tourism (proxied by travel), and communications. Table 6.1 suggests that Egypt’s position in communication services, financial services, and other business services has deteriorated among 20 leading developing countries, whereas its rank has moved by only one point in the case of construction and in the case of royalties and license fee services. Table 6.2 reflects that the RCA for Egypt is higher than 1 for transport, travel, communications, and construction services. Egypt’s RCA in communication services may be due to the high settlement payments Egypt is receiving from other countries. In this case, Egypt’s “comparative advantage” may actually reflect a lack of domestic liberalization (that is, a lack of competition for international telecommunication services). Data were not available to allow this issue to be investigated. Moreover, the construction sector seems to have gained comparative advantage in the past few years. In contrast, the other business service sector seems to be losing its comparative advantage.4

In fact, the RCA reflects partially (as will be explained later) the main determinants behind acquiring comparative advantage. For example, transport and travel reflect the role of fundamentals: geographic position represented by the


<table>
<thead>
<tr>
<th>Service</th>
<th>Value (US$ million)</th>
<th>Rank among 20 leading developing countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transport</td>
<td>2,645</td>
<td>5,489</td>
</tr>
<tr>
<td>Travel</td>
<td>4,345</td>
<td>7,591</td>
</tr>
<tr>
<td>Communications</td>
<td>306</td>
<td>496</td>
</tr>
<tr>
<td>Construction</td>
<td>93</td>
<td>430</td>
</tr>
<tr>
<td>Computer and information services</td>
<td>23</td>
<td>52</td>
</tr>
<tr>
<td>Financial services</td>
<td>52</td>
<td>149</td>
</tr>
<tr>
<td>Royalties and license fees</td>
<td>59</td>
<td>138</td>
</tr>
<tr>
<td>Other business services</td>
<td>2,119</td>
<td>1,337</td>
</tr>
<tr>
<td>Personal, cultural, and recreational services</td>
<td>15</td>
<td>116</td>
</tr>
</tbody>
</table>


Note: — = not available.

a. This category includes merchandising and other trade-related services; operational leasing services; and miscellaneous business, professional, and technical services.
Table 6.2. Revealed Comparative Advantage of Egypt’s Service Sectors

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Transport</td>
<td>1.47</td>
<td>2.03</td>
<td>1.56</td>
<td>1.54</td>
<td>1.23</td>
<td>1.40</td>
<td>1.34</td>
<td>1.45</td>
<td>1.55</td>
<td>1.58</td>
</tr>
<tr>
<td>Travel</td>
<td>0.88</td>
<td>0.44</td>
<td>0.53</td>
<td>0.95</td>
<td>1.47</td>
<td>1.46</td>
<td>1.52</td>
<td>1.74</td>
<td>1.82</td>
<td>1.87</td>
</tr>
<tr>
<td>Other services</td>
<td>0.63</td>
<td>0.67</td>
<td>1.04</td>
<td>0.73</td>
<td>0.60</td>
<td>0.57</td>
<td>0.57</td>
<td>0.41</td>
<td>0.36</td>
<td>0.35</td>
</tr>
<tr>
<td>Communications</td>
<td>..</td>
<td>..</td>
<td>..</td>
<td>1.23</td>
<td>1.43</td>
<td>1.29</td>
<td>1.30</td>
<td>1.08</td>
<td>1.26</td>
<td>1.66</td>
</tr>
<tr>
<td>Construction</td>
<td>..</td>
<td>..</td>
<td>..</td>
<td>0.00</td>
<td>0.60</td>
<td>1.20</td>
<td>1.68</td>
<td>1.74</td>
<td>1.26</td>
<td>2.28</td>
</tr>
<tr>
<td>Computer and information services</td>
<td>..</td>
<td>..</td>
<td>..</td>
<td>0.01</td>
<td>0.08</td>
<td>0.05</td>
<td>0.06</td>
<td>0.04</td>
<td>0.07</td>
<td>0.12</td>
</tr>
<tr>
<td>Insurance</td>
<td>0.26</td>
<td>1.06</td>
<td>0.37</td>
<td>0.07</td>
<td>0.16</td>
<td>0.12</td>
<td>0.10</td>
<td>0.20</td>
<td>0.10</td>
<td>0.19</td>
</tr>
<tr>
<td>Financial services</td>
<td>..</td>
<td>..</td>
<td>..</td>
<td>0.21</td>
<td>0.08</td>
<td>0.13</td>
<td>0.08</td>
<td>0.14</td>
<td>0.12</td>
<td>0.05</td>
</tr>
<tr>
<td>Royalties and license fees</td>
<td>..</td>
<td>..</td>
<td>..</td>
<td>0.11</td>
<td>0.11</td>
<td>0.20</td>
<td>0.11</td>
<td>0.18</td>
<td>0.17</td>
<td>0.12</td>
</tr>
<tr>
<td>Other business services</td>
<td>0.89</td>
<td>0.86</td>
<td>0.95</td>
<td>1.09</td>
<td>0.95</td>
<td>0.76</td>
<td>0.86</td>
<td>0.43</td>
<td>0.34</td>
<td>0.26</td>
</tr>
<tr>
<td>Personal, cultural, and recreational services</td>
<td>..</td>
<td>..</td>
<td>..</td>
<td>0.03</td>
<td>0.11</td>
<td>0.48</td>
<td>0.34</td>
<td>0.48</td>
<td>0.59</td>
<td>0.40</td>
</tr>
<tr>
<td>Government services not identified elsewhere</td>
<td>0.40</td>
<td>0.54</td>
<td>3.77</td>
<td>1.01</td>
<td>0.44</td>
<td>0.77</td>
<td>0.36</td>
<td>0.52</td>
<td>0.83</td>
<td>0.74</td>
</tr>
</tbody>
</table>

Source: Author’s calculations based on UNCTAD 2009a.

Note: .. = negligible or unavailable. Shaded cells indicate that an RCA exists. The RCA index of country $i$ for item $j$ is often measured by the product’s share in the country’s exports in relation to its share in world trade:

$$RCA_{ij} = \frac{x_{ij}}{X_i} \div \frac{x_{wj}}{X_w},$$

where $x_{ij}$ and $x_{wj}$ are the values of country $i$’s exports of item $j$ and world exports of item $j$, respectively, and where $X_i$ and $X_w$ refer to the country’s total exports and world total exports, respectively. A value of less than 1 implies that the country has a revealed comparative disadvantage in the product. Similarly, if the index exceeds 1, the country is said to have a revealed comparative advantage in the item.
Suez Canal (transport) and the existence of monuments (travel). In other cases, policies have played an evident role, as in the case of communications. Other sectors, such as construction, have experienced an increase in RCA over time (with the exception of 2007), which could be a result of the increased role played by Egyptian construction firms in the Gulf area. Nevertheless, the potential is still not fully reaped as a result of the weak business environment and lack of encouraging policies (further explanations are provided in subsequent sections).

**General Conditions Shaping Comparative Advantage in the Egyptian Economy**

Hoekman and Mattoo (2008) found that the ability and capacity to produce and export services are shaped by the interaction among the sources of comparative advantage, which include natural endowments, institutions, policies, and infrastructure. The following discussion highlights the main features of some important variables that could help shape the comparative advantage of Egypt in producing and exporting services in general.

**Geographic location**

Egypt’s geographic comparative advantage cannot be underestimated. Egypt’s strategic location bridges the three continents of Asia, Africa, and Europe and acts as the gateway to some of the world’s largest markets because of the Suez Canal. Egypt is a hub for the world’s maritime and air traffic links at the nexus of Africa, Europe, and the Arab world.

The Suez Canal has certainly helped Egypt acquire comparative advantage in transport. One can argue that its unique position created a sort of global monopolistic position for maritime transport between the Red Sea and the Mediterranean Sea. In 2008, the number of ships passing through the Suez Canal reached 21,415, which was reduced to 17,228 in 2009 as a result of the crisis in world trade as well as the impact of Somali pirates in the Gulf of Aden.

**Labor and human capital**

By February 2009, Egypt reached a population of 80 million. About 58 percent of the total population is under 25 years of age, and 41 percent is between 15 and 39. Such a huge potential labor force, accompanied by relatively low wage levels, provides untapped resources for Egypt to become a major hub for labor-intensive services and industries.
Even though the enrollment ratio of students in basic and secondary education is relatively high at 89.4 percent in 2005/06 (UNDP and INP 2008), domestic and foreign businesses operating in Egypt, as well as several international reports, have identified human capital as a major constraint hindering Egypt from excelling in industrial and service exports.

For example, the World Economic Forum’s *Global Competitiveness Report 2008–2009* found that higher education status in Egypt has worsened and its ranking dropped from 80 in 2007/08 to 91 in a group of 160 countries. This deteriorating position of Egypt in higher education is among the factors that have contributed to the worsening of Egypt’s overall ranking in the report, dropping from 77th in 2007–08 to 81st in 2008–09 (Porter and Schwab 2008).

Egypt’s ranking with respect to primary education has also deteriorated (Porter and Schwab 2008). This lack of qualified human capital implies that a mismatch exists between the outputs of the educational system and the demands of the economy, which resulted in high levels of unemployment, reaching 11.7 percent in 2007/08. The unemployment rate among university graduates reached 26.8 percent in 2005, compared to an overall unemployment rate of 9.3 percent (UNDP and INP 2008).

The deteriorating educational system has been a concern of the government for a long time, and it has sought the help of international donors (World Bank 1999, 2005). Yet rather than being solved, the problem has been exacerbated over time. As revealed by the World Bank (2008), Egypt has the highest rate of unemployed labor with secondary education and above (table 6.3) among neighboring countries in the Middle East and North Africa. This finding implies that the returns to education, in general, and to higher education, in particular,

<table>
<thead>
<tr>
<th>Table 6.3. Distribution of the Labor Force and the Unemployed in Selected Middle Eastern and North African Economies, by Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>Country</td>
</tr>
<tr>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>Egypt, Arab Rep.</td>
</tr>
<tr>
<td>Bahrain</td>
</tr>
<tr>
<td>Morocco</td>
</tr>
<tr>
<td>Iran, Islamic Rep.</td>
</tr>
<tr>
<td>Jordan</td>
</tr>
<tr>
<td>Algeria</td>
</tr>
<tr>
<td>Oman</td>
</tr>
<tr>
<td>Tunisia</td>
</tr>
</tbody>
</table>

are relatively low (Galal 2002; Nugent and Saleh 2009), mainly because of its low quality. The problem of deteriorating educational levels is rooted in Egypt’s educational system, which has focused on providing free public education for decades. The focus on enhancing access, combined with increased population growth rates, has negatively affected the quality of education.

Thus, Egypt could potentially enjoy a comparative advantage in labor-intensive services by using its abundant labor; however, given the low quality of education, it is unable to do so. The huge decline in Egyptian exports of other business services, as revealed in table 6.1, which shows that exports declined by more than 40 percent between 2000 and 2007, and the huge decline in RCA for other business services between 1995 and the years that followed, as revealed by table 6.2, can be attributed to the deteriorating level of education.

**Macroeconomic policies**

Egypt has embarked on major economic structural reforms since 1991 after beginning the Economic Reform and Structural Adjustment Program, which was designed and implemented jointly with the World Bank and the International Monetary Fund. Throughout most of the 1990s, Egypt succeeded in implementing an economic reform program, which managed to slow down inflation and make progress in restoring internal balances so the macroeconomic indicators improved over the 1991–98 period. Since 1991, the government of Egypt has adopted a number of reform measures, such as devaluing the Egyptian pound and unifying the existing exchange rate systems, reducing trade barriers, initiating an ambitious privatization program (though it slowed down in the latter part of the 1990s), adopting a tightened fiscal policy, reducing subsidies on some strategic commodities (including gasoline), and upgrading and expanding physical infrastructure.

Consequently, economic performance improved during the 1990s (except in 1997/98, when the real GDP growth rate dropped significantly, mainly because of the Luxor massacre and its severe impact on tourism and the capital flight that followed the 1997 Asian financial crisis). These positive macroeconomic trends were reversed in 2000/01 as a result of the stagnation of the economic reform process, which was further aggravated by a slowdown in the international economy and the impact of the September 11 terrorism attacks. The negative developments were further exacerbated by the appreciation of the Egyptian pound, which was pegged to the U.S. dollar. As a result, real GDP growth continued to fall and reached its lowest level in a decade in 2003 (3.1 percent).
Alarmed by the slowdown of the economy and the negative economic indicators, the government sought to revive the economic reform program. Among the reforms undertaken were flotation of the Egyptian pound in early 2003 and appointment of a new cabinet in 2004. A wide-ranging set of economic reforms has been undertaken since the appointment of a new cabinet, including trade and customs reform, tax reform, and a more market-oriented macroeconomic policy. For example, corporate and personal income tax rates were cut by half, many tax exemptions were eliminated, and tax administration was improved, which resulted in a substantial increase in tax receipts (corporate and personal).

The privatization program was revived after a period of economic slowdown, which lasted from 1997 to 2003. Moreover, crucial institutional pillars of a market economy, such as the competition law in 2005 and the consumer protection law in 2006, were introduced. Tax reduction and exchange rate devaluation were particularly beneficial for firms in the service sector because services (compared to goods) use fewer imported inputs, and hence devaluation lowered the price of Egyptian services (for example, ICT-related services and tourism), which has helped boost Egyptian exports of services and made the country more competitive worldwide.

The reforms undertaken by the government in 2004 corrected the macroeconomic imbalances. For example, the reform of the foreign exchange market established a market-based system and eliminated the black market by the second half of 2004. Having a flexible exchange rate regime allowed better management by the Central Bank of Egypt (CBE), leading to a better monetary policy that had a positive influence on the development of the economy as a whole.

Foreign direct investment (FDI) inflows increased tremendously from US$0.2 billion in 2003 to US$11.5 billion in 2007 and then decreased to US$9.5 billion in 2008 (UNCTAD 2009b). The share of foreign participation in different sectors (a proxy for FDI) has ranged from 37 percent to 70 percent from 2005 to 2008. This inflow of foreign capital in the service sector has helped increase the number of firms operating in the domestic market and has brought with it technology, managerial expertise, and competition.

The reforms helped improve economic performance, as seen in higher real GDP growth, which amounted to 5.1 percent in 2004/05 and reached 7.2 percent in 2007/08. Yet the Egyptian economy still suffered from negative macroeconomic phenomena, including relatively high inflation rates, which reached 18 percent in 2008 (CBE 2010), when the increase in nominal wages lagged, and high unemployment rates, which revolved around 11.7 percent in 2007/08 (Ministry of Finance 2008) before decreasing to 9.3 percent in the first quarter of 2009/10 (Ministry of Economic Development 2009).
Institutions and business climate

As asserted by Amin and Mattoo (2006), countries with better institutions (mainly regulatory and contract-enforcing institutions) have more dynamic and larger service sectors. The Doing Business report (published by the World Bank since 2004) classified Egypt as the best performer in the world in 2008 in terms of its ability to improve its ranking and overcome a number of obstacles that used to impede businesses. However, overall Egypt does not rank well on Doing Business indicators.

Table 6.4 shows the rankings for Egypt for 2008 and 2009. The number of procedures for starting a business in Egypt decreased from 13 in 2004 to 6 in 2009, and the number of days declined from 37 in 2004 to 7 in 2009. A significant decline in associated costs of starting a business has also been noted.

A significant improvement in its ranking is owed to the minimum capital requirements, which declined tremendously from 13 percent of per capita income to 2 percent of per capita income. Egypt’s ranking in enforcing contracts, which is an institution critical for service exports, improved slightly from 154 to 148. Registering property in Egypt became a bit easier through reduction in cost and time. Protecting investors and dealing with taxes also became significantly easier. Trading across borders improved in all its associated indicators, whether dealing with time or costs. However, in relative terms, Egypt’s performance lagged that of other countries, which resulted in a lower rank.

Egypt’s position according to the Global Competitiveness Report has been deteriorating over the years. Egypt ranked 70th in the 2009–10 report, but its ranking in the 2010–11 report has deteriorated to 81st (Schwab 2009, 2010). When one compares Egypt to other countries, other countries are in a better position, and

Table 6.4. Egypt’s Ranking in the Doing Business Report

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2008</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ease of doing business</td>
<td>125</td>
<td>114</td>
</tr>
<tr>
<td>Starting a business</td>
<td>55</td>
<td>41</td>
</tr>
<tr>
<td>Dealing with construction permits</td>
<td>163</td>
<td>165</td>
</tr>
<tr>
<td>Registering a property</td>
<td>104</td>
<td>85</td>
</tr>
<tr>
<td>Getting a credit</td>
<td>102</td>
<td>84</td>
</tr>
<tr>
<td>Protecting investors</td>
<td>84</td>
<td>70</td>
</tr>
<tr>
<td>Paying taxes</td>
<td>151</td>
<td>144</td>
</tr>
<tr>
<td>Trading across borders</td>
<td>21</td>
<td>24</td>
</tr>
</tbody>
</table>

Note: Doing Business 2008 rankings have been recalculated to reflect changes to the methodology and the addition of three new countries.
their performance has improved over time, implying a widening gap between Egypt and its competitors. For example, in 2005/06 Egypt was in a better position than Morocco and Turkey and almost comparable to Bahrain.

Service-specific reports

Despite the modest performance on an absolute and relative basis shown by Egypt in the Global Competitiveness Report and Doing Business rankings, other international reports that have focused mainly on services—especially ICT-related services—have ranked Egypt in a better position. For example, the A.T. Kearney (2007) Global Services Location Index (GSLI) placed Egypt in position number 13, surpassing all its competitors, including the United Arab Emirates (20), Tunisia (28), Morocco (38), and Turkey (49). In 2009, Egypt’s rank further improved to sixth position (A.T. Kearney 2009). Moreover, other reports, such as Global Services–Tholons (2009), put Egypt (Cairo) in seventh position among the major outsourcing cities in the world.

When comparing Egypt with its competitor countries in the field of exporting services (see table 6.5), one observes that Egypt has a better rank in terms of human skills availability in A.T. Kearney’s GSLI indicators (reflecting the availability of ICT skills), whereas it has a relatively lower rank in the Global Competitiveness Report for higher education and training (because of the general inefficiency of the educational system). This finding implies that the education system is inefficient and is able to train professionals only to provide low-end ICT services globally. Hence, when the world demand for complex services increases or service delivery becomes more competitive, Egypt may slip from its current competitive position in reports such as the GSLI if it does not improve the quality of its education system.

In the financial attractiveness indicator of the 2007 GSLI, Egypt ranks relatively well, while it has a mediocre ranking in terms of intellectual property rights and physical infrastructure. In terms of technological readiness, the Global Competitiveness Report 2008–2009 suggests that Egypt has a relatively backward position (Porter and Schwab 2008). In other words, the comparative advantage enjoyed by Egypt in specific service sectors is difficult to relate to general fundamentals and compare with the situation in competitor countries.

Characteristics of Service Exports from Egypt

Three main variables affected the choice of service sectors in Egypt. First, for obvious reasons, sectors where Egypt enjoys an RCA greater than 1 are discussed. These sectors include travel, transport, construction, and communications.
<table>
<thead>
<tr>
<th>Indicators</th>
<th>A.T. Kearney GSLI 2009&lt;sup&gt;a&lt;/sup&gt;</th>
<th>World Economic Forum Global Competitiveness Report 2009–10&lt;sup&gt;b&lt;/sup&gt;</th>
<th>World Bank World Development Indicators 2009</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>GSLI overall rank</td>
<td>GSLI score for people skills and availability&lt;sup&gt;c&lt;/sup&gt;</td>
<td>Labor higher education and training rank</td>
</tr>
<tr>
<td>Human capital</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Egypt, Arab Rep.</td>
<td>6</td>
<td>1.20</td>
<td>88</td>
</tr>
<tr>
<td>Jordan</td>
<td>9</td>
<td>0.91</td>
<td>42</td>
</tr>
<tr>
<td>Morocco</td>
<td>30</td>
<td>0.93</td>
<td>99</td>
</tr>
<tr>
<td>Tunisia</td>
<td>17</td>
<td>—</td>
<td>32</td>
</tr>
<tr>
<td>Turkey</td>
<td>44</td>
<td>1.23</td>
<td>73</td>
</tr>
<tr>
<td>United Arab Emirates</td>
<td>29</td>
<td>0.84</td>
<td>29</td>
</tr>
<tr>
<td>Access to finance</td>
<td></td>
<td></td>
<td>Financial market sophistication rank</td>
</tr>
<tr>
<td>Egypt, Arab Rep.</td>
<td>6</td>
<td>3.07</td>
<td>84</td>
</tr>
<tr>
<td>Jordan</td>
<td>9</td>
<td>2.99</td>
<td>52</td>
</tr>
<tr>
<td>Morocco</td>
<td>30</td>
<td>2.62</td>
<td>96</td>
</tr>
<tr>
<td>Tunisia</td>
<td>17</td>
<td>2.86</td>
<td>87</td>
</tr>
<tr>
<td>Turkey</td>
<td>44</td>
<td>2.01</td>
<td>80</td>
</tr>
<tr>
<td>United Arab Emirates</td>
<td>29</td>
<td>2.10</td>
<td>33</td>
</tr>
<tr>
<td>Intellectual property rights</td>
<td></td>
<td></td>
<td>Intellectual property protection rank</td>
</tr>
<tr>
<td>protection</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Egypt, Arab Rep.</td>
<td></td>
<td></td>
<td>58</td>
</tr>
<tr>
<td>Jordan</td>
<td></td>
<td></td>
<td>30</td>
</tr>
<tr>
<td>Morocco</td>
<td></td>
<td></td>
<td>86</td>
</tr>
<tr>
<td>Geography</td>
<td>Infrastructure rank</td>
<td></td>
<td></td>
</tr>
<tr>
<td>---------------------</td>
<td>---------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tunisia</td>
<td>43</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Turkey</td>
<td>105</td>
<td></td>
<td></td>
</tr>
<tr>
<td>United Arab Emirates</td>
<td>15</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Geography</th>
<th>Infrastructure (physical)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Egypt, Arab Rep.</td>
<td>55</td>
</tr>
<tr>
<td>Jordan</td>
<td>42</td>
</tr>
<tr>
<td>Morocco</td>
<td>70</td>
</tr>
<tr>
<td>Tunisia</td>
<td>37</td>
</tr>
<tr>
<td>Turkey</td>
<td>62</td>
</tr>
<tr>
<td>United Arab Emirates</td>
<td>6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Geography</th>
<th>Economic Intelligence Unit IT industry competitiveness index 2009e</th>
<th>Global Competitiveness Index technological readiness rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Egypt, Arab. Rep.</td>
<td>53</td>
<td>82</td>
</tr>
<tr>
<td>Jordan</td>
<td>—</td>
<td>61</td>
</tr>
<tr>
<td>Morocco</td>
<td>—</td>
<td>76</td>
</tr>
<tr>
<td>Tunisia</td>
<td>—</td>
<td>55</td>
</tr>
<tr>
<td>Turkey</td>
<td>46</td>
<td>54</td>
</tr>
<tr>
<td>United Arab Emirates</td>
<td>—</td>
<td>17</td>
</tr>
</tbody>
</table>

Sources: A.T. Kearney 2009; EIU 2009; Schwab 2009; World Bank’s World Development Indicators database.

Note: — = not available.

a. Rank out of 50 economies is shown.
b. Rank out of 133 economies is shown.
c. People skills and availability are rated on a scale of 0–3.
d. Financial attractiveness is rated on a scale of 0–4.
e. Rank out of 66 economies is shown.
Second, Egypt is historically known to have been exporting services from a number of sectors for which data were not available on a regional basis (for example, education and health services). Hence, historical reputation of exporting services played an important role in the choice of sectors. Third, some service sectors have been performing well in the past few years even though their contribution to exports might not be highly significant. The efforts undertaken by the government and the engagement of the private sector in such sectors show that their export potential is high (for example, ICT and related services). For other sectors, such as audiovisual services, anecdotal evidence suggests that Egypt is a large exporter in the region; however, lack of available data and information prevented investigation of the reasons behind the success or failure of their export.

Exports of financial services constitute banking, insurance, reinsurance, and other financial services. Exports of financial services from Egypt increased dramatically in 2005 and 2006 but slowed in 2007. Because of lack of data, this chapter focuses its analysis only on exports of banking and other financial services.

Table 6.6 identifies the Egyptian banks operating abroad in different forms, ranging from branches to representative offices to a wholly owned subsidiary. From the table one can see that two public banks, four private banks, and a specialized bank operate abroad. High concentration exists in destination countries where most of the mode 3 financial service exports are targeted for Arab countries, followed by a few European countries. The most notable competitors to Egypt on a regional basis are Jordan and Lebanon, which have a number of banks that have extended their operations in the Arab region.

A number of Egyptian nonbanking financial firms founded in the mid-1980s and early 1990s have grown exponentially and have exported a number of their services via mode 3, mainly to Arab countries but also to some Western countries. The services exported include securities brokerage, asset management, investment banking, private equity, and research. Among the largest firms is EFG Hermes, whose market capitalization exceeded US$3.5 billion in mid-2008. EFG Hermes operates in Egypt, Kuwait, Lebanon, Saudi Arabia, Oman, Qatar, the United Arab Emirates, and recently the Syrian Arab Republic and has 13 offices around the Arab region. EFG Hermes is also listed on the Egyptian Stock Exchange and London Stock Exchange.

Smaller than EFG Hermes are other firms such as Pioneers Holding Co. (established in 1997), which is an investment bank focused on brokerage and asset management and had a turnover of approximately US$6 billion in 2009. The firm has offices and subsidiaries in Bahrain, Morocco, Saudi Arabia, Syria, and the United Arab Emirates. Another firm, Beltone Financial, has as wide a portfolio as EFG Hermes and Pioneers Holding, including brokerage, asset management, investment banking, and private equity. It has offices in Libya, Qatar,
## Table 6.6. Egyptian Banks Operating in Foreign Countries, 2009

<table>
<thead>
<tr>
<th>Bank</th>
<th>Branches</th>
<th>Representative offices</th>
<th>Initial approval of branch abroad (not yet open)</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>National Bank of Egypt</em></td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>8</td>
</tr>
<tr>
<td>United Kingdom (London)</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>United States (New York)</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>China (Shanghai)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>South Africa (Johannesburg)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>United Arab Emirates (Dubai)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Saudi Arabia</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Sudan</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>National Bank of Egypt (UK) Limited</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Banque Misr Liban SAL (in Lebanon)</em></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><em>Misr Bank–Europe GmbH (in Germany)</em></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><em>Banque Misr SAE (in Egypt)</em></td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>France (Paris)</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>United Arab Emirates (Abu Dhabi, Dubai, Sharjah, Al Ain, Ras Al Khaimah)</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(89.32% owned by Banque Misr, Cairo)
(50.75% owned by Banque Misr, Cairo)

(wholly owned by National Bank of Egypt)

(Table continues on the following page.)
<table>
<thead>
<tr>
<th>Bank</th>
<th>Branches</th>
<th>Representative offices</th>
<th>Initial approval of branch abroad (not yet open)</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cairo Amman Bank (in Jordan)</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Arab African International Bank</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>United Arab Emirates (Abu Dhabi, Dubai)</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Lebanon (Beirut)</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Commercial International Bank</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>United Arab Emirates (Dubai)</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Suez Canal Bank</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Libya (tribal)</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Egyptian Arab Land Bank (specialized bank)</td>
<td>18</td>
<td></td>
<td></td>
<td></td>
<td>18</td>
</tr>
<tr>
<td>Jordan</td>
<td>12</td>
<td></td>
<td></td>
<td></td>
<td>12</td>
</tr>
<tr>
<td>Palestine</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Total</td>
<td>29</td>
<td>5</td>
<td>2</td>
<td>4</td>
<td>40 (38 actual)</td>
</tr>
</tbody>
</table>

Sources: CBE 2010 and other unpublished sources.
Saudi Arabia, the United Arab Emirates, and the United States and has recently expanded its operations in Qatar. In 2009, Pioneers Holding and Beltone Financial decided to merge. The merger is expected to enhance their exports of services in the Arab region, especially the Gulf area.

Other investment banking firms, such as HC Securities & Investment and Prime Group, have developed strategies similar to those adopted by EFG Hermes, Pioneers Holding, and Beltone Financial. Major regional competitors to Egypt in investment banking include the United Arab Emirates and, to a lesser extent, Bahrain.

**Drivers and Constraints on Financial Services Exports**

In the case of the banking sector, regulatory infrastructure has been strengthened following the adoption of Law 88/2003. Law 88/2003 set higher standards for the banking sector, especially with respect to risk exposure, further emphasizing the CBE’s independence in managing monetary policy.

The regulatory reform of the banking sector has positively affected financial service exports from Egypt by allowing banks to focus more on overseas operations. Before the reform, export markets were relatively neglected because banks were mainly concerned with solving domestic banking problems such as those emanating from the high percentage of nonperforming loans. The decision to export services is not directly related to the performance of the banking sector domestically, but strong domestic performance is a necessary condition for expanding abroad. Domestic regulators will not usually allow a weak bank to expand abroad, and a host country will probably not authorize weak foreign banks to establish a commercial presence. Banking exports follow the regulations of the host country and not Egypt; hence, branches abroad act as separate entities following different rules. The CBE does not have any specific policy that encourages exports by banks. Its role is a regulatory one, and its relation to banking exports is confined to the supervision of banks in Egypt, including their branches abroad. However, by improving banks’ performance and building a stronger financial sector, domestic regulation reforms played a critical role in expanding the exports of other financial services (investment banking).

Given the absence of a specialized undergraduate banking institute and the weak educational system, the banking sector depends on in-house training, specialized banking courses abroad, and a few specialized training institutes (including the Egyptian Banking Institute, which is the training arm of the CBE) to prepare the various levels of management employees as well as new entrants to the banking sector. Under the reform program of 2005–08, banks—especially public sector banks—were able to recruit highly qualified banking...
cadres and leadership by providing them with attractive salaries using a special fund (the banking reform fund) (CBE 2010). However, no direct relationship exists between the strengthening of human capacity and the performance of financial service exports. When the human capacity available to the financial services sector was enhanced, other challenges in operating at a global level became evident, such as the lack of awareness of external environment and issues in risk management. Moreover, Egypt lacks professionals with skill sets that could, if readily available, significantly increase its ability to export.

Many banks pursued efforts to apply modern technologies to upgrade the quality of their services and have taken decisive measures toward computerization and increased competition (Hakim and Neamie 2001).

Thus, the banking sector in Egypt does not seem to face physical or human infrastructure constraints that impeded it from providing efficient service. Even though specific constraints, such as lack of specialized bankers in specific fields (for example, risk management); weak physical infrastructure in certain areas; and relative technological backwardness in the financial service industries exist in Egypt, such types of constraints have been gradually overcome and did not act as a bottleneck to development of this sector.

The size of the domestic market seems to play an important role in explaining exports of financial services. However, its role is different in the case of banking services compared to other financial services. In the case of banking services, the relatively large size of the domestic market (especially when compared to Egypt’s regional competitors in terms of size of population) narrowed the focus of commercial banks to the domestic market. The case has been different for investment banking, where provision of services (such as securities brokerage, asset management, investment banking, private equity, and research) was constrained by the relatively limited domestic market. After attaining a considerable size, the investment banking firms realized the limitations of domestic absorption capacity and moved regionally to other Arab countries to maintain their growth rate.

Export of banking services through mode 3 has occurred for different purposes, which included attracting remittances from the Egyptian diaspora (for example, Banque Misr); taking advantage of rising business opportunities in the host countries, such as a mandate in banks’ charters to open a branch abroad (for example, the Arab African International Bank); and financing Egyptian investments abroad.

The domestic performance of the banking sector is not highly correlated to the extent of service export. The large domestic market size lessened the need for several Egyptian banks to expand abroad. The few banks that did export through mode 3 were motivated by specific purposes, such as a mandated mission to operate regionally to attract remittances of Egyptian migrants. Thus, in the case of the
banking industry, no correlation exists between size of bank and exporting; small banks as well as large banks export services. In contrast, exports of other financial services are correlated with firm size. For instance, investment banks were encouraged to move abroad and expand regionally after they had grown in size and were significantly constrained by the small domestic market. Evidence of this trend is that, despite the establishment of such firms in the mid-1980s and early 1990s (except Beltone Financial, which was established in 2002), none of them decided to go regional before 2005. Thus, the decision to export services came after the passage of time and is mainly attributed to the acquired comparative advantage in terms of the necessary human skills and knowledge of Arab markets and clients.

The increase in absolute terms of the value of exports reported in table 6.1 reflects the increase in nonbanking exports, which were significant only after 2005. However, the increase in financial services has remained highly limited when compared to that of Egyptian exports of other services that have higher absolute values (though financial services started from a low base). Therefore, Egypt does not appear to have acquired any comparative advantage in financial services, as revealed in table 6.2.

**Health and educational services**

The number of Egyptian emigrants reached 2,399,251 in 2005, representing about 3.2 percent of the Egyptian population. Most of these emigrants were destined for Arab countries (mainly, in order of importance, Saudi Arabia, the United Arab Emirates, Kuwait, and Oman) and some for European Union countries (Italy, the United Kingdom, Germany, Greece, and the Netherlands).

The regional comparative advantage enjoyed by labor in this regard has resulted in the exportation of education services (teachers) and health services (physicians and nurses) to the Arab Gulf countries as well as Libya and the Republic of Yemen. Exports have mainly taken place through mode 4 and, to a lesser extent, mode 2, so this chapter focuses on the former mode. Table 6.7 shows the distribution of work permits granted to Egyptian labor. A major problem with migration data is that no accurate information exists on the numbers of teachers and nurses working abroad (Fargues 2006). Thus, teachers and nurses are included in the category of scientists and technicians. This category represents the highest share of work permits granted.

Engman (2009) pointed out that the number of Egyptian schoolteachers migrating and working in Arab countries has declined over the years. Egyptian teachers working in Arab countries follow one of two systems: (a) a secondment program by the Egyptian Ministry of Education or (b) private search and contacts. Engman (2009) found that the number of teachers in the secondment
program dropped from 30,000 in the mid-1980s to 1,737 in 2006/07. He identified several supply and demand reasons behind the decrease, including strict migration policies adopted by Gulf countries and availability of side economic activities that teachers residing in Egypt could pursue (for example, private lessons). However, this chapter argues that the private route of obtaining a job abroad has not been captured by the data provided by Engman (2009), which can explain why the number of teacher-migrants has been maintained or at least has not dropped significantly.

Despite the general deteriorating status of educational institutions in Egypt, the country remained unique in terms of the availability of a large pool of labor in the fields of teaching and nursing. The RCA enjoyed by Egypt in this regard is mainly attributed to the high unemployment rate for graduates in the fields of education and nursing. According to the Labor Force Sample Survey conducted by the Central Agency for Public Mobilization and Statistics in 2006/07, holders of bachelor’s degrees in teaching had the second-highest unemployment rate (5.4 percent of the total unemployed) after graduates of commerce and economics. The survey recorded the highest unemployment rate among females holding bachelor’s degree, with a rate of 6.9 percent. The unemployment rate for holders of bachelor’s degrees in the medical, dentistry, nursing, and pharmacy fields was about 0.6 percent (CAPMAS 2008b). Thus, a high unemployment rate among teachers and nurses, coupled with the cultural and language similarities with countries in the Gulf area, Libya, and the Republic of Yemen, has helped promote this type of export.

The high level of unemployment, particularly among secondary and university graduates, signifies a mismatch between the output of the education sector and the

<table>
<thead>
<tr>
<th>Occupation</th>
<th>1985</th>
<th>1990</th>
<th>2002</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scientists and technicians</td>
<td>20.4</td>
<td>40.2</td>
<td>41.0</td>
</tr>
<tr>
<td>Managers</td>
<td>0.3</td>
<td>0.3</td>
<td>2.4</td>
</tr>
<tr>
<td>Clerical workers</td>
<td>8.8</td>
<td>8.0</td>
<td>1.5</td>
</tr>
<tr>
<td>Sales and services</td>
<td>18.5</td>
<td>17.3</td>
<td>12.7</td>
</tr>
<tr>
<td>Agriculture, animal husbandry, and fishing</td>
<td>8.9</td>
<td>5.3</td>
<td>8.6</td>
</tr>
<tr>
<td>Production workers</td>
<td>43.0</td>
<td>28.9</td>
<td>33.8</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

domestic demand. The unemployment rate among graduates with intermediate-level education or above reached 12.3 percent in 2007 (figure 6.2), whereas the unemployment rate among university graduates reached 16.4 percent in 2008 (CAPMAS 2008b; see also http://www.msrintranet.capmas.gov.eg/ows-img2/pdf/4-6.pdf). The high rate of unemployment explains the high tendency of educated people to migrate and helps explain the regional comparative advantage of Egypt in services such as nursing and teaching.

Egypt is, however, not alone in this field. The main competitor to Egypt as an Arabic-speaking country is Morocco. However, the Arabic dialect of Moroccans is difficult for the population of the Gulf countries, Libya, and the Republic of Yemen to understand. Hence, Egypt monopolized the regional export of health and education services in the 1970s and 1980s, which coincided with the oil boom in the Gulf countries and their high demand for Egyptian labor. Available data indicate that more than 70 percent of Egyptian migrants are concentrated in Arab countries, compared with only 8.5 percent of Moroccan migrants (Di Bartolomeo, Fakhoury, and Perrin 2009, 2010).

Two factors have caused Egypt’s health service export position (mainly through mode 4) to deteriorate, starting in the 1990s. The first factor relates to the deteriorating quality of education (see Galal 2002; Radwan 2002). The second reason is the recent emigration of nurses from Southeast Asian countries to Arab countries; these nurses have easily replaced Egyptian nurses (Girgis 2002). Teachers do not face this competition, because knowledge of the Arabic language is unique to Egypt and is not easily found in South Asia. The demand for Arabic-speaking teachers’ services is less elastic in the Gulf area, the Republic of Yemen, and Libya because of the scarcity of both domestic citizens and other nationalities who can supply such services.

Starting in the 1970s, Egypt adopted a regulatory framework that encourages exports of health and education, among other services, through mode 4. For example, Law 73/1971 allowed public sector employees to return to their jobs one year after resignation (subsequently extended to two years), together with the removal of other legal impediments. Law 111/1983 on emigration and sponsoring of Egyptians abroad identified the rights of all migrants, temporary and permanent; allowed dual nationality; and identified the financial rights of migrants regarding waivers from taxes and fees for their deposits invested in Egyptian banks.

Moreover, the government of Egypt has created specific institutional representation at the ministry level for migration issues (Presidential Decree 574/1981 set up the Ministry of State for Emigration Affairs) as well as a higher committee for migration (headed by the Minister of Manpower and Emigration and including representatives from 13 ministries) in accordance with Presidential
Figure 6.2. Unemployment Rate of Educated Persons, 1994–2007

Note: Figures do not include emigrants.
Decree 2000/1997 to enhance cooperation between different ministries on migration issues.

The Emigration Sector of the Ministry of Manpower and Emigration has undertaken wide-ranging responsibilities with the following objectives:

- Developing policies to encourage Egyptian emigration (for example, allowing the children of emigrants to be examined following the Egyptian school syllabus)
- Enhancing relationships with Egyptian emigrants abroad
- Capitalizing on the knowledge, skills, and savings of Egyptians abroad to enhance Egyptian social and economic development (for example, by allowing migrants to return to their initial jobs when they come back to Egypt)
- Establishing an integrated database on issues related to migration (Ghoneim 2010)

Hence, the regulatory framework itself acted as a major factor in shaping the comparative advantage of Egypt in exporting such services.

The government has undertaken several policies to enhance short-term migration to Arab countries. For example, it has concluded a number of bilateral agreements with Arab countries; between 1974 and 1993, Egypt signed labor migration agreements with 11 countries. Many of these agreements have been renewed, and several existing agreements, including those with Jordan, Libya, Qatar, and Sudan, regulate the right of entry, movement, ownership, and work. Currently, Egypt has concluded 12 such agreements with Arab countries to regulate the flow of Egyptian migrants into those countries. The agreements deal with issues that ensure that Egyptians are well treated in their host countries. The agreement with Libya remained modest and emphasized the need for cooperation. The agreement with Jordan is not reciprocal and focuses mainly on managing the flow of Egyptian emigrants to Jordan. The agreements include provisions on enhancing the training of migrant labor, setting the conditions of entry, and preserving labor rights (Ghoneim 2010). In addition to these agreements, starting in the early 1970s, government and private agencies were set up to organize labor migration, especially targeting Arab countries and focusing on specific occupations, such as teachers, physicians, and nurses.

**ICT outsourcing and software services**

Several international reports have identified the improved performance of Egypt in exporting ICT-related services. For example, Datamonitor estimated that the total market size for Egypt-based outsourced contact centers in 2005 was 655 agent
positions (Datamonitor 2005, as cited in Kamel and Hussein 2008). This number was expected to rise rapidly over the next five years, at a compounded annual growth rate of just over 50 percent, to 3,775 contact center agent positions by 2009. Agent positions in Egypt were at par with key near-shore markets, including the Czech Republic, Hungary, and Poland.

Egypt has a moderately large endowment of multilingual people, who are well used in ICT service exports. Microsoft uses the nine-language local Xceed contact center as its support center for global products and has a small innovation lab that specializes in prototype development and applied research. Orange Business Services and France Telecom have 1,600 engineers managing their networks nationwide. They operate 24 hours a day, seven days a week, and have plans for expansion. Some Indian firms are outsourcing to Egypt as a near-shore location for Europe. Vodafone has 800 contact center agents in Cairo serving Australian, New Zealand, and U.K. markets, as well as the domestic market. Xbox game console technical support is done from Egypt. Network technology provider Alcatel-Lucent has a technical support staff of 300 in Cairo. Oracle has 500 employees who provide technical support to customers across 140 countries in multiple languages (Datamonitor 2009). Moreover, BPO is booming with a focus on software development.

The Global Services–Tholons (2009) study put Cairo seventh among the world’s top emerging outsourcing cities, the only Middle-Eastern city to attain such a position. In 2007, Egypt was ranked 13th most attractive outsourcing destination by the A.T. Kearney GSLI, and in 2009 its rank had improved to sixth position, preceded only by India, China, Malaysia, Thailand, and Indonesia. The Yankee Group has praised Egypt for its distinguished position in the world market in IT outsourcing services (Marson and Blodgett 2008). These analyses put Egypt ahead of delivery locations in Eastern Europe such as the Czech Republic, Hungary, and Poland, as well as other African locations such as South Africa and Tunisia (El Shinawi and Lanvin 2009). Outsourcing to Africa has put Egypt in top place in Africa as an outsourcing location because of its competitive advantages, such as suitable infrastructure, availability of workforce, and suitability of business (Commonwealth Business Council and Cyber Media India 2009).

From 2004 to 2008, the total volume of Egypt’s offshore industry (including BPO, call centers, and technical support centers) grew from around US$100 million or US$150 million to US$700 million (El Shinawi and Lanvin 2009). ICT exports were expected to reach nearly US$1.1 billion by 2010, according to A.T. Kearney projections (table 6.8).

With a goal of becoming the IT hub for the Arab region, Egypt has become the major software exporter to most countries in the Arab region, competing with Jordan and the United Arab Emirates. Since the 1990s, Egypt has been supplying
70 percent of the demand for software from the Gulf region, primarily represented by Saudi Arabia and the United Arab Emirates (Kamel, Rateb, and El-Tawil 2009).

Egypt has a larger pool of skilled labor, and its workforce’s language skills in Arabic and English are better than its competitors in this specific field (see the GSLI findings in table 6.5). Multimedia-related products such as cultural, educational, entertainment, and religious CDs are the leading products exported by Egypt to the Arab region. Exports have taken place to Arab countries through modes 1 and 3, whereas exports to the European Union have mainly been through mode 1. The majority of Egyptian software companies have established branches in Bahrain, Oman, Saudi Arabia, and the United Arab Emirates (box 6.1).

Moreover, this workforce is skilled in a broad range of European languages, giving Egypt a comparative advantage in exporting ICT services in the region.18 Such linguistic abilities give Egypt a competitive edge over India, which is mainly exporting ICT services in the English language (Marson and Blodgett 2007). Moreover, sharing the same time zone with many European countries provides Egypt with a competitive edge over its competitors such as China and India, while its low labor costs relative to Eastern European outsourcing centers make Egypt an ideal exporter of such services to European and Arab countries (Marson and Blodgett 2007).

Only a few countries can compete with Egypt in terms of low labor costs—China, India, and the Philippines. For example, one can hire high-quality BPO agents in Cairo for around US$250 per month, whereas in other established and emerging countries—such as India and the Philippines—the figure is about twice

<table>
<thead>
<tr>
<th>ICT industry element</th>
<th>Target revenue (US$ million)</th>
<th>Compounded annual growth rate (%)</th>
<th>Share of total (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Software and IT services</td>
<td>280</td>
<td>27</td>
<td>34</td>
</tr>
<tr>
<td>Arab-content management</td>
<td>200</td>
<td>46</td>
<td>12</td>
</tr>
<tr>
<td>Technical support centers</td>
<td>200</td>
<td>27</td>
<td>24</td>
</tr>
<tr>
<td>Contact center markets</td>
<td>115</td>
<td>50</td>
<td>6</td>
</tr>
<tr>
<td>Research and development engineering design</td>
<td>100</td>
<td>38</td>
<td>8</td>
</tr>
<tr>
<td>BPO services</td>
<td>75</td>
<td>72</td>
<td>2</td>
</tr>
<tr>
<td>IT product exports (emerging markets)</td>
<td>45</td>
<td>25</td>
<td>6</td>
</tr>
<tr>
<td>IT localization</td>
<td>40</td>
<td>22</td>
<td>6</td>
</tr>
<tr>
<td>Knowledge process outsourcing services</td>
<td>30</td>
<td>43</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>1,085</td>
<td></td>
<td>100</td>
</tr>
</tbody>
</table>

Among the successful examples in the field of ICT outsourced exporting services is a firm named Xceed. An Egyptian pioneer firm and a leading contact center, Xceed first started its first call center operation in 2003. It envisioned becoming the foremost provider of outsourced customer contact solutions for commercial and government customers in Egypt and foreign markets, with aspirations to attract other opportunities globally. Xceed offers its services in nine different languages and served local and foreign firms in various fields. Its customers include Telecom Egypt, Microsoft Egypt, Oracle Global Product Support Center, Electronic Data Systems, NetOne, Nestlé Waters, Neuf Cegetel, the MCIT, the Ministry of State for Administrative Development, Aviation Information Technology, and CIT Global. According to its website (http://www.xceedcc.com), the firm has about 1,900 employees. In addition to customized service solutions, Xceed provides customer relationship management services, Internet-based customer care, and technical support services.

Other successful Egyptian firms in this field are C3, Raya Contact Center, and ECCO Outsourcing. From its premises in Cairo, C3 provides call and contact center services (inbound and outbound) in a variety of languages to both domestic and foreign customers. Its global customers include the Wall Street Journal Europe, Tele2, and Banque de la Poste Belge. Raya Contact Center provides the same type of services as C3 in four languages, and ECCO Outsourcing provides such services in three languages.

All these firms depend on the comparative advantage enjoyed by Egypt; however, they have also developed their own strategies, which are based on quality assurance and employee training in relevant technical and managerial skills to ensure quality processes are designed in accordance with customer requirements and with customer satisfaction in mind. The firms introduced full process documentation and detailed work instructions to ensure consistency of operations, which are regularly audited. Xceed also deployed several layers of calibration that ensured monitoring consistency. Moreover, quality scores were calibrated with customer satisfaction data. Xceed’s accreditations include the following: ISO 9001:2008 (on quality management systems); ISO 14001:2004 (on environmental management systems); OHSAS 18001:1999 (on occupational health and safety management systems); ISO/IEC 27001:2005 (on IT security techniques); and BS 25999 (on business continuity management).

The government of Egypt offered Orange Business Services (OBS) a number of incentives to attract its major service center to Egypt. The incentive package included a tax holiday and reduction of international circuit charges. The service center established in Cairo is the largest one that OBS operates globally. Its physical security meets the highest standards required by OBS’s global clients, and it provides many different services, including solution designs, service delivery management, incident management, change and resale management, configuration and data integrity, and online support and design implementation. The Cairo center also develops new services for OBS in incubators. It operates 24 hours a day, seven days a week, and has a highly resilient network architecture. It provides service for a large array of clients.
as high (El Shinawi and Lanvin 2009). Similarly, the annual average salary of a programmer in Egypt is approximately US$16,000, which is lower than in India and slightly more than in Vietnam (Datamonitor 2009).

Egypt also enjoys a relatively well-developed and low-cost telecommunication infrastructure, largely owing to reforms in the telecommunication sector. Currently, Egypt enjoys high-quality network facilities that are built around a world-class infrastructure, including 10 gigabit per second optical fiber and 2.5 gigabit per second rings, delivering services over a public switched telephone network. Mobile and packet-based networks cover the country (El Shinawi and Lanvin 2009). In the longer term, Egypt needs to address issues relating to data safety that could potentially have an adverse effect on its reputation as an ICT service exporter (Marson and Blodgett 2007).

Among its other sources of comparative advantage is the liberal policy adopted by the Egyptian government in the field of ICT service exports. ICT firms have benefited greatly from the opening up of the data segment. Moreover, the liberal

---

**Oracle Global Support Center**

Oracle’s global support center (GSC) is located in Cairo within the Smart Village. It employs more than 400 world-class engineers to support more than 100,000 customers in 140 countries worldwide. In 1999, Oracle Group’s headquarters in the United States began investigating whether Egypt would make a good outsourcing destination and verified that the country’s labor productivity and the quality of its infrastructure were no less than they are in any other part of the world. The GSC was opened in June 2005 with 20 engineers in its application product support division; currently, Egypt GSC is the fastest-growing center for Oracle around the globe. It started by importing its entire consulting team from abroad. Today, the GSC is satisfying all its human resources needs from Egypt. Oracle chose the Egypt market because of its time-zone affinity with Europe; its cost-competitive environment; and the large, highly skilled labor pool with multilingual skills in Arabic, English, French, German, Italian, and Spanish. Moreover, the excellent government support (including education programs for working Egyptian professionals) and an advanced telecommunication infrastructure are important advantages.

*Sources: Datamonitor 2009; El Shinawi and Lanvin 2009; Kamel and Hussein 2008; Marson and Blodgett 2007.*
international resale of voice services has attracted several international investors—for example, GlobalOne, American Express, and MCI offer international calling card services (Rossotto, Sekkat, and Varoudakis 2003).

The government’s willingness to create a vibrant ICT sector is reflected in its initiation of the ICT master plan in 2000. In this plan the government has clearly stated its objectives:

- Creating a vibrant and export-oriented ICT industry
- Supporting the development of a modern national telecommunication network
- Increasing employment opportunities in the ICT sector
- Building an information society capable of absorbing and benefiting from expanding sources of information
- Developing and upgrading ICT applications to improve the standard of living and support competitiveness in global ICT markets

As will be described later, the government has also addressed the supply-side aspects by investing in human resources to develop a wide pool of qualified professionals and by establishing technology incubators.

In 2004, the government established ITIDA, whose mission is to develop the ICT sector and boost its exports. ITIDA is a partnership between the MCIT and the private sector dedicated to developing IT in Egypt. ITIDA also acts as the ICT industry information center and provides market research data. Moreover, it is intended to offer technical counseling to disputing parties in the ICT industry fields (box 6.2). The supporting infrastructure, created mainly by the government, also includes research and development centers of excellence. The main goal of such centers is to help establish start-up firms that make intensive use of ICT in areas such as data mining and computer modeling, wireless technologies, mobile and e-services, and electronic design.

Several other programs aim at enhancing exports, including export development programs of the Center for Business Support and the Egyptian Exporters Association under the Growth through Globalization Program.

Clusters and technology parks, such as the Smart Village inaugurated in 2004, have created a space where IT companies can operate within a community conducive to their business needs. Most of the leading IT-related companies, as well as the MCIT itself, have moved to the Smart Village, which currently employs about 29,000 people. It is intended to accommodate up to 67 office plots, 500 companies, and approximately 80,000 employees, with a total of 1,336,000 square meters of land, of which 90 percent is green space.
Box 6.2: ITIDA Programs

ITIDA undertakes several programs. These programs have the following aims:

- Developing the skills of potential and actual workers in the ICT sector
- Building the caliber needed for work in BPO by providing the necessary training in soft, technical, and language skills through special educational initiatives
- Enhancing the linguistic capabilities of new entrants to BPO and the managerial skills of existing workers
- Building the capabilities of IT companies through ITIDA’s affiliate SECC (Software Engineering Competence Center), which promotes and supports the development of Egypt’s software industry by raising industry standards and professionalism
- Supporting companies to sharpen their international competitiveness and export potential
- Protecting intellectual property rights in the IT field
- Facilitating secure online business through enhancing the use of e-commerce and e-signature
- Building bridges with academia through special programs that aim at bringing academic expertise to the IT field
- Strengthening links with multinationals (for example, ITIDA launched a joint nanotechnology research center with IBM aimed at enhancing the research and application of nanotechnology in different fields of interest to Egypt)

Moreover, ITIDA has developed special programs aimed at identifying and supporting potential champions in IT. For example, ITIDA’s Technology Incubation Program focuses on supporting the development of promising seed and start-up IT companies. The program is designed to identify potential innovations in the ICT sector by identifying candidates for incubation and supporting them, thus resulting in a greater number of successful start-ups and small businesses. ITIDA supports program participants by providing furnished office space in the Smart Village. Participants receive full training and consultation that focuses on technical, project management, human resources, financial, marketing, business development, and networking. The incentive packages also include payment of salaries on the basis of a predefined salary scale. ITIDA supports attendance at start-up conferences and international exhibitions worldwide. Other programs focusing on enhancing exports include the Go to GCC Program, which aims at helping Egyptian IT firms export to Gulf Cooperation Council (GCC) countries by providing a platform for partnerships with leading system integrators and channel partners in the region. ITIDA handles all issues related to licensing and provides a shield against red tape and cumbersome government procedures for firms working in this field, thus overcoming some of the negative business climate conditions previously highlighted.

In February 2010, ITIDA announced a new export promotion program, Export IT. This program aims at supporting Egyptian exports of IT services and products by providing a 10 percent export subsidy on the value added (software products, consultations, training, IT-enabled services, software applications, system analysis, and so on) created by Egyptian IT firms in their export products. The goal is to reach US$2 billion of exports of IT products and services by 2013. Through March 2010, 154 firms had signed up for Export IT, and 140 firms met the necessary conditions and were accepted for registration.

Companies inside as well as outside the Smart Village can benefit from ITIDA export incentives. The main benefits of locating in the Smart Village are the advanced infrastructure and the clustering (for example, amenities such as a fiber-optic network, multisource power supply, and district cooling and heating redundant network plant), but the location provides no additional financial gains or tax breaks. A number of other successful ICT-exporting firms are located outside the Smart Village (in Nasr City public free zone), including Sakhr21 and ITWorx.22 Maadi Park, another business park designed for BPO and IT outsourcing delivery, is currently being built in downtown Cairo. It will have a capacity for 45,000 employees in more than 40 buildings with 2 million square meters of space (Datamonitor 2009).

The total number of employees in the ICT sector reached 55,109 in December 2008, and if Telecom Egypt employees, Egypt Post employees, and Smart Village employees are added, that number increases to 175,110 employees, compared with 147,853 in December 2006, an increase of more than 18 percent (Helmy 2009; MCIT 2009). Over the same period, the number of ICT companies increased by nearly 42 percent to reach 2,938. Of these companies, 79 percent were IT companies, 13 percent IT-enabled service companies, and 8 percent telecommunication companies (MCIT 2009). Nearly 300 companies work in the software industry, employing more than 8,500 professionals. This number reflects about 13 percent of the total number of companies operating in the ICT sector. The sector was able to attract approximately US$3.13 billion in FDI during the period 1998–2004 and US$3.97 billion during the period 2006–07 (Kamel, Rateb, and El-Tawil 2009).

Table 6.9 shows the different fields in which multinationals are engaged.

The MCIT has developed specific training programs for the different segments of the industry. For example, the MCIT sponsors a training program for contact centers to prepare 800 agents, supervisors, and trainers annually. The training is related to 10 fields, including banking, communications, IT, and medical services, and is provided through recognized educational institutions (MCIT 2005). Moreover, a high percentage of IT and technical-related university graduates (about 80,000 technical graduates each year) ensures a continuous flow of specialists in this field. Both public and private universities and higher education institutions have been increasing their capacities to provide such training, and a few new faculties have been established within existing universities to further increase the labor supply in this field.

Establishing the Nile University is an important achievement in creating a qualified workforce. The university is a not-for-profit research and development institution. Privately owned and autonomously managed, Nile University specializes in engineering technology and business administration. It is the first in a new class of academic institutions in Egypt that embrace partnership between
the private sector, represented by a nongovernmental organization; government, represented by the MCIT; and industry, in a major initiative of great national and regional interest.

Nile University opened in early 2007 and focuses mainly on applied IT research, looking to create solutions to industry challenges through strong links between the university and industry. The university has three main centers specializing in research and development, entrepreneurship and incubators, and innovation and intellectual property. Those centers act as catalysts to advance the technological capabilities of the ICT industry (Marson and Blodgett 2007).

ITIDA runs an education program called EduEgypt, liaising with universities to train students for entering the BPO industry. Some 5,000 students are currently enrolled in this “university intervention for BPO” (ITIDA plans to increase enrollment to 20,000), and 700 students are enrolled in the IT equivalent of this program (Datamonitor 2009, 6). EduEgypt also supports undergraduate training in soft skills, language abilities, and technical competence to prepare students for local and global markets. This effort is a part of a workforce development initiative aimed at reducing the gap between student readiness and employer expectations. The initiative produced 3,000 graduates in its first year and aims at supplying the market with 40,000 graduates per year by 2011.24

The software industry is attracting considerable investment from the private sector, which is drawn by the industry’s growth and government incentives.

### Table 6.9. Fields Where Multinational Companies Are Engaged

<table>
<thead>
<tr>
<th>Company</th>
<th>Activities and projects</th>
</tr>
</thead>
<tbody>
<tr>
<td>IBM</td>
<td>Software development center employing 400+ skilled IT developers focusing on Arabization</td>
</tr>
<tr>
<td>Mentor Graphics</td>
<td>Design center employing 170+ engineers</td>
</tr>
<tr>
<td>Intel</td>
<td>Regional platform definition center and regional software enablement lab</td>
</tr>
<tr>
<td>Microsoft</td>
<td>Developer support center for regional developers and software innovation center</td>
</tr>
<tr>
<td>Cisco</td>
<td>Core competency e-learning institute</td>
</tr>
<tr>
<td>Oracle</td>
<td>Global support center employing 600+ engineers providing regional customer support</td>
</tr>
<tr>
<td>Orange and France Telecom</td>
<td>Global support center employing 1,200+ engineers</td>
</tr>
<tr>
<td>Alcatel-Lucent</td>
<td>International support center employing 300+ engineers providing GSM (Global System for Mobile Communication) and wireless support services</td>
</tr>
<tr>
<td>Satyam</td>
<td>BPO services with 200+ engineers</td>
</tr>
<tr>
<td>ZTE and Huawei</td>
<td>WiMax (Worldwide Interoperability for Microwave Access) research and development centers</td>
</tr>
</tbody>
</table>

*Source: Ministry of Communications and Information Technology website, http://www.mcit.gov.eg.*
Nevertheless, it is still in a nascent stage of development covering four main market segments: software tools, packaged applications, customizations of existing applications, and Arabization. Despite the government’s effort to relax the supply-side bottleneck in the sector, ICT service exports from Egypt are still constrained by skills availability compared with those of its main competitors (A.T. Kearney 2009). Neither is its telecommunication network up to the mark. For instance, Helmy (2009) argues that despite the rapid increase in ICT, some of the indicators related to telecommunication infrastructure are still more modest in Egypt than in other countries in the region (for example, the number of Internet hosts).

**Tourism**

Tourism is considered the main service export from Egypt; its contribution is the largest to GDP, exports, and employment. Exports of tourism services account for 23 percent of total exports of goods and services and 46 percent of total exports of services (CBE 2010). The foreign exchange proceeds from tourism rank first among other sources of foreign exchange and have been the largest foreign exchange contributor for the past five years. According to the Ministry of Economic Development, proceeds reached US$9 billion in 2009. Studies such as Sakr, Massoud, and Sakr (2009) and Tohamy and Swinscoe (2000) find that tourism’s indirect effects on generating income and employment are so high that taking them into account would increase tourism’s contribution to GDP from 3 or 4 percent to 11 percent.

According to Sakr, Massoud, and Sakr (2009), the number of tourist arrivals increased more than sevenfold, from 1.5 million in 1985 to 11.1 million in 2007, with an average annual growth rate of 9.2 percent. Tourist nights also grew substantially over the same period, from 9 million to 111.5 million, with an average annual growth rate of 12.1 percent. Tourism earnings increased as well, from about US$315 million in 1985 to nearly US$9.5 billion in 2007, and account for almost 25 percent of total tourism receipts in the Middle East. Tourism revenues represent around 41.5 percent of Egypt’s service exports (Ragab 2008). Although tourism exports have increased over time, Sakr, Massoud, and Sakr (2009) argue that the potential of tourism services has not yet been realized. Their findings showed considerable forgone opportunities in terms of unsatisfied potential demand in general and for certain markets and tourism products in particular. Table 6.10 identifies the main indicators of tourism development over time in Egypt.

Egypt attracts tourists mainly from European and Arab countries (figure 6.3).
### Table 6.10. Main Tourism Indicators, 1985–2007

<table>
<thead>
<tr>
<th>Tourism indicators</th>
<th>1985</th>
<th>1993</th>
<th>2000</th>
<th>2007</th>
<th>Average annual growth rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of arrivals (million)</td>
<td>1.5</td>
<td>2.5</td>
<td>5.5</td>
<td>11.1</td>
<td>6.8</td>
</tr>
<tr>
<td>Number of nights (million)</td>
<td>9.0</td>
<td>15.1</td>
<td>32.8</td>
<td>111.5</td>
<td>6.8</td>
</tr>
<tr>
<td>Average length of stay of visitors</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>10</td>
<td>—</td>
</tr>
<tr>
<td>(nights)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tourism receipts (US$ billion)</td>
<td>0.3</td>
<td>1.9</td>
<td>4.3</td>
<td>9.5</td>
<td>26.7</td>
</tr>
<tr>
<td>Lodging capacity (thousand rooms)</td>
<td>27.3</td>
<td>58.8</td>
<td>111.3</td>
<td>190.2</td>
<td>10.0</td>
</tr>
</tbody>
</table>

**Source:** Sakr, Massoud, and Sakr 2009.

**Note:** — = not available.

### Figure 6.3. Sources of Tourists in Egypt, 2007

- **Source:** Data from the Central Agency for Public Mobilization and Statistics.
(WEF 2009) identified a number of factors that make Egypt an attractive country for tourists, including its rich cultural heritage, low prices, and national prioritization of the sector. However, the report also highlighted a number of factors that reduce Egypt’s ability to fully exploit the potential of this sector: weak infrastructure (especially ground infrastructure), modest human skills and human resources, and lack of environmental sustainability. According to the report, Egypt still lags several countries, including, as shown in table 6.11, Tunisia and Turkey.

Even though Egypt has low-cost labor, the relatively low quality of its labor has been cited as a reason for the declining comparative advantage in this sector. The lack of employees trained according to international standards certainly affects the quality of services provided. In 2006, only 14 percent of employees in this sector had been trained according to international standards, which in turn affected the standards of service provided (Sakr, Massoud, and Sakr 2009). The government, in collaboration with international partners and the private sector, has started implementing a number of development programs aimed specifically at improving tourism skills. These programs attempt to overcome the weak human capacity by targeting workers with different levels of education (higher secondary and on-the-job training).26

Moreover, the government of Egypt has undertaken many efforts to enhance the comparative advantage by facilitating investment in this sector. For example, laws and regulations have been implemented that provide tax holidays following investment (Law 8/1997). Allowing full foreign ownership of tourism-related infrastructure such as hotels has encouraged almost all chains of hotels recognized worldwide to locate in Egypt. The room capacity reached 215,000 rooms in 2009 (Ragab 2008), and additional capacity of 156,200 rooms is planned to be added by 2014, particularly in the growing resort areas along the coasts of the Red Sea and El Aqaba Gulf in South Sinai, and more recently along the north coast and west of Alexandria (Sakr, Massoud, and Sakr 2009). In addition, the government is in the

| Table 6.11. Ranks in Travel and Tourism Competitiveness Index, 2009 |
|-----------------|-----------------|-----------------|-----------------|
| Overall index  | Travel and tourism regulatory framework | Travel and tourism business environment and infrastructure | Travel and tourism human, cultural, and natural resources |
| Egypt, Arab. Rep. | 64 | 52 | 65 | 73 |
| Tunisia | 44 | 31 | 49 | 56 |
| Morocco | 75 | 64 | 78 | 83 |
| Turkey | 56 | 63 | 60 | 44 |

Source: WEF 2009.
process of preparing a National Tourism Sustainable Development Plan and enhancing related infrastructure, including airports and aviation regulation. The government adopted an open-skies policy allowing charter flights to operate in all Egyptian airports. It has also diversified tourism activities (for example, yacht and shopping tourism); adopted aggressive marketing and branding techniques; and adopted high environmental standards. As a result of such policies, the number of travel agencies operating in Egypt has increased from 550 in 1986 to 1,300 in 2007 (Ragab 2008).

To overcome regulatory bottlenecks, the government of Egypt has issued rules and regulations (for example, an amendment to Law 230/1996) that facilitate procedures in some areas for organizing the possession of buildings and lands by foreigners. Ministerial Decree 548/2005 facilitates the possession of residential units by foreigners in some areas and removes any remaining restrictions on residential tourism (such as the purchase of Egyptian vacation homes by foreigners) (Ragab 2008).

The lack of public awareness in tourism sites accompanied by a lack of mechanisms to control the behavior of vendors created a negative reputation for Egyptian tourism. The Ministry of Tourism is trying to enhance public awareness and build a brand name for Egypt’s tourism sector through a number of promotional radio and television programs.

Although the Ministry of Tourism is the main body responsible for tourism in Egypt, tourism is affected by other institutions and, therefore, a specific level of coordination is needed for activities ranging from transportation to lodging to meals to entertainment to retail sales. Lack of coordination among the several authorities engaged in overseeing tourism activities has created difficulties for businesses that have to deal with local governorates’ authorities and has resulted in delays in issuance of licenses, allocation of land permits, and suspension of licensees for different operators in the tourism industry (Ragab 2008). Furthermore, policy constraints are difficult to address because up to 17 agencies and ministries are involved in handling tourism-related issues (Sakr, Massoud, and Sakr 2009).

**Conclusions and Policy Implications**

Table 6.12 lists the strengths, weaknesses, opportunities, and threats (SWOT) that, as outlined in this chapter, could shape comparative advantage of service exports from Egypt.

As the chapter discussed, Egypt is in an advantageous position to provide a direct link between Africa, Asia, and Europe. Beyond its geographic location, the country is endowed with a large, educated population that not only advances the
domestic market size but also could be a useful resource for exporting in the international market. Egypt has been able to use its human resources, to a limited extent, to export services.

The transportation and travel service sectors have benefited from Egypt’s geographic location, while the ICT service sector has made use of the multilingual people skills Egyptians possess. However, Egypt’s potential is still not fully used. It has a pool of trained nurses and teachers who are moving abroad because they lack meaningful employment opportunities in the country. True, they are contributing to mode 4 service exports; nonetheless, such skills would be better used to ensure higher quality and, hence, higher returns. Such underused resources, along with an underdeveloped electronic and telecommunication infrastructure, are the most important drags on service exports from Egypt.

Egypt’s traditional existing comparative advantage (the fundamental sources) has played an overwhelming role in identifying Egyptian exports of services; however, for some sectors, targeted policy proved to be effective as well. Tourism and educational service exports are based on traditional comparative advantage sources, such as the availability of cheap, educated labor with strong linguistic skills and the existence of natural tourism sites. However, ICT and software-related service exports are based on targeted policy, such as establishment of technology parks, that is able to reinforce the fundamental source of comparative advantage (that is, the availability of cheap labor with linguistic skills). Other policies, such as those that reformed the telecommunication sector, were also crucial.

Table 6.12. SWOT Analysis for Egypt’s Comparative Advantage in Services

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weakness</th>
<th>Opportunities</th>
<th>Threats</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Geographic position</td>
<td>• Weak infrastructure</td>
<td>• Large market</td>
<td>• Loss of existing business because of unfavorable conditions and competition from other countries</td>
</tr>
<tr>
<td>• Large domestic market</td>
<td>• Lack of space and planning</td>
<td>• Underused human resources</td>
<td>• Increased pollution</td>
</tr>
<tr>
<td>• Well-educated, cheap labor force in identified sectors such as ICT</td>
<td>• Lack of accessibility</td>
<td></td>
<td>• Traffic congestion</td>
</tr>
<tr>
<td>• Clusters with necessary infrastructure</td>
<td>• Weak rule of law</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Corruption</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Low quality of human resources</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Expensive office space</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Informal sector</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Lack of access to finance</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Lack of coordination among official bodies</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Sudden changes in policies and regulations</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Interviews with business community representatives and main results of international reports.
In other cases, the traditional comparative advantage sources were not fully used (for example, tourism) because of the lack of complementary government policies or a weak regulatory framework.

Egypt has been moderately successful in exporting language-specific software services. Nevertheless, Egypt is not the only country in the region that is exporting this type of services. Bahrain, Lebanon, and the United Arab Emirates are also in the race. Therefore, Egypt not only needs to develop its human capital and telecommunication infrastructure, but also should revaluate its policies relating to regulatory framework, corruption, real estate development, and access to finance to maintain its current hold on ICT service exports.

Finally, some policy recommendations can be derived from the Egyptian case:

- Egypt was able to establish its own competitive advantage in some sectors (such as ICT) through a determined policy that overcame several disadvantages, such as its complex regulatory system and inefficient education system. The policy focused on creating a tier of well-educated labor and used advantages such as time zones and linguistic ability.

- In contrast, although some sectors have a natural comparative advantage, such as geography in the case of tourism or availability of labor supply in the case of nursing and teaching (which are exported through mode 4), that advantage can easily be lost if accompanying policies are not adjusted to serve the export goals. For example, in the case of tourism, training of workers and enhancement of public awareness will help ensure that tourists receive a positive impression of the country. Promoting tourism may even entail introducing specific laws and regulations that prevent harassment of tourists. Moreover, policies in tourism-related sectors (such as transportation and traffic) should be coordinated.

- The government’s role in promoting service exports of services is paramount. Any government should seriously consider an industrial policy for services. Such a policy can be created on a sectoral basis, can be established across the board, or can use a mixture of both. Examples of across-the-board policies include tax reductions if services are exported by mode 1 and introduction of incentives for attracting FDI to specific sectors or geographic areas in the case of mode 3.

Notes
2. Some studies suggest that production services have not played a highly positive role in enhancing employment, whereas social services (mainly governmental) have taken the lead in this regard (El-Ehwany and El-Megharbel 2008).
3. Data are from the online version of the International Monetary Fund’s International Financial Statistics database at http://www.imf.org.

4. The other business service sector encompasses a set of rather heterogeneous activities (from bookkeeping to architecture to research and development services), and Egypt may still have a comparative advantage in certain subsectors but not in others. However, data limitations did not allow thorough investigation of this issue.


6. The Economic Reform and Structural Adjustment Program was not the first reform initiative by the Egyptian government. In fact, Egypt signed three standby agreements with the International Monetary Fund in 1976, 1978, and 1987. These standby agreements followed the same line of policy recommendations, advocating to different degrees tight fiscal and monetary policies, a liberal exchange rate, and trade policies along neoclassical lines. However, the other three agreements were discontinued for social, political, or economic reasons (Korayem 1997).

7. These data were supplied by the Ministry of Investment and the General Authority for Investment.

8. The seven main pillars of the Doing Business rankings are starting a business, dealing with construction permits, registering property, getting credit, protecting investors, paying taxes, and trading across borders. The World Bank uses a number of indicators to assess the performance of each pillar. See the Doing Business website, http://www.doingbusiness.org/custom-query.

9. The GSLI analyzes and ranks the top 50 locations worldwide that provide the most common remote functions, including IT services and support, contact centers, and back-office support. Each country’s score comprises a weighted combination of relative scores on 43 measurements, which are grouped into three categories: financial attractiveness, availability of people and skills, and business environment.


12. The website for HC Securities & Investment is http://www.hc-si.com; the website for Prime Group is http://www.primegroup.org.


14. The Global Services–Tholons (2009) study combines results from surveys and interviews with key providers to identify which global cities are set to be the next hotspots for the outsourcing industry. It looks at a wide range of criteria, including scale and quality of workforce, education, cost, infrastructure, risk profile, and quality of life.

15. The GSLI is based on corporate inputs, current remote service activity, and government initiatives to promote the sector. Such aspects were evaluated against 43 measurements across three main categories, including financial attractiveness, people’s skills and availability, and business environment.

16. The Yankee Group uses similar methodology in its index to Global Services–Tholons and A.T. Kearney. All of these groups use industry surveys in addition to factual data. The differences are a result of weights given to different variables in calculating the index, the surveys’ responses, and inclusion or exclusion of some variables.

17. This report looks at the same variables as the other international reports but is more focused on the African continent. It uses secondary data on the national level as well as interviews.

18. The existence of several foreign language higher education providers and the positive spillover effect of tourism have created a community that is friendly to foreign languages and familiar with European culture and business ethics.

19. This plan is outlined on the MCIT’s website. See http://www.mcit.gov.eg.

20. See http://www.expolink.org.eg for more information.
21. Sakhr is the global leader in Arabic-language technology, with products for the Middle East in e-governance, education, wireless, and security. It has 200 employees worldwide, with offices in Cairo and Washington, D.C. Sakhr began in 1982 with a far-reaching vision of the need for Arabic-language technologies. With 15 years of pioneering research and the world’s largest knowledge base in Arabic natural-language processing, Sakhr has developed numerous Arabic-language “firsts.” Sakhr leads the field in Arabic-language machine translation, OCR (optical character recognition), speech recognition, speech synthesis, search, and localization. The firm has partners in all Arabic countries. See Sakhr’s website, http://www.sakhr.com/default.aspx, for more information.

22. ITWorx is a global software professional services organization. Headquartered in Egypt, the company offers portals, business intelligence, enterprise application integration, and application development outsourcing services to Global 2000 companies. ITWorx serves governments, financial services firms, educational institutions, telecommunication operators, and media companies in Europe, the Middle East, and North America. Across industry verticals and service practices, ITWorx has developed specific competences in security, usability, productivity, and enterprise manageability. See ITWorx’s website, http://www.itworx.com/AboutUs/Pages/default.aspx, for more information.

23. That nongovernmental organization is the Egyptian Foundation for Technology Education, which is dedicated to improving technology-related education by establishing specialized institutes, schools, and vocational schools. It was created to provide a mechanism for the delivery of Nile University services and activities. See Nile University’s website, http://www.nileu.edu.eg, for more information.


25. This information is available on the Ministry of Economic Development’s website at http://www.mop.gov.eg/MOP_META/nsdp.htm.

26. Information about these programs was provided by the Ministry of Tourism.

References


Ragab, Adla. 2008. “Assessment of Trade in Tourism and Travel Related Services in Egypt in Relation to the GATS.” Study undertaken for the Ministry of Trade and Industry, Cairo.


Kenya’s potential for exporting business services is vast. Business services are those that are provided by the private sector and that require a high level of skills, usually certified, and include accounting, architectural, engineering, business process outsourcing (BPO), and legal services. Because of its strong domestic services sector, Kenya is in a unique position to export such services throughout East Africa and to the rest of the world. Kenya’s recent information and communication technology (ICT) revolution, epitomized by the success of Safaricom, has expanded mobile phone and Internet access to millions of people, and Kenya’s ICT service firms such as KenCall have had substantial success in the domestic and international markets. However, as described in the World Bank’s (2010a) *Kenya Economic Update*, exports represent Kenya’s “weak engine.” Increasing exports of services, especially high-value-added business services, therefore represents an important opportunity to drive economic growth in Kenya.

The chapter is based on the findings of the assessment of Kenya’s export potential in business services undertaken by the Kenya Export Promotion Council and the World Bank in 2009. Support from the Bank Netherlands Partnership Program and the Multi-donor Trust Fund for Trade and Development supported by the governments of Finland, Norway, Sweden, and the United Kingdom is gratefully acknowledged. The authors would like to thank Pumela Salela for her contribution on South Africa’s experience in exporting information technology–enabled services.
Why focus on business services? Services are important because they are a main contributor to gross domestic product (GDP), to GDP growth, and to employment in most developed and some developing countries (WTO 2008). Business services provide the inputs to many other economic activities and can have significant positive spillover effects throughout the economy. Studies by the McKinsey Global Institute and by the United Nations Conference on Trade and Development suggest that a potential 18 million new jobs may be created in developing countries by service offshoring, and each new job in service sectors could create a further three jobs in the rest of the economy (McKinsey Global Institute 2005; UNCTAD 2003). An example of the power of business services for economic growth is the impressive success of the BPO sector in India, which paved the way for the development of similar BPO sectors around the world. Middle-income countries such as the Arab Republic of Egypt and South Africa are following suit by expanding exports from their business service sectors. Despite this growth, however, in 2008 Sub-Saharan Africa as a whole still accounted for only 2 percent of global trade in services.

In Kenya, service sectors’ output accounts for approximately 56 percent of GDP—or US$16.8 billion—in 2009, and service sectors grew by 4.2 percent in 2009, led by the communication and transportation sectors as well as the travel and tourism sector, which rebounded with nearly 1 million foreign tourists. Over several years, the compound annual growth rate of services’ value added in Kenya has been 8.6 percent, and services as a share of GDP has generally trended upward over that time, as can be seen in figure 7.1. This trend compares with a 10-year compound annual growth rate of 11.7 percent for Rwanda and 7.3 percent for South Africa. The drop in Kenya’s service growth from 2007 to 2008 appears to be caused by lower growth in service value added relative to a larger increase in GDP, perhaps because of the disruptions caused by political unrest in Kenya during this period (which hurt particularly BPO, nonbanking financial, and freight-forwarding services).

Kenya’s trade in services has increased moderately over the past decade. Service exports increased to 12 percent of GDP in 2009 from 8 percent in 2000, with transport and travel comprising 90 percent of total services exports (World Bank 2010a). Similarly, since the beginning of the decade, Kenya’s exports and imports of services as a percentage of total exports and imports have steadily increased, as can be seen in figure 7.2. The compound average growth rate for service exports from 1998 to 2008 was 3.3 percent and for service imports was 2.8 percent. In comparison, over the same period, Rwanda’s compound annual growth rate for service exports was 23.8 percent (albeit starting from a substantially lower base) and for service imports was 10.6 percent, while South Africa’s compound annual growth rate for service exports was 9.0 percent and for service imports
was 11.6 percent. These comparators suggest that, despite the upward trend in its service trade, Kenya has further scope to develop its service sectors.

Kenya’s service exports consist mostly of travel and transportation services, whereas the country tends to be less competitive in higher-value-added sectors such as finance and ICT services. Kenya’s global share of service exports has
declined from 0.21 percent in 1970 to 0.09 percent in 2009. Table 7.1 presents the sectoral composition of service exports from 2005 to 2008 and the compound growth rate of each service subsector from 1998 to 2008. Table 7.2 shows the revealed comparative advantage (RCA) of Kenya’s service exports in four subsectors.¹

The numbers in table 7.2 confirm that Kenya is competitive in exporting transportation and travel services but is less competitive in exporting higher-value-added services such as BPO, ICT, and other business services. Also, the numbers emphasize that although Kenya is moving in the right direction, it has just begun to take advantage of the growing opportunities awarded by global trade in business services.

To examine further Kenya’s export performance and identify the service sectors with potential for expanding trade flows, this chapter uses a “quadrant” or “matrix” analysis. Figure 7.3 shows Kenya’s exports by service sector according to a methodology developed by the International Trade Centre to assess export performance. The horizontal axis indicates the evolution of Kenya’s share in world trade for each service sector, measured as the compound annual growth rate of Kenya’s share in the world market of that particular sector. The vertical axis indicates average world trade growth for each product category and is measured as the

---

Table 7.1. Service Subsectors as a Share of Total Service Exports, 1998–2008

<table>
<thead>
<tr>
<th>Service subsector</th>
<th>Share of total service exports (%)</th>
<th>Growth rate, 1998–2008 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transport</td>
<td>39.2 40.7 38.6 39.5</td>
<td>4.8</td>
</tr>
<tr>
<td>Travel</td>
<td>30.8 28.3 31.3 23.1</td>
<td>1.7</td>
</tr>
<tr>
<td>Communication</td>
<td>9.4 11.7 11.2 13.4</td>
<td>12.9</td>
</tr>
<tr>
<td>Finance and insurance</td>
<td>0.6 0.3 0.3 0.3</td>
<td>–0.9</td>
</tr>
<tr>
<td>Computers and IT</td>
<td>0.1 0.0 0.0 0.0</td>
<td>–1.1</td>
</tr>
<tr>
<td>Royalties and licenses</td>
<td>0.9 0.4 0.8 1.0</td>
<td>5.6</td>
</tr>
</tbody>
</table>

Source: Authors’ calculations based on International Monetary Fund balance of payment statistics.

Table 7.2. RCA in Kenyan Service Subsectors, 2008

<table>
<thead>
<tr>
<th>Service subsector</th>
<th>RCA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transport</td>
<td>3.56</td>
</tr>
<tr>
<td>Travel</td>
<td>1.82</td>
</tr>
<tr>
<td>Finance and insurance</td>
<td>0.06</td>
</tr>
<tr>
<td>Communication, computers, and miscellaneous</td>
<td>1.13</td>
</tr>
</tbody>
</table>

Source: Authors’ calculations based on International Monetary Fund balance of payment statistics.
compound annual growth rate of world imports. The size of a balloon represents the weight of the sector in Kenya’s export basket.

This type of analysis can indicate whether export sectors have registered a dynamic, stagnant, or declining performance over the four-year period 2004–08. Figure 7.3 is best interpreted as allowing the identification of the service sectors that have, in the recent past, seized the opportunities offered by world markets and those that failed to do so. This analysis could be a starting point for identifying sectoral or countrywide policies or policy reforms to help underperforming sectors and strengthen successful ones. Specifically, the sectors located toward the upper right corner are considered “champions,” where Kenya has gained market share and where world trade growth was the strongest, whereas the sectors located toward the bottom left corner are “sluggish” sectors, where Kenya is losing market share and world demand is declining. The matrix analysis in figure 7.3 suggests that the communication sector has performed very well, whereas the finance and insurance sector has underachieved given the global growth of that sector.

One area that Kenya can focus on is service offshoring as a way to develop strong service firms for domestic consumption and international export. A deceleration in the growth of Kenyan service exports occurred in 2007–08 because of the post-election violence and the global financial crisis. BPO, nonbanking financial, and

![Figure 7.3. Kenya’s Export Performance: Service Trade, 2004–08](image-url)
freight-forwarding services, were particularly affected. Nevertheless, Kenya’s potential for offshoring is vast—particularly in the areas of information technology (IT), BPO, and knowledge process outsourcing (KPO). Figures 7.4 and 7.5 illustrate the types of IT, BPO, and KPO services that can be offshored. Figure 7.4 provides detailed lists of the types of services that can be outsourced, and figure 7.5 details the types of activities that can be outsourced across an organization’s value chain. As mentioned previously, recent studies suggest that a potential 18 million new jobs may be created in developing countries by offshoring, and each new job could create a further three jobs in the rest of the economy. However, several important challenges need to be addressed for Kenyan exports of business services to grow.

Countries tend to develop their business service sectors incrementally, each step allowing the country to attain a higher value added as service sectors gain more experience and exposure to international competition. Figure 7.6 outlines the progression of service sector development, from basic staff augmentation services, such as back-office functions, which would require a Kenyan service provider to take on most or all of the risk, to transformational sourcing, which would allow the Kenyan service provider to provide world-class innovation, compete internationally, and possibly even expand to other countries.

Although most developing countries’ service sectors fall toward the bottom of the progression, Kenya is somewhat of an outlier because of its handful of internationally successful, innovative, and competitive firms, such as KenCall and Safaricom. In Kenya, the large majority of service firms are clustered in the bottom two segments (staff augmentation and low-value offshoring), but several world-class firms are at the top end of the progression. Therefore, Kenya’s economy could reap substantial gains from expanding the number of exporting firms and the number of firms that progress to the higher-value offshoring and partnership segments.

The remainder of this chapter first describes the characteristics of the professional service exporters in Kenya on the basis of an in-depth study of 52 exporters, including their export strategies. Second, the key challenges faced by current and potential exporters of professional services are identified. Third, the chapter proposes policy recommendations to address the challenges that will help establish Kenya as a desirable offshoring destination for international clients.

Kenyan Service Exporters’ Characteristics

Kenyan service exporters come in all sizes, but the majority employ fewer than 100 workers. Most of these workers are permanent, except in the BPO sector, where
**Figure 7.4.** IT, BPO, and KPO Services

<table>
<thead>
<tr>
<th>Shared services</th>
<th>IT outsourcing</th>
<th>BPO</th>
<th>KPO</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT</td>
<td>IT help desk</td>
<td>Procure to pay</td>
<td>Recruitment</td>
</tr>
<tr>
<td></td>
<td>Desktop support</td>
<td>Order to cash</td>
<td>Compensation</td>
</tr>
<tr>
<td></td>
<td>Data center</td>
<td>Record to report</td>
<td>Benefits</td>
</tr>
<tr>
<td></td>
<td>operations</td>
<td>Accounts payable/accounts receivable</td>
<td>Human resource information systems</td>
</tr>
<tr>
<td></td>
<td>Server and storage management</td>
<td>Collections</td>
<td>Employee data management</td>
</tr>
<tr>
<td></td>
<td>Network operations</td>
<td>Web design</td>
<td>Workforce management</td>
</tr>
<tr>
<td></td>
<td>Voice services</td>
<td>Community</td>
<td>Training</td>
</tr>
<tr>
<td></td>
<td>Application development</td>
<td>Analytics</td>
<td>Outplacement</td>
</tr>
<tr>
<td></td>
<td>Application maintenance</td>
<td>Fixed assets</td>
<td>Travel management</td>
</tr>
<tr>
<td></td>
<td>Enterprise resource planning systems</td>
<td>Treasury</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Colocation</td>
<td>Cash management</td>
<td></td>
</tr>
<tr>
<td>IT management</td>
<td>Customer service</td>
<td>Financial planning</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Customer relations</td>
<td>Analytics</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Customer acquisition</td>
<td>Tax and compliance</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Operations support</td>
<td>Expense management</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Customer relationship management support</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Outbound telemarketing</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Specialty help desk</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E-commerce</td>
<td>B2C e-Retail Site</td>
<td>Procurement</td>
<td></td>
</tr>
<tr>
<td></td>
<td>B2C Business to business</td>
<td>Human resources</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Content management</td>
<td>Source to pay</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Web design</td>
<td>Sourcing</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Community</td>
<td>supplier</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Analytics</td>
<td>research</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Marketing</td>
<td>Supplier training</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Web hosting</td>
<td>Contract management</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fulfillment</td>
<td>Market intelligence</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Warehouse management</td>
<td>Procurement analytics</td>
<td></td>
</tr>
<tr>
<td>Finance and accounting</td>
<td>Accounts payable/accounts receivable</td>
<td>Spend analysis</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Collections</td>
<td>Performance reporting</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**End-to-end shared services capabilities**

**Source:** Avasant 2010.
Figure 7.5. Types of Activities That Can Be Outsourced across an Organization’s Value Chain

Source: Avasant 2010.
Figure 7.6. Evolution of Business Service Sectors

Source: Adapted from Avasant 2010.
firms tend to keep a reserve of 20 percent of nonpermanent staff members to enable them to respond quickly should they face a sudden increase in export orders. The majority of service exporters are 100 percent Kenyan owned.

Because the phenomenon of service exporting is new in Kenya, the majority of firms have fewer than 10 years of exporting experience. Only firms in freight forwarding and Kenyan affiliates of large multinational companies providing accounting and legal services (such as Ernst & Young or Hamilton Harrison & Mathews) have longer experience in export markets.

The subsectors with greatest export turnover totals are insurance, accounting, nonbanking financial services, and BPO services, as shown in figure 7.7. However, for most Kenyan service exporters, export turnover represents a small proportion of total turnover. The exceptions are freight forwarding and BPO, where large shares of turnover come from exports, followed to a much lesser degree by accounting and ICT and IT-enabled services (ITeSs). The general inward orientation of service sectors that consider the domestic market as their primary target for growth is not a Kenyan phenomenon but rather a stylized fact verified across countries; India is perhaps the only exception (Breinlich and Criscuolo 2010).

**Modes of Delivery**

Almost all surveyed Kenyan service exporters deliver some of their exports through cross-border supply (mode 1), whereby the service crosses the border, for example, by means of faxing, couriering, or e-mailing of reports and other outputs.²

Service exports delivered through the movement of natural persons (mode 4) are also quite prevalent, occurring for 60 percent of the surveyed exporters in Kenya. Movement of professionals is often seen, particularly in the East African region, in the architectural and engineering sectors. Kenyan engineering firms have projects in Rwanda, Southern Sudan, and Uganda, and engineers travel regularly to work at those sites. Accountants must also travel to the destination country to conduct audits.

Commercial presence (mode 3) is used by 44 percent of the surveyed Kenyan service exporters to deliver services abroad. Firms in the freight-forwarding sector have small satellite offices at main border points or in major markets such as Uganda. Insurance companies must have affiliate presence to be able to sell their services in other countries. Firms in the BPO, ICT, and ITeS sectors often have sales subsidiary offices in foreign markets.

The least used mode of supply by Kenyan service exporters is consumption abroad (mode 2). This mode is used by accounting, nonbanking financial service,
Figure 7.7. Export Turnover of Service Sectors, 2007

or legal service firms facilitating foreign client site visits for mergers and acquisitions work or during initial public offerings. Also, legal firms often represent foreign clients; for example, a tourist may have an accident in a hotel and sue the hotel, or a foreign client may require family law services related to adoption or marriage.

**Export Clients and Destinations**

Kenyan firms export services to a variety of markets; as many as 40 different countries were reported as export destinations by the 52 firms interviewed for this chapter. The regional markets of the East African Community (EAC) tend to dominate the export flows of Kenyan professional service firms. More than half of Kenyan service exporters have clients in Tanzania or in Uganda, and about a third have clients in Rwanda. Almost a quarter of firms have clients in Sudan and in European countries (other than the United Kingdom), and a fifth of firms export services to South Africa. Because of language barriers, Kenyan legal firms tend to restrict themselves to English-speaking export destinations. Interestingly, during the recent global financial crisis, the need for Kenyan service exporters to diversify became apparent. Exporters needed to serve clients not only in developed countries but also in African markets, because the African countries were insulated from the global financial crisis and actually saw growth in business. Figure 7.8 presents the distribution of the 52 interviewed service exporters across export destinations.

Kenyan firms export services to a variety of clients. Multinational and private corporations are the main clients for more than half of Kenyan exporters, particularly those operating in the insurance, BPO, nonbanking financial, ICT, and freight-forwarding service sectors. Multinational aid organizations, nongovernmental organizations, and embassies are the key clients for a fifth of Kenyan exporters, particularly in the accounting and engineering sectors. Governments or quasi-governmental institutions are key clients for firms in the architectural, engineering, and ICT sectors because of the presence of large government-funded infrastructure works in the region.

In general, BPO, ICT, financial advisory, and logistics services are typically exported outside Africa. The other business services are typically exported to other East African countries. The strength of regional markets is crucial for exports of accounting, architectural, engineering, insurance, and legal services. However, the United Kingdom and the United States are the most important markets for Kenyan exporters in the BPO sector. In the freight-forwarding, ICT, ITeS, and nonbanking financial sectors, Kenyan firms export to a combination of regional markets and international markets outside Africa. Table 7.3 summarizes the typical export destination by service subsector.
Figure 7.8. Service Exporters’ Target Markets

Source: EPC and World Bank 2009.
Exported Services and Customization

Given the intangible and heterogeneous nature of service exports, it is of interest to consider some concrete examples of what Kenyan firms are exporting in the accounting, architectural, BPO, ICT, ITeS, and legal sectors. In accounting, Kenyan firms export accounting, tax, consulting, and auditing services. Auditing is supplied mostly to organizations with branches in the EAC or worldwide. Such work requires travel to the country where the project is located. In architecture, Kenyan firms provide consulting services such as master planning, urban planning, land use planning, site planning, interior planning, and project management. In BPO, Kenyan firms export an array of services, including the following: (a) inbound-outbound customer voice, e-mail, or short message service support; (b) inbound and outbound sales via phones; (c) customer satisfaction surveys; (d) back-office support; (e) database management, such as updating changes to information portals or live updates of stock markets, providing safe data storage and backup facilities, transcribing from voice to text, or subtitling videos; and (f) entertainment or professional service chat support. In the ICT and ITeS sectors, Kenyan firms export design services such as animations of Web advertising, user interface systems, and icon and banner advertisements. They also provide high-end corporate websites such as intranets (which allow collaboration and communication within an organization) or extranets (which allow customers to log in and view statements securely), as well as technology solutions such as hardware and disaster recovery. In legal services, Kenyan firms essentially export intellectual property, licensing requirements, and commercial and conveyancing services. Such services could pertain to due diligence in the purchase of property in Kenya or to mergers and acquisitions work.

Table 7.3. Typical Export Destinations, by Service Sector

<table>
<thead>
<tr>
<th>Service subsector</th>
<th>Typical export destination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting</td>
<td>EAC</td>
</tr>
<tr>
<td>Architecture</td>
<td>EAC</td>
</tr>
<tr>
<td>BPO</td>
<td>United Kingdom and United States</td>
</tr>
<tr>
<td>Engineering</td>
<td>EAC</td>
</tr>
<tr>
<td>Logistics</td>
<td>Global</td>
</tr>
<tr>
<td>ICT</td>
<td>EAC, Europe, and United States</td>
</tr>
<tr>
<td>Insurance</td>
<td>EAC</td>
</tr>
<tr>
<td>Legal services</td>
<td>EAC</td>
</tr>
<tr>
<td>Financial services</td>
<td>Global</td>
</tr>
</tbody>
</table>

*Source: EPC and World Bank 2009.*
To suit client demands, the services exported by Kenyan firms are subject to some degree of customization relative to the services sold domestically. However, the degree of customization is minimal. For example, in the architectural and engineering sectors, a change in measurements from the metric system may be necessary for U.S. clients. Another example of customization in the architectural sector is the provision of highly detailed drawings to foreign clients that are generally not required by Kenyan clients. In engineering services, customization occurs through the use of the appropriate computer-aided design (CAD) system (because some, mainly U.S., clients use MicroStation whereas others use AutoCAD). In insurance services, Kenyan firms exporting to Sudan changed their focus from private vehicles, for which insurance is not mandatory in that country, to public service vehicles, for which insurance is mandatory and which therefore constitute a much larger market. In nonbanking financial services (stockbroking and investment banking services), some of the changes made to exported services are to customize foreign clients’ reporting structures (for example, the need for daily reports). Finally, a general change to service delivery made for exports relative to domestic sales concerns communication skills, because the bulk of communication for exports occurs through e-mail. Employees of Kenyan exporters are trained on how to communicate effectively by telephone and e-mail, thereby enabling them to efficiently deliver export services. Table 7.4 provides details on the customization of exported services by Kenyan firms across service subsectors.

The Process of Exporting: Starting to Export and Sustaining Exports

The majority of Kenyan exporters of services do not set specific or conscious objectives to enter foreign markets. Instead, they follow their clients as those clients enter foreign markets, or they are referred to foreign clients, who contact them directly. An example of the first type is when a major client of a service firm in the Kenyan market expands its services to Tanzania and the Kenyan service firm continues to provide services for that client in the new country. An example of the second type is when an existing U.K. client of a Kenyan service exporter refers a potential U.K. client with some needs for work in East Africa to the Kenyan exporter.

Most firms undertake a preliminary screening of the target export market using informal means, such as Internet research and business contacts’ knowledge of the target market. Larger and more established Kenyan firms select target export markets systematically, basing their entry decisions and strategies on professional, in-depth market research. In some cases, large firms rely on in-house
<table>
<thead>
<tr>
<th>Subsector</th>
<th>Domestic services</th>
<th>Modifications to domestic services to make them exportable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting</td>
<td>Accounting services</td>
<td>Modifications are made with respect to tax regulations in the foreign country and the client firm’s accounting program. For work on donor-funded projects, Kenyan firms can conduct technical and social audits that include project impact assessments.</td>
</tr>
<tr>
<td></td>
<td>Audit and assurance services</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tax services</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Consulting services</td>
<td></td>
</tr>
<tr>
<td>Architecture</td>
<td>Urban planning</td>
<td>Only slight modifications are made. Foreign clients often want more detailed designs than do local clients, more work is done through e-mail, and projects must adhere to regulations in the client’s country.</td>
</tr>
<tr>
<td></td>
<td>Land use planning</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Site planning</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Project management</td>
<td></td>
</tr>
<tr>
<td>BPO</td>
<td>Inbound and outbound sales</td>
<td>All services can be exported. Delivery of exported services can be fully conducted online (mode 1). However, employee training must be up to international standards, including developing strong customer service skills and teaching employees how to speak with a neutral accent.</td>
</tr>
<tr>
<td></td>
<td>Customer satisfaction surveys</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Back-office support</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Database management</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Transcription</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Technology support</td>
<td></td>
</tr>
<tr>
<td>Engineering</td>
<td>Engineering consulting</td>
<td>Specifications are changed for the client country. Units in drawings are converted, depending on whether measurements in the client country are based on the imperial system (feet and inches) or metric system (meters and centimeters). Drawing text must be translated if in a different language than the client’s.</td>
</tr>
<tr>
<td></td>
<td>Environmental impact assessments</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Construction materials testing</td>
<td></td>
</tr>
<tr>
<td>Freight</td>
<td>Customs brokerage</td>
<td>Small modifications are made when exporting, such as adapting to changing regulatory requirements. An additional service that is provided to foreign clients is walking them through the numerous Kenyan documentation processes and procedures.</td>
</tr>
<tr>
<td>Forwarding</td>
<td>Documentation processing</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Logistics planning (transportation, warehousing,</td>
<td></td>
</tr>
<tr>
<td></td>
<td>material handling, or acting as a shipping</td>
<td></td>
</tr>
<tr>
<td></td>
<td>agency or cargo depot)</td>
<td></td>
</tr>
<tr>
<td>ICT</td>
<td>Digital design for Web advertising</td>
<td>ICT services are typically exported by telecommunications (mode 1). Employees must be able to communicate effectively through e-mail and often must receive computer training.</td>
</tr>
<tr>
<td>-----</td>
<td>----------------------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>Advanced technical support</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Website solutions and design</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Web-based marketing</td>
<td></td>
</tr>
<tr>
<td>Insurance</td>
<td>Insurance products (general, life, crop, health, microinsurance)</td>
<td>Services are tailored to individual client countries and markets. For example, private vehicle insurance is not mandatory in Sudan, whereas the public vehicle insurance market is quite large. These types of dynamics will alter the way firms market insurance products.</td>
</tr>
<tr>
<td></td>
<td>Pensions</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Asset management</td>
<td></td>
</tr>
<tr>
<td>Legal services</td>
<td>Corporate and commercial law</td>
<td>All services can be exported as long as the lawyer is registered and admitted to the foreign bar association. Services pertaining to Kenyan law do not require registration in the country of export. Modifications to services are small and generally have to do with the way documents are presented, especially regarding court documents.</td>
</tr>
<tr>
<td></td>
<td>Intellectual property</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Family law</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Criminal law</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Legal advisory services</td>
<td></td>
</tr>
<tr>
<td>Nonbanking financial services</td>
<td>Private equity and venture capital (investment, guidance, and strategy)</td>
<td>Some clients have their own specific standards because of global regulations and oversight from headquarters, and services may be altered to adhere to these factors. For mergers and acquisitions advisory services, modifications are made on a case-by-case basis.</td>
</tr>
<tr>
<td></td>
<td>Investment banking</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Stockbroking</td>
<td></td>
</tr>
</tbody>
</table>

*Source: EPC and World Bank 2009.*
market research done across countries of operation that is then pooled and shared among subsidiaries. But for smaller firms, no organized or systematic assessment is made to determine the exportability of their services and the viability of target export markets.

To obtain new foreign clients, Kenyan firms pursue a wide array of marketing methods. Referrals from foreign clients who contact Kenyan service firms directly constitute the most widely used method, particularly in the accounting, architectural, engineering, freight-forwarding, and legal sectors. In the accounting, freight-forwarding, and legal sectors, some firms have joined international networks that refer clients exclusively to network members operating within any given region.5

In the BPO, ICT, and ITeS sectors, firms often make use of commission-paid agents in foreign markets to source work. Marketing and advertising efforts along with personal client visits are another way that Kenyan service firms obtain foreign business. However, these efforts are prohibited for firms in the accounting, legal, architectural, and engineering sectors.

Tendering in competitive bidding processes for government and donor work is another important way that Kenyan firms in the accounting, architectural, and engineering sectors obtain foreign contracts. Very rarely do Kenyan service firms receive their foreign clients from the head office or the parent company. Hence, subsidiaries in Kenya operate rather autonomously and are required to develop their own markets and client base.

In some cases, after exporting to a foreign country for some time, a Kenyan service firm may identify new niche areas and underserved markets in that country. Often the new service complements the one that the firm originally exported to the foreign country. For example, a Kenyan architectural firm operating in Rwanda originally offered architectural services but recently ventured into project management and property development after recognizing Rwanda’s limited domestic resources in those fields.

Given the heterogeneity in the types of services provided across professional service sectors, providing a uniform description of how the export transaction happens is difficult. Box 7.1 provides examples of the step-by-step process that firms go through when exporting their services in the BPO and architectural sectors.

Most Kenyan firms are able to negotiate some of the terms of their export contracts with foreign buyers, such as length of the assignment, but generally they cannot negotiate price. In the BPO sector, however, firms have less supplier power, and thus the terms of the contracts are largely imposed by foreign buyers. Contracts tend to include penalty clauses for delays in delivery, particularly in the engineering and architectural sectors.
In certain professional service sectors, small and medium-size Kenyan firms need to partner with larger firms to engage in exports. For example, in the engineering sector, smaller firms often work as consultants to large firms; hence, although these smaller firms do not have the capital or capacity to do large projects on their own, they are able to participate in such projects.

Box 7.1: Description of Export Transactions

**BPO Services**

Following are the steps that BPO service firms follow in exporting services:

1. Initial client engagement.
2. Evaluation by client—the foreign client assesses the Kenyan firm (for example, listens to contact agent voices and assesses data skills in transcription, form editing, typing speeds, and accuracy).
3. Negotiation of contract and payment terms.
4. Pilot contract stage—each job requires specific product knowledge, and the pilot contract is a training period that typically lasts one to two weeks.
5. Award of contract and work commencement.

Work is conducted entirely in Kenya and delivered by mode 1.

**Architectural Services**

Exporting architectural services usually requires the following steps:

*Phase 1: Design*

1. Initial client engagement—the Kenyan firm meets the client, explains its working methodology (often outlined in the company profile), and proposes an outline of the project.
2. Preparation of a proposal and concept sketch.
3. Formal approval by the client.
5. Delivery of design.

*Phase 2: Construction*

1. Filing of design with the relevant authorities—usually skim drawings are filed at the local authority that are not as detailed as working or construction drawings.
2. Acquisition of work permits and registration in the foreign country.
3. Supervision of work until completion.

Work for phase 1 can be conducted entirely in Kenya and is delivered by mode 1 (documents are couriered to the client). Work for phase 2 is delivered by mode 4 because it needs to be conducted in the foreign country.

Source: EPC and World Bank 2009.
Service Exports: Success Stories

Accounting is one sector that provides important export opportunities for Kenyan firms. As a result of widespread adoption of International Financial Reporting Standards (IFRS) across developed and developing countries, the demand for accountants proficient in IFRS has been growing. Kenya was among the first countries to adopt IFRS and thus has a supply of accountants who are proficient and experienced in IFRS (World Bank 2010b). Kenya has been able to capitalize on this comparative advantage by exporting high-end accounting and auditing services through mode 4: its accountants often travel to provide services in countries that have recently adopted IFRS and that have a deficit in skilled and experienced IFRS professionals.

Kenya has also developed a reputation and specialist expertise in the market niche of marine and underwater consulting engineering services. As such, Kenya has been able to target export markets that need such specialized skill but lack domestic professionals who can provide it. The development of this very specialized and unconventional sector in Kenya is interesting because it shows the diversity of services that can emerge as potential exports.

Kenyan firms with premium pricing strategies have been able to offer specialized or niche services (such as the provision of CAD drawings by architectural and engineering firms), and they have developed new ways of providing existing services (such as the provision of recurrent online job advertising sites by ICT and ITeS firms to replace traditional newspaper job-seeking advertisements). Firms with premium pricing strategies have also been able to offer customer service that caters to demanding foreign clients (for example, meeting a one-hour inquiry response policy in the ICT and ITeS sectors or providing detailed financial research reports in the nonbanking financial sector). Box 7.2 describes in detail Kenyan firms with great success in providing IT-related services.

Overall, the recent success of Kenyan service exporters has occurred at both the regional and international levels. At the regional level, Kenyan firms are premium-quality service providers, especially in countries lacking skilled professionals. Kenyan firms are perceived as superior and offer better services than local counterparts, but at lower rates than providers from developed countries or countries outside the region. Moreover, Kenyan firms have a competitive advantage in understanding target markets in East Africa because of their knowledge of soft, or cultural, issues such as the slow pace of conducting business or the insistence on face-to-face meetings. Service firms from South Africa and developed countries that do not possess such skills have failed in their attempts to penetrate these markets.

At the international level, Kenyan firms are value service providers; that is, they are able to provide quality services at lower cost than local service providers in the foreign market. Competitive pricing has been a key factor in the growth of Kenyan
The Case of Kenya

Box 7.2: Kenyan Services Exporters’ and Innovators’ Success Stories: KenCall, Txteagle, Ushahidi, and Safaricom

KenCall

A Kenyan firm that has been very successful in exporting higher-value-added BPO services to developed countries is KenCall. The firm specializes in providing outbound and inbound voice and data services for large Western companies. The firm began with outbound voice services, such as developing sales leads and doing post-sale calls with customers, but now has added business in the more lucrative data and inbound voice services. As the Harvard Business School case study by Isenberg (2009, 7) on KenCall explains, the inbound voice category includes a range of services that require a level of skill with customers, such as “1-800 sales lines, customer service, help desk, hotlines, complaints, and emergency (911-type) services.” According to KenCall, the services the firm offers include sales, billing, customer information, administrative and data management, and level 1 tech support. For its tech support business, KenCall’s employees are certified by Cisco and Microsoft, among other ICT providers. Because of its success in this range of services, KenCall has been able to export its services globally. As Kenya further increases the quality of its telecommunication infrastructure, in particular with fiber-optic cable connectivity, KenCall will likely be able to expand its business further, and other Kenyan firms may be able to enter the BPO service sector.

Txteagle

Txteagle is a U.S. firm that developed an innovative technology that enables organizations, through Txteagle’s platform, to compensate mobile phone users for providing valuable information that would not otherwise be collected. The company is able to tap into a network of 2.1 billion phone numbers in 80 countries around the world. Mobile users tend to spend a large portion—aabout 10 percent—of their income on airtime. If Txteagle lowers this percentage by compensating mobile phone users with airtime, their disposable income will increase and could act as a de facto “pay raise” for millions or even billions of people.

Txteagle has close ties to Kenya, where the firm’s founder has helped train a new generation of Kenyan computer scientists. For example, one Kenyan entrepreneur created a system through which electricity bills can be prepaid through a mobile phone. Other Kenyan computer scientists are focused on using mobile phones to provide valuable local services that cannot easily be outsourced or can only be done at high cost, such as polls and surveys in rural areas, sentiment analysis, and market research for international firms and organizations. Although not all of these technologies will be immediately exportable, innovative Kenyan entrepreneurs are well placed to be on the cutting edge of new game-changing mobile technologies.

Ushahidi

Another innovative Kenyan organization that has had international success is the nongovernmental organization Ushahidi. Ushahidi developed an open-source software platform through which anyone with a mobile phone or digital connection can collect, place, and visualize information on an online map in near-real time. The online map can then be viewed by anyone with an Internet connection and a computer, allowing detailed information about geography and events to be shared and transferred. Ushahidi’s software has been used around the world in a diverse array of applications. It was used first to track violence after the 2008 Kenyan elections and has since been

(Box continues on the following page.)
Box 7.2: Kenyan Services Exporters’ and Innovators’ Success Stories: KenCall, Txteagle, Ushahidi, and Safaricom (continued)

used to observe wildlife patterns in Kenya, monitor elections in India, track violence in Gaza and crime in Atlanta, avoid hazards during the 2010 blizzard in Washington, D.C., and coordinate the cleanup of the U.S. Gulf Coast oil spill, among others. The success of Ushahidi in disseminating its software platform globally shows that Kenyan firms compare positively with larger firms around the world in terms of innovation and will be able to compete more vigorously as Kenya’s potential for exporting higher-value-added services becomes better known internationally.

Safaricom

Safaricom is a groundbreaking mobile service provider that innovated and developed one of the largest mobile money systems in the world, called M-Pesa. The M-Pesa system has helped greatly to expand access to finance in Kenya, especially among the previously unbanked. In 2010, M-Pesa accounted for a large proportion of the estimated US$7 billion (20 percent of GDP) transferred via mobile phones, and since its rollout in 2007, Safaricom has grown at a staggering pace, signing more than 13.5 million customers in that time. Originally M-Pesa allowed money to be transferred only electronically using a mobile phone and an extensive network of agents around Kenya, but M-Pesa has now expanded further from a transfer system to a direct payment system. In addition to transferring or remitting money to family members living in rural areas of the country, subscribers can use their mobile phones to make purchases from commercial partners, including supermarket chains and Kenya Airlines. More recently, Safaricom has developed a new mobile platform called M-Kesha in partnership with Equity Bank, which allows subscribers to access their Equity Bank saving accounts through their mobile phones. The success and influence of Safaricom and M-Pesa demonstrate that appropriate government regulations and strong business strategies geared toward growth can lead to success and international prestige for Kenyan companies.


service exports, and it is due to the much lower costs of living in Kenya relative to most developed countries. For example, the pay that would afford a middle to upper-middle quality of life for a programmer in the United Kingdom is three times as high as the pay that would afford the same quality of life for a programmer of equal skill in Kenya.

Also, Kenyan service exporters have proven able to ensure business continuity and delivery of continued high-quality service even under difficult conditions. For example, one BPO firm put in place a dormitory and catered food for contact center agents to continue servicing clients during the period of postelection violence in Kenya in 2007–08. The firm has now developed a disaster management and recovery system that is shared with foreign clients to reduce fears of political risk.

Large service firms that have been operating in Kenya for many years have built considerable brand equity: for example, Ernst & Young in accounting services or
Hamilton Harrison & Mathews in legal services. Younger service firms are constantly building their brand equity and reputation by striving to win awards such as the Financial Reporting (FiRe) Award of Institute of Certified Public Accountants of Kenya, Business Daily’s awards for the top 100 small and medium-size enterprises, or technology service partner international awards (Microsoft Partner awards). Brand equity is a competitive advantage in acquiring foreign work.

**Challenges for Kenyan Service Exporters**

An examination of the challenges facing Kenyan business service firms helps identify the factors that firms see as the key constraints to exporting. The factor that constrains most service providers from exporting is a widespread lack of knowledge about exporting opportunities, markets, and processes and a lack of awareness about how to acquire such knowledge.

This dynamic is demonstrated by the surveys conducted for this chapter, which show that 48 percent of the surveyed Kenyan service exporters do not have a plan for exporting, and 54 percent of the surveyed exporters do not conduct any market research before exporting. This finding indicates that although Kenyan services firms may be innovative and successful domestically, many do not engage in any systematic attempt to export their services. Similarly, if nearly half of Kenyan exporters do not have an export business plan, then likely many other firms do not export but would be able to do so if given the opportunity. In the context of increasing Kenya’s exports of business services, this dynamic is an important constraint that must be overcome rapidly.

Very often, Kenyan service providers—especially smaller ones—lack international networks and find obtaining market intelligence on foreign markets very difficult. For example, they do not know the largest firms in each sector, the tax implications of exporting, or the key contacts that would allow them to access opportunities. Kenyan service firms are also very unaware about what trade support services are available from the government, such as the institutions that support trade and services they offer. For example, surveyed exporters were unclear about the activities and role of the Kenya Chamber of Commerce.

Another important constraint identified by the surveyed firms is difficulty in penetrating foreign markets. Partially this difficulty is caused by the trade and domestic regulatory restrictions faced by Kenyan firms in local and foreign markets. But the global perception about Kenya—if not negative, at least not positive, especially given the political turmoil during the 2008 election—also acts as a disincentive for potential clients to work with Kenyan service exporters.

Current and potential Kenyan service exporters face a series of regulatory barriers that affect their operations and export opportunities. Surveyed firms mention tax-related restrictions, excessive procedures and licensing requirements to
operate in Kenya, outdated sector-specific regulatory measures, and sectoral restrictions (such as advertising prohibitions in accounting, architectural, engineering, and legal services). Also, burdensome requirements on academic and professional qualifications and licensing requirements for individuals providing the service can restrict entry into foreign markets.

Kenya has low international brand equity as a business service provider. The Kenyan government, in contrast to its Indian or South African counterparts, for example, does not sponsor international conventions or events to showcase the BPO services available in Kenya. The foreign perception of Kenya’s government as unstable also plays a negative role and is likely to deter foreign companies from outsourcing work to Kenyan BPO providers. However, Kenya does have high visibility as a business service provider in the EAC.

Skill mismatches and skill shortages pose a significant challenge to many Kenyan exporters. Although Kenya is relatively well endowed with graduates who could work in various business service firms, including firms in the BPO sector, fresh graduates need to receive a substantial amount of training to catch up with market requirements. Such training costs make up a substantial part of BPO contact center costs. Similarly, in the ICT and ITeS sectors, Kenyan graduates in programming are of good quality, but they lack skills in terms of the practicality of exporting their services, the exposure to a foreign environment, and the promotional expertise.

In the engineering sector, an acute shortage of professionals exists relative to local demand, particularly in mechanical engineering. In the insurance sector, training in technical skills is very low. Finding individuals with the necessary skills is so difficult that insurance firms spend considerable time on in-house training and sponsoring staff members to attend courses.

In the legal sector, Kenya has many lawyers, but the grasp of the law for most graduates is very theoretical, and few lawyers are qualified to export legal services. In small law firms, in particular, the skills needed for exporting services (such as experience in other jurisdictions and work experience with multinational organizations) are very rare.

Another frequently mentioned constraint by the surveyed firms is a lack of ICT infrastructure. This constraint is being overcome, however, by the two undersea fiber-optic cables that have recently given Kenya access to a high-speed Internet connection.

**Policy Recommendations**

The government of Kenya is well aware of the need to diversify its export base by boosting professional service exports. Going forward, the government can, through its trade-supporting institutions and in collaboration with business and
professional associations and the private sector, develop a service export strategy and play an important role in helping to reduce the barriers that Kenyan service firms face in their export development efforts.\(^6\)

However, most Kenyan service exporters feel that direct incentives to exports such as tax incentives are unnecessary. Rather, what they consider to be crucial is for the government to facilitate access to foreign markets. Such facilitation would lead to an increase in employment, upgrades in the technology used, and improvements in the quality of services delivered to meet high international standards.

Possible policy actions for the government of Kenya are summarized in table 7.5 and described in more detail in the subsections that follow. Box 7.3 provides details on how South Africa developed its BPO sector.

Address lack of knowledge about export opportunities

The government of Kenya, through the Export Promotion Council (EPC) and in collaboration with business and professional associations, can play a crucial role in reducing the information asymmetries about service exports affecting both Kenyan service firms and their foreign clients. Following are several ways in which the informational barriers to exports can be addressed:

- The EPC could collect and disseminate to Kenyan service firms market research information (for example, country profiles, sector rules and regulations, tax issues, and general working conditions in foreign markets) and highlight available opportunities for service exports. The EPC could establish links with other international trade support institutions to create a greater

<table>
<thead>
<tr>
<th>Table 7.5. Policy Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Address lack of knowledge about export opportunities</strong></td>
</tr>
<tr>
<td>• Collect and disseminate market research information.</td>
</tr>
<tr>
<td>• Develop trade directories of Kenyan service providers to be used for marketing to foreign firms.</td>
</tr>
<tr>
<td>• Encourage Kenyan firms’ participation in international expositions.</td>
</tr>
</tbody>
</table>

Source: Authors’ compilation.
In 2004, the government of South Africa identified the BPO and offshoring part of the ITeS sector as one of the high-potential sectors targeted to boost economic growth and reduce unemployment and poverty in the country. In South Africa, services account for almost 70 percent of GDP. South Africa has a US$960 million annual BPO sector, which is forecast to grow to US$1.9 billion by 2015, according to recent figures from Frost & Sullivan (2010) market research. Because human resources account for the large majority of the cost base of any BPO service provider, the broad ITeS sector has the potential to lift the economic status of a large mass of people.

The Department of Trade and Industry has been the lead institution in developing the BPO sector in South Africa and drafted the country’s BPO Sector Development Strategy. In 2005, the Department of Trade and Industry, the Business Trust, and the BPO sector body (Business Process Enabling South Africa) set up the BPO Sector Support Programme with the assistance of professional service firms to enable actors in the public and private sectors to work together in establishing South Africa as a preferred location for outsourced business processes. The objective is to create 100,000 jobs (25,000 direct and 75,000 indirect) by 2010.

Government assistance and support for the accelerated development of the BPO sector was launched in 2007 and covered several work streams: for example, supporting the effective marketing of South Africa as a competitive BPO location; developing and deepening the pool of internationally competitive talent; creating an enabling environment of incentives and infrastructure to support the sector; and strengthening the sector body to make it capable of mobilizing and representing the key stakeholders, developing BPO in designated areas, and reducing telecommunication prices for BPO.

Some specific initiatives were undertaken under South Africa’s marketing strategy for the BPO sector. First, market intelligence was gathered focusing on developments in the operating environment, and global research was undertaken for the purpose of strategy development. Second, broad-based marketing was used to organize outbound marketing missions and produce of collateral material to support these missions, while targeted marketing focused on the creation of a database, the development of key account plans and fact packs for priority targets, the creation of an economic model to be used by investors to assess return on potential investments in South Africa, and the provision of support to lead managers for the priority targets. Support was provided for a number of marketing missions by South African firms to source countries. Additional support was provided to facilitate the entry of the first new major investors to South Africa.

As a result of these efforts, South Africa has managed to attract, since 2007, some of the world’s top players in the BPO sector: Aegis, which is part of the Essar Group, one of India’s largest conglomerates; Teleperformance, which has the largest global footprint in the sector, with 249 contact centers, a presence in 47 countries, and services in more than 75 markets and 18 geographically diverse near-shore and offshore locations; and Genpact, which is a leader in the globalization of services and technology and a pioneer in managing business processes for companies around the world.

The development of the BPO sector in South Africa did and does face several challenges. First, the cost of telecommunications and lack of broadband penetration in rural areas remains an inhibitor to rapid growth in the sector. Although BPO, given that it is a new sector, generally faces few formal regulations, it is affected by regulations in related sectors. For example, cross-border BPO services that use VoIP (Voice over Internet Protocol) or private networks may be confronted with restrictions on the use of telecommunication services or requirements that the transmission may be terminated only on monopoly networks. Such restrictions can raise the cost of

---

Box 7.3: The Experience of South Africa in ITeS Exports

In 2004, the government of South Africa identified the BPO and offshoring part of the ITeS sector as one of the high-potential sectors targeted to boost economic growth and reduce unemployment and poverty in the country. In South Africa, services account for almost 70 percent of GDP. South Africa has a US$960 million annual BPO sector, which is forecast to grow to US$1.9 billion by 2015, according to recent figures from Frost & Sullivan (2010) market research. Because human resources account for the large majority of the cost base of any BPO service provider, the broad ITeS sector has the potential to lift the economic status of a large mass of people.

The Department of Trade and Industry has been the lead institution in developing the BPO sector in South Africa and drafted the country’s BPO Sector Development Strategy. In 2005, the Department of Trade and Industry, the Business Trust, and the BPO sector body (Business Process Enabling South Africa) set up the BPO Sector Support Programme with the assistance of professional service firms to enable actors in the public and private sectors to work together in establishing South Africa as a preferred location for outsourced business processes. The objective is to create 100,000 jobs (25,000 direct and 75,000 indirect) by 2010.

Government assistance and support for the accelerated development of the BPO sector was launched in 2007 and covered several work streams: for example, supporting the effective marketing of South Africa as a competitive BPO location; developing and deepening the pool of internationally competitive talent; creating an enabling environment of incentives and infrastructure to support the sector; and strengthening the sector body to make it capable of mobilizing and representing the key stakeholders, developing BPO in designated areas, and reducing telecommunication prices for BPO.

Some specific initiatives were undertaken under South Africa’s marketing strategy for the BPO sector. First, market intelligence was gathered focusing on developments in the operating environment, and global research was undertaken for the purpose of strategy development. Second, broad-based marketing was used to organize outbound marketing missions and produce of collateral material to support these missions, while targeted marketing focused on the creation of a database, the development of key account plans and fact packs for priority targets, the creation of an economic model to be used by investors to assess return on potential investments in South Africa, and the provision of support to lead managers for the priority targets. Support was provided for a number of marketing missions by South African firms to source countries. Additional support was provided to facilitate the entry of the first new major investors to South Africa.

As a result of these efforts, South Africa has managed to attract, since 2007, some of the world’s top players in the BPO sector: Aegis, which is part of the Essar Group, one of India’s largest conglomerates; Teleperformance, which has the largest global footprint in the sector, with 249 contact centers, a presence in 47 countries, and services in more than 75 markets and 18 geographically diverse near-shore and offshore locations; and Genpact, which is a leader in the globalization of services and technology and a pioneer in managing business processes for companies around the world.

The development of the BPO sector in South Africa did and does face several challenges. First, the cost of telecommunications and lack of broadband penetration in rural areas remains an inhibitor to rapid growth in the sector. Although BPO, given that it is a new sector, generally faces few formal regulations, it is affected by regulations in related sectors. For example, cross-border BPO services that use VoIP (Voice over Internet Protocol) or private networks may be confronted with restrictions on the use of telecommunication services or requirements that the transmission may be terminated only on monopoly networks. Such restrictions can raise the cost of
performing cross-border BPO and reduce its feasibility. In South Africa, VoIP is legal; however, the local loop remains to be unbundled. South Africa’s broadband costs and connectivity are becoming less of a concern as more undersea cables landed in the country for the 2010 Fédération Internationale de Football Association World Cup, which increased the bandwidth availability.

Second, a steady stream of recent graduates who are ready to work is required as an increasing number of global investors view South Africa as an attractive destination. South Africa needs to draw lessons from countries such as Malaysia and the Philippines, where links have been established between the BPO industry and educational institutions.

Third, to establish a commercial presence to supply BPO services, companies need to adhere to export market regulations and costs associated with establishment, investment, and incorporation in the foreign market, as well as local labor laws and restrictions on government procurement. Recent perceptions in some countries about jobs lost to foreign outsourcing have led to the emergence of laws prohibiting the outsourcing of public contracts or government procurement of services to foreign firms located abroad. Such laws may also prevent domestic companies from subcontracting portions of their government contracts to firms abroad.

Fourth, because South Africa does not offer tax breaks, the country finds competing with countries that offer such incentives a challenge. However, measures are in place to circumvent the unavailability of tax breaks by offering substantial incentives related, for example, to training and skills development, which can be negotiated at provincial and local government levels.

Fifth, the perception of difficulties in doing business in Africa remains a critical challenge for African countries that aspire to be significant players in the BPO global market. South Africa, in particular, has suffered from the negative perception not only of crime but also of rising inflation and the volatility of the local currency.

Sixth, a key challenge experienced is how to ensure that BPO ITeS operators are evenly spread geographically across the country to stimulate economic development even in rural areas.

Some of the lessons learned from the development of the BPO sector in South Africa are that the keys to promoting ITeSs are the crafting of the right policies and strategies to create an enabling environment to achieve long-term sustainability. Government support is essential from the onset, because the government is able to provide strategic direction by issuing appropriate policy directives and setting aside the necessary funding to drive the sector forward. Furthermore, collaboration with private sector players is important because they have firsthand experience of the sector and are better able to articulate their needs about the form of support required from the government.

A coherent and nationally coordinated message is imperative; confusion is created if provinces within a country each approach potential investors in foreign markets, advancing their own value propositions or advantages over other provinces. Potential investors prefer to have one point of entry, be it an organization or an allocated account manager whom they work with in a country. Equally important is to identify the key target markets and to have dedicated personnel to present them with a clear and concise value proposition. Because the ITeS sector is fast moving, what was “in” yesterday may not necessarily be the trend tomorrow; this dynamism of the sector has to be monitored carefully by conducting benchmarking exercises and mapping out competition and other country movements. Of utmost importance is that the country strategy be anchored on intensive research and be substantiated with accurate facts and figures, because potential investors rely on this information to make decisions within a short space of time. Although not strongly articulated, soft issues play a role in

(Box continues on the following page.)
pool of information on business opportunities available in other countries as well as profile companies that can deliver those services.

- The EPC, in collaboration with business and professional associations, could develop trade directories of Kenyan service firms, including detailed provider profiles, supply capacities, and key contacts. Such directories should be readily available on the EPC’s website and should be used by foreign missions in Kenyan embassies abroad to market Kenyan services internationally. The EPC and business and professional associations could also establish physical or virtual business exchanges to increase the marketing of services.

- Business and professional associations should be more active in hosting international seminars to educate the industry and increase networking opportunities for local experts. For this purpose, some capacity building for the associations is necessary—possibly through a government-supported program—so that they can prepare marketing materials, organize conventions and forums, or participate in international forums and conventions to create awareness of the skills available in Kenya.

- The EPC could provide financial assistance to Kenyan service firms—especially small firms—in their incursion into international markets, through participation in international fairs and expositions (perhaps through a cooperative effort), for example. The EPC should also be able to assist individual Kenyan service exporters or potential exporters with marketing and branding efforts when they participate in international expositions (for example, ensure that Kenyan delegations have top-of-the-line display stands).

- The government of Kenya could allow tax exemptions for market development costs such as business trips for marketing purposes or for businesspeople coming into Kenya to explore the local potential.
Address regulatory and branding issues

Several domestic regulatory reforms could facilitate Kenyan service exports. Liberalizing advertising in various professional service sectors would enable current and future exporters in Kenya to use an important channel for targeting foreign clients. Given the likelihood of strong informational asymmetries, allowing advertising that is relevant, truthful, and not misleading, as is currently done in accounting in Malawi, South Africa, and Zambia, would be the best combination to protect domestic and foreign clients.

Although Kenyan service firms aim high and would like to become globally renowned service providers, achieving such status will take some time. Kenyan service providers may benefit from the establishment of a strong regional presence as a stepping-stone for a global presence. The private sector in the region, individual consumers in the EAC, and Kenyan service firms in particular could benefit from deeper regional integration in professional service trade, which would include the following:

- **Opening regional boundaries to allow free movement of EAC nationals without work permit requirements.** This step would help greatly to increase business opportunities within the region and to boost service exports.
- **Establishing mutual recognition agreements of professional qualifications and of licensing requirements within the EAC.** Agreements in the areas of accounting, architectural, engineering, and legal services would likely benefit Kenyan service firms (as well as firms in neighboring countries) in their exports of services to the region. Talks about such agreements have been ongoing, and provisions have been agreed to in principle. For example, a draft mutual recognition agreement in accounting was signed in 2010 and is expected to be finalized in 2011.
- **Creating standards at the EAC level.** The development of EAC standards for the accounting, architectural, engineering, and even legal sectors would potentially benefit consumers in the EAC.

Domestic business and professional associations could play a stronger role in lobbying the government of Kenya to push the EAC on the issues that affect their members with respect to cross-border practices, mutual recognition of qualifications, and elimination of work permit requirements for EAC members.

The government of Kenya should lead the positioning and marketing of the country brand and key services globally, showcasing professional services next to tourism, sports, horticulture, and other Kenyan products. Trade support institutions should conduct concerted marketing efforts with professional associations and government agencies such as the Kenya ICT Board, the Kenya Tourist Board,
and the Communications Commission of Kenya, to promote Kenyan services and build Kenya’s reputation as an exporter of professional services.

**Address skill mismatches and skill shortages**

Several actions by professional associations as well as the government at the training level would help develop Kenyan workers’ skills for service exports. The provision of more and better continuing professional education to individuals working in professional service sectors is important.

The availability of scholarships or partial funding to enable BPO agents to access formal training courses not readily available in Kenyan universities and colleges would improve the skills—and thus marketability—of Kenya’s BPO sector. The same reasoning applies to professionals employed in the ICT and ITeS sectors whose needs for training in specialized technology areas cannot be met by local learning institutions.

The provision of rebates or the development of incentives for firms to conduct training—especially specialized training such as the Association of Certified Fraud Examiners–certified fraud examiners course in the accounting sector—would help increase the quality and degree of specialization of the services offered by Kenyan firms.

**Notes**

1. The index of RCA, initially introduced by Balassa (1965), can be used to assess the structure of a country’s exports. The RCA for the service sector is services’ share in the country’s total exports (including goods) divided by the country’s share of world trade in goods and services. A value of the index greater than one implies that a country is relatively specialized in services and thus has an RCA in such exports compared with the world average.

2. The four modes of supply of services in the terminology of the General Agreement on Trade in Services are mode 1, cross-border supply: services supplied from the territory of one country into the territory of another country; mode 2, consumption abroad: services supplied in the territory of one country to the consumers of another country; mode 3, commercial presence: services supplied through any type of business or professional establishment of one country in the territory of another (that is, foreign direct investment); and mode 4, temporary presence of natural persons: services supplied by nationals of one country in the territory of another. Mode 4 includes both independent service suppliers and employees of the service supplier of another country.

3. The EAC is the regional intergovernmental organization of Burundi, Kenya, Rwanda, Tanzania, and Uganda. Its headquarters is in Arusha, Tanzania.

4. Kenyan clients do not see the value of such drawings or the benefit of having an architect oversee a project. Often, they receive the drawings and then engage a contractor to build without consulting the architect.

5. For example, if a U.K. member of the accounting network Nexia has a client with work in Mozambique, it would refer that piece of work to the nearest network member, which would be a Kenyan accounting firm. Before a Kenyan firm may join the network, its processes, procedures, and skills must be assessed. If they are appropriate for the network standard, the firm is allowed to join. This procedure
ensures that when one network member refers work to another member, the quality of work will remain that of the network international standard. International networks sponsor networking events and training seminars worldwide that offer Kenyan member firms the opportunity to provide training, to present technical sessions that demonstrate their skills, and to share experiences with network members. Such events increase a firm’s likelihood of gaining referral work from network members.

6. A complementary view on policy changes that can make Kenya a more attractive destination for offshoring of IT and ITeS work is provided by the examination of a location readiness index described in Sudan and others (2010).

7. For more details on the regulatory framework affecting professional services in Kenya, see Dihel, Fernandes, and Mattoo (2010) and World Bank (2010b).

References


The increase in commercial service exports from Brazil has been impressive. In the 1990s, commercial service exports grew 153 percent and 192 percent in the 2000s. Among emerging economies, Brazil’s phenomenal growth in service exports is second only to China’s growth in manufacturing exports and India’s growth in software service exports.

Brazil’s service sector has experienced three distinct phases of export growth. The first phase was characterized by the export of construction and related services (C&RSs). As a result of their experiences in domestic infrastructure projects from the 1950s to the 1970s, several Brazilian construction companies could successfully bid on international projects. These firms became the hallmarks of service exports from Brazil. Given recent developments, however, the success of construction and engineering companies has now become only a part of Brazil’s success in exporting services. The internationalization of Brazilian companies is well under way and has extended beyond construction and engineering to include a more holistic development of service trade and investment.

The second phase of internationalizing Brazil’s service exports occurred at the end of the 1980s, reaching a broad range of sectors, such as audiovisual, transport,
and financial services. The three companies that led this wave of internationalization were TV Globo, Banco Itaú, and Embraer. In the case of financial services, service provision was initially a result of demand from subsidiaries of domestic public and private banks working abroad. Brazilian banks had established branches abroad in the 1990s, seeking deposits and placements from Brazilian immigrants around the world. Only later did banks begin to focus on regionalizing their operations, particularly in the Mercosur area (that is, the Southern Common Market or Mercado Común del Sur), by opening offices and agencies.

The third phase of service sector internationalization started in the 1990s, when new and small information and communication technology (ICT) companies engaged in service exports. The advent of ICT companies owes much to the demand created by the first wave of internationalization, because newly internationalized companies needed help developing, installing, maintaining, and integrating software telecommunication systems; processing and storing data; devising programs; creating network services; and so on. Naturally, Brazilian ICT companies were Brazilian firms’ first choice for those services. Most of these exporters are medium-size companies that are majority-owned by Brazilian nationals. The Brazilian Association of Information Technology and Communication (Associação Brasileira de Empresas de Tecnologia da Informação e Comunicação, or BRASSCOM) estimated that ICT service exports would reach US$5 billion in 2010, whereas the Brazilian Association of Software Companies (Associação Brasileira das Empresas de Software, or ABES) estimated overall software service revenues at US$5 billion in 2009, with 10 percent of revenues devoted to exports (that is, US$500 million as opposed to US$209 million in the balance of payments). ABES estimates that software service exports account for about 8,000 jobs in the Brazilian economy.

In this context, the development of Brazil’s service exports is different from that of other successful countries, such as India and the Philippines. In the case of Brazil, outward foreign direct investment (FDI) paved the way for cross-border exports in the software service sector. This pattern differs from the case of India, where mode 4 service exports in the software service sector were followed by mode 1 exports and then by mode 3 exports, but all in the same sector. Thus, in the case of Brazil, it seems that outward FDI may be a successful strategy for expanding the export of a wide range of services.1

With the increasing internationalization of Brazilian companies, financial institutions are also likely to spread globally, and not just regionally, further encouraging ICT and other service exports. Unlike other segments of the Brazilian economy, such as transport, Brazil’s financial service and capital market sectors have technologically advanced infrastructure by international standards and are adequately organized to participate in the international market.
Service statistics suggest that most of the service sectors have been champions in exporting to the world; that is, they have large market shares, and their export levels are above world averages. For instance, insurance services and computer and information services gained a much larger market share in the period 2003–07 and maintained an above average growth rate. The only sector that did not perform well was communications, which lost market share and was below the average world growth rate.

The factors that influence the success or failure of service exports may vary widely across sectors. Services are very heterogeneous and respond differently to various policies, regulations, and market conditions. Nevertheless, some general and specific elements are important. In Brazil, as in the rest of the world, there are fundamental sources of comparative advantage, such as general market and labor market characteristics, infrastructure, and institutions.

It is apparent that, in becoming competitive, each sector may have its own peaking point. The difference in timing exists because factors that provide comparative advantage may not be relevant across all sectors within the same timeframe. However, the analysis still leads to an overriding conclusion in the case of Brazilian service exports: comparative advantage was significantly developed or advanced after the second half of the 1990s. This conclusion indicates a strong correlation between the main economic policies of that period (that is, liberalization, market opening, and privatization) and the success of service exports (figure 8.1).

In some sectors, macroeconomic conditions explain export performance. For example, C&RS exports have grown significantly since 1993, but in the reverse direction of the country’s macroeconomic conditions at the time. Macroeconomic instability and strict stabilization policies during the 1990s pushed construction services abroad in search of stability and growth opportunities in other markets.

In other sectors, a combination of factors (such as macroeconomic stability, technology-driven changes, and economic growth) explains sector performance. For example, the first competitive trend in Brazilian banking started in the 1990s, when inflation was controlled and banks had to cut costs and earn money without relying on “floats” (that is, profits from clients’ money left in the accounts overnight). The second trend, which has been a stronger incentive in the past 10 years, relates to Brazil’s technological development, which demanded large investments in Internet functionalities, internal systems, and security. The third wave involves the credit boom since 2006. The internationalization of Brazilian banks will serve as a fourth competitive trend, when new ground will have to be conquered beyond the country’s borders.

In the case of transport services, goods trade explains export growth. Domestic liberalization policies and worldwide liberalization of the 1990s, including at the
regional level, explain the increase in goods trade and, consequently, transport service performance. In addition, the domestic transport sector has played a role in supporting transport service exports. However, Brazil’s transport service exports seem to be lagging compared to other sectors. The transport service sector has always had the potential to be competitive in the global market because of its domestic market size. However, the lack of competition, especially in air transport, has allowed inefficient firms to survive and, hence, created high margins, which discourage international ventures. The creation of Gol Airlines in 2001, for instance, revolutionized the Brazilian air transport market and coincided with the increasing trend in transport exports.

Physical infrastructure is not playing a significant role in promoting export development. The quality of Brazil’s infrastructure is below the Latin American

Figure 8.1. Service Exports by Category, 1970–2009

Source: Central Bank of Brazil balance of payments data.
and BRIC (Brazil, the Russian Federation, India, and China) averages; therefore, physical infrastructure actually slows export development, especially transport service development.

The business environment heavily influences the growth of the ICT sector. Other fundamental factors that encourage software service exports are human skills, similarity in time zones with other Latin American countries and the United States, and low labor costs relative to those in developed countries. The recent global financial crisis has helped the Brazilian ICT sector because outsourcing constitutes an effective means of reducing costs. Brazil’s favorable business environment is among the reasons for its success in exporting services. The tourism sector also identifies the business environment as a fundamental reason for export success.

Human skills and education play a significant role in Brazil’s service performance. Government institutions, associations, and the private sector offer several courses that specifically focus on service exports. The Commerce and Services Secretariat of the Ministry of Development, Industry, and Foreign Trade and the state-owned Banco do Brasil, one of Brazil’s biggest banks, developed a partnership with the goal of spreading a service-exporting culture, strengthening entrepreneurs’ qualifications, and identifying opportunities for the development of actions that can underpin the growth of Brazilian service exports. Banco do Brasil offers a course called “Training in International Business: Services Exports,” which educates entrepreneurs about best practices for reaching international service markets.

In the case of the ICT sector, the main concern for future development is skill level. Because of increasing demand, most technicians and professionals enter the labor market before concluding a formal university course. Furthermore, the software service sector points to the cost of labor as the most important fundamental aspect underlying its competitiveness, or the lack thereof, particularly when Brazil is compared with competing countries such as India and the Philippines.

Business, professional, and technical (BPT) services are the main Brazilian services exports, totaling US$12.8 billion and 0.8 percent of GDP in 2009. The general trend for all BPT subsectors was to grow reasonably in the 1980s, considerably in the 1990s, and spectacularly in the first decade of the millennium. Brazil was clearly no exception in this context to the same world developments that underpin growth in the sector: the rapid deployment of information technology (IT), the overall liberalization of trade and investment in the world, and the increasing demand for offshoring as a business tool at all levels of economic activity.

The Brazilian Development Bank (Banco Nacional de Desenvolvimento Econômico e Social, or BNDES) is the main financing branch of the federal government, offering an extensive number of solutions to firms that support construction export services. BNDES has a special focus on supporting exports of
services with high intellectual content, such as software and computer services and engineering services for infrastructure projects.

**Service Exports in the Context of the Economy**

The service sector represented 68 percent of Brazil’s GDP in 2009, whereas the manufacturing sector’s share was 25 percent and the agriculture sector’s share was 6 percent. In terms of employment, the service sector accounted for 77.3 percent of formal jobs, which places Brazil among the most service-intensive emerging economies in the world.

The growth of commercial service exports has been impressive in Brazil, reaching 135 percent in the 1990s and 192 percent in the 2000s (compared with 177 percent growth in goods trade for the same period, despite the so-called commodities revolution) (figure 8.1). However, the overall service balance has been negative. Deficit levels at around US$10 billion were seen in 1997 and 1998, and deficit levels have risen again since 2006. The lowest deficit since 1993 was in 2004. Since then, the deficit has increased by 312 percent, from US$4.7 billion in 2004 to US$19.3 billion in 2009. The travel sector accounts for almost 30 percent of that deficit, and transport services account for 20 percent. In 2009, the biggest surplus item was that of BPT services at US$7.7 billion. Architectural, engineering, and other technical services accounted for 32 percent of that surplus. In the 2000s, export growth totaled 189 percent.

As a share of total exports, service exports represent 17.2 percent—up from 12.6 percent in 2005. Conversely, service exports’ contribution to the economy shrank slightly; such exports accounted for 1.7 percent of GDP in 2009 compared with 1.8 percent in the previous year. Brazilian service exports mainly comprise BPT services (US$12.8 billion), international travel (US$5.3 billion), and transport services (US$4.0 billion), which together account for nearly 80 percent of all service exports (figure 8.2). In 2008, the main destinations of these exports were the United States (50.8 percent), the United Kingdom (11.1 percent), and Germany (4.0 percent).

In Brazil, more than 50 percent of all 2008 service exports and 42 percent of all 2008 service imports were transacted with the United States (figure 8.3). The European Union (EU) accounted for 24 percent of all service exports and 37 percent of all service imports in 2008. Thus, the EU and the United States accounted for 75 percent of Brazilian service exports and 79 percent of imports in 2008. Along with Mercosur and the rest of Latin America, the EU and the United States accounted for 79 percent of all service exports and 86 percent of all service imports in that same year.
Figure 8.4 shows the growth rates for each of the three main exporting sectors. During the 1990s, the BPT service sector grew by an astounding 1,252 percent, compared to a 31 percent growth for travel services and a 15 percent decline for transport services—a clear result of flagship Brazilian companies’ decline in cargo transport generated by the country’s foreign trade. From 1999 to 2009, all three main sectors had impressive growth rates; however, the BPT sector accounted for most of the growth in service exports from 2004 to 2009, with a 183 percent growth rate during that period.

BPT services are the main Brazilian service exports. Totaling US$12.8 billion, they accounted for 46.1 percent of total service exports, 7.1 percent of total exports, and 0.8 percent of GDP in 2009. These services were the fourth most imported services in 2009, totaling US$5.1 billion and accounting for 10.1 percent of service imports and 2.9 percent of total imports. In the same year, this subsector had a net balance of US$7.7 billion, the highest surplus in the service sector.

*Source: Central Bank of Brazil balance of payments data.*
Figure 8.3. Brazilian Service Export Markets, 2008

Source: Central Bank of Brazil balance of payments data.

Figure 8.4. Growth in Service Exports, 1989–2009

Source: Central Bank of Brazil balance of payments data.
If architectural, engineering, and other technical services are taken out of this sub-sector, the surplus is still US$5.3 billion.

International travel was Brazil’s second-largest service export in 2009. Totalling US$5.3 billion, international travel accounted for 19.1 percent of total service exports, 2.9 percent of total exports (goods and services), and 0.3 percent of GDP. International travel was the most imported service, totaling US$47 billion and accounting for 23.1 percent of service imports and 6.2 percent of total imports. International travel had a balance of negative US$5.6 billion, the second highest deficit in the service sector.

Transport services were Brazil’s third largest service export in 2009. Totalling US$4.0 billion, this subsector represented 14.6 percent of service exports, 2.4 percent of total exports, and 0.3 percent of GDP. Transport services were the third most imported services, totaling US$9.4 billion and accounting for 16.9 percent of service imports and 4.6 percent of total imports. Transport services had a net balance of negative US$3.9 billion, the third highest deficit in the service sector.

BPT services, travel, and transport put the dynamism of various Brazilian service sectors in perspective and further evidenced Brazil’s success in exporting services (figure 8.5). During 2003–07 (the period for which data were available), most of the service sectors were champions in exporting to the world; that is, they had large market shares, and their export levels were above world averages. Insurance services and computer and information services were also somewhat successful, gaining a much larger market share in the same period and maintaining a growth rate much larger than the world average. The only sector that did not perform well was communication services, which lost market share and grew at rates below the world average.

The State of the Fundamental Factors in Brazil

With a US$1,577 billion GDP and a population of 191 million in 2010, Brazil is the 10th-largest economy and the 5th most populous nation in the world. During the 1990s and 2000s, the country has taken important steps toward achieving macroeconomic stability and liberalizing its economy. The progress made during that period is believed to explain Brazil’s rise as a dynamic economy worthy of comparison with China, India, and Russia. Between 2004 and 2008, Brazil experienced an average GDP growth of 4.7 percent, but its economy contracted by 0.2 percent in 2009. This negative result can largely be attributed to the global financial crisis and shows that Brazil fared better than most countries during that period. Furthermore, Brazil was one of the first emerging markets to begin recovering, and its GDP is expected to grow by 5 percent in 2010.
Brazil ranked 56th in the World Economic Forum’s 2009–10 Global Competitiveness Index out of the 134 economies studied (Schwab 2009). However, when considering only the 10 most important indicators related to the business environment, the country ranked 30th. Also, Brazil was listed as one of the top five countries that would actually gain competitiveness as a result of the global financial crisis (along with Australia, Canada, China, and India). This position reflects the dynamism, sophistication, and efficiency of Brazil’s business regime and the capacity for innovation. Those factors, combined with a vast and expanding domestic market, an abundance of natural resources, and a well-developed industrial sector, put Brazil in an advantageous position in the global market.

Figure 8.5. Dynamism and Brazilian International Participation, 2003–07

Source: Author’s representation based on Central Bank of Brazil data.  
Note: The size of the spheres reflects the level of exports in the 2003–07 period. The thick gray line corresponds to the world’s average export growth.
Unfortunately, Brazil still has much to do to improve the poor quality of most of its institutions, its inadequate infrastructure, and its excessive government regulation. Brazil was ranked relatively lower (109th) in the Global Competitiveness Index in terms of its macroeconomic stability, whereas it did well in business sophistication and innovation with a ranking of 32nd and 43rd respectively.

The World Bank’s Doing Business indicators also shed some light on the business climate in Brazil. Surprisingly, the Brazilian map for ease of doing business is way below what might be expected for a country that is only second to China in attracting FDI in the developing world. However, in 2010, the World Bank ranked Brazil 129th in the world for ease of doing business, two positions lower than its rank in 2009. Brazil especially fares poorly in rankings for paying taxes (150th), and its ranking is getting worse. Brazilian companies spend a striking 2,600 hours per year doing taxes, compared with the Latin American average of 385.2 hours Organisation for Economic Co-operation and Development average (OECD) of 194.1 hours. Brazil performed well, however, with respect to protecting investors (ranked 73rd) and allowing access to credit (ranked 87th).

The specific effect of Doing Business rankings on service exports is indirect, although extremely relevant, particularly when one compares Brazil with competing countries. Like Brazil, India is also known for being bureaucratic, but Brazil fares better than India when it comes to starting and closing a business, dealing with construction permits, and enforcing contracts, and paying taxes. However, India tends to do better in employing workers, registering property, getting credit, and protecting investors (figure 8.6).

Similarly, China does not fare as well in the early phases of doing business (such as starting a business and protecting investors) compared to Brazil (figure 8.7). Because exporting normally requires a reasonable level of success in domestic markets, postestablishment factors (such as registering a company or getting credit) certainly may have a significant bearing on export competitiveness, especially in terms of delays.

The ICT industry association, BRASSCOM, attributes most of that sector’s success in exporting services to Brazil’s business environment (figure 8.8). In other words, the ICT sector is especially sensitive to the business environment and much of its competitiveness hinges on it. This finding corroborates those of A.T. Kearney’s (2009b, 2011) study on the most attractive offshoring locations, where Brazil is ranked 12 among 50 countries.

Nevertheless, the ICT sector may fare well despite whether overall economic conditions are good or bad. In 2009, for example, while firms in many sectors of the economy were decreasing their number of employees, IT companies were
aiming for a large number of recruits but were unable to find software professionals. This difference is especially relevant, because most IT jobs are related to export, as in the case of IBM do Brasil, in which 80 percent of the openings are targeted for export. IBM has consistently made efforts to close the gap between

Figure 8.6. Doing Business Rankings, Brazil versus India, 2010

Note: Brazil is ranked 129th and India is ranked 133rd for overall ease of doing business.

Figure 8.7. Doing Business Rankings, Brazil versus China, 2010

Note: Brazil is ranked 129th and China is ranked 89th for overall ease of doing business.
the profile of a recent graduate and the desired profile of an employee. Between 2005 and 2008, IBM’s number of Brazilian employees grew by more than 50 percent, reaching 15,400.

IBM’s executives chose to locate their businesses in Brazil because of the quality of Brazilian workers, the similarity in time zone with the United States, and the relatively low labor costs. They also indicate that the recent global financial crisis helped the Brazilian ICT sector, because outsourcing constitutes an effective means of reducing costs. Thus, the sector can perhaps be seen as countercyclical—growing in times of general economic downturns because struggling firms need IT to reduce costs. Because IT also helps manage growth during expansion periods, however, the sector cannot be characterized as simply countercyclical. In addition to the available employee positions in 2009, the IT sector planned to create 100,000 new jobs by 2011 (not including call centers, which would add 50,000 more jobs) (Fuoco 2009).

The downside for the Brazilian IT sector is its cost relative to its Asian competitors. The A.T. Kearney (2009b) study indicates that, even if Brazil could match the tax incentives in China and India, it would still be less competitive than those two BRICs because of its high cost. As late as 2007, Brazil was ranked by A.T. Kearney the fifth most attractive offshore destination after India, China, Malaysia, and Thailand, which is considerable improvement from two years earlier when Brazil ranked 10th. Since 2009, though, Brazil is ranked 12th among 50 countries because of a strengthening of its currency.
The other sector that identified business environment as a fundamental reason for export success was tourism. The Brazilian Association of Travel Agencies (Associação Brasileira de Agentes Viagens) listed the item as the second most important reason for export success after entrepreneurial strategy. This finding suggests that, from a public policy perspective, a special focus on improving the business environment is crucial in diversifying service exports.

The ICT sector has also grown very fast because of its link to the financial sector. According to BRASSCOM, the automatization of banking has placed the financial sector among the most promising exporting sectors. Both domestic and foreign banks play a role in the development of exports of ICT solutions for financial services providers. Using their in-house resources, Brazilian domestic banks invested in ICT to serve their customers in inflationary environments during the late 1970s. Later, in a more stable macroeconomic environment, their focus shifted to providing a diversified range of Internet-based services. Between 2000 and 2008, the number of Internet-based banking accounts reached 32.5 million with an average annual growth rate of 9.1 percent. In 2008, Brazilian banks’ ICT expenses reached US$8.8 billion. However, during the 1990s foreign banks’ access to the financial market allowed the development of centers that provide global financial services from Brazil (Bastos Tigre and Lemme 2010).

**Regulations and Institutions**

Brazil started liberalizing and opening its economy in the early 1990s, but, despite significant progress in some areas, the institutional environment still lags the country’s dynamic entrepreneurial capacity. The regulatory framework, which was modernized, improved, and updated to include broad policy reforms, requires further strengthening in several sectors.

Since the 1990s, Brazil has created several regulatory agencies to oversee the functioning of various service sectors. The federal government focuses mainly on economic regulation, and state and local regulatory agencies at times contribute to regulatory supervision, as is often the case in environmental matters. The excessive number of agencies often results in bureaucratic disputes, and approval requirements at various government levels can make business difficult. Furthermore, the independence of these agencies could also be enhanced. Yet improving the overall regulatory framework has been among the government’s priorities. More specifically, there is growing focus on the need to increase transparency and accountability and to introduce new tools for evidenced-based regulatory performance decision making (OECD 2008; dos Santos 2010).
The regulatory framework makes Brazil one of the least efficient countries in the world in terms of the time and number of procedures required to start a business. Nonfinancial costs represent a significant obstacle to starting businesses, and there is much room for improvement when it comes to eliminating bureaucracy and red tape in public institutions. To attenuate the burden of regulation and reduce uncertainty, policy makers should better coordinate across agencies and reinforce the independence of those agencies.

Service activities tend to be more prone to red tape and bureaucratic discretion because they are usually more regulated and are monitored in a much more diverse and nontransparent manner than are other economic activities. To the extent that services obey national policy objectives that, in turn, require specific regulatory approaches at various levels of the activity chain (for example, at preestablishment, establishment, and postestablishment), bureaucratic sluggishness and reticence can easily become more rampant. Exports, however, are more complicated because they involve international money transfers, exchange rate transactions, and trade-related documents.

Representing the software industry in Brazil, ABES names the regulatory framework as one of the top reasons for export success, along with low labor costs and availability of qualified labor (figure 8.9). Moreover, adequate regulations may also play a positive role in the development of service industries. According to Bastos Tigre and Lemme (2010), Brazil’s adoption of international financial standards promoted the development of outsourcing activities.

Skill Availability

In 2009, Brazil ranked 53rd in reading performance, 52nd in mathematics performance, and 53rd in science performance out of 65 countries in the OECD’s Programme for International Student Assessment (OECD 2010). This position reflects Brazil’s poor quality of education at basic levels (primary and secondary education), which resulted from a system that lacked investment and focused on higher education. In recent years, attention has shifted to basic education, and investments in overall education have increased significantly, reaching 4.29 percent and 4.09 percent of government investment for basic education and higher education, respectively.

Federal programs aimed to improve Brazil’s overall education level by addressing one of the country’s main education issues—the high number of primary and secondary school dropouts. By granting low-income families financial incentives for keeping children in school, these programs significantly raised enrollment rates and succeeded in keeping children off the streets and from leaving school for substandard jobs. By 2008, Brazil achieved universal enrollment in secondary
education and close to universal enrollment at the primary level (94.4 percent enrollment). This achievement was an important and necessary step in increasing the level of education, but it did not address the quality issue. Overall quality improvement can be achieved only when policies and investments are put in place to ensure that children are not only in school but also provided adequate infrastructure and qualified instructors.

Brazil also lags when it comes to internationalizing education. Only a small number of students travel abroad to receive part, or all, of their higher education in other countries. The main sources of government funding are scholarships from the National Council for Scientific and Technological Development (Conselho Nacional de Desenvolvimento Científico e Tecnológico), which can be applied to graduate (not for a master’s degree) and postgraduate study, training, and internships in several areas of study. The scholarships are comprehensive, and no repayments are required as long as the graduate returns to Brazil to work for a period equal to, or longer than, his or her length of study.

When it comes to service exports, executives and experts note that Brazilian education continues to be primarily domestic in nature. For instance, legal experts point to the virtual nonexistence of Brazilian universities that focus on training lawyers for export markets at the undergraduate level. Such training is usually offered only at the graduate level, if it is offered at all.

In the case of the ICT sector, the main concern regarding skill level is that most technicians and professionals end up entering the labor market before concluding
a formal university course. In other words, demand is outstripping supply, and new entrants join the labor market without the necessary skills. Hence, ABES has helped promote a more market-oriented type of training in an attempt to fill the current skill gap. High domestic demand for professionals also obviates recourse to scholarships in developed countries and explains the low number of candidates for existing programs.

IBM do Brasil provides an interesting case. More than 80 percent of the personnel hired by IBM in Brazil are allocated to the service export segment, making the challenge of finding qualified people even more difficult given the education and international experience required for exporting services. As a result, IBM has to decline projects whenever teams cannot be assembled quickly enough. Sector experts and executives note that universities provide a reasonable number of graduates, but these graduates leave the academic institutions with very general knowledge and not with specialist certification, which the market needs its employees to have.

Because curricula are not updated to meet certification requirements, companies can spend two to three months training workers. In partnership with a group of about 700 academic institutions, IBM has worked to provide relevant training to students during their undergraduate studies and has advocated teaching students English starting in high school (Fuoco 2009). In terms of the number of English-speaking inhabitants, Brazil is only second to India (by a factor of nine). In terms of the quality of English as a second language, Brazil loses only to Argentina and Chile in TOEFL (Test of English as a Foreign Language) scores among BRIC and Latin American countries.

Cost and Price Comparisons

In 2009, Brazil ranked 105th in the world in terms of per capita GDP, with each of its citizens earning an average of US$10,200. This value, however, does not reflect average compensation in the service sector, because Brazil has one of the highest levels of income inequality. Wages in the sector are, indeed, lower than in developed countries, but they are relatively high when compared with wages in other emerging nations. Hence, low wages are not seen as a reason for export-minded FDI as they are in China and India. Instead, FDI in the Brazilian service sector is mainly market seeking rather than efficiency seeking, and it focuses on benefiting from the vast and expanding internal market. The cost of labor can be high, particularly when compared to Brazil’s main competitors (as seen in the sections that follow).

From the point of view of domestic service providers, high income taxes are seen as a burden because they entail extra costs for employers with no gains in
worker productivity. Furthermore, rigidities in the labor market increase both the financial and nonfinancial costs of hiring and firing. There are no major differences, in this respect, between service and manufacturing activities; therefore, Brazil is often at a disadvantage compared to its competitors in both goods and services. Those two factors increase the perceived wage to employers, reducing some of the comparative advantage. However, the large domestic market allows firms to enjoy economies of scale and become more competitive at the global level.

In the case of the software service sector, the cost of labor is the most important fundamental aspect underlying the sector’s competitiveness. Clearly, the item has been decreasing in relevance compared to other aspects, such as tax burden and structure, but the cost of labor remains a strong influence in the sector, particularly when compared to competing countries (Bastos Tigre and Lemme 2010).

The so-called compensation costs (that is, annual base salaries plus allowances, variable bonuses, and commissions) for analysts and managers in the software service sector reveal Brazil’s vulnerabilities. The cost for analysts is lower in Brazil only relative to Chile and Mexico in Latin America, whereas it is more than two times the cost for analysts in China and three times the cost in China. In the case of managers, Brazil has the highest cost in the world according to recent estimates (Economist 2011).

The cost proposition in Brazil worsens when one goes beyond compensation and so-called tax benefits—that is, taxes paid to the government on behalf of the worker. Such benefits account for close to 39 percent of the base salary in Brazil, as opposed to 21 percent in Argentina and 22 percent in Mexico. Surprisingly, China’s tax benefits are 35.0 percent. However, the figure for India is 16.8 percent, whereas Chile has a record low of 4.9 percent. Assuming the base salary to be 100.0 percent, total labor cost would correspond to 153.1 percent in the case of Brazil compared to 108.1 percent for Chile, 116.8 percent for India, 129.3 percent for Argentina, 131.4 percent for Mexico, and 135.0 percent for China (which has no take-home benefits or take-home cash in addition to the base salary). Various social benefits granted by the Brazilian labor laws, such as annual maternity and sick leave, also entail considerable additional cost. In this area, Brazil ranks worse than any of its main competitors (A.T. Kearney 2009a).

**Openness to FDI**

Brazilian direct investment abroad (BDIA) has been a very important factor in service exports (figure 8.10). In the past 20 years, particularly in the 2000s, Brazil was transformed from being only a receiver of FDI to being a sender of FDI as well. According to the Central Bank of Brazil, BDIA stock reached
US$164.5 billion in 2009 compared with US$49.7 billion in 2001 (the first year in which data are available). The direct participation of residents in the capital of companies totaled US$132.4 billion, a growth of 16.4 percent compared to 2008. The rest corresponds to intercompany loans (US$32 billion). BDIA (excluding intercompany loans) is concentrated in the agricultural and extraction of metallic minerals sectors (32 percent of the total, of which 94 percent are invested in metallic and minerals activities) and in financial services and ancillary activities (39 percent of the total). Regarding the geographic distribution of these investments abroad, Austria is the largest market of destination, with a share of 27.4 percent of the total stock invested abroad, followed by the Cayman Islands (13.8 percent), the British Virgin Islands (10.1 percent), The Bahamas (7.8 percent), the United States (7.5 percent), Denmark (7.3 percent), and Spain (4.0 percent). The rest is distributed among a large number of countries.³
Brazilian investment abroad is diversified in terms of both sectors and markets (ECLAC 2005). Although the biggest investments have been directed to mining and manufacturing activities, Brazilian firms have also invested in services. Construction companies that initiated the internationalization process (such as Andrade Gutierrez, Odebrecht, and Camargo Corrêa) have also diversified beyond the construction and engineering activities to include a larger set of sectors. Banco Itaú has also expanded its operations to include other Latin American countries (see annex 8.A).

Inward FDI in services peaked in the second half of the 1990s, hovering around 60 percent of all FDI. This peak was largely the result of Brazil privatizing the telecommunication and transport sectors, revamping the financial sector, and improving the overall investment climate by stabilizing the Brazilian economy. FDI in services decreased in relative importance to about 30 percent of total FDI. In 2008 and 2009, FDI in services stabilized at about 39 percent of total FDI (figures 8.11 and 8.12).

Services have figured prominently as a target for FDI in the country over the years. In 2008, inward FDI in the service sector reached its highest level, totaling US$16.9 billion. The 2009 results were 16.3 percent lower than those in the previous year—once again reflecting the harsh times of the global financial crisis and

Figure 8.11. FDI in the Service Sector, 2004–09

Source: Data from Central Bank of Brazil.
its aftermath. The main sources of inward FDI have been Germany, the Netherlands, Spain, and the United States, which together have accounted for 66.3 percent of total FDI in Brazil.

In 2009, 45 percent of FDI inflow was in services. This contrasts starkly with the FDI stock in 1995 and 2000, when services accounted for 31 percent and 64 percent of the total, respectively. The reason for such a high stock in 2000 was the opening of the economy that took place in the 1990s and, especially, the flow of FDI in the second half of that decade. Contrary to common belief, however, the high inflows of FDI in services were not primarily the result of the formidable privatization that took place in Brazil during the period 1996–2000 (figure 8.13). In fact, the Central Bank’s 2001 Foreign Capital Census showed that, of the US$112.6 billion in FDI in Brazil in the 1996–2000 period, only US$29.6 billion (or less than a third) was related to privatization. In the case of telecommunications, however, the largest privatization program in the world accounted for much of the FDI in that sector. In the remaining service sectors (such as the financial sector), the new climate, which boasted economic stabilization and the beginning of structural reforms, attracted most investments.4

The service sector’s participation in total FDI has been decreasing rapidly since 2005, despite nominal increases in total flows, as in the 2006–08 period

**Figure 8.12.** FDI in Brazil, 2005–09

![Bar chart showing share of total FDI in Brazil from 2005 to 2009 by sector: agriculture, mining, and fisheries, manufacturing, and services.](image)
In 2005, 60.1 percent of total FDI was in services, but that number had decreased to 38.5 percent by 2008. The data for 2009 show the agriculture, mining, and fisheries receiving 13 percent of total FDI; manufacturing receiving 42 percent; and services receiving 45 percent.

The privatization that occurred in the early 1990s was one of the most extensive reforms in the world and drastically changed the dynamics of the Brazilian economy, especially in the service sector. Three-fourths of privatizations involved the service sector, which brought in large amounts of investment. Yet the consistent introduction of competition in areas formerly monopolized by the government contributed to most of the gains. Privatization was a determinant factor in increasing firm efficiency and improving the comparative advantage of the economy, in general, and the service sector, in particular.

Of the service sector’s 45 percent of total FDI inflow in 2009, financial services accounted for 11 percent, commerce for 9 percent, insurance for 5 percent, construction for 4 percent, transport for 3 percent, and BPT services for 2 percent (figure 8.13). A striking element in this context is the low level of inward FDI for the most prominent service-exporting sectors—namely, BPT, transport, and travel. This low level points to FDI inflows’ lack of relevance in determining success in exporting services.

The breakdown of FDI inflows by sector has varied considerably in the case of the communication sector, which includes postal and telecommunication services. In the beginning of the 2000s, that sector accounted for 34 percent of all FDI inflows, followed by financial services with 13 percent, utilities with

Figure 8.13. FDI Inflows as a Share of Total FDI, by Sector, 2009

Source: Data from Central Bank of Brazil.
8 percent, and commerce with 7 percent. In 2009, communications accounted for only 1 percent of total inflows.

Relatively low labor costs contribute to Brazil’s attractiveness for export-oriented FDI, and the government has implemented a series of benefits and incentives for exporters, such as the special tax regime for exports of IT services. Despite these attractive factors, the possibility of exporting does not seem to be a major promoter of FDI in Brazil as it is in China and India. This finding may suggest that market seeking has been the main driver of FDI in Brazil, unlike the case of Mexico, where efficiency seeking seems to predominate (ECLAC 2008).

**Government Support**

BNDES is the main financing branch of Brazil’s federal government, offering an extensive number of solutions to firms. In 1997, BNDES started offering service exporters specially designed programs that enable these exporters to compete at the global level. The first such program began in 1997; BNDES provided financial support for a Brazilian firm’s venture to build highways in Ecuador. Such support in construction service exports peaked in 1998, when construction services’ success in the international market was at least partially the result of the availability of credit. Financing was vital to such projects because extremely large firms dominate global construction. According to *Engineering News-Record*, three Brazilian firms are the only South American firms among the 225 largest infrastructure and engineering companies (Reina and Tulacz 2008). In the face of intense competition, Brazil’s domestic market size definitely helps ensure comparative advantage—at least relative to Brazil’s South American neighbors.

BNDES’s expenditures in credit lines increased 28-fold from 1998 to 2009, having gone from US$49.0 million to almost US$1.4 billion during the period (figure 8.14). The bank has a special focus on supporting service exports that are intensive in intellectual content, such as software and computer services and engineering services in infrastructure projects. In the case of construction and engineering service exports, BNDES primarily supports projects in Angola and Latin America, where the demand for infrastructure is very high because of strong competition from third-country companies.

In the case of software and computer services, BNDES’s involvement has taken place under the program Prosoft Export (Prosoft Exportação), which focuses on small and medium-size enterprises (SMEs) in the sector. This program finances the investments and business plans of companies located in Brazil, assists with domestic marketing, and exports software and related services through three subprograms: Prosoft Company, Prosoft Marketing, and Prosoft Export. But the overall use of the funds has been limited because of several factors, among them
inadequate human resources for assessing the projects and the cost of financial guarantees (Marques 2009).

Other programs in Brazil also support service exports, including, but not limited to, the following:

- The Exports Financing Program of Brazil (Programa de Financiamento às Exportações Brasileiras) provides financing for micro, small, and medium-size companies that produce goods or provide services to export.
- The Exports Credit Insurance program insures Brazilian goods and service exports against commercial, political, and extraordinary risks.
- The Exports Assurance Fund supplies coverage for the export credit insurance operations.

Besides the C&RS sector, only the ICT service sector has benefited from access to bank credit. However, of the US$665.0 million financed for service exports in 2007, only US$95.2 million (14 percent) went to software and ICT service exports. In 2008, the corresponding share was even smaller (8.7 percent) for an overall disbursement of more than US$1 billion. In 2009, 100 percent (US$1.38 billion) of the financing went to construction and engineering (Galvão and Catermol 2008).

**Factors behind success: The specifics**

Generally speaking, Brazil has little, or close to no, special or specific policies regarding improving service exports (Fonseca Moreira 2007). Policies on general
services (not focused on exports) tend to be sectoral and domestic in nature, as sector ministries and agencies so determine. The predominance of regulatory and state entities in the economic life of service sectors is evident. Even professional services have federal councils that oversee their activity, which contrasts with the usual practice of delegating regulation and oversight to private bodies.

Service exports, of course, differ from domestic services. Regulatory agencies that address service matters, such as telecommunications or transport, do venture into the international realm, but not with an exporting mindset. Effectively, much could be done to create a culture around the notion that services are exportable and that many international service transactions are now considered service exports. ApexBrasil, the export promotion agency, and the Foreign Trade Secretariat within the Ministry of Development’s Industry and Foreign Trade are only now starting to examine service exports systematically—still far from developing anything that looks like a structured policy on the matter.

In 2004, the software sector was selected as a priority sector for industrial, technological, and foreign trade policy. A set of policies was implemented to promote technological innovation, investment, and software development. A special tax regime for the IT service export platform was implemented, as well as other tax incentives that aimed to expand Brazil’s IT service exports. In addition, the 2005 Law of Technological Innovation encouraged interaction among companies, research centers, and universities, which stimulated the development of new ideas and innovative products (SOFTEX 2009; Valls Pereira, Sennes, and Muder 2009).

International trade negotiations have played a minor role in service exports. The World Trade Organization remains the sole recipient of service commitments. Brazil is known for negotiating only partial and very limited trade agreements—virtually all devoted to goods trade. Chile, an associate member of Mercosur, has only recently convinced Brazil and Mercosur’s three original members to negotiate services. Neither the Free Trade Area of the Americas nor the Mercosur-EU negotiations have resulted in the inclusion of services in Brazil’s bilateral or regional commitments in the sector. Although Mercosur members formed a service agreement in 1998, the agreement’s provisions did not enter into force until the end of 2005. Moreover, several service-negotiating rounds have been conducted under this agreement, but none of their provisions have been implemented yet.

Brazil has double taxation agreements with 26 countries, but not with Germany (which recently renounced the agreement) or the United States. Brazil has not been able to close an agreement, including an investment, with the United States for more than 50 years. In other words, Brazil’s success in exporting services has hardly anything to do with the existence of free trade, taxation, or investment agreements.
BPT services

The BPT service subsector experienced a shift in exports after 2003 (figure 8.15). By 2009, the main Brazilian service exports reached US$12.8 billion, or 46.1 percent of total service exports, and the highest surplus was in the service sector (US$7.7 billion). Even if the architectural, engineering, and other technical services subsector is not taken into account, the surplus is still US$5.3 billion.

Figure 8.15. BPT Service Exports, 1999–2009

Source: Central Bank of Brazil balance of payments data.
Architectural, engineering, and other technical services must be combined with construction services to do justice to the market-relevant cluster of services that Brazil exports.

In 2009, three subsectors accounted for more than the 90 percent of BPT exports: architecture, engineering, and other technical services (44.2 percent); office installation and maintenance and real estate rental (29.3 percent); and professional fees (21.2 percent).

Most experts and executives attribute the extra boost in the sector to the advent of the Internet as an everyday tool in the work of companies in the subsector. Most of the services that account for BPT exports can be delivered electronically and have benefited greatly from the diffusion and advancement of the Internet. Other services that have reportedly benefited from the significant progress in ICT were insurance service exports and financial service exports, which grew rapidly after 2004 and 2005, respectively. Although software can also be delivered electronically, the software sector did not experience the same growth as the BPT sector because it was not as well developed as other sectors.

*The case of legal services*

One of the service sectors most sensitive to FDI is the legal service sector. Experts and representatives from that sector, such as the Center for the Study of Law Firms (Centro de Estudos das Sociedades de Advogados) point to Brazil’s openness to FDI as one of the fundamental reasons for the country’s success in service exports. The sector is responsive to economic conditions in general and to the entry of FDI in the national market in particular. The entry of FDI brings with it great demand for legal services—the type that will produce a successful establishment or investment into national borders. Such services are supplied through mode 2 (that is, through consumption abroad). The Brazilian legal service supplier remains in the Brazilian market and works with foreign consumers or clients abroad.

It would be imprecise to affirm that FDI stimulates the export of Brazilian legal services only in times of growth, because such exports are also stimulated in times of crises or other stresses on the national economy. The main differences between the effects of positive and negative growth lie in the types of legal services that may become exports. When the national economy is bullish (that is, attracting FDI and growing), the bulk of legal service exports is related to establishment, real estate, capital markets, and project finance law among other segments. Alternatively, when times are bearish, legal service exports are also demanded, but they are wanted in other legal segments, such as company recovery, general litigation, and tax litigation.
According to Valls Pereira, Sennes, and Muder (2009), several Brazilian law firms have established an international presence through partnership networks, through associations with firms in other countries, or through independent offices. The firms’ strategy was to follow the internationalization process of their clients. This process explains the increased participation of legal services in the exports of other business services from 1 percent to 14 percent between 2001/02 and 2005/06. South America is the main destination market for these firms.

Other services

Brazilian companies have also chosen to internationalize their operations through franchising operations. International brands have become part of domestic marketing strategies. Franchise development is in its initial stages among the 400 companies that are part of the Brazilian Franchise Association. In 2007, only 35 of those companies had gone international. Other service activities that are in their developing stage are medical services (specifically, remote diagnoses and teleradiology) and health tourism (Valls Pereira, Sennes, and Muder 2009).

“Macroeconomic jumping”: Construction and related services

C&RS exports are traditional service exports for Brazil. In the second half of the 20th century, these exports grew thanks to the government initiating a major effort to develop domestic infrastructure. The strength of this effort allowed companies to participate in construction projects in the 1970s and 1980s, initiating successful internationalization (ECLAC 2005).

C&RS exports have grown significantly since 1993, a phenomenon that was inversely related to Brazil’s macroeconomic conditions at the time. During the 1990s, when economic conditions, in general, were improving considerably because of the stabilization of the economy and the end of inflation, C&RS firms were encouraged to establish abroad in better and more profitable markets. With macroeconomic stabilization, firms lacked access to credit, faced high interest rates, and had to reduce their economic activity for a while, which finally forced them to look abroad. Thus, firms had to “jump” borders to escape Brazil’s macroeconomic conditions. After 1993, the domestic and exporting sectors switched places. Domestic revenues dropped 74 percent in two years and then experienced virtually no growth between 1995 and 2004. Conversely, exports grew by 1,647 percent between 1993 and 2000, clearly displaying signs of a substitution effect.

C&RS exports, however, peaked in 2000, then shrank by 14.3 percent in 2001, and then grew just 3.1 percent until 2003. After 2003, economic conditions started to affect exports in a different way. Sales of C&RS services abroad resumed in
2004—the year when the domestic sector also grew significantly. Whereas domestic revenues grew by 55.7 percent between 2003 and 2007, foreign sales grew by 148.0 percent during the same period.

The strengthening of the domestic market was an important factor contributing to firms’ competitiveness abroad. The 2002–07 period was a time of consolidation and growth in the size of firms. Despite the increase in both domestic and export revenues, the total number of firms decreased, increasing the average revenue by 69.9 percent. Growth is also reflected in the average number of employees per firm, which grew by 36.8 percent as these companies gained strength to compete in the global market.

Furthermore, according to the World Bank’s Doing Business data, the cost of dealing with construction permits significantly decreased from 66 percent of per capita income in 2006 to 51 percent in 2010 (figure 8.16). Construction permits are inefficient and generate deadweight loss in the economy. As the costs of such permits decrease as a share of total expenditure, factors that add value (such as skilled labor or high-quality material) account for a larger portion of the growth

**Figure 8.16.** Cost of Dealing with Construction Permits, 2006–10

![Graph showing the cost of dealing with construction permits from 2006 to 2010, with a decrease from 65.7% to 50.6% over the period.](http://www.doingbusiness.org)
in costs. Increased expenditures in these areas do not harm sector competitiveness; rather, expenditures greatly increase the competitiveness of national firms, thus increasing firms’ chances of surviving in international markets.

The sector has also benefited from the support of BNDES. Moreover, the construction sector considers government support the most important reason for its success in exporting services followed by entrepreneurial strategies and FDI openness (figure 8.17).

**Significantly lagging: Transport services**

Although Brazil seems to be on the right path for economic development, it still lags its potential, both in terms of GDP growth and international market participation. One of the main factors hindering Brazil’s progress in exporting services (in particular, transportation services) is the country’s highly deficient physical infrastructure. Ineffective regulation, lack of investment, and unbalanced transportation mode use are some of the reasons for the poor quality of Brazilian transportation networks. Transportation infrastructure has a major

---

**Figure 8.17.** Importance of Each Fundamental Aspect, Construction

Source: Data from São Paulo Association of Entrepreneurs of Public Works.

Note: Importance is ranked on a scale of 1 to 10, where 1 is least important and 10 is most important.
effect on the overall performance of the economy. Poor quality of physical infrastructure creates bottlenecks for goods trade, which, in turn, restricts trade in transport services.

Brazil ranked 74th in the *Global Competitiveness Report 2009–2010* for infrastructure, which does not even reflect the country’s poor performance in the individual transportation areas (Schwab 2009). Brazilian general infrastructure ranked 81st, while specific infrastructure ranked 65th. The lack of railroads earned the country the 86th position in that category, and port infrastructure ranked 127th. Because most Brazilian airports operate close to or above capacity, air transport infrastructure earned the 89th position. Also, the lack of infrastructure in maritime and air transport modes leads to overuse of road transport, which already suffers from quality problems. Brazil ranked 106th for road quality, and overuse of roads further deteriorates the network. The country’s dependence on ground transport is an obstacle to major reconstruction work. Figure 8.18 compares Brazil and the United States in terms of infrastructure and transport infrastructure.

**Figure 8.18.** Competitiveness of Transport Infrastructure, Brazil versus the United States, 2009–10

![Competitiveness of Transport Infrastructure, Brazil versus the United States, 2009–10](image)

*Source: Schwab 2009.*

*Note: Competitiveness is ranked on a scale of 1 to 6, where 1 is least competitive and 6 is most competitive.*
The Inter-American Development Bank’s publication, “Unclogging the Arteries: The Impact of Transport Costs on Latin American and Caribbean Trade,” estimates that a 10 percent reduction in freight costs in nine Latin American countries, including Brazil, could result, on average, in a 39 percent increase in goods exports to the United States, compared to only a 2 percent increase if U.S. tariffs were lowered by 10 percent (Mesquita Moreira, Volpe, and Blyde 2008). The lack of high-quality infrastructure directly affects the transport industry’s competitiveness abroad, and it indirectly limits transport service exports by reducing goods trade and making goods more inefficient and expensive.

The transport service subsector has always had the potential to be competitive in the global market because Brazil’s domestic market size and physical dimensions could be seen as comparative advantages. However, lack of competition, especially in air transport, allowed for the survival of inefficient firms and for the existence of high margins, which discouraged international ventures.

**Export Promotion Policies**

ApexBrasil, the Brazilian trade and investment promotion agency, supports projects comprising export promotion activities (unlike BNDES, which provides financial support). In general, sector associations, goods and service exporters, or micro or small enterprise consortia design and propose the projects. Projects supported by ApexBrasil are grouped into three main categories:

- Integrated sectoral projects benefit companies that are active in a certain sector, with nationwide coverage.
- Projects for groups of small exporters benefit small enterprises organized under consortia or cooperatives.
- Single-purpose projects aim to achieve a specific promotional initiative.

In services, ApexBrasil emphasizes the so-called creativity sectors, including music, audiovisual, entertainment, and fashion. The ICT and health service sectors are also included in current programs by the agency. The following are under ApexBrasil’s export promotion plans:

- **Entertainment and services.** ApexBrasil promotes economic activities in which creativity is the most important asset, including Brazilian music, musical instruments and accessories, film and television (coproduction of television programs and documentaries), advertising films, franchises, and tourism.
• *Projeto Brasil MIXITUP.* The main objective of this project is to promote the internationalization of Brazilian entertainment companies, increase the number of exporting companies, consolidate existing markets, and open new markets for Brazilian goods and services.

• *ICT.* The Brazilian software industry stands out in the global IT market because of its excellence and the quality of its products. With the goal of leveraging exports from the sector, ApexBrasil has been actively working in the software and related service sector. ApexBrasil emphasizes the following vertical segments: software for banking automation, telecommunications, electronic government, Internet, health care, business management, security, games, and application service provider services.

• *Health.* Initiatives support a variety of high-value-added products in the health service sector, such as medical, dental, hospital, and laboratory articles and equipment, as well as health and hospital management services.

The Brazilian government has also been promoting exports through horizontal and vertical policies of a broader nature. In May 2008, Brazil implemented the Policy for Productive Development (Política de Desenvolvimento Produtivo, or PDP), which aims to expand Brazilian supply capacity, continuously improve the current account, increase innovative capacity, and strengthen SMEs. The PDP’s main goals are to increase the investment rate, expand the participation of Brazilian exports in the world market, increase private spending on research and development, and augment the number of exporting SMEs.

The PDP’s mobilizing programs for strategic areas include ICT, nanotechnology, and biotechnology, as well as the defense industrial complex, nuclear power industrial complex, and health industrial complex. There are also programs to strengthen the country’s competitiveness, with a focus on productive complexes that have export potential. Special institutional arrangements are devoted to service exports, such as the service complex, which aims to increase service exports; provide Brazil with a system for information, management, and operations in international service trade; diversify and proliferate Brazilian service exports; and qualify companies that provide services in international trade.

In the specific case of service-related skills and qualifications, studies have shown that an increase of 1.00 percent in the average time devoted to education by workers improves the propensity of firms to export services by 0.68 percent, whereas the corresponding figure for the export of goods is only 0.02 percent. In other words, education and skills more significantly influence service exports than they do goods exports at the firm level, which points to the greater benefits of public policy tailored to human capital capacity-building in service sectors (Moreira, Alves, and Kubota 2006).
Role of Private Associations

The Brazilian International Trade Association is a private association that supports goods and service-exporting companies. It gathers statistics and studies relevant subjects to develop policy, solve problems, and help improve production methods to achieve better productivity, lower costs, and higher quality. The Brazilian International Trade Association also helps improve financing and insurance systems for export activities, and it lobbies for policies that facilitate international trade. In addition, the association proposes ways to ease the creation of new, export-oriented firms and the expansion of existing ones that focus on trade. Furthermore, it provides legal consulting to its members and connects with similar entities abroad, as well as with international organizations.

A similar institution is the Center for International Trade Studies Foundation, which has the primary objective of developing Brazilian international trade. The foundation is an independent and permanent channel for communication between the public and private sectors. It plays an important role in implementing international trade policies that correspond to the ambitions and capacity of entrepreneurs. The Center for International Trade Studies Foundation conducts and publishes sector-level studies about the main aspects involved in import and export activities, supplying technical support and managerial tools to entrepreneurs. Training and qualifying specialized technical staff members, providing courses, and contracting studies are also among its activities.

Both the Center for International Trade Studies Foundation and the Brazilian International Trade Association are very focused on trade in goods. Trade in services, or service exports for that matter, have rarely been a topic of study, debate, or strategic thinking on the part of those two institutions. All the same, Brazil is home to national confederations of industry, agriculture, commerce, transport, and, recently, tourism. Clearly, those confederations and state-level federations related to service sectors (such as those in commerce, transport, and tourism) do deal with matters related to services, but with a strong domestic focus.

The private sector is also very well organized into national sector associations related to the various service sectors, many of which have been consulted for this study. Most of these associations tend to focus on the domestic market rather than foreign trade or international markets.

Only recently, an informal group of service-related institutions called the Services Dialogue (Diálogo Serviços) has begun addressing services. The group meets at the São Paulo Federation of Commerce. As a general rule, Brazil has not yet been amenable to the worldwide movement toward the formation of
business-supported service coalitions, which were much more common in the 1980s and 1990s, when multilateral and regional trade negotiations were popular. However, great scope exists for the private sector to increase its involvement in matters relating to general service trade—particularly service exports. As the Brazilian economy continues its internationalization, greater institutional involvement on the part of business entities will tend to increase their influence and supporting role in government efforts to develop services exports.

**Conclusion**

Brazilian growth in service exports has witnessed three distinct phases. The first phase is characterized by the export of construction and C&RSs. As a result of their experience in domestic infrastructure projects from the 1950s to the 1970s, several Brazilian construction companies could successfully bid on international projects. The second phase of internationalization in service exports took place at the end of the 1980s, reaching a broad range of sectors, such as audiovisual, transport, and financial services. The third phase of internationalization of services started in the 1990s, when new and small ICT companies engaged in service exports. The advent of ICT companies owes much to the demand created by the first wave of internationalization, because newly internationalized companies needed help developing and maintaining software, installing and integrating software and telecommunication systems, processing and storing data, devising programs, creating network services, and so on.

The pattern of service export development that Brazil followed is distinct from that of other successful countries, such as India and the Philippines. In the case of Brazil, outward FDI paved the way for cross-border exports in the software service sector. Thus, for Brazil, outward FDI may be a successful strategy for expanding the export of a wide range of services.

In some sectors, macroeconomic conditions explain export performance. Macroeconomic instability and strict stabilization policies during the 1990s pushed construction services abroad in search of other markets for stability and growth opportunities. In other sectors, a combination of factors (such as macroeconomic stability, technology-driven changes, and economic growth) explains sector performance.

In the case of transport services, goods trade explains growth in service exports. In this context, domestic liberalization policies and worldwide liberalization of the 1990s, including at the regional level, explain the increase in goods trade and, consequently, transport service performance. In addition to promoting growth in goods exports, the domestic transport sector plays a role in supporting transport service exports.
Yet compared with other sectors in Brazil, transport services seem to be lagging. The transport service sector has always had the potential to be competitive in the global market because of its domestic market size. However, the lack of competition, especially in air transport, allowed inefficient firms to survive and, hence, allowed the existence of high margins, which discouraged international ventures. The creation of Gol Airlines in 2001, for instance, revolutionized the Brazilian air transport market and coincided with the increasing trend in transport exports.

The business environment heavily influences growth of the ICT industry. Other fundamental factors that encourage software service exports are availability of human skills, similarity in time zones with other Latin American countries and the United States, and low labor costs relative to developed service-importing countries. The recent global financial crisis has helped the Brazilian ICT sector, because outsourcing constitutes an effective means of reducing costs. The country’s business environment is among the reasons for its success in exporting services.

Human skills and education play a significant role in Brazil’s service performance. In the case of the ICT sector, the main concern for future development is skills. Because of increasing demand, most technicians and professionals enter the labor market before finishing a formal university course. In addition, the software service sector points to the cost of labor as the most important fundamental aspect underlying its competitiveness, or its lack thereof, particularly when compared with competing countries.

BNDES is the main financing branch of the federal government, offering an extensive number of solutions to firms that support construction export services. In 1997, BNDES started programs for promoting service exports. The first program, which began in 1997, supported the export of Brazilian services for building highways to Ecuador. A year later, in 1998, construction exports peaked in growth. Financing was vital in these construction projects, and large firms dominated global construction. BNDES’s spending on credit lines increased 28-fold between 1998 and 2009, having gone from US$49.0 million to almost US$1.4 billion during the period.

BNDES has a special focus on supporting exports of services that have high intellectual content, such as software and computer services and engineering services in infrastructure projects. In the case of software and computer services, BNDES’s involvement has taken place under the program Prosoft Export, which focuses on SMEs in the sector.

More traditional export promotion activities implemented by the promotion agency ApexBrasil are still in their infancy and seem to have played a minor role in Brazil’s service export success.
Annex 8.A: Investments of Nonfinancial Firms in Latin America and the Caribbean

Table 8.A.1 lists the largest nonfinancial companies and firms in Latin America and the Caribbean that had investments outside their country of origin. Brazilian firms are shaded.

Table 8.A.1. The Largest Nonfinancial Companies and Firms in Latin America and the Caribbean and Their Investments outside Their Countries of Origin, 2007

<table>
<thead>
<tr>
<th>Company</th>
<th>Country</th>
<th>Sales (US$ million)</th>
<th>Sales abroad (%)</th>
<th>Domestic sales (%)</th>
<th>Employees abroad (%)</th>
<th>Sector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petróleos de Venezuelaa</td>
<td>Venezuela, RB</td>
<td>110,000</td>
<td>98</td>
<td>—</td>
<td>49</td>
<td>Oil and gas</td>
</tr>
<tr>
<td>Petrobras</td>
<td>Brazil</td>
<td>87,476</td>
<td>21</td>
<td>12</td>
<td>62</td>
<td>Oil and gas</td>
</tr>
<tr>
<td>Techint</td>
<td>Argentina</td>
<td>39,770</td>
<td>63</td>
<td>63</td>
<td>52</td>
<td>Diversified</td>
</tr>
<tr>
<td>Companhia Vale do Rio Doce</td>
<td>Brazil</td>
<td>33,115</td>
<td>84</td>
<td>46</td>
<td>50</td>
<td>Mining</td>
</tr>
<tr>
<td>Banco Itaú</td>
<td>Brazil</td>
<td>31,195</td>
<td>13</td>
<td>23</td>
<td>—</td>
<td>Banking</td>
</tr>
<tr>
<td>América Móvilb</td>
<td>Mexico</td>
<td>29,113</td>
<td>50</td>
<td>32</td>
<td>—</td>
<td>Telecommunications</td>
</tr>
<tr>
<td>CEMEX</td>
<td>Mexico</td>
<td>21,673</td>
<td>82</td>
<td>71</td>
<td>50</td>
<td>Cement</td>
</tr>
<tr>
<td>Mexichem</td>
<td>Mexico</td>
<td>21,170</td>
<td>50</td>
<td>31</td>
<td>—</td>
<td>Petrochemicals</td>
</tr>
<tr>
<td>Grupo Modelo</td>
<td>Mexico</td>
<td>17,291</td>
<td>37</td>
<td>—</td>
<td>41</td>
<td>Beverages</td>
</tr>
<tr>
<td>Gerdau</td>
<td>Brazil</td>
<td>17,283</td>
<td>54</td>
<td>39</td>
<td>32</td>
<td>Steel and metallurgy</td>
</tr>
<tr>
<td>FEMSA</td>
<td>Mexico</td>
<td>16,453</td>
<td>17</td>
<td>44</td>
<td>57</td>
<td>Beverages</td>
</tr>
<tr>
<td>Grupo Votorantim</td>
<td>Brazil</td>
<td>13,589</td>
<td>16</td>
<td>5</td>
<td>50</td>
<td>Diversified, cement, mining, and steel</td>
</tr>
<tr>
<td>Telmexb</td>
<td>Mexico</td>
<td>12,108</td>
<td>52</td>
<td>52</td>
<td>—</td>
<td>Telecommunications</td>
</tr>
<tr>
<td>Braskem</td>
<td>Brazil</td>
<td>9,981</td>
<td>20</td>
<td>6</td>
<td>—</td>
<td>Petrochemicals</td>
</tr>
<tr>
<td>Grupo Alfa</td>
<td>Mexico</td>
<td>9,750</td>
<td>53</td>
<td>70</td>
<td>39</td>
<td>Diversified</td>
</tr>
</tbody>
</table>

(Table continues on the following page.)
<table>
<thead>
<tr>
<th>Company</th>
<th>Country</th>
<th>Sales (US$ million)</th>
<th>Sales abroad (%)</th>
<th>Domestic sales (%)</th>
<th>Employees abroad (%)</th>
<th>Sector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cencosud</td>
<td>Chile</td>
<td>7,623</td>
<td>37</td>
<td>63</td>
<td>97</td>
<td>Retailing</td>
</tr>
<tr>
<td>Camargo Corrêa</td>
<td>Brazil</td>
<td>7,175</td>
<td>19</td>
<td>26</td>
<td>32</td>
<td>Diversified</td>
</tr>
<tr>
<td>Companhia Siderurgica Nacional</td>
<td>Brazil</td>
<td>6,978</td>
<td>24</td>
<td>—</td>
<td>—</td>
<td>Steel</td>
</tr>
<tr>
<td>Grupo Bimbo</td>
<td>Mexico</td>
<td>6,756</td>
<td>31</td>
<td>60</td>
<td>90</td>
<td>Food</td>
</tr>
<tr>
<td>Falabella</td>
<td>Chile</td>
<td>5,560</td>
<td>29</td>
<td>27</td>
<td>59</td>
<td>Retailing</td>
</tr>
<tr>
<td>Andrade Gutierrez</td>
<td>Brazil</td>
<td>5,096</td>
<td>7</td>
<td>4</td>
<td>13</td>
<td>Construction</td>
</tr>
<tr>
<td>Odebrecht</td>
<td>Brazil</td>
<td>4,950</td>
<td>77</td>
<td>15</td>
<td>54</td>
<td>Diversified and construction</td>
</tr>
<tr>
<td>Embraer</td>
<td>Brazil</td>
<td>4,896</td>
<td>96</td>
<td>45</td>
<td>24</td>
<td>Aerospace</td>
</tr>
<tr>
<td>Sadia</td>
<td>Brazil</td>
<td>4,874</td>
<td>46</td>
<td>1</td>
<td>52</td>
<td>Food</td>
</tr>
<tr>
<td>TAM</td>
<td>Brazil</td>
<td>4,248</td>
<td>10</td>
<td>—</td>
<td>13</td>
<td>Transport and logistics</td>
</tr>
<tr>
<td>Sudamericana de Vapores</td>
<td>Chile</td>
<td>4,131</td>
<td>90</td>
<td>58</td>
<td>7</td>
<td>Transport and logistics</td>
</tr>
<tr>
<td>Perdigão</td>
<td>Brazil</td>
<td>3,745</td>
<td>41</td>
<td>—</td>
<td>40</td>
<td>Food</td>
</tr>
<tr>
<td>Grupo Elektra</td>
<td>Mexico</td>
<td>3,647</td>
<td>55</td>
<td>12</td>
<td>35</td>
<td>Diversified and retailing</td>
</tr>
<tr>
<td>LAN</td>
<td>Chile</td>
<td>3,525</td>
<td>85</td>
<td>63</td>
<td>15</td>
<td>Transport and logistics</td>
</tr>
<tr>
<td>Grupo Maseca</td>
<td>Mexico</td>
<td>3,347</td>
<td>66</td>
<td>15</td>
<td>20</td>
<td>Food</td>
</tr>
</tbody>
</table>

**Source:** ECLAC 2008 based on information provided by the Department of Studies and Special Projects of América Economía.

**Note:** — = not available.

a. Data are estimated sales.

b. The sales of América Móvil and Telmex are presented separately.
Notes

1. Valls Pereira, Sennes, and Muder (2009) confirm that the dynamic performance of Brazil’s service exports is associated with the internationalization of Brazilian companies. However, they stress the importance of the rise of inward FDI in the service sector, which expands Brazil’s export capacity. They also emphasize the role of Brazilian investment abroad, particularly within the region, in the service sector.

2. This process of internationalization of Brazilian companies has had support from BNDES since 2002 (Alem and Cavalcanti 2005).


4. There were no privatizations in the 2000s, which included the last two mandates of President Luiz Inácio Lula da Silva.

References


———. 2008. Foreign Direct Investment in Latin America and the Caribbean. Santiago: ECLAC.


Moreira, Sérvulo Vicente, Patrick Franco Alves, Luís Cláudio Kubota. 2006. “Firmas de Serviços Exportadoras: Um Estudo sobre Setores Selecionados.” In Estrutura e Dinâmica do Setor de Serviços no


Chile is well known as an early reformer in Latin America as well as among developing countries. Its reform process and results have been examined extensively by both the academic world and multilateral organizations. Chilean reforms have three distinctive features. First, when most developing countries believed in import substitution policies and the state’s strong role in development, Chile embraced liberalization as early as the mid-1970s. Second, the scope of its reforms was broad, not only covering all dimensions of the economy but also addressing political aspects of the country. And third, although the path of reform was bumpy, especially in the initial phase, long-term assessments of the reforms have been widely positive.

Among the reforms, the trade policy has received significant attention. The growth performance of exports of goods has been strong, and the overall development strategy is based on an open economy with a low import tariff and a few...
nontariff barriers. Foreign investment has consistently been strong, and investors enjoy access to a wide set of economic activities.

In contrast to the dynamism of trade in goods, service trade has shown a more modest growth pattern, especially when compared to the activities of other developing countries in areas such as business, professional, and information technology (IT)—enabling services (figure 9.1). Service export growth has been strong in transportation services, particularly in maritime and air transportation services where Chilean companies such as Compañía Sudamericana de Vapores and LAN Airlines, respectively, have become global and regional players.

However, traditional transport is not the only service export from Chile. New service exports have emerged in recent years. For instance, about 6,000 foreigners visit Chile annually seeking health treatment, and Chilean construction companies have started establishments abroad, particularly in other Latin American countries. Engineering service exports, especially mining engineering services, have been growing strongly from less than US$13 million in 2003 to US$30 million in 2008. Special incentive programs established by the Chilean government have attracted several multinational firms to set up their operations for

Figure 9.1. Chile’s Exports of Goods and Services, 2000–10

Source: Central Bank of Chile.
Note: Chile has benefited since 2004 from a significant increase in the international prices of key commodities, which makes comparison between goods and service exports growth more difficult.
providing a wide range of knowledge process operation and business process operation services. Finally, Chile has been relatively more successful in exporting retail distribution services and financial services through investment in other Latin American countries. Nonetheless, wide-scale success in cross-border service exports from Chile is not observed. Thus, the question remains why a country that has been successful in its outward-oriented development strategy and maintains an open trade and investment regime, including in a wide range of service sectors, has not been able to become a successful cross-border service exporter. This chapter attempts to answer that question.

The following section briefly examines the importance of services in the Chilean economy. The second section analyzes the importance of trade in services and service exports in the Chilean economy, and the third section focuses on Chile’s performance in service exports other than transportation and travel. The fourth section analyzes the fundamental factors that determine export performance, and the fifth section looks at the specific factors that explain Chile’s position in service exports. The final section provides an overview of the main findings as well as policy recommendations.

**Services in the Chilean Economy**

Chile’s unilateral liberalization and economic reforms from 1975 to 1989 have played a major role in achieving rapid growth of exports of both traditional and nontraditional products and greater diversification in terms of products and market destinations during this initial phase. The economic reform during this period marked a profound change in the economic development strategy that Chile had adopted since the early 1930s. One of the pillars of this transformation was the change of the state’s role in the economy.

In achieving this goal, major state-owned enterprises were privatized, including those in the electric power industry, telecommunications, steel, and other sectors. But privatizations were not the only means of increasing the role of the private sector in the economy. Major regulatory reforms were introduced in activities where the public sector was a dominant service provider, such as pensions, education, and health. In all these sectors, the main purpose of reforms was to allow providers from the private sector—both foreign and national—to actively compete with the public sector in supplying services.

Further efforts to secure greater liberalization were made in other service sectors from 1990. In particular, in the telecommunication sector, where reforms started in the mid-1980s, broad deregulation was introduced in 1994, prompting greater competition, specifically in long-distance services. In the financial sector, continuing reforms have expanded the range of available services while at the
same time improving the supervision of banks, insurance companies, and securities (Sáez and Sáez 2006).

The private sector became involved in providing public infrastructure traditionally left in the hands of the state in areas such as construction of highways, management of port and airport services, and management of water and sewage systems. Finally, the process of privatizing public enterprises continued, albeit at a slower pace than in previous years. Nevertheless, although the government had privileged a regulatory function, it also maintained a significant role as a provider in several important economic activities (for example, mining, energy, and banking), although in competition with the private sector.

Despite the Chilean economy’s overall good performance, the share of all service sectors in gross domestic product (GDP) has remained in the range of middle-income countries. As shown in table 9.1, the service sectors represented 55.5 percent of GDP in 1995 and 52.3 percent in 2008. The share for middle-income countries was 51.3 percent and 53.5 percent in 1995 and 2008, respectively. Moreover, in the case of Chile—similar to the patterns observed in Latin America and the Caribbean—the share of services has fluctuated sharply, not showing a clear upward trend, unlike other groups of countries or regions such as East Asia and the Pacific or South Asia.1

If one considers a longer-term perspective and compares the Chilean performance to that of different regions, two interesting peculiarities emerge. First, the growth of services matches the overall growth of the Chilean economy—as in the Latin American region—but this finding is in contrast to South Asia, where growth in the service sector tends to outpace growth in the economy (figure 9.2). Second, Chile’s growth performance, as well as the growth of services, diminished from 2000 onward.

The composition of Chile’s service sectors has remained relatively stable in recent years. In 2008, the most important subcategories within the Chilean service sector, in decreasing order, were financial and business services (26.5 percent); personal services (16.8 percent); and commerce, restaurants, and hotels (15.3 percent). Interestingly, the share of financial and business services in GDP increased from almost 24.0 percent to 26.5 percent, whereas transport and personal services were the only subsectors that showed a decrease in their share of GDP.

Service employment increased sharply during the 2000s. Between 2000 and 2008, it rose from 70 percent to 74 percent of total employment. The sector with the highest employment-generating capacity is personal, communal, and social services, although its relative weight is declining. Employment in financial and business services has been growing steadily, and in 2008 it represented 12.4 percent of all the employment generated by the service sector.2

Average remunerations in mining; electricity, gas, and water; financial and business services; and personal, communal, and social services, in that order,
### Table 9.1. Share of Services in GDP, 1990–2008

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Chile</td>
<td>49.8</td>
<td>55.5</td>
<td>55.5</td>
<td>55.5</td>
<td>54.8</td>
<td>58.5</td>
<td>55.6</td>
<td>53.5</td>
<td>48.9</td>
<td>48.9</td>
<td>52.3</td>
</tr>
<tr>
<td>Organisation for Economic Co-operation and Development</td>
<td>65.0</td>
<td>68.3</td>
<td>70.6</td>
<td>71.6</td>
<td>72.3</td>
<td>72.6</td>
<td>72.5</td>
<td>72.8</td>
<td>72.7</td>
<td>73.1</td>
<td>—</td>
</tr>
<tr>
<td>Middle-income countries</td>
<td>45.7</td>
<td>51.3</td>
<td>53.6</td>
<td>54.7</td>
<td>54.2</td>
<td>53.2</td>
<td>52.8</td>
<td>52.6</td>
<td>52.8</td>
<td>53.0</td>
<td>53.5</td>
</tr>
<tr>
<td>Latin America and the Caribbean</td>
<td>55.4</td>
<td>63.8</td>
<td>64.7</td>
<td>65.4</td>
<td>63.5</td>
<td>60.7</td>
<td>59.3</td>
<td>59.9</td>
<td>60.8</td>
<td>61.0</td>
<td>60.6</td>
</tr>
<tr>
<td>East Asia and the Pacific</td>
<td>35.2</td>
<td>36.5</td>
<td>41.0</td>
<td>42.1</td>
<td>43.0</td>
<td>42.7</td>
<td>42.0</td>
<td>41.3</td>
<td>41.2</td>
<td>41.4</td>
<td>40.9</td>
</tr>
<tr>
<td>South Asia</td>
<td>44.7</td>
<td>46.5</td>
<td>50.3</td>
<td>51.3</td>
<td>52.4</td>
<td>52.7</td>
<td>52.4</td>
<td>52.1</td>
<td>52.4</td>
<td>52.4</td>
<td>53.5</td>
</tr>
</tbody>
</table>

**Source:** World Bank’s World Development Indicators database.

**Note:** — = not available.
Figure 9.2. Growth Rate of GDP and Services, 1990–2008

a. Chile and Latin America and the Caribbean

b. Chile and middle-income countries
Figure 9.2. (continued)

c. Chile and South Asia

![Graph showing economic growth in Chile and South Asia from 1990 to 2008.

Source: World Bank’s World Development Indicators database.

---

d. Chile and East Asia and the Pacific

![Graph showing economic growth in Chile and East Asia and the Pacific from 1990 to 2008.

Source: World Bank’s World Development Indicators database.}
are all above the national average. Also, in decreasing order, the remuneration in telecommunication services, commerce, and the construction sectors are all below the national average. Variations in average remunerations normally reflect differences in labor productivity and labor skills among the different sectors.

Between 58.5 percent and 65.3 percent of all fixed capital formation in 2003–07 went to the service sector. Although property ownership receives the largest share of all investment in services (31.2 percent in 2007), it is closely followed by investment in transport and communications (24.5 percent) and in financial and business services (13.1 percent). These last two subsectors composed close to 38 percent of all investment in service activities during 2007.

Trade in Services: Chile in the Global Economy

In 2008, almost 90 percent of Chile’s GDP was traded. The share of merchandise trade in GDP increased from 51 percent in 1990 to 76.5 percent in 2008. This increase is largely explained by the increase in the price of the commodities exported by Chile, especially after 2005. In contrast, service trade as a share of GDP has remained relatively constant. But it is worth noting that Chile’s service share in GDP was much higher in 1990—12.4 percent, more than double Latin America and the Caribbean’s 5.6 percent—than in any other region or group of countries (table 9.2). Unlike the experience in Chile, the share of trade in services in GDP has increased in all regions and groups of countries. South Asia, in particular, shows a spectacular increase, which is mainly explained by India’s performance.

The export sector’s relative size in the world economy is quite different for Chilean goods and services. Chile represents 0.41 percent of world merchandise trade but only 0.21 percent of world service exports. This factor itself indicates that Chile’s service export performance is rather modest when compared with that of countries such as the Republic of Korea, whose share in world trade is 1.96 percent. The corresponding figure for Malaysia is 0.78 percent and for Hungary, 0.53 percent. Even Costa Rica, a country with one-fourth of Chile’s population, has a share of 0.11 percent of world service exports.4

Service exports also represent a relatively small share of Chile’s domestic economy. They accounted for only 6.3 percent of GDP in 2008. As a comparison with Asian countries, this share was 15.5 percent in Malaysia; 8.4 percent in India, which has a less open economy than Chile; and 8.0 percent in Korea (table 9.3). The share of service exports in total exports is relatively similar to that of Argentina and Brazil but below that of countries such as Costa Rica, India, and the Philippines.
Table 9.2. Trade as a Share of GDP, 1990–2008

<table>
<thead>
<tr>
<th>Country or region</th>
<th>Merchandise trade as a share of GDP (%)</th>
<th>Trade in services as a share of GDP (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chile</td>
<td>51.1</td>
<td>50.1</td>
</tr>
<tr>
<td>Organisation for Economic Co-operation and Development</td>
<td>29.9</td>
<td>36.2</td>
</tr>
<tr>
<td>Middle-income countries</td>
<td>31.9</td>
<td>45.4</td>
</tr>
<tr>
<td>Latin America and the Caribbean</td>
<td>23.0</td>
<td>36.1</td>
</tr>
<tr>
<td>East Asia and the Pacific</td>
<td>47.0</td>
<td>59.5</td>
</tr>
<tr>
<td>South Asia</td>
<td>16.4</td>
<td>24.0</td>
</tr>
</tbody>
</table>

Source: World Bank’s World Development Indicators database.
Evolution and Composition of Chilean Service Exports: Cross-Border Trade

Service exports totaled US$10,754.5 million in 2008, up from US$4,082.9 million in 2000 and showing an average nominal growth rate for all service exports of 20.4 percent a year since 2000. This finding is the result of a 24 percent annual average growth rate in transport service receipts, a 14.3 percent annual rate for travel, and a 17.9 percent annual rate for other commercial services.

Imports of services totaled US$11,400.7 million in 2008, up from US$ 4,801.7 million in 2000, with an average annual growth rate of 17.2 percent. Imports of transport services grew, on average, by 25.8 percent; travel grew by 15.1 percent yearly, and other commercial service (OCS) imports expanded by 8.4 percent annually.

The evolution of service exports and imports led to a net deficit for the whole period. Deficits ranged between US$618 million in 2003 and a high of US$974.9 million in 2007. The widest gap is clearly in OCSs. The OCS deficit reached a maximum of US$966.9 million in 2004. The accumulated deficit in OCS represents 116 percent of the total accumulated service trade between 2000 and 2008. Royalties and licenses, insurance, and financial services account for the three largest deficits within this category. Because of its erratic growth pattern and although

<table>
<thead>
<tr>
<th>Country</th>
<th>Service employment as a share of total employment (%)</th>
<th>Service exports as a share of GDP (%)</th>
<th>Share in total exports of goods and services (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Argentina</td>
<td>67.6</td>
<td>3.6</td>
<td>14.6</td>
</tr>
<tr>
<td>Brazil</td>
<td>54.6</td>
<td>1.8</td>
<td>12.7</td>
</tr>
<tr>
<td>Chile</td>
<td>64.7</td>
<td>6.3</td>
<td>13.8</td>
</tr>
<tr>
<td>Costa Rica</td>
<td>60.7</td>
<td>13.6</td>
<td>29.8</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>49.6</td>
<td>10.2</td>
<td>13.2</td>
</tr>
<tr>
<td>Egypt, Arab Rep.</td>
<td>36.9</td>
<td>15.2</td>
<td>45.2</td>
</tr>
<tr>
<td>Korea, Rep.</td>
<td>63.2</td>
<td>8.0</td>
<td>14.6</td>
</tr>
<tr>
<td>Hungary</td>
<td>55.9</td>
<td>12.9</td>
<td>15.7</td>
</tr>
<tr>
<td>India</td>
<td>—</td>
<td>8.4</td>
<td>35.3</td>
</tr>
<tr>
<td>Indonesia</td>
<td>38.4</td>
<td>2.9</td>
<td>9.5</td>
</tr>
<tr>
<td>Malaysia</td>
<td>50.3</td>
<td>15.5</td>
<td>13.2</td>
</tr>
<tr>
<td>Mexico</td>
<td>55.5</td>
<td>1.7</td>
<td>6.0</td>
</tr>
<tr>
<td>Philippines</td>
<td>45.0</td>
<td>6.1</td>
<td>17.4</td>
</tr>
<tr>
<td>South Africa</td>
<td>—</td>
<td>4.5</td>
<td>12.6</td>
</tr>
</tbody>
</table>

Note: — = not available.
service exports grew faster than service imports, no clear trend for a widening or closing trade deficit can be identified in the aggregate.\textsuperscript{5}

Chile’s performance with regard to service exports is heavily influenced by the evolution of transport, especially maritime transport (figure 9.3), reflecting the importance of both geographic location and the close link between transport services and goods trade. During the decade 1998–2008, the evolution of Chilean service exports exhibited a relative dynamism, particularly after 2002. The period was characterized by a rapid growth of transport services, reflecting the expansion of world demand for these services as well as unusually high transportation costs.\textsuperscript{6} However, the OCS and travel categories exhibit a rather modest evolution, especially when compared to the world pattern for trade in OCSs. According to available data, OCSs were the least dynamic category of all Chilean service exports (figure 9.3).\textsuperscript{7} Some factors that could help explain why Chile’s OCS export performance is comparatively weak are explored in box 9.1.

Because of the highly dominant contribution of transport services, the share of OCS exports to total service exports decreased from 35 percent to 25 percent from 1995 to 2000 and remained practically unchanged between 2000 and 2008 (figure 9.4).

**Figure 9.3.** Chile’s Service Exports, 1998–2008

![Graph showing Chile's service exports from 1998 to 2008](image)

- total commercial services (excluding government services)
- transportation
- travel
- other commercial services (commercial services minus travel and transport)

Box 9.1: Assessing the Performance of Chile’s Service Exports: An Econometric Illustration

Commercial service exports from Chile are large given per capita income, size of the service sector, and GDP. In 2008, 60 percent of service exports from Chile were in transport services, and OCS exports constituted only 24 percent, whereas the reverse was true for the world average. In a world where globalization is increasingly leading to offshoring of OCSs, such as computer and information services or other business services, why has Chile not been able to take advantage of this opportunity?

Actual OCS exports from Chile are below the level predicted by the level of fundamental variables such as GDP per capita, service value added, and GDP, especially in recent years. What are the possible explanations for this underperformance? First, one must assess whether the penetration of the telecommunication network affects OCS exports in general and particularly in Chile. In this case, one finds that Internet penetration in general does significantly affect OCS exports, and in the case of Chile, the extent of Internet penetration is significant in explaining its lack of success in OCS exports. Thus, the lower level of Internet penetration in Chile relative to its per capita income partially explains the relatively low contribution of OCS exports in aggregate service exports.

For a more complete picture, human capital skills were added to evaluate whether the level of human skills in Chile explains the level of OCS exports. Human capital, as proxied by average years of schooling, positively and significantly affects OCS exports. This finding means that the level of skills in Chile is also partially responsible for the relatively low level of OCS exports from Chile.

Also evaluated was whether the effect of Internet penetration or average years of schooling has an effect on Chile that is different from that in other countries in the sample. Hence, an interaction term of Internet penetration and average years of schooling was added. In this case, the coefficients for both these interaction terms are insignificant, implying that the effect of a better telecommunication network or longer years of schooling on Chile is no different from such an effect on the rest of the world.

Regarding other explanatory variables, given the state and quality of institutions in Chile, this analysis finds Chile’s OCS exports are very low. Finally, it finds that the coefficient for this interaction term is insignificant, implying that institutions affect OCS exports from Chile in the same manner as they do from any country.

This econometric exercise allows the following conclusions to be drawn. First, Chile is an example of a successful exporter of commercial services, but it is rather unsuccessful in exporting OCSs. Second, telecommunication network density, as proxied by Internet penetration; human capital skills, as proxied by average years of schooling; and physical infrastructure (road-length infrastructure) explain the success of Chile in exporting total commercial services, although it may appear as a contradiction that the same factors explain the lack of success in OCS exports from Chile.

How can this conclusion be reconciled? The presence of telecommunication network density or human capital skills in Chile seems to be enough to promote commercial services such as transport or travel services, but it is low with respect to levels required for providing OCS exports. Thus, factor endowment in Chile in terms of telecommunication network or human capital skills or road-length infrastructure encourages transport service exports, but because OCS exports are highly intensive in these inputs, Chile is not able to provide these services in the international market. The subsequent sections of this chapter further substantiate these findings.

Source: Authors’ analysis based on the annex to this chapter.
Note: The results presented in this box illustrate the influence of a number of variables in service export performance. Because of the data problems in services, the results must be interpreted with caution.
This pattern of Chile’s service exports presents a sharp contrast with recent trends in world trade in services. As seen in figure 9.4, the relative importance of OCSs is continuously growing, and today it clearly represents the lion’s share of world trade. In a very short period, the dynamism of this category has changed considerably the composition of world service trade. The share of OCSs increased to 51.2 percent of total world exports in 2008, compared with 40 percent in 1995, whereas in Chile the share of OCSs decreased. This increase on the world level took place essentially at the expense of travel, which experienced several setbacks in this period.

Furthermore, despite the recent global financial crisis (2008–09), world exports of OCSs continued to grow—albeit more slowly—during 2008. In the same context, world exports of transport and travel decreased in absolute value.

Chile’s service trade pattern is markedly different from that of Brazil, China, India, Korea, the Russian Federation, Singapore, and other developing countries that have successfully benefited from the opportunities offered by the world market for OCSs in areas as diverse as information and communication technology (ICT) services, business services, professional and technical services, health services, construction services, and many others. A careful review of Chile’s data may help identify a few niches of incipient dynamism within Chile’s service industries and may suggest better prospects for the future of its service exports. Recently
revised figures from the Central Bank of Chile for 2000–09 provide more detailed information on the evolution of OCSs (table 9.4).

In 2000–08, although the overall composition of service exports remained practically unchanged, some industries within the OCS category performed rather well. However, this limited success was not enough to modify the overall composition of the country’s export basket. Within this category, sectors with relatively high growth in the 2000–08 period were royalties and license fees (21.8 percent annually); personal, cultural, and recreational services (15.9 percent); insurance services (14.8 percent); informatics and information services (10.7 percent); and other business services (10.5 percent).

**The sluggish expansion of other commercial services**

In 2007, the Export Promotion Agency (Dirección de Promoción de Exportaciones, or ProChile), assisted by the Central Bank of Chile and the National Statistical Institute, conducted a preliminary study with the purpose of estimating Chile’s exports in categories other than transport and travel by the four delivery modes for 2006 and 2007. According to this report, Chilean firms have, on average, a low level of internationalization. The relative importance of foreign sales to domestic service production ranges around 2 percent. However, this study did not cover transport and travel services—two highly internationalized categories—nor did it make a reliable estimate of the importance of foreign sales in the case of foreign affiliates (particularly important for retail).

Because the most dynamic activities in international trade in services that have attracted attention in recent years are under the OCS category, in what follows this chapter looks more closely at that category. As previously mentioned, much of the relative dynamism of some specific industries in the past few years had an almost negligible effect on the composition of Chile’s exports. Many of these exports from Chile were minimal in 2000, and the current levels are still very low in absolute terms.

Central bank data indicate that the evolution of other business services is noteworthy. Whereas in 2000 “merchanting” activities accounted for over 65 percent of this category, that share was down to 44 percent in 2008. Meanwhile, other business services, which includes professional and IT services, expanded from US$188 million in 2000 to US$707 million in 2008, increasing its share within the category from 31.4 percent in 2000 to 44.0 percent in 2008.

A study financed by the Chilean Development Agency (Corporación de Fomento, or CORFO) and IDC made further insights (IDC 2009). Using primary data from the National Customs Service, the study provides 2008 revised values and 2009 estimates of global services, including ICT, business, engineering,
Table 9.4. Composition of Other Commercial Service Exports in Chile

<table>
<thead>
<tr>
<th>Year</th>
<th>Communication services</th>
<th>Insurance</th>
<th>Financial services</th>
<th>Information services</th>
<th>Royalties and licenses</th>
<th>Other business services</th>
<th>Personal, cultural, and recreational services</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>207.3</td>
<td>76.0</td>
<td>37.5</td>
<td>33.4</td>
<td>10.0</td>
<td>601.6</td>
<td>21.7</td>
<td>987.5</td>
</tr>
<tr>
<td>2001</td>
<td>124.7</td>
<td>70.5</td>
<td>34.2</td>
<td>42.8</td>
<td>24.9</td>
<td>652.0</td>
<td>29.0</td>
<td>978.1</td>
</tr>
<tr>
<td>2002</td>
<td>161.8</td>
<td>137.9</td>
<td>24.6</td>
<td>62.9</td>
<td>41.1</td>
<td>745.3</td>
<td>38.6</td>
<td>1,212.2</td>
</tr>
<tr>
<td>2003</td>
<td>158.1</td>
<td>124.1</td>
<td>29.6</td>
<td>81.4</td>
<td>45.5</td>
<td>829.9</td>
<td>67.6</td>
<td>1,336.2</td>
</tr>
<tr>
<td>2004</td>
<td>162.7</td>
<td>136.2</td>
<td>31.4</td>
<td>70.5</td>
<td>48.5</td>
<td>889.8</td>
<td>58.3</td>
<td>1,397.4</td>
</tr>
<tr>
<td>2005</td>
<td>147.8</td>
<td>163.1</td>
<td>34.0</td>
<td>74.2</td>
<td>54.0</td>
<td>1,087.4</td>
<td>69.2</td>
<td>1,629.7</td>
</tr>
<tr>
<td>2006</td>
<td>142.9</td>
<td>189.3</td>
<td>37.4</td>
<td>78.4</td>
<td>55.2</td>
<td>1,236.3</td>
<td>78.4</td>
<td>1,817.9</td>
</tr>
<tr>
<td>2007</td>
<td>150.8</td>
<td>224.4</td>
<td>39.8</td>
<td>82.0</td>
<td>61.2</td>
<td>1,517.8</td>
<td>84.5</td>
<td>2,160.5</td>
</tr>
<tr>
<td>2008</td>
<td>165.4</td>
<td>258.4</td>
<td>46.6</td>
<td>96.0</td>
<td>63.6</td>
<td>1,759.2</td>
<td>110.6</td>
<td>2,499.8</td>
</tr>
<tr>
<td>2009</td>
<td>153.4</td>
<td>262.4</td>
<td>41.8</td>
<td>83.6</td>
<td>59.2</td>
<td>1,472.6</td>
<td>81.9</td>
<td>2,154.9</td>
</tr>
</tbody>
</table>

Average annual growth rate (%) –3.3 14.8 1.2 10.7 21.8 10.5 15.9 9.1

Source: Data from Central Bank of Chile.
Note: Construction service exports are not included in the total.
research and development, medical, and digital media and content services. Data are organized under four categories: innovation process operations, knowledge process operations, business process operations, and IT operations. All these services are offshored from Chile through digital means.

According to IDC (2009) estimates, total exports of global services amounted to US$843.6 million in 2008. About 60 percent of all global service exports were concentrated in three items: knowledge process operations (32.7 percent), which comprise mostly engineering services and to a lesser extent, business, digital media and content, and financial services; horizontal business process operations (18.3 percent), which are mainly process operation services such as marketing, sales, and customer service; and IT software applications (20 percent) (figure 9.5). This study shows evidence of an attractive potential for certain segments of the global service category, particularly through the offshoring of engineering services and the development of application software.10

Regarding destination markets, the IDC (2009) study identifies Latin American countries as the major markets for Chilean global service exports, with 50.4 percent of the total. Peru (43 percent), Mexico (10 percent), and Argentina (9 percent) account for 62 percent of total exports to this region. Brazil, the largest market in Latin America, represents only 3 percent of total exports. Other major destination markets are the United States (21.1 percent), Spain (11.2 percent), and the rest of Europe (7.7 percent). The rest of the world has a share in total exports of 9.5 percent. Interestingly, foreign firms are the main exporters of offshoring services (66 percent of the value) although they represent only 29 percent of the number of offshoring firms (figure 9.6).

Another important component of the OCS category is retail (box 9.2). Sales through foreign affiliates have become particularly relevant in the case of the retail sector, for which about 60 percent of total revenues come from operations abroad. According to a Deloitte study that ranks retail sales for Latin America, Cencosud, the largest Chilean retailer with operations abroad, was ranked first in the region in 2008–09 with US$11.2 billion in sales.11 In this latest ranking, Cencosud overtook the leading position, which Brazilian group Pão de Açúcar held for many years. Over time, retail providers also became financial service providers both in Chile and abroad.12

A study prepared by the Center for Retail Studies (CERET 2009) of the University of Chile has identified a typology for Chile’s internationalized retail sector. It notes that Chilean companies are currently operating internationally in various segments of retail business: supermarkets, convenience stores, discount stores, department stores, home improvement stores, and specialized shops such as drugstores and pharmacies.
Figure 9.5. Chilean Offshoring Exports

Source: IDC 2009.
Figure 9.6. Firms’ Share in Service Exports

Source: Authors’ calculations based on IDC 2009 data.
Many services are indirectly exported through other services or embodied in the export of goods. Although this trade is less visible than other forms of trade, it can be quite relevant in certain industries. Small firms that are not in a position to reach other markets directly do so by integrating themselves into the value chain of a larger sector. This arrangement can be highly attractive for small firms that can learn, grow, and mature as captive outsourcers for a period of time. Eventually, this position can be the starting point for new exporters on their own merits, once the suppliers of these services are in a position to sell their services directly to foreign customers.

During 2008, ProChile financed a study seeking to identify the cluster of service firms that supply the retail business in Chile and to explore the potential of these firms to become direct exporters. The study proposes the creation of a cluster of retail providers that is based on the world-class applied knowledge of retail concepts and is integrated by firms that offer high-value, “made in Chile” services in various specialized areas. The study identifies the following service categories: (a) specialized professional services; (b) infrastructure, equipment maintenance, and repair; (c) ICT services; (d) analytical services (that is, ICT and retail management); (e) specialized telecommunication services; (f) credit financing and other financial services; (g) logistics; and (h) human resources, selection, and training.

Within each of these categories, a number of domestic firms were identified. The majority of them were small, Chilean-owned firms. According to the report, these firms have made a crucial contribution to the development of the retail sector in Chile and have set quality standards that have facilitated their penetration into foreign markets. In addition, the report found that a number of these service providers were already exporting a wide range of retail-related services to several countries of the region. In most cases, these markets were developed on the buyer’s initiative, independently of the Chilean retailer. The countries of destination were Argentina, Brazil, Colombia, Costa Rica, the Dominican Republic, Guatemala, Mexico, Peru, and the República Bolivariana de Venezuela. Coincidentally, among the firms surveyed, Colombia and Peru were the most attractive markets in the medium term, whereas Brazil and Mexico would require time to develop.

The fresh fruit industry was one of the first industries in which the role of ancillary services was crucial. Growing and marketing of fresh fruit depends on an extensive value chain of services that starts before the seed-planting process and covers a whole range of value-added activities until the fresh fruit reaches the final retail store in foreign markets. In the case of a distant country such as Chile, getting to the final market with fruits that are fresh, tasty, and in perfect shape is a major challenge that involves (a) seed development, sophisticated fruit-growing processes, and strict quality and pest control techniques; (b) careful fruit picking and packing, adequate cold storage, and adequate transport equipment; and (c) maintenance of a very short time span between the fruit-picking process and placement of the fruit on market shelves. All these service activities provide many specialized jobs and help create substantial value added by the time the product reaches the final consumer.

An early study by the United Nations Economic Commission for Latin America and the Caribbean researched the situation of the Chilean fruit export industry and found that about 90 percent of the value of Chilean grapes in a New York store was added by numerous service firms that had made an indirect export through the produce and at the same time had contributed to make the export process possible.

Source: Authors’ analysis based on CERET 2009 and ECLAC 1989.
Inward and outward investment: Service exports through commercial presence

In 1974, Chile implemented a voluntary foreign investment framework, Decree Law (DL) 600. DL 600 allows nondiscriminatory access to foreign investors in all sectors except cabotage, air transport, and mass media. In the case of fishing, access is subject to international reciprocity. Although other mechanisms are available to foreign investors who wish to enter the Chilean market (among them chapter XIV of the Central Bank’s Compendium of Foreign Exchange Regulations), this policy instrument has been the main tool to attract foreign investment since its enactment (about 70 percent of total materialized investments in 1990–2008).

Since 1990, a number of initiatives aimed at improving the investment climate and attracting new flows of investments have been implemented, including unilateral reforms and negotiations of bilateral investment agreements and double taxation agreements. These measures have been particularly significant for the service sector because of the various modes of supply involved. In addition, some service exports were exempted from indirect taxes (OECD 2007a).

On average, during the period 1974–2010, nearly 54 percent of all the stock accumulated through DL 600 foreign direct investment (FDI) was destined for service activities. Italy, the Netherlands, Spain, Switzerland, and the United States have invested heavily in the service sector. Italy, Mexico, Spain, and Switzerland invested almost exclusively in service activities. Energy, communications, and financial services (including insurance) accounted for almost all accumulated foreign investment in service industries (Foreign Investment Committee 2011).

Investment and trade reforms created advantages for certain Chilean service activities, which translated into investments in and service exports to Latin American countries. In fact, Chilean direct investment abroad surged in the early 1990s and has been mainly directed toward Latin American countries since then. These investments have focused on service sectors such as finance and retail distribution (see figure 9.7). Table 9.5 provides some examples of the leading Chilean companies investing abroad.

The Directorate General of International Economic Relations (Dirección General de Relaciones Económicas Internacionales, or DIRECON) estimates a total outflow of US$54.2 billion of Chilean investment abroad for the period 1990–June 2010. The estimate covers 65 countries in the Americas, Europe, Asia, and Africa and involves more than 2,000 projects carried out by more than 900 firms (figure 9.7). Argentina, Brazil, Peru, and the United States are the main destinations of Chilean investment abroad. The service and energy sectors capture 68 percent of all total investment. Energy is listed under a different heading because it covers both generation and distribution. Services entail industries such as retail, informatics, real estate and construction, and air and maritime transport.
Figure 9.7. Stock of Chilean Investment Abroad, June 2010

a. Countries

- Argentina: 15,979
- Brazil: 10,614
- Chile: 9,402
- Mexico: 6,793
- Colombia: 3,701
- United States: 2,063
- Panama: 814
- Uruguay: 743
- Venezuela, RB: 596

Note: Energy includes gas, water, and electricity generation and distribution. Services include construction, retail, hotels and restaurants, transport and communications, financial, real estate, IT, and other professional services. Mining includes oil and gas.

Source: Data from DIRECON.
Table 9.5. Leading Chilean Companies Investing Abroad, 2004–05

<table>
<thead>
<tr>
<th>Company</th>
<th>Sector</th>
<th>Sales (US$ million)</th>
<th>Operations in regional markets&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Internationalization category&lt;sup&gt;b&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enersis&lt;sup&gt;c&lt;/sup&gt;</td>
<td>Electricity</td>
<td>4,863</td>
<td>x</td>
<td>—</td>
</tr>
<tr>
<td>Empresa Nacional del Petroleo</td>
<td>Petroleum</td>
<td>4,704</td>
<td>x</td>
<td>—</td>
</tr>
<tr>
<td>Falabella</td>
<td>Commerce</td>
<td>2,885</td>
<td>x</td>
<td>—</td>
</tr>
<tr>
<td>Cencosud</td>
<td>Commerce</td>
<td>2,477</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>LAN Airlines</td>
<td>Air transport</td>
<td>2,034</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Arauco</td>
<td>Cellulose and paper</td>
<td>2,075</td>
<td>x</td>
<td>—</td>
</tr>
<tr>
<td>CMPC</td>
<td>Cellulose and paper</td>
<td>1,935</td>
<td>x</td>
<td>—</td>
</tr>
<tr>
<td>Compañía General de Electricidad</td>
<td>Electricity</td>
<td>1,276</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Entel</td>
<td>Telecommunications</td>
<td>1,243</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Fasa</td>
<td>Commerce</td>
<td>1,087</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Molymet</td>
<td>Metallurgy</td>
<td>975</td>
<td>x</td>
<td>—</td>
</tr>
<tr>
<td>Ripley</td>
<td>Trade</td>
<td>909</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>CCU&lt;sup&gt;d&lt;/sup&gt;</td>
<td>Beverages</td>
<td>755</td>
<td>x</td>
<td>—</td>
</tr>
<tr>
<td>Embotelladora Andina&lt;sup&gt;d&lt;/sup&gt;</td>
<td>Beverages</td>
<td>743</td>
<td>x</td>
<td>—</td>
</tr>
<tr>
<td>AES Gener&lt;sup&gt;c&lt;/sup&gt;</td>
<td>Electricity</td>
<td>702</td>
<td>x</td>
<td>—</td>
</tr>
<tr>
<td>Madeco</td>
<td>Metallurgy</td>
<td>582</td>
<td>x</td>
<td>—</td>
</tr>
<tr>
<td>Masisa&lt;sup&gt;c&lt;/sup&gt;</td>
<td>Cellulose and paper</td>
<td>398</td>
<td>x</td>
<td>—</td>
</tr>
</tbody>
</table>

Sources: Adapted from ECLAC 2005 on the basis of information provided by the companies and AméricaEconomía 2005.

Note: — = not available. Data for service companies are shaded.

<sup>a</sup> Markets are Latin America and the Caribbean, North America, Asia and the Pacific, Europe, and other.

<sup>b</sup> Calculated as a percentage of sales (or employment) accounted for by subsidiaries outside Chile.

<sup>c</sup> Chilean trans–Latin American company bought by a transnational corporation.

<sup>d</sup> Chilean trans–Latin American company controlled by a transnational corporation.
Chile’s Fundamentals and the Development of Service Exports

Chile’s early reforms led it onto a strong growth path, especially between 1986 and 1997, when GDP annual rates ranged between 3.8 percent in 1990 and 12.2 percent in 1993, with six years with annual growth rates above 7 percent. GDP growth rates declined considerably between 1998 and 2008, to an average of 4.4 percent a year, primarily because of stagnation in Chile’s productivity (OECD 2010, 2011).

Compared with many developing countries, Chile has a relatively low level of foreign indebtedness. Total foreign debt increased from US$32.6 billion in 1998 to US$64.8 billion in 2008, but public debt is only 18.6 percent of that total. The ratio of foreign debt to GDP has consistently fallen since 2002, whereas public sector debt fell in absolute terms from US$3.2 billion in 1995 to US$2.8 billion in 2008. Over the same period, international reserves increased from US$16.3 billion to US$23.2 billion.

As a result, Chile enjoys a rather comfortable position in many of the best-known world economic rankings. For instance, Chile ranks 10th in the 2010 Index of Economic Freedom by the Heritage Foundation and the Wall Street Journal; 15th in the Business Environment Rankings of the Economist Intelligence Unit; 15th in the 2009 Institute for Management Development World Competitiveness Yearbook; and 28th in the 2008–09 Global Competitiveness Index of the World Economic Forum. Chile also ranks among the lowest-risk countries in the world, as reflected in rankings made by Economist Intelligence Unit (eighth lowest), Moody’s Investor Service (A1), Fitch Ratings (between A and A+), and Standard & Poor’s (between A+ and AA).

Nevertheless, the Chilean economy has lost dynamism over the years. After the 1998 Asian financial crisis, per capita growth was significantly reduced compared with the previous 12 years (1986–97). Productivity explains a major part of the slowdown in growth. In fact, the growth of total factor productivity (TFP) has been nearly zero since 1998 in contrast to a growth rate of more than 2 percent annually over the 1986–97 period (OECD 2010; Schwellnus 2010). If the growth rate is decomposed to its determinant factors, one can conclude that the “contribution of capital formation to GDP growth has been similar over the past decade as over the 1986–97 period but both labour input and [TFP] growth have slowed down. The slowdown in labour input growth accounts for around one-third of the slowdown in GDP growth over the past decade and the apparent stagnation of TFP accounts for the remaining two-thirds” (OECD 2010, 66).

But what explains the poor performance of TFP? As will be shown, the main factors behind the slow growth in TFP are also pertinent to explaining the performance of Chilean service exports. More specifically, the (OECD 2010) identifies a number of weaknesses in structural policies as contributing to the uneven
productivity performance: (a) product market competition, (b) existing conditions for entrepreneurship that do not encourage risk taking and the reallocation of production to new and higher-productivity activities, and (c) low rates of technological (product and process) and nontechnological (marketing and organization) innovation in firms. Education and labor skills are also important factors that influence Chilean TFP performance.

According to the OECD (2010, 72), product market competition measured by price-cost margins “is higher in Chile than in the comparator group in all industries, except mining. Price-cost margins are higher even in the manufacturing sector, which is open to international trade, and in the retail sector, which has a reputation of being competitive.” The largest differences are found in transport and telecommunications and in other services, which mainly include business services, indicating that competition, in particular in the service sectors, is weak in Chile.

Among the factors that explain the weak competition environment, regulations on entry and exit (burdensome bankruptcy procedure) have been highlighted because of their effect on entrepreneurial risk taking and diversification into new and higher-productivity activities. Although Chile ranks high on broad indicators of overall competitiveness and has fewer barriers to trade and investment than most OECD countries, administrative burdens on start-ups are higher than in almost any OECD country. Two sectors stand out as examples: the retail sector and regulated professional services.18

**Regulations and institutions**

As in many countries, services are highly regulated, and a complex network of service-related regulations and institutions exists. Identifying the trade component of such regulations was one of the major challenges Chile faced when confronted with including services in its trade agreements. The complexity and heterogeneity of the regulatory environment has also made assessing and introducing reforms in the public policies associated with the various service industries difficult.

In general, Chilean norms and regulations dealing with services have very limited discriminatory provisions with respect to the treatment granted to foreign services or foreign suppliers. Telecommunications, financial services, business services, and transportation all have a high degree of international integration. Even in social services such as education, health, and even pension fund management, both private and foreign participation as service providers are important. Restrictions related to foreign ownership of domestic service industries and associated with the type of legal entity required or the nationality of the service provider or board
member are very limited: radio and television concession activities are two cases in point (Sáez 2008).

Chile’s political and regulatory environment ranks comparatively well in international indexes. It is placed in 34th position when compared with the 134 countries surveyed by the Networked Readiness Index 2008–2009 (Dutta and Mia 2009). In the Global Competitiveness Index 2009–10 (Schwab 2009), the country ranks 30th of 133 in the overall ranking, but it ranks lower in health and primary education, higher education and training innovation, and labor market efficiency. Schwab (2009) identifies restrictive business regulations, inefficient government bureaucracy, and inadequately educated population as the three most problematic factors for doing business in Chile.

According to the private sector, some inadequacies still exist in labor legislation as well as with respect to granting of work permits to foreign nationals. Certain labor rigidities seem to be especially sensitive for the operation of lines of business that operate 24 hours a day, seven days a week. Visa requirements for certain nationalities may make the timely hiring of foreign professionals more difficult.

In the fiscal area, despite recent lowering of the tax rate, an additional income tax of 15 percent is still applied to all software imported into Chile. Although the rationale of this tax is to put imports on equal footing with national software products, the measure is seen as protectionism that negatively affects the costs of ICT industry inputs. However, even though Chile is not a member of the Information Technology Agreement of the World Trade Organization, many computer-related products enjoy duty-free entry into the country as a consequence of its preferential trade agreement (PTA) commitments, and this treatment is granted on a most-favored-nation basis.

**Skill availability: Educational indicators**

As previously noted, Chile’s difficulties in developing solid comparative advantage in services may be somewhat linked to its educational shortcomings and the skill level of its labor force. One of the key constraints in the recent slowdown in Chile’s economic growth rate can be found in its educational system. Although considerable efforts to improve the education system have been made since 1990, results have been noticeable more in coverage than in quality. Even though Chile has improved its Programme for International Student Assessment (PISA) scores in recent years, the average scores are still well below those of developed countries. According to the PISA 2006 study (OECD 2007b), which included 57 countries, Chile ranks 40th in science, 37th in reading, and 44th in mathematics. Nevertheless, Chile ranks better than other Latin American countries in science and reading. Only in mathematics does Chile rank below one Latin American
country—Uruguay. However, PISA average results mask important differences when one accounts for the differences in social and economic backgrounds of students and schools.

The limited number of personnel with technical qualifications and the limited pool of talent have also been listed as a weakness by a study conducted by the Boston Consulting Group (2007) for the National Council for Innovation for Competitiveness (Consejo Nacional de Innovación para la Competitividad, or CNIC) and used by CORFO to form a program to develop new industries in the offshoring of global services. Others studies have also identified human capital and education as one of the most important areas where significant progress must be made for further development of Chile’s service exports (see Castillo 2009; CNIC 2010; Fernández-Stark, Bamber, and Gereffi 2010b; IDC 2009; Tholons 2010).

At the tertiary level of education, limitations arise with respect to the total number of graduates from universities and from professional and technical institutes. According to the Ministry of Education, during 2007, 10,064 students graduated from professional institutes (about 35 percent in technology-related education), 17,386 graduated from technical institutes, and 41,647 graduated from a university (about 35 percent in technical and scientific professions such as basic sciences, engineering, and medicine). The total number of graduates in Chile is a fraction of that in Brazil and Mexico, less than half of that in Argentina, and below the Colombian figure (Boston Consulting Group 2007).

In relation to Chile’s population, the gross enrollment ratio for tertiary education is reasonably good at the regional level (46.6 percent); it is below that of Argentina and Cuba and similar to that of Uruguay (ITU 2009). Apparently, however, this ratio is too small to generate a pool of qualified professionals large enough to sustain a large increase in the country’s supply capacity of specialized services, particularly in the IT segment.

However, in the world context, Chile ranks rather well with respect to innovation. It ranks 29th in the Innovation Capacity Index for 2009–10 (López-Claros 2009), well ahead of other countries in the region; Uruguay and Costa Rica, the two closest Latin American countries, rank 49th and 58th, respectively. Chile is in a better position than more advanced countries such as the Czech Republic, Italy, Poland, and Portugal. Adaptability and innovation are crucial for developing competitive services. The life cycle for services is very short—hence the need to adapt and innovate to stay ahead in the market.

On the basis of the Mercer Consulting Group’s Global Pay Summary for 2005/06, the Boston Consulting Group (2007) reports that Chilean salaries are, on average, between 50 percent and 71 percent less onerous for employers than salaries in the United States, yet they are three times higher than salaries in India
for jobs such as account executive, human resources analyst, and program analyst. In functions relevant to the ICT business (personnel analyst, system analyst, junior programmer, accountant, analyst programmer, and account executive), the study notes that total remuneration (salary plus benefits) is somewhat in line with that found in Brazil and Mexico but well above that in Argentina.

**Infrastructure**

Chile’s physical infrastructure usually rates well when compared with that of other countries in the region and other developing countries, including many of the more successful service exporters. Chile ranks 30th of 133 economies in the 2009–10 Global Competitiveness Index with respect to the quality of its infrastructure (Schwab 2009). Regarding its telecommunication infrastructure, in 2007 Chile ranked 48th in a survey of 155 countries considered in the ICT Development Index (ITU 2009) but was down from 45th in 2002. In telecommunication infrastructure, Chile ranks at the top of the region, along with Argentina (47th) and Uruguay (49th), followed by Brazil (60th), Panama (61st), and Costa Rica (66th). In the access subindex of the ICT Development Index, Chile ranks 50th, losing five places since 2002. In the use subindex, Chile ranks 48th, down eight places since 2002, while in the skill subindex, it ranks 47th, down five places since 2002.

Nevertheless, Chile—along with Argentina, Brazil, Costa Rica, Panama, and Uruguay—is in the upper group, following the top group of economies that comprises developed economies plus some top service exporters from the developing world such as Hong Kong SAR, China; Korea; Macao SAR, China; Singapore; Taiwan, China; and the United Arab Emirates.

In Chile, broadband subscribers represent more than 90 percent of all Internet subscribers. Perhaps the two most serious drawbacks regarding ICT infrastructure are, on the one hand, the loss of position in all three categories (access, use, and skills in telecommunications) since 2002 and, on the other, the high access cost for Internet and the limited capacity of Internet connections in Chile (CNIC 2010). The country ranks 73rd in the ICT Price Basket 2008 (ITU 2009). The weighted average for fixed, mobile, and Internet rates is 11 times higher than in Singapore and the United States, the countries with the cheapest Internet access. Chile also ranks poorly in the ICT Price Basket 2008 when compared to Costa Rica (41st), Panama (44th), Uruguay (55th), República Bolivariana de Venezuela (59th), Mexico (60th), and Argentina (62nd). For instance, a 4 megabyte broadband connection costs about US$57 a month in Chile, whereas a 100 megabyte connection costs US$24 in Korea and US$16 in Sweden. Moreover, international applications such as telepresence demand bandwidths of at least 24 megabyte per second. As the *Economist*
(2010) points out, “A whole host of applications in education, government, health care, public safety and energy management become possible once bandwidth is no longer a constraint.”

**Institutions: The situation of intellectual property protection**

Intellectual property protection laws and institutions are still one of the weakest aspects of Chile’s institutional development. However, Chile has made some important reforms to improve its ability to deal with intellectual property rights crimes. One of the most important initiatives is the creation of the National Institute for Industrial Property (Instituto Nacional de Propiedad Industrial, or INAPI) in January 2009. INAPI is responsible for overseeing all administrative actions related to industrial property, including patents and trademarks. However, certain problems, especially in the pharmaceutical sector, have kept Chile on the 2009 Priority Watch List included in the 2009 Special 301 Report of the Office of the United States Trade Representative.  

Other limitations in this area, especially those related to the low level of protection of trade and personal data, could become a disadvantage for the development of ICT services in general and for the financial sector or research and development work in particular. Nevertheless, in the context of the Latin American region, Chile provides a high standard of property rights protection (A.T. Kearney 2009).

**Cultural and language affinities**

In terms of its export potential, several disadvantages regarding Chile’s cultural and language abilities have been identified in different studies. First, Chileans appear to experience some adaptation difficulties in foreign environments, even in neighboring countries. Many firms have admitted to having problems keeping intracorporate transferees in foreign destinations for more than one or two years. Although highly respected professionally by their peers, the business culture of Chilean executives is sometimes resented by their local counterparts, who sometimes view them as somewhat rude and indifferent to local culture, habits, and business practices.  

Another limitation relates to the low level of English-language skills within the country. About 2 percent of the population and only 8 percent of the graduates with technical qualifications have English-language skills. The level of English skills increases when university graduates and upper socioeconomic groups are considered (33 percent) (Boston Consulting Group 2007). This finding probably explains why only 32 percent of IT outsourcing exports are provided to non-Hispanic countries (IDC 2009).
Another cultural limitation present in many parts of Chile’s export sector relates to the reluctance of local firms to enter into strategic alliances and partnerships, even with other Chilean firms, when attempting to reach foreign markets. The limitation has been described as “weak associability.” ProChile, having recognized the importance of firm size in the international market, organizes coaching activities to promote more associability within the export sector. In contrast, in the case of India’s service industries, associability is one of the factors that explain India’s export successes (Gregory, Nollen, and Tenev 2009).

Several interpretations are given for this reluctance to work in association. Most nontraditional service exporters are small and medium-size firms that have operated exclusively in the domestic market. Because the country’s market is rather small, competition among local service suppliers can be fierce, and their market positions often depend on well-protected know-how or business connections that they would not share with competitors. Making such attitudinal changes when going abroad is therefore difficult.

Another interesting fact from a sociological perspective relates to Chile’s ranking as having among the most mistrustful people in Latin America. According to Latinobarómetro (2009), the index of interpersonal trust (seen as the transaction costs among people) has not changed since 1995. Among the 18 Latin American countries surveyed, Chile appears as a country with a high level of distrust regarding culture, institutions, and life in general within the nation. Whereas countries such as the Dominican Republic and Uruguay have the relatively higher trust rankings in the region, Brazil and Chile share the lowest rankings. This finding may be helpful in understanding why local firms are so reluctant to enter into association schemes when confronting foreign markets. Within Chile, trust toward business associations is among the lowest of all economic institutions (well below labor unions and even the public health system).

**The Specifics of Chile’s Service Export Performance**

Early reforms in the Chilean economy were probably responsible for an unprecedented development of Chilean outward investments in the new service sector. Between the mid-1980s and the first half of the 1990s, Chile seemed headed to become a major player in several service industries within Latin America. Many Chilean companies began to look beyond national borders for the expansion of their business operations.

Chilean banks, privately managed pension and health insurance funds, electricity transmitters and distributors, and other companies began to reach out and, when necessary, buy existing operations or open affiliates and subsidiaries in foreign countries. Also, a growing number of professionals and specialized consultants
began to travel around the region providing specialized consulting work on regulatory reform, privatization, and management for industry-specific reforms in areas as diverse as telecommunications, financial management, and social services. Little of this activity was recorded in the official statistics, but this unprecedented Chilean presence abroad was widely covered by the local and regional media (see table 9.5).

However, this early internationalization boom was short lived. Soon, many domestic and foreign operations of Chile’s service industries were overtaken by bigger multinational companies with greater financial and technological resources. In general, these multinationals were based in developed countries, especially Spain.

With time, these companies were also attracted by the new business opportunities offered by other Latin American countries, which had also begun implementing market-oriented reforms, and they began direct operations in each of those markets.

Despite many government attempts to diversify exports and reduce their vulnerability to world price fluctuations of natural resources, the composition of merchandise exports remains almost unchanged. After 25 years of implementing a comprehensive open trade policy and entering into a record number of PTAs, Chile still depends heavily on the export of basic commodities, particularly copper and natural resource–based manufactures.28

Likewise, because they are heavily concentrated in transportation, service export earnings are highly dependent on changes in aggregate world demand, fuel prices, and other costs affecting freight rates. For instance, in 2007, fuel cost in the airline industry represented 29 percent of all costs, up from 14 percent in 2003. In the case of maritime transport, fuel costs represented 63 percent of total costs in 2007 against 33 percent three years earlier (WTO 2008). These types of fluctuations clearly add damaging uncertainties to the commercial and financial prospects of these industries with corresponding negative effects in the country’s balance of payments. As a result of these developments, Chile has tended to replicate in services the rigidities that have characterized its merchandise exports.

**Arrangements to facilitate exports**

After more than a decade (since the mid-1970s) of implementing a unilateral opening of its trade and investment regime, Chile adopted, in the early 1990s, one of the most aggressive open regionalism strategies, seeking PTAs with a wide range of developing and developed countries.29 Today, Chile enjoys preferential access in 60 countries. Many of its agreements include preferential rules and trade commitments in the areas of services and investment (Sáez 2008; Sáez and Valdés 1999).
Chile’s more specific objectives in entering into PTAs were twofold. On the one hand, they were meant to create a sort of seal of quality that would help the country in its efforts to build greater international visibility, credibility, and prestige for Chile’s trade and investment regime (box 9.3). By binding its commitments with market-oriented policies and with the adoption of best practices on rules and institutions, Chile felt it earned a right to be part of an elite group of countries with well-managed economies. On the other hand, the agreements would provide preferential access to the richest and most attractive markets in the world. Both objectives ought to create a virtuous dynamic process leading to a rapid expansion and diversification of Chile’s export sector, powered by large FDI inflows. Then Chile will be regarded as a top-quality platform for manufacturing and service

**Box 9.3: The Importance of Developing Credible Services and Service Providers**

Because services are usually intangibles whose real value to consumers is rarely appreciated before they are consumed, exporting services usually starts by exporting a promise. Establishing credibility is a serious challenge for small, developing, and rather unknown countries. Few important markets may be aware of the export potential and the services that may be available in a country such as Chile.

Among the recommendations included in an IDC (2009) report, the need to promote the use of international certifications among Chilean service providers, especially in areas such as CMMI (Capability Maturity Model Integration) and ITIL (IT Infrastructure Library), stands as one of the most important. Also, a Boston Consulting Group (2007) study suggests a number of international certification standards that could be used in the areas of information technology (Cisco Systems, IBM, Red Hat, Citrix Systems, and others); information security (certified information security manager and certified protection professional); and others (such as the International Association of Outsourcing Professionals’ Certified Outsourcing Professional Program).

Assisted by the CORFO-Innova program, access to partial financing (under a cofinancing scheme) for both the preparation of firms for the certification process and the certification itself has helped generate a growing awareness of the importance of internationally certified standards for exporting firms. Such certification is particularly important for ICT services, in which a high level of CMMI certification can be indispensable in reaching more demanding markets. Also, International Organization for Standardization (ISO) certification is starting to be more commonly recognized as a source for developing credibility and trust of service providers.

ISO certifications have expanded rapidly in Chile since 2004. For instance, regarding ISO 9001 (management) certifications, Chile ranks fourth in the region. Nevertheless, the country remains quite a distance behind the leaders, Brazil and Argentina, but closer to Mexico. The number of Chilean certifications grew from 924 in December 2004 to 4,103 in December 2008. Chile’s ISO 14001 certifications (environmental management systems) grew from 277 in 2005 to 686 in 2008, whereas the ISO survey does not register any Chilean certification for ISO 27001:2005 (information technology, information security) up to 2008.

*Source: Authors’ construction.*
export operations and, at the same time, benefit from preferential access to a potential market of nearly 3 billion people. However, to what extent these objectives have been reached cannot be assessed. Negotiations of service agreements with Latin American countries, which are the most important destination market of service exports, are relatively recent, meaning that negotiations have not led service exports but have followed the process.

In most cases, PTAs were complemented by double taxation agreements. Following the OECD model agreement, Chile has already signed or is in the process of negotiating 25 such agreements with countries such as Canada, Denmark, France, Germany, the Netherlands, New Zealand, Norway, Spain, Switzerland, the United Kingdom, and the United States. Chile has also entered into a number of social security agreements and investment promotion and protection agreements. The latter were important in cases where the PTAs did not include satisfactory investment rules and commitments.

One drawback of PTAs is that most preferential service agreements are really only formally “preferential.” In fact, trade commitments rarely go beyond listing and binding the existing level of protection at the time of their implementation, and actual liberalization takes place in a limited number of sectors (for example, financial). They cover a diverse number of sectors, usually much smaller than universal coverage. Furthermore, once a commitment is undertaken in the context of a PTA, it is, in essence, granted on a most-favored-nation basis to the rest of the world. Therefore, the preferential and transparency advantage is greatly diminished.

Chile has made little or no use of targeted, custom-made agreements between private or public operators that provide special and truly preferential market-access conditions for their exports, such as those advanced by countries like India or Thailand, which have arranged special deals for their health service exports through specific contracts with health insurance companies from developed countries, or the Philippines, which has promoted bilaterally the temporary movement of labor to provide services.

**Service export promotion policies**

Although Chile has been negotiating service PTAs since 1995, government support programs that provide assistance to service exporters are not only modest but also of recent vintage. Only in 2006 did ProChile open a separate item within the agency’s general promotion fund to be used in promoting service exports. These funds have been partially allocated to the Service Trade Department as well as to ProChile’s domestic regional offices. The Service Trade Department handles most of the work related to promotion of service exporters. The department developed a strategic export plan for the following services: engineering; educational; cultural
(including audiovisual, editing, and printing services as well as the visual arts); environmental (including carbon bonds); film location; and ICT services. Recently, a number of additional sectors have been incorporated into ProChile’s efforts: architectural services, logistics, and a cluster of service providers to retail businesses.

The range of instruments available in ProChile covers international trade fairs and strategic export sectoral plans. The latter include activities such as providing market intelligence; cofinancing business trips and organizing the business agenda with the assistance of the ProChile office abroad; and providing coaching seminars, printed and audiovisual promotional material, and other support measures. The overall yearly budget for services in ProChile is under US$1 million. The budget allocates about 45 percent to cofinance with the private sector participation in international trade fairs. The remaining 55 percent is used to develop additional activities within the strategic sectoral plans, such as invitations to foreign buyers; creation of promotional material; and holding of workshops, seminars, and business forums.

ProChile is currently supporting programs in 12 different service industries. The average resources available for each strategic sectoral plan are about US$40,000 a year per sector, which is used to implement the central plan as well as the service component contained in the regional plans. Given that every sectoral plan contemplates a number of individual support projects, ProChile estimates that the average amount available per project is about US$4,000, ranging between US$2,000 and US$10,000. Normally, through cofinancing with the private sector, an additional 40 percent is added to these resources. Overall, the promotion efforts undertaken by ProChile in services seem insufficient and probably have a modest influence on service exports.

A different government agency, the National Tourism Service (Servicio Nacional de Turismo, or Sernatur), deals with tourism. Sernatur was created in 1975 and promotes the development of national and foreign tourism in Chile. It has several offices in different cities within Chile but no offices abroad. For international efforts, it works jointly with Turismo Chile (a private association of the tourism sector), which jointly promotes Argentina and Chile as tourist destinations. The public resources available to Sernatur are rather modest, and most of the budget is spent on domestic promotional activities.

In addition, two fiscal initiatives are worth mentioning. First is the value added tax exception for services qualified as exports by the National Customs Service. A second incentive can be found in the Platform Law (Ley Plataforma). The main purpose of this 2002 law was to grant a fiscal allowance to attract foreign investment with the exclusive purpose of exporting services such as offshoring services from Chile. According to the law, foreign-owned companies established
with that sole purpose are considered not to have legal residence in Chile and are therefore not subject to the general income tax law. However, the complexities of complying with all the requirements of the Platform Law have limited its use by foreign investors, who generally opt to use the benefits provided under the double taxation agreements to which Chile has subscribed.

Mindful of the importance and prospects of service exports in Chile, the government implemented a new policy to develop the offshoring industry in 2000.\(^\text{34}\) The High-Technology Investment Promotion Program was adopted under the leadership of CORFO. It focuses on promoting foreign investments by acknowledging the new patterns of location of high-tech firms. The main components of the program are promotion, investment development, and investor services. *Promotion* refers to the dissemination of the location advantages offered by Chile in the community of international technological business among the officials of leading companies located in the main world-class technological clusters. *Investment development* refers to the market intelligence work used to identify decision makers, companies, and projects that are assessing Latin America or other continents as an alternative for the location of projects related to IT business areas. CORFO provides financial support in connection with this initiative, which is described further in table 9.6. Finally, *investor service activities* provide guidance for investors and facilitate the processes of assessment, installation, and

### Table 9.6. Attracting High-Tech Companies to Chile

<table>
<thead>
<tr>
<th>Incentives</th>
<th>Financial support</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preinvestment studies or</td>
<td>Feasibility studies for an investment project</td>
<td>Up to 60% of the preinvestment study cost (maximum US$30,000)</td>
</tr>
<tr>
<td>prospecting trips to Chile</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Project launch assistance</td>
<td>Execution of a working plan to assist in project</td>
<td>Up to US$30,000 for start-up activities</td>
</tr>
<tr>
<td></td>
<td>implementation</td>
<td></td>
</tr>
<tr>
<td>On-the-job training</td>
<td>New employee training program</td>
<td>Up to 50% of annual salaries (maximum US$25,000 per employee)</td>
</tr>
<tr>
<td>Equipment and infrastructure</td>
<td>Acquisition of technological infrastructure and</td>
<td>Up to 40% of the total investment in fixed assets (maximum US$2,000,000)</td>
</tr>
<tr>
<td></td>
<td>equipment</td>
<td></td>
</tr>
<tr>
<td>Long-term property leasing</td>
<td>Long-term lease of property associated with the</td>
<td>Up to 40% of total lease amount during the first 5 years (maximum US$500,000)</td>
</tr>
<tr>
<td></td>
<td>investment project</td>
<td></td>
</tr>
<tr>
<td>Specialized training and</td>
<td>Acquisition of specific knowledge or recruitment of</td>
<td>Up to 50% of specialized training or recruitment (maximum US$100,000)</td>
</tr>
<tr>
<td>recruitment</td>
<td>experts</td>
<td></td>
</tr>
</tbody>
</table>

The Case of Chile

implementation of investments through incentives. The program’s aim is to facilitate and influence investment decisions in Chile.

In February 2003, a new strategy was adopted to (a) focus on Europe and the United States after the negotiation of free trade agreements with those markets; (b) add new segments to the offshoring industry; and (c) incorporate factors for the development of this industry in Chile in the field of human resources and regulation, including adjustment of regulatory issues for the offshoring industry, development of human resources with English-language skills, and prospecting of new areas of investment attraction in business processes, knowledge processes, and biotechnology.

In December 2007, as part of a wider initiative to promote innovation in Chile, the Strategic Public-Private Council of Offshoring Clusters was established. Initially, the purpose of this body was to design and implement an action plan to strengthen the development and expansion of offshoring in Chile. The council is made up of representatives from industry, including foreign companies operating in Chile, entrepreneurial associations, and higher education and public sector institutions. It validates the action plan in three main areas: reducing the human capital gap, developing an international promotion strategy, and improving both infrastructure and the regulatory framework. This coalition is directed by CORFO and financed by the Chilean Innovation and Competitiveness Fund, which provided US$23 million for 2008–09 (Gereffi, Castillo, and Fernández-Stark 2009).

In addition to the preceding program, CORFO, through its Innova division, supports the Global Services Program. Essentially, this support takes the form of financing of technological missions (to attract large high-tech firms to invest in Chile) and financing of the Business Platform for Innovation, which seeks to develop a marketing infrastructure in priority foreign markets for the promotion and sale of global services offshored from Chile. Innova’s 2008 resources available for granting subsidies through its various support programs totaled some US$90 million. Projects submitted to the Business Platform for Innovation, when approved, can receive a 70 percent subsidy with an upper limit of US$30 million.

Yet some concerns exist that relate to the lack of specificity of the Global Services Program. First, the program aims at developing knowledge process operations and innovation process operations rather than business process operations and IT operations. However, these categories of services are so broad that they mask the real target of the support program. Moreover, the criterion for choosing these services is not clear, nor is the mechanism by which funds will be allocated. Second, from a value-added perspective, knowledge process operations and innovation process operations are obviously very attractive categories. However, trying
to compete in one of the world’s most sophisticated markets in areas may be diffi-
cult for Chilean industry, which is only in the early stages of its development.
Some studies acknowledge that the program did not attract all the investments
and the types of investments initially expected, but they consider the policy design
to be correct and to point in the right direction, though, admittedly, it should have
been more ambitious in scale (Agosín, Larraín, and Grau 2009; Agosín and Price
2009).

More generally, the risks associated with choosing the sectors to be developed,
even in the absence of government support, or with choosing to support sectors
that are not viable have been pointed out. Regulatory capture risks are also a con-
cern. Therefore, a set of requirements that would help avoid those risks has been
proposed, and among its provisions are goal setting and monitoring (OECD
2011).

Another CORFO initiative is the creation of the National Registry of Individu-
als with Advanced English-Language Skills. The registry identifies some 15,000
people living in the country who have a level of language skill certified by the Test
of English for International Communication. Beginning in 2008, this register was
complemented with an English training program, subsidized by CORFO, for
graduate technicians and professionals specializing in ICT. Every year 2,000 stu-
dents are sponsored by scholarships financed by this program. These programs
supplement earlier English training initiatives developed by the Ministry of Edu-
cation since 2004.

In addition to the CORFO Global Services Program, ProChile has recently
undertaken some initiatives. Using the two most successful industries within
Chile’s service sector—the international maritime and air transport sector and
the retail sector—as the starting point, ProChile has begun two new programs
structured around the cluster approach:

• A special program to develop new service exports around a retail cluster
• A program aimed at the development of service exporters related to the inter-
national components within the logistic supply chain associated with interna-
tional transport

Both programs represent promising areas associated with sectors that already
have proven experience in internationalization and proven comparative advan-
tages and thus may be appropriate for promotion policies. Whether the limited
financial resources available to ProChile as well as its limited role in attracting
inward FDI or its influence in modifying the regulatory architecture of many serv-
icie industries will be an obstacle in achieving the programs’ objectives remains to
be seen.
Private associations in services

Chile’s first private association of service exporters dates to the mid-1990s, when the country negotiated with Canada its first comprehensive PTA. The Coalition of Service Exporters was created under the aegis of the Santiago Chamber of Commerce. Its associates cover a wide range of service industries that either are exporting or wish to export services. At the time of its inception, the coalition’s purpose was to act as the private counterpart in negotiations for consultations regarding the industry’s views on the service rules and commitments contained in the Canada-Chile free trade agreement. The coalition is still active today and, together with ProChile, maintains and manages a Web page devoted to the export of services (http://www.chileexportaservicios.cl). In addition to acting as a consulting body to the government on trade negotiation matters, the coalition provides technical support to its associates on fiscal matters affecting Chilean service exporters and organizes seminars and coaching activities on service-related matters.

Other private service associations have a more industry-specific character but have also been very active in developing the Global Services Program, and the Engineers Professional Association has also been active in attempting to implement the recognition agreement provisions included in Chile’s PTAs.36 However, the work of all these associations is somewhat weakened by their limited influence on the design and implementation of public policies affecting Chilean service exporters and organizers seminars and coaching activities on service-related matters.

In Search of a Service Development Policy: Some Lessons Learned

Chile’s search for a less vulnerable and more diversified economy may be traced to the early 1990s, when it began a trade policy based on the open regionalism concept. Some of the objectives set out in this policy have not yet been fully achieved. First, the country has failed to achieve a substantial degree of export diversification, both in goods and services.37 Second, it has been unable to become a major international investment platform and a regional center for transnational companies.

In addition, a number of limitations or inadequacies have been identified. First, supply-side factors, such as the limited pool of human resources, stagnant productivity of the labor force, scarcity of English-language skills,38 and relative rigidities in Chile’s labor legislation, affect the efficiency of labor in providing services.39 The small number of internationally certified firms and service
providers, the perceived lack of adequate export credit financing and insurance (López and Muñoz 2008), and the high costs and limited connectivity of Chile’s telecommunications infrastructure (especially broadband Internet access) have been identified as limiting factors (CNIC 2010).

The availability of financial instruments to support the export sector (that is, export credits and export credit insurance) has played a decisive role in the success of Chile as an exporter of goods. Although financial services have a high penetration in Chile and the industry is well developed in different areas, among service firms a consistent perception exists (a) that no instruments are available locally to support efforts to export services abroad or (b) that the current instruments are not suitable for service activities. Hence, one must determine whether the financial system needs to improve its technical capacity and human resource knowledge to assess and finance service export projects.

In terms of government support, the financing granted by the public sector has by and large been allocated to facilitate exports of goods, but service exporters have been neglected. Proper design and adequate availability of service export credit financing and export credit insurance may be future determinants of export performance of Chilean services, particularly at a time when external markets face acute liquidity constraints.

Other industry-specific limitations have been noted. For instance, a recent study (Achá Álvarez and Bravo Lillo 2009) about the software industry in the region notes that, despite multiple government efforts to promote technological activities in international markets, mainly through agencies such as ProChile and CORFO, a lot of ignorance still exists about Chile’s technological capabilities and supply potential in foreign markets. The study also mentions inadequacies in the quality of Chile’s postsale services, marketing and managerial skills, and financial backing. The study quotes a Fundación Chile study that confirms some of the more basic aspects, such as the shortage of professionals with language skills and the time difference with markets outside the Americas.

Second, Tholons (2010) acknowledges that Chile does not enjoy scale advantage as do other Latin American countries. In its analysis, Tholons (2010, 25) assesses Chile’s point of scale resistance, defined as “the number of employees beyond which companies find difficulty in ramping up operations in a particular location.” Tholons (2010, 25) concludes that despite the limited workforces of Argentina and Costa Rica, those countries have better points of scale resistance than does Chile. Costa Rica, the study concludes, “in spite of having only one-fourth the population of Chile, has a Point of Scale Resistance of 1,000, similar to Chile.”

These limitations are shared with a number of successful exporting developing countries; hence, fully grasping how they could be strong enough to offset the
many positive elements that have placed Chile high in many international competitiveness index rankings is difficult. Possibly some additional elements have not been considered in the general or specific fundamentals previously listed. As noted by the OECD (2010, 2011) studies, most OECD countries encourage the formation of industrial clusters under the economic justification that they generate positive externalities for the economy as a whole. OECD (2010, 14) goes further to conclude that in Chile the promotion “of industrial clusters may foster the diversification into nontraditional high-productivity sectors, but potential risks to public resources should not be overlooked.”

Policy makers and economists alike reasonably hesitate to implement development policies that deviate from the free play of market forces and introduce selective promotion policies. The use of public resources in trying to develop industries that may never reach an acceptable level of efficiency and competitiveness is associated with obvious potential risks. These fears are perhaps stronger in countries that experience exhaustion from the decades of inefficient development strategies based on protectionism and the abuse of the “infant industry” argument. More transparency about the duration of the incentives granted, continuous monitoring of progress made, sunset clauses for support programs, and clear export targets for assessing such policies are essential.

A conclusion that may be drawn is that countries that set out aggressive service industry development and service export development strategies very early in the process are currently reaping the benefits of an impressive growth in service world trade. Countries such as China, Hungary, India, Ireland, Korea, Singapore, as well as other Latin American countries such as Costa Rica or Uruguay, took timely measures to promote their service exports with special emphasis on value-added services. Not many developing countries have followed this path. A majority of countries lack a service industry development strategy.

For instance, Chile and Hungary have similar development indicators, yet their service trade pattern is quite different. Hungary’s experience can serve as an educational example of how an active industrial policy favoring the development of well-targeted service clusters has proved to be highly successful. Hungary’s GDP was only 83 percent of Chile’s GDP. Employment in service activities was about half the figure for Chile, yet total Hungarian service exports were almost double those of Chile. Hungary’s per capita service exports amounted to US$1.22 million in 2005, whereas Chile’s per capita exports were only US$0.44 million. In 2008, Hungary’s exports in the OCS category were almost four times those of Chile. While Hungarian total commercial service exports expanded by 37.2 percent annually between 1998 and 2008, in Chile they expanded by 27.6 percent. Even more remarkably, Hungary’s OCS category expanded by an average 85.3 percent a year between 1998 and 2008. The comparable figure for Chile was only 29.7 percent in
the same period. A positive element explaining such important differences in the
evolution of Chilean and Hungarian exports can be traced to the volume of
inward FDI stock in services, which was 5.3 times higher in Hungary than in
Chile. Whereas inward FDI in Hungary was US$103.242 million in 2006, the
corresponding figure for Chile was US$19.492 million. Of course, Hungary’s location
in the heart of Europe, membership in the European Union, and highly qualified
human capital are also important factors that explain these divergent trajectories.

The different trade pattern indicates the results that can be achieved through a
neutral industrial policy as opposed to an active industrial development policy in
services. Five of six priority sectors defined by the Hungarian Investment and
Trade Development Agency are designed for service industries. The incentive
package provides four types of subsidies and allowances for projects worth at least
€10 million (at least €50 million for tourism).

Since the CNIC was created in Chile, several internationally competitive clus-
ters have been identified. On some occasions, they have been the basis of new pro-
grams that are now are beginning to be implemented. Success will also depend on
overcoming some of the systemic weaknesses identified throughout this chapter.
ProChile can have an active role in paving the way to remove some of these obsta-
cles, particularly in areas such as further developing associative entrepreneurial
capacity, coaching for the development of business models and successful interna-
tional marketing strategies, facilitating access to private financial sources, and
promoting the use of international standards and certifications by exporters and
others. Also, an increase in ProChile’s promotion resources should be assessed
together with a more targeted approach toward a narrower set of activities to
make the best use of the limited resources devoted to each of them. Finally,
improvements in the overall coordination of promotion activities should be
implemented among different institutions such as ProChile, CORFO, and the
Foreign Investment Committee.

Beyond trade promotion, the future focus of Chilean trade authorities in serv-
ces should aim at addressing trade facilitation in services, including reduction of
regulatory burden. For instance, measures to reduce the processing time and facil-
itate foreign recognition of professional titles could help improve the availability
of skills. Among the facilitation initiatives, the rationale behind the custom
authorities’ participation in the process of exporting should be assessed. Also,
greater priority should be given to the identification of domestic policies that may
improve Chile’s position as a service platform; given the nature of service trade, a
wide array of domestic policies may be needed, including policies related to entre-
preneurship, immigration, and education (CNIC 2010).

During the 1990s, Chile appeared ready to become a successful and rather well-
diversified service exporter. In addition to a well-established air and maritime
international transportation industry, the country’s service providers began venturing into foreign markets in areas as diverse as pension fund management, retail, banking, water and energy (transmission and distribution), and a range of business services offered to both governments and private firms, including management consulting, advisory services on regulatory reform and privatization, and management of international bidding for concessions in public works.

However, this initial success led to a comparatively more moderate performance. In only a few years’ time, this incipient diversification began to elude Chilean exporters. Soon after, the composition of Chilean exports became increasingly dominated by international transport services while the most dynamic categories of world service trade (that is, OCSs) began to shrink in its contribution to total exports. Chile’s early success was associated with the country’s sound management of its macroeconomic policies, the quality of its institutions and its commitment to the rule of law, and its relatively adequate endowment of physical infrastructure and human resources (equal to if not better than that of many of its more successful competitors from the developing world). Also, for several years Chile has enjoyed a favorable position in various rankings dealing with development and competitive indicators. All these factors should have been strengthened by one of the most comprehensive networks of PTAs, which would facilitate and promote trade and investment with the most dynamic economies on the planet.

This chapter has attempted to provide some explanations for Chile’s service export performance, but more research, better data, and more detailed information are needed. Perhaps more focus should be given in future research to midlevel policies or micropolicies as opposed to macropolicies. Services are highly heterogeneous, and different services seem to be affected differently by more specific determining factors and sectoral policies. A deeper analysis, on an industry-by-industry basis, may be needed to provide better policy recommendations.

Annex 9.A: Service Exports from Chile

This annex illustrates the influence that a number of variables can have on Chile’s service exports’ performance. Because of the data problems related to services, the results must be interpreted with caution.

Export (in any industry or sector) from a country $i$ at time $t$ is given by

$$\text{Export}_i^t = \text{Output} - \text{Domestic Consumption}. \quad (9.1)$$

In the commercial service sector, service value added would represent the supply of services (a proxy of commercial service value added in the country), whereas GDP would represent the domestic demand for the service. Therefore,
one would estimate the following export equation for commercial service exports:

\[
\log (\text{Commercial service exports})_{it} = FE_i + \log (\text{Per capita income})_{it} \\
+ \log (\text{Service value added})_{it} \\
+ \log (\text{GDP})_{it} + \epsilon_{it}.
\] (9.2)

One would expect the service value added to positively affect service exports, whereas domestic consumption or absorption would reduce service exports. GDP per capita represents the country’s productivity and therefore is likely to positively affect commercial service exports.

To assess whether the state of commercial service exports from Chile is above or below normal for the country’s per capita income, service sector size, and economy, a Chilean dummy is added to the specification in equation 9.2. If the coefficient on the Chilean dummy is significant, it indicates that commercial service exports from Chile are not in accord with its economic fundamentals. A positive sign would indicate that they are larger than an average country in the sample, whereas a negative sign conveys the opposite message. The following model (which is referred to as the base model) is estimated:

\[
\log (\text{Commercial service exports})_{it} = FE_i + \log (\text{Per capita income})_{it} \\
+ \log (\text{Service value added})_{it} \\
+ \log (\text{GDP})_{it} + \text{Chile dummy} + \epsilon_{it}.
\] (9.3)

For this estimation, service exports from 1990 onward are included, and African countries are excluded because of the small size of service exports from those countries. The results of the estimation for equation 9.3 are shown in column 1 of table 9.A.1. The signs of the fundamental variables—GDP per capita, service value added, and GDP—are in accordance with expectations.

For a per capita income exceeding US$13,000 in 2008, commercial service exports from Chile are significantly larger than those from the average country. The positive and significant coefficient for the Chilean dummy in column 1 of table 9.A.1 suggests that commercial service exports from Chile are large given its per capita income, service sector size, and GDP.

Next, whether Chile’s success in exporting commercial services can be explained by the quality of its telecommunications network, as proxied by the number of Internet users per 100 people in the country, is assessed. By incorporating the Internet penetration variable in the base model, one can evaluate whether ICT innovations have significantly affected service exports:

\[
\log (\text{Service exports})_{it} = FE_i + \log (\text{Per capita income})_{it} \\
+ \log (\text{Service value added})_{it} + \log (\text{GDP})_{it} \\
+ \text{Internet penetration} + \text{Chile dummy} + \epsilon_{it}.
\] (9.4)
Table 9.A.1. Chile’s Position in Commercial Service Exports

*Dependent variable: commercial service exports*

<table>
<thead>
<tr>
<th>Variable</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
<th>(7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP, per capita (constant US$), in logs</td>
<td>1.909***</td>
<td>1.560***</td>
<td>1.959***</td>
<td>1.960***</td>
<td>1.959***</td>
<td>2.155**</td>
<td>2.150**</td>
</tr>
<tr>
<td></td>
<td>[10.049]</td>
<td>[5.919]</td>
<td>[4.791]</td>
<td>[4.793]</td>
<td>[4.788]</td>
<td>[2.500]</td>
<td>[2.487]</td>
</tr>
<tr>
<td>Service value added, in logs</td>
<td>0.985***</td>
<td>0.982***</td>
<td>0.979***</td>
<td>0.979***</td>
<td>0.979***</td>
<td>0.788***</td>
<td>0.788***</td>
</tr>
<tr>
<td></td>
<td>[79.808]</td>
<td>[71.644]</td>
<td>[56.794]</td>
<td>[56.734]</td>
<td>[56.735]</td>
<td>[7.625]</td>
<td>[7.603]</td>
</tr>
<tr>
<td>GDP (constant US$), in logs</td>
<td>–1.752***</td>
<td>–1.360***</td>
<td>–1.796***</td>
<td>–1.806***</td>
<td>–1.792***</td>
<td>–2.131**</td>
<td>–2.128**</td>
</tr>
<tr>
<td>Internet users per 100</td>
<td>0.001</td>
<td>0.002**</td>
<td>0.002**</td>
<td>0.002**</td>
<td>0.001</td>
<td>0.001</td>
<td></td>
</tr>
<tr>
<td></td>
<td>[1.207]</td>
<td>[2.191]</td>
<td>[2.197]</td>
<td>[2.176]</td>
<td>[0.533]</td>
<td>[0.538]</td>
<td></td>
</tr>
<tr>
<td>Average years of schooling</td>
<td>0.190***</td>
<td>0.191***</td>
<td>0.189***</td>
<td>0.189***</td>
<td>0.124</td>
<td>0.124</td>
<td></td>
</tr>
<tr>
<td></td>
<td>[3.344]</td>
<td>[3.351]</td>
<td>[3.329]</td>
<td>[0.865]</td>
<td>[0.866]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chile dummy</td>
<td>3.553***</td>
<td>2.530***</td>
<td>0.591</td>
<td>2.829**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>[7.024]</td>
<td>[3.619]</td>
<td>[1.271]</td>
<td>[2.548]</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internet penetration*Chile dummy</td>
<td>0.004</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>[1.339]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Schooling years*Chile dummy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>–0.041</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>[–0.315]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rule of law</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.093</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>[0.462]</td>
<td></td>
</tr>
<tr>
<td>Rule of law*Chile dummy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>–0.326</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>[–0.274]</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>[7.180]</td>
<td>[3.861]</td>
<td>[3.980]</td>
<td>[3.999]</td>
<td>[3.626]</td>
<td>[1.939]</td>
<td>[2.025]</td>
</tr>
<tr>
<td>Observations</td>
<td>1,004</td>
<td>917</td>
<td>622</td>
<td>622</td>
<td>622</td>
<td>251</td>
<td>251</td>
</tr>
<tr>
<td>$R^2$</td>
<td>0.984</td>
<td>0.985</td>
<td>0.987</td>
<td>0.987</td>
<td>0.987</td>
<td>0.988</td>
<td>0.988</td>
</tr>
</tbody>
</table>

Source: Authors’ calculations.

Note: Robust t-statistics are in brackets.

* = significant at the 10 percent level; ** = significant at the 5 percent level; *** = significant at the 1 percent level.
In column 2, one finds that Internet penetration, by itself, does not significantly affect commercial service exports. This finding probably reflects the fact that many developing countries have been able to export services even without having a larger percent of their population exposed to new technology. What matters for service exports is that exporting firms have access to ICT, which may be provided by the government through special programs such as the software technology parks. Another reason ICT penetration may not be sufficient in explaining service exports could be that it requires a complementary input (that is, education or human capital skills), without which it cannot be used meaningfully. This hypothesis will be tested by adding the level of education, as proxied by average years of schooling, as an explanatory variable in the next specification.

Notice that in the specification of column 3, even though Internet penetration is not significant in affecting service exports for the sample of countries, it does explain why Chile is an outlier in exporting services. This finding is clear from the lower magnitude of the Chilean dummy relative to its size in column 1. However, the coefficient for the Chilean dummy is still positive and significant. Hence, although Internet penetration explains part of the Chilean success in exporting services, it does not provide a complete explanation. ICT penetration may not fully explain service exports from Chile because of the composition of service exports in Chile, which is heavily biased toward a service that is not intensive in ICT usage (that is, transport services).

Column 3 tests whether Internet penetration, together with skill, explains service exports in general and particularly from Chile. Not only is human capital consequential in explaining service exports from the sample of countries, but it also accentuates the effect of ICT penetration. This effect is seen in the positive and significant coefficient for the two variables in this specification. Most notably, the coefficient for the Chilean dummy loses significance in column 3. Thus, ICT penetration and average years of schooling in Chile completely account for Chile’s performance in commercial service exports.

In column 4, an interaction term of the variable on Internet penetration with the Chilean dummy is added to evaluate whether the effect of Internet penetration is larger for Chile than for the rest of the countries in the sample. The positive but insignificant coefficient for this interaction term suggests that the effect of Internet penetration on commercial service exports in Chile is not significantly large vis-à-vis an average country.

Column 5 assesses whether human capital skills have a higher effect on service exports from Chile than on such exports from the rest of the countries in the sample. This assessment is done by adding an interaction term of average years of schooling with the Chilean dummy. The insignificance of the coefficient for this
interaction term suggests that the effect of investment in human capital on Chile is not any different than its effect on the average country in the sample.

Column 6 assesses whether the quality of institutions, over and above ICT network and human capital, matter for commercial services exports. The coefficient for the rule of law variable, obtained from Kaufmann, Kraay, and Mastruzzi (2006), is not significant in explaining commercial service exports. This result may be attributable to a high correlation of the rule of law variable with GDP per capita (0.78), Internet penetration (0.69), and human capital (0.81). One can also see that, in this specification, the positive and significant coefficient for the Chilean dummy returns when this institutional variable is added, which implies that, given the state of institutions in Chile, service exports should have been lower and not higher. Thus, the quality of institutions does not explain Chilean success in exporting services.

In column 7, an interaction term of the rule of law variable with the Chilean dummy is added to assess whether institutions have higher or lower effect on Chile compared with the rest of the world. The coefficient for this interaction term is found to be insignificant, implying that the effect of the quality of institutions on Chilean commercial service exports is no different than their effect on other countries in the sample.

In 2008, 60 percent of service exports from Chile were in transport services, and other commercial service exports comprised only 24 percent of service exports, while the reverse was true for the world average. In a world where globalization is increasingly leading to offshoring of other commercial services, such as computer and information services or other business services, one would like to evaluate why Chile has not been able to take advantage of this opportunity. Commercial service exports are estimated in a cross-country framework, and a dummy variable for Chile is introduced (along with interaction of the Chilean dummy with the explanatory variables). The following base model is estimated:

\[
\log(\text{Other commercial service exports})_{it} = FE_i + \log(\text{Per capita income})_{it} + \log(\text{Service value added})_{it} + \log(\text{GDP})_{it} + \text{Chile dummy} + \epsilon_{it}. \tag{9.5}
\]

As before, service value added is a proxy for the value added in the OCS export sector and is likely to positively influence exports, whereas GDP reflects domestic consumption demand for OCSs and therefore is likely to drag down services available for export purposes. GDP per capita represents the productivity level of the country and is likely to positively affect OCS exports. The Chilean dummy is added to assess whether OCS exports from Chile are higher or lower than what would be predicted for the level of these fundamental variables: GDP per capita,
service value added, and GDP. The result of the estimation is presented in table 9.A.2. In column 1, the Chilean coefficient is found to be negative and highly significant, implying that actual OCS exports from Chile are way below the level that is predicted by these fundamental variables.

The regression output in column 1 of table 9.A.2 reflects that from 1990 onward, given Chile’s GDP, GDP per capita, and service value added, Chilean OCS exports have been below the prediction on average. The next step is to evaluate whether the penetration of the telecommunication network affects OCS exports in general and particularly so for Chile. After a proxy for the telecommunication network (that is, Internet penetration) is added to the econometric specification in equation 9.5, the model is reestimated. The result for this extended model is presented in column 2. In contrast to the result for commercial service exports, Internet penetration does significantly affect OCS exports. Thus, the reason for the lack of significance of Internet penetration in the case of commercial or aggregate service exports does relate to the fact that OCSs are more intensively involved in telecommunication network relative to aggregate or commercial services and, therefore, are more likely to be affected by Internet penetration in the country. Notice that the magnitude of the coefficient for the Chilean dummy falls by half relative to its size in column 1 when the Internet penetration variable is introduced into the specification in column 2. This change implies that the extent of Internet penetration in Chile is significant in explaining the lack of success in OCS exports. The lower level of Internet penetration in Chile relative to its per capita income partially explains the relatively low contribution of OCS exports in aggregate service exports.

In the next specification, in column 3, human capital skills are added to evaluate whether the level of human skills in Chile explains the lack of OCS exports from the country. Human capital, as proxied by average years of schooling, is found to positively and significantly affect OCS exports. Given the decline in magnitude for the coefficient of the Chilean dummy in this specification, one can conclude that the level of skills in Chile is also partially responsible for the relatively low level of OCS exports from Chile. Notice that even when both the electronic infrastructure and the human skill endowment variable are added, the significance of the coefficient for the Chilean dummy does not vanish. Thus, unlike the case for commercial service exports, Internet penetration and human skill are not sufficient to explain Chilean performance in OCS exports.

As in the case of commercial service exports, whether Internet penetration or average years of schooling affect Chile differently from other countries in the sample is also evaluated. An interaction term of Internet penetration with the Chilean dummy is added in column 4, while in column 5, average years of schooling is interacted with the Chilean dummy. The coefficients for both these interaction terms are found to be insignificant, thus implying that the effect of a better
Table 9.A.2. Commercial Service Exports from the Chilean Perspective

**Dependent variable: other commercial service exports**

<table>
<thead>
<tr>
<th>Variable</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
<th>(7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP, per capita (constant US$), in logs</td>
<td>3.572***</td>
<td>2.462***</td>
<td>2.462***</td>
<td>2.463***</td>
<td>2.465***</td>
<td>3.211**</td>
<td>3.226**</td>
</tr>
<tr>
<td></td>
<td>[10.096]</td>
<td>[5.116]</td>
<td>[3.772]</td>
<td>[3.769]</td>
<td>[3.775]</td>
<td>[2.017]</td>
<td>[2.021]</td>
</tr>
<tr>
<td>Services value added, in logs</td>
<td>0.966***</td>
<td>0.945***</td>
<td>0.926***</td>
<td>0.926***</td>
<td>0.926***</td>
<td>0.902***</td>
<td>0.902***</td>
</tr>
<tr>
<td></td>
<td>[31.060]</td>
<td>[32.115]</td>
<td>[35.307]</td>
<td>[35.276]</td>
<td>[35.243]</td>
<td>[4.813]</td>
<td>[4.802]</td>
</tr>
<tr>
<td>Internet users per 100</td>
<td>0.006***</td>
<td>0.008***</td>
<td>0.008***</td>
<td>0.008***</td>
<td>0.003</td>
<td>0.003</td>
<td></td>
</tr>
<tr>
<td></td>
<td>[3.694]</td>
<td>[4.298]</td>
<td>[4.290]</td>
<td>[4.250]</td>
<td>[1.041]</td>
<td>[1.017]</td>
<td></td>
</tr>
<tr>
<td>Average years of schooling</td>
<td>0.192*</td>
<td>0.192*</td>
<td>0.188*</td>
<td>0.020</td>
<td>0.019</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>[1.777]</td>
<td>[1.776]</td>
<td>[1.740]</td>
<td>[0.069]</td>
<td>[0.065]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internet penetration*Chile dummy</td>
<td>0.001</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>[0.139]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Schooling years*Chile dummy</td>
<td>–0.310</td>
<td></td>
<td>–0.310</td>
<td>–0.304</td>
<td>–0.308</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>[–0.753]</td>
<td>[–0.756]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rule of law</td>
<td></td>
<td></td>
<td></td>
<td>0.895</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>[0.368]</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rule of law*Chile dummy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>66.313***</td>
<td>35.827***</td>
<td>34.498***</td>
<td>34.556***</td>
<td>30.422***</td>
<td>76.032**</td>
<td>76.119**</td>
</tr>
<tr>
<td></td>
<td>[8.338]</td>
<td>[3.377]</td>
<td>[2.632]</td>
<td>[2.624]</td>
<td>[2.863]</td>
<td>[2.175]</td>
<td>[2.173]</td>
</tr>
<tr>
<td>Observations</td>
<td>992</td>
<td>905</td>
<td>613</td>
<td>613</td>
<td>613</td>
<td>248</td>
<td>248</td>
</tr>
<tr>
<td>$R^2$</td>
<td>0.955</td>
<td>0.959</td>
<td>0.967</td>
<td>0.967</td>
<td>0.967</td>
<td>0.971</td>
<td>0.971</td>
</tr>
</tbody>
</table>

**Source:** Authors’ calculations.

**Note:** Robust t-statistics are in brackets.

* = significant at the 10 percent level; ** = significant at the 5 percent level; *** = significant at the 1 percent level.
telecommunication network or longer years of schooling on Chile is not any different from that on the rest of the world.

Column 6 presents a model that evaluates the effect of institutions on OCS exports in general and particularly for Chile. For the measure of institutions (that is, the rule of law), OCS exports from the sample of countries are not critically affected, perhaps because of multicollinearity. For the case of Chile, the negative and significant coefficient for the Chilean dummy increases in value compared with its size in the specification shown in column 3, which implies that given the state and quality of institutions in Chile, its OCS exports are very low.

In column 7, an interaction term on the quality of institutions is added to the Chilean dummy to check whether the effect of institutions on Chile is any different from their effect on the rest of the countries in the sample. The coefficient for this interaction term is insignificant, implying that institutions affect OCS exports from Chile in the same manner as they do from any country.

From this econometric exercise, one can draw several conclusions. First, Chile is an example of a successful exporter of commercial services, but it is rather unsuccessful at exporting other commercial services. Second, telecommunication network density, as proxied by Internet penetration; human capital skill, as proxied by average years of schooling; and physical infrastructure (road-length infrastructure) explain the success of Chile in exporting commercial services. Although apparently contradictory, the same factors explain the lack of success in OCS exports from Chile.

How can this last conclusion be reconciled? The presence of telecommunication network density or human capital skills in Chile is enough to promote commercial services such as transport or travel services, but it is low with respect to the level required for providing OCS exports. Thus, factor endowment in Chile in terms of telecommunication network or human capital skill or road-length infrastructure encourages transport service exports. However, because OCS exports are highly intensive in these inputs, Chile is not able to provide OCS services in the international market owing to insufficient availability of these endowments.

Notes

1. This fluctuation seems to be explained by the importance of the mining industry in Chile. Service share in GDP tends to move inversely with respect to the relative weight of mining in Chile’s GDP. In turn, this ratio oscillates sharply in response to changes in the world prices of minerals, mainly copper. According to the Central Bank of Chile, services’ share in GDP (in current pesos) accounted for 60.4 percent in 2008, down from 65.7 percent in 2003.

2. Employment and remuneration data are from the weekly economic statistics series published by the Central Bank of Chile. See http://www.bcentral.cl/eng/economic-statistics/series-indicators/.

3. These data are according to the national accounts of the Central Bank of Chile.

5. Trade statistics are from the Central Bank of Chile (http://www.bcentral.cl).


7. Commercial services correspond to services minus “government services, not included elsewhere.” Other commercial services include communication services; construction; insurance services; financial services; computer and information services; royalties and license fees; other business services; and personal, cultural, and recreational services.

8. The Central Bank of Chile does not have estimates for construction services; therefore, exports of this sector are omitted.

9. Merchanting is defined as the purchase of a good by a resident of a country from a nonresident and the subsequent resale of the good to another nonresident. During the process, the good does not enter or leave the resident country. The difference between the value of goods when acquired and the value when they are sold is recorded as the value of merchanting services provided.

10. According to the website of the Chilean Association of Engineering Consulting Companies, (http://www.aic.cl/?page_id=1378&lang=es) 95 percent of engineering exports in Chile correspond to mining engineering services. Also, exports of engineering consulting services have increased from less than US$13 million in 2003 to US$230 million in 2008. The main destination markets are Peru (35 percent), Argentina (22 percent), and South Africa (12.9 percent).


12. For instance, Falabella transformed Financiera CMR in Peru into Banco Falabella, and Cencosud broke into the credit card market in Argentina (ECLAC 2007).

13. This section is based on Sáez (2008).

14. Between 1985 and 1991, Chile also used a special debt-swap mechanism for the inflow of foreign direct investment to cope with the 1982 financial crisis. In 2007 and 2008, inflows using the chapter XIV mechanism were higher than those entering under DL 600. According to the Foreign Investment Committee, total FDI inflows amounted to US$12.2 billion in 2008: US$5.2 billion came under DL 600 while US$6.9 billion came under chapter XIV. See the committee’s website at http://www.inversionextranjera.cl/.

15. The DIRECON survey is based on several open sources, and its estimates include not only direct materialized investments but also other sources of capital. The criteria followed by DIRECON are based on the methodology proposed by UN and others (2002).


17. For more information, see the websites of the rating agencies: Moody’s (http://www.moodys.com), Fitch (http://www.fitchratings.com), and Standard & Poor’s (http://www.standardandpoors.com).

18. According to the OECD (2011), in professional services (accountants, architects, engineers, and lawyers), entry barriers are comparatively high, in particular regarding exclusive rights of provision, which keep potential entrants out of the market. Advertising bans in these professions further restrict competition.

19. See, for example, the analysis of the call center industries in Chile in Fernández-Stark, Bamber, and Gereffi (2010a) and Manso (2010).

20. See, for example, an analysis in El Mercurio, July 5, 2010, and proposals in CNIC (2010).

21. PISA is an OECD-sponsored system of international assessments that focuses on 15-year-olds’ capabilities in reading, mathematics, and science.

22. CNIC was created in 2005 and is a public-private institution whose main function is to advise the president of Chile on the identification and formulation of public policies related to science, technology development, transfer, and diffusion as well human resources qualifications. See http://www.cnic.cl.

24. The current Movistar monthly connection cost is about US$57 (Ch$29,900 at US$1 = Ch$520) for a four megabyte connection.


26. These observations were taken from interviews with Chilean firms as well as news articles of Chilean and foreign sources (La Tercera 2010; Spencer Ruff 2000).

27. These data are based on information from the University of Chile, the Ministry of Education, and interviews.

28. Abundant literature exists on Chile’s failure to diversify exports. The fact is candidly recognized even by official publications such as DIRECON (2009).

29. This section is partly based on Sáez (2008).

30. ProChile’s work program also has to consider the regional demands arising from the delimited regional plans (planes regionales acotados), which originate in Chile’s regional development agencies. Hence, the central plan elaborated by ProChile has to be reconciled with the needs of 15 different regions of the country. Therefore, the Service Trade Department’s budget has to reconcile and be shared with the regions.

31. For more information, see Sernatur’s website at http://www.sernatur.cl.

32. To access to this benefit, an exporter must fulfill a number of requirements. The most important is that the National Customs Service must confirm exports of services. According to the National Customs Service, cross-border service exports reached a total of US$897 million in 2010. The private sector has requested that the confirmation of service exports by the National Customs Service be terminated (CPC and AmCham Chile 2005).


34. The information about this policy comes from Castillo (2009) and Gereffi and Fernández-Stark (2010).

35. Details of the program are available at http://www.corfo.cl/becasdeingles.

36. Relevant associations include Engineers Professional Association (Colegio de Ingenieros de Chile), the Chilean Association of Engineering Consulting Companies (Asociación de Empresas Consultoras de Ingeniería de Chile), the Chilean Association of ICT Firms (Asociación Chilena de Empresas de Tecnología e Información), and the Chilean Construction Chamber (Cámara Chilena de la Construcción).

37. Chile’s export diversification challenge and policy options are discussed in OECD (2011).

38. For instance, Oracle employs only 260 Chileans of a potential total of 500 employees in part because of the Chilean labor force’s lack of English-language skills. Capgemini has also explicitly mentioned a shortage of English speakers as a concern that should be addressed (Tholons 2010).

39. For more information, see CPC and AmCham Chile (2005), Kharas and others (2008), and CNIC (2010). Together with rigidities in the labor market, the labor cost is a challenge that must be dealt with if Chile is to compete with attractive new markets in the region. For instance, in the case of call centers, an industry highly sensitive to labor costs, which represent 70 percent of total costs, Chile faces competition from Colombia and Peru. Labor costs are US$4.82 per hour in Chile, whereas they are only US$1.03 and US$1.10 for Colombia and Peru, respectively (Manso 2010).


41. See the services trade time series in the World Trade Organization statistics database.

42. In regard to immigration, the cost of visas can be extremely high, reaching in some cases almost US$1,000 (see the analysis in El Mercurio, July 5, 2010).

References


CPC (Confederación de la Producción y del Comercio) and AmCham Chile (Cámara Chileno–Norteamericana de Comercio). 2005. “Fortaleciendo a Chile como Plataforma de Negocios: Problemas y Soluciones.” CPC and AmCham Chile, Santiago.


Fernández-Stark, Karina, Penny Bamber, and Gary Gereffi. 2010a. “Chile’s Offshore Services Value Chain.” Center on Globalization, Governance, and Competitiveness, Duke University, Durham, NC.


Boxes, figures, notes, and tables are indicated with b, f, n, and t following the page numbers.

A
ABES. See Brazilian Association of Software Companies
Abidin, Mahani Zainal, 161, 166
accounting services, 256
adjacency (geographic) as service export determinant, 39
advertising. See marketing efforts
Aegis, 262b
AFAS (ASEAN Framework Agreement on Services), 179–80, 189
Agenor, Pierre-Richard, 154
agriculture sector, 84–85, 85–86f, 115n2
Ahluwalia, Montek S., 117n22
AirAsia, 168, 174, 177–78
Air Philippines, 149
airports and air travel, 148–50, 154, 187–88, 189, 299, 338. See also transport services; specific airlines
Alcatel-Lucent, 218
American Electronics Association, 77n30
American Express, 222
Amin, Mohammad, 30–31, 93, 204
Anand, Rahul, 193
Anderson, James E., 40
Angola, engineering projects in, 291
animation businesses, 133, 136, 250
Annual Report 2009 (Public Works and Highway Department, Philippines), 148
APEXBrasil, 15–16, 293, 300–301, 304
architects and architecture services, 183, 250–51, 255b. See also construction services
Argentina
certification programs in, 339b
Chilean investment in, 328
English language proficiency in, 285
graduates, numbers of, 334
infrastructure in, 335
Internet access in, 335
labor force in, 346
salaries in, 335
service exports from, 316, 324
tax benefits in, 286
tourism in, 341
Arora, Ashish, 30, 106
ASEAN. See Association of Southeast Asian Nations
ASEAN Framework Agreement on Services (AFAS), 179–80, 189
Asian financial crisis (1998), 175
Asia-Pacific Economic Cooperation (APEC), 153
associability, 337
Association of Certified Fraud Examiners, 266
Association of Private Hospitals of Malaysia, 183
Association of Southeast Asian Nations (ASEAN)
electricity costs and, 132
foreign direct investment (FDI) and, 168
foreign ownership limits and, 131
international students and, 170
labor force skills and, 186
liberalization agreements and, 179–80
mutual recognition agreements and, 182
Association of Southeast Asian Nations (ASEAN) (continued)
open-skies policies of, 149, 177
remittances and, 127b
tourism and, 146, 172
A.T. Kearney (consulting firm), 12, 138, 205, 218, 279, 281
Australia
air carriers in, 188
contact center service to, 218
Filipino workers in, 127b
tourism and, 146, 172
Australian Productivity Commission, 37
Austria, Brazilian investments in, 287
available seat kilometers, 149, 155n15
Aviation Information Technology, 220b
A.T. Kearney (consulting firm), 12, 138, 205, 218, 279, 281
Australia
air carriers in, 188
contact center service to, 218
Filipino workers in, 127b
tourism and, 146, 172
Australian Productivity Commission, 37
Austria, Brazilian investments in, 287
available seat kilometers, 149, 155n15
Aviation Information Technology, 220b
Bagde, Surendrakumar, 30, 106
The Bahamas, Brazilian investments in, 287
Bahrain
economic performance in, 205
financial services in, 208, 211
higher education in, 188
software companies in, 219, 231
Balance of Payments Manual (IMF), 190n4
Banaue Rice Terraces (Philippines), 148
Banco do Brasil, 273
Banco Falabella, 357n12
Banco Itaú, 270, 288
Bangko Sentral ng Pilipinas, 127b
Bangladesh
healthcare facilities in, 168
higher education institutions in, 168
international students from, 169, 170
banking. See financial services and banking;
Islamic finance; specific banks
Bank Negara Malaysia, 167, 181–82
Bank of America, 3
Banque de la Poste Belge, 220b
Barro, Robert J., 107
BASAs (bilateral air service agreements), 149
Bastos Tigre, Paulo, 283
BDIA (Brazilian direct investment abroad), 286–87, 287f
Beltone Financial, 208, 211
Bhattacharya, Rudrani, 99
Bhide, Shashanka, 117n22
bilateral air service agreements (BASAs), 149
Biztour5, 152
BNDES (Brazilian Development Bank), 273–74, 307n2
Board of Investments (BOI, Philippines), 131, 141, 144
Borchert, Ingo, 116n12
Boston Consulting Group, 334, 339b
BPAP. See Business Processing Association of the Philippines
BPO. See business process outsourcing
BPT services. See business, professional, and technical services
brain drain, 113
brand equity, 260
branding techniques, 229, 265–66. See also marketing efforts
BRASSCOM. See Brazilian Association of Information Technology and
Communication
Brazil, xv, 5, 269–308
business, professional, and technical (BPT) services, 273, 274–75, 277, 294–95, 294f
business climate in, 277–82, 280–81f
certification programs in, 339b
Chilean exports to, 327b, 328
China compared with, 279
cost and price comparisons, 285–86
destination markets for, 14
diasporas from, 13
export promotion policies for, 300–301
foreign direct investment (FDI) and, 18, 286–91, 288–90f, 295, 298, 303, 305–6f
goods trade, liberalization of, 83
government support in, 291–300, 292f, 304
construction and related services, 269, 296–98, 297–98f, 303
legal services, 295–96
other services, 296
success factors and, 292–93
transport services, 298–300, 299f, 303–4
government support in, 291–300, 292f, 304
construction and related services, 269, 296–98, 297–98f, 303
legal services, 295–96
other services, 296
success factors and, 292–93
transport services, 298–300, 299f, 303–4
graduates, numbers of, 334
India compared with, 273, 279, 280f, 303
industry associations in, 17, 19, 302–3
information technology (IT) and, 15
infrastructure in, 335
other commercial services (OCSs) and, 321
Philippines compared with, 273, 303
regulations and institutions in, 11, 282–83, 284f
salaries in, 335
service exports, overview of, 1, 25, 269–74, 272f, 303, 307n1
service exports in economic context, 12–13, 274–77, 275–76f, 278f, 304, 316, 324
skill availability in, 7, 31, 283–85, 304
technology institutes in, 51
trust rankings for, 337
Brazilian Association of Information Technology and
Communication (BRASSCOM), 270, 279, 281f, 282
Brazilian Association of Software Companies (ABES), 270, 283, 284f, 285
Brazilian Association of Travel Agencies, 282
Brazilian Development Bank (BNDES), 15–16, 273–74, 291, 292f, 298, 304, 307n2
Brazilian direct investment abroad (BDIA), 286–88, 287f
Brazilian Franchise Association, 296
Brazilian International Trade Association, 302
Brazilian Trade and Investment Promotion Agency. See ApexBrasil
BRIC (Brazil, Russian Federation, India, and China), 273, 285. See also specific countries
British Virgin Islands, Brazilian investments in, 287
broadband. See Internet
Brunei Darussalam, tourism and, 172
Brunei Darussalam–Indonesia–Malaysia–Philippines East Asian Growth Area, 149
business, professional, and technical (BPT) services, 273, 274–75, 277, 294–95, 294f. See also business process outsourcing: commercial and business services
Business Daily, awards from, 259
Business Environment Ranking, 331
Business Platform for Innovation, 343
Business Process Enabling South Africa, 264b
Business Processing Association of the Philippines (BPAP), 17–18, 132–33, 136, 141, 144, 153
business process outsourcing (BPO). See also business, professional, and technical services; commercial and business services
clients for, 248
customization and, 250
development of, 261, 262–64b
export process in, 255b
in Indian service exports, 12, 132, 133, 154, 187, 238
labor costs of, 194
Malaysian service exports and, 263b
marketing and, 254
offshoring of, 242, 243f
other commercial services (OCSs) and, 96
Philippine service exports and, 11–12, 121, 122–23, 132–44, 152–54
skill shortages and, 7, 266
software service exports and, 98, 116n13
turnover in, 246
Business Trust, 262b

C
CAD (computer-aided design), 251
call centers, 93, 218, 220b. See also contact centers
Cambodia
foreign labor from, 175
service exports from, 1
Canada
business process outsourcing (BPO) in, 132
contact center operations in, 33
double taxation agreements with, 340
Filipino workers in, 127b
geographical determinants and, 39
Indian services export to, 98, 99, 101
intraregional trade in, 38
preferential trade agreements with, 345
regulations in, 36
Canuto, Oviano, xvi
Capability Maturity Model Integration (CMMI), 339b
Capgemini, 358n38
catch-up argument for services growth, 91–92
Cathay Pacific Airlines, 155n13
Cattaneo, Olivier, 32, 76n11
Cayman Islands, Brazilian investments in, 287
CBE (Central Bank of Egypt), 203, 211
Cebu Pacific, 149
Cencosud, 324, 357n12
Center for Business Support, 222
Center for International Trade Studies Foundation, 302
Center for Retail Studies (CERET), 324
Center for the Study of Law Firms, 295
Central Agency for Public Mobilization and Statistics (Egypt), 214
Central Bank of Brazil, 286–87, 289
Central Bank of Chile, 322, 356n1
Central Bank of Egypt (CBE), 203, 211
Central Statistical Organization, 115n2
certification standards, international, 339b
Chiang Mai (Thailand), 148
Chile, xv, 5, 10–11, 309–60
bilateral trade agreements and, 14
compensation costs in, 286
English language proficiency in, 285, 336, 345
industry associations in, 17, 19
information and communication technology (ICT) in, 12, 15
institutions in, 77n30
offshoring exports, 324, 325–26f
service development policy for, 311, 345–49
service exports, cross-border trade and, 13, 311, 318–30, 321f
foreign direct investment (FDI) and, 11, 328–30, 329f, 330f
hidden exports, 327b
other commercial services (OCSs) and, 318–19, 320b, 321–27, 323f, 354, 356
retail and, 324, 327b, 344
transport services and, 319, 319r
service exports, economic context for, 311–18, 313f, 314–15f, 317–18f
service exports, fundamentals and development of, 311, 331–37
cultural and language affinities, 336–37
infrastructure and, 335–36, 349
intellectual property protection and, 336
Index

Chile (continued)
  regulations and institutions, 332–33, 348
  skill availability and, 7, 18, 31, 333–35
  service exports, overview of, 26, 309–11, 310f
  service exports, performance of, 311, 337–45
  arrangements facilitating, 338–40
  credibility in service provision and, 339, 339b
  data and variables on, 349–56, 351t
  private associations and, 345
  promotion policies for, 340–44, 342t, 348, 349
  service negotiations and, 293
  tax benefits in, 286
  private associations and, 345

  Chilean Association of Engineering Consulting
  Companies, 357n10

  Chilean Development Agency (CORFO)
  on commercial services, 322
  High-Technology Investment Promotion
  Program, 342
  human capital and, 334
  Innova division of, 343
  promotion activities of, 348
  Registry of Individuals with Advanced
  English-Language Skills, 344
  software industry and, 346
  Chilean Innovation and Competitiveness
  Fund, 343

  China, People’s Republic of
  Brazil compared with, 279, 280f
  business process outsourcing (BPO) in, 133
  compensation costs in, 286
  diaspora from, 177
  economy of, 277
  foreign direct investment (FDI) and, 102, 168,
  182, 279, 291
  higher education institutions in, 168, 188
  infrastructure and, 335
  international students from, 169, 170, 171
  labor costs in, 194, 219
  manufacturing exports from, 269
  other commercial services (OCSs) and, 321
  as outsourcing destination, 218, 281
  as remittance recipient, 127b
  service exports and, 1, 25, 347
  software parks in, 51
  talent pool in, 139
  taxes in, 281, 286
  time zone advantages and, 219
  tourism and, 172
  wages in, 285
  Cisco, 221b, 257b
  CIT Global, 220b
  CMMI (Capability Maturity Model Integration),
  339b
  CNIC. See National Council for Innovation for
  Competitiveness
  Coalition of Service Exporters, 345

  Colombia
  Chilean exports to, 327b
  graduates, numbers of, 334
  colonial history, 37, 40–41, 43, 48
  commercial and business services. See also
  business, professional, and technical
  services; business process outsourcing
defined, 8, 9b
  Egyptian service exports and, 26, 196,
  197f, 238
  growth in, 89
  Commission on Information and Communication
  Technology, 156n24

  Communications Commission of Kenya, 266
  communications sector, 290–91
  Compañía Sudamericana de Vapores, 310
  comparative advantage theory. See also revealed
  comparative advantage
  Egyptian service exports and, 193, 195,
  200–205, 230–31
  information technology (IT) and, 108
  peaking point for, 271
  privatization and, 290
  service exports and, 3, 8
  compensation costs, 286
  computer-aided design (CAD), 251
  See also software services

  construction services. See also architects and
  architecture services
  bidding and, 269
  exports of, 303
  government support for, 291, 298, 298f
  “macroeconomic jumping” and, 296
  permits for, 297–98, 297f
  contact centers, 133, 136, 152, 153, 224. See also
  call centers
  contiguity as service export determinant, 39
  contracts and contract enforcement
  cost of, 107
  mudaraba contracts, 174
  mutual recognition agreements, 265
  procedures for, 82–83
  Copyright Act (India), 111–12
  CORFO. See Chilean Development Agency
  CORFO-Innova program, 339b
  Corporación de Fomento de la Producción de
  Chile (Production Development
  Corporation), 15, 77n30

  corruption
  in court systems, 82
  institutions and, 5
  joint ventures and, 136
  perception index for, 33
  productivity and, 122, 131

  Costa Rica
  Chilean exports to, 327b
  foreign direct investment (FDI) and, 12, 33
Index

infrastructure in, 335
innovation rankings and, 334
Internet rates and, 335
labor force in, 346
service exports and, 25, 316, 347
creativity sectors, 16, 300–301
credibility in service provision, 339, 339b
Croatia, geographic distance determinants and, 39
Crouch, Geoffrey I., 156
C3 (outsourcing firm), 220
Cuba, tertiary education in, 334
cultural affinities. See soft skills
Czech Republic
information and communication technology (ICT) and, 218
innovation rankings and, 334
data protection laws, 33, 153, 156
Data Protection Act (Philippines), 18, 144, 153
Data Security Council of India (DSCI), 112, 117
Daud, Mohammad Mohd, 176
deficit levels, 274, 318–19
Deloitte on retail sales in Latin America, 324
Denmark
Brazilian investments in, 287
double taxation agreements with, 340
de Paiva Verheijden, Jan-Willem, 76
Desh (garment firm), 76
determinants of service exports. See service export determinants
developing countries. See also service exports, developing-country perspective on foreign direct investment (FDI) and, 102
Infrastructure in, 190
service export determinants in, 25–79. See also service export determinants
diasporas, 13, 40–41, 84, 108, 113–14, 177
Dihel, Nora, 237
Diosdado Macapagal International Airport, 150
Directorate General of International Economic Relations (DIRECON), 328, 357n15
distance as service export determinant, 5, 28, 38–39, 43, 48, 77n25
Doing Business rankings (World Bank), 107, 122, 131, 175, 204, 204t, 232n8, 279, 280f, 297
Dominican Republic
Chilean exports to, 327b
trust rankings for, 337
double taxation agreements, 293, 340, 342
DSCI (Data Security Council of India), 112, 117n32
E
East African Community (EAC), 248, 250, 260, 265, 266n3
Easterly, William, 76n16
East Malaysia, ecotourism in, 176
Eaton, Jonathan, 99
ECCO Outsourcing, 220b
economic freedom indexes, 34, 35
Economic Reform and Structural Adjustment Program, 202, 232n6
Economic Times (India) on business process outsourcing, 155n7
Economist
on broadband access, 335–36
on Chile’s business environment, 331
ecotourism, 176
Ecuador, highways in, 291, 304
education and human capital
Brazilian service exports and, 7, 31, 283–85, 304
broadband penetration and, 188
Egyptian service exports and, 7, 18, 31, 51, 194, 200–202, 229–30
financial services and, 212
foreign direct investment (FDI) and, 180–82
importance of, 18
Indian service exports and, 7, 18, 82, 93, 94f, 111, 114
for information technology (IT), 111
liberalization in, 189
Malaysian service exports and, 7, 18, 131, 185–88, 186f, 187f, 190
other commercial services (OCSs) and, 354
Philippines service exports and, 7, 18, 186, 263b
private providers of, 179, 180
productivity growth and, 116–17n22
quality assurance in, 182
as service export determinant, 5, 29–31, 30f, 43, 46–47, 48, 51, 77n27
service exports and, 5–7, 6f, 27, 168, 170, 188, 213–17, 230, 352–53
skill availability and, 186, 186t, 283–85, 333–35
software service exports and, 106
tourism services and, 228
EduEgypt, 7, 194, 225
EFG Hermes, 208, 211
Egypt, Arab Republic of, xv, 5, 193–235
business environment in, 19, 204–5, 204t
commercial and business services in, 26, 196, 197f, 238
comparative advantage for, 193, 195, 200–205, 230–31
diasporas from, 13
financial services exports, 194–95, 208, 209–10, 211–29
health services and, 213–17, 216f, 230
Egypt (continued)
information and communication

technology (ICT) and software services, 8, 15, 194, 217–26, 219t, 220–21b, 225t, 230–31
tourism, 193, 195, 226–31, 227–28t, 227f
work permits and, 213, 214t
geographic location as advantage, 193, 200, 229, 231
human capital in, 7, 18, 31, 51, 194, 200–202, 229–30
industry associations in, 17, 19
institutional framework in, 204–5, 204t
macroeconomic policies and reform, 202–3
policy implications for, 229–31
service exports, characteristics of, 14, 205–11
service-specific reports, 205, 206–7t
strengths, weaknesses, opportunities, and threats (SWOT) analysis, 229, 230t
unemployment in, 201, 201t
Egyptian Exporters Association, 222
Egyptian Foundation for Technology Education, 233n23
Egyptian Stock Exchange, 208
Egypt Post, 224
Eichengreen, Barry, 85, 89, 115–16n11, 115n6
Electronic Data Systems, 220b
electronic infrastructure. See also infrastructure
Internet penetration and, 8
as service export determinant, 5, 29, 34–35, 43, 46, 51, 75n6, 75t, 76–77n23
service exports and, 5, 6f
Embraer, 270
emigrants. See migrant workers
Engineering News-Record on infrastructure and engineering companies, 291
engineering services, 106, 251, 255, 256, 260, 357n10
Engineers Professional Association, 345
English language proficiency
Chilean service exports and, 285, 336, 345
IBM and, 285
Indian service exports and, 194, 219, 285
labor supply and, 153
limitations in, 336, 345, 358n38
Malaysian service exports and, 178
promotion of, 343, 344
talent pool for, 138–40, 139t, 140t, 152
Test of English as a Foreign Language (TOEFL), 285
Test of English for International Communication, 344
Engman, Michael, 213–14
Enterprise Survey (2009), 131, 132
trepreneurial skills, 37, 42
EPC (Export Promotion Council, Kenya), 261, 264
EPZs (export processing zones), 109–10, 117n27
e-readiness scores, 190
Ernst & Young, 258
Essar Group, 262b
European Union (EU). See also specific countries
Brazilian exports to, 274
business process outsourcing (BPO) and, 12
Egyptian emigrants to, 213
graphic distance determinants and, 39
Hungary’s membership in, 348
intraregional trade in, 38
Mercosur and, 293
regulations in, 36
software exports to, 219
Eurostat data, 39
Everest Research Institute, 133
Executive Opinion Survey (2010), 131
Executive Order No. 500 on flights (Philippines), 150
EXL Service, 101
Export IT, 223b
export processing zones (EPZs), 109–10, 117n27
Export Promotion Agency. See ProChile
Export Promotion Capital Goods Scheme, 109
Export Promotion Council (EPC, Kenya), 261, 264
Exports Assurance Fund, 292
Exports Credit Insurance program, 292
Exports Financing Program of Brazil, 292
extranets, 250
F
Falabella, 357n12
FDI. See foreign direct investment
Fédération Internationale de Football Association World Cup, 263n
Fernandes, Ana Margarida, 237
FIC (Foreign Investment Committee), 180, 182
FIRe (full information maximum likelihood) estimates, 36
financial crisis
Asian crisis (1998), 175
global crisis (2008–09), 144, 273, 277–78, 281, 304
Financial Reporting (FIRe) Award of Institute of Certified Public Accountants of Kenya, 259
financial services and banking, 35, 167, 190n2, 271, 282. See also Islamic finance; specific financial institutions
Financial Services Master Plan of 2001 (Malaysia), 182
Financiera CMR, 357n12
FIRe (Financial Reporting) Award of Institute of Certified Public Accountants of Kenya, 259
H

Hamilton Harrison & Mathews, 259
Hausman-Taylor estimations
- bilateral service exports and, 47
- gravity model and, 36, 37
- human capital and, 31
- infrastructure and, 34–35
- other commercial services (OCSs) and, 39
- telecommunications and, 46
HC Securities & Investment, 211
Head, Keith, 38, 39, 40, 43, 47–48
Health Insurance Portability and Accountability Act of 1996 (HIPAA), 156n22
health sectors. See also medical tourism
- Egyptian service exports and, 213–17, 216f, 230
- government support for, 301
- private providers in, 179, 180
- quality assurance in, 183
Helmy, Omneia, 226
Helpman, Elhanan, 98–99, 101
Heng, Loke Wai, 161
Heritage Foundation, 331
High-Technology Investment Promotion Program, 342–43
HIPAA (Health Insurance and Portability and Accountability Act of 1996), 156n22
Hoekman, Bernard, 200
Hong Kong SAR, China
- education in, 186, 188
- Filipino workers in, 129b
- infrastructure and, 335
- hotel room capacities, 151, 228
- HSBC, 132
- human capital. See education and human capital
  - Human Development Report 2009 (UNDP), 186
  - Human Resource Development in IT program (India), 111
  - Hungarian Investment and Trade Development Agency, 348
Hungary
- information and communication technology (ICT) in, 218
- service exports and, 316, 347–48
I

IBM, 132, 221b, 280–81, 285
ICA. See Investment Climate Assessment
ICT. See information and communication technology
ICT Development Index, 335
IDA (Industrial Development Agency), 52
IDC, 322, 324, 339b
IFRS (International Financial Reporting Standards), 256
IMF. See International Monetary Fund
INAPI (National Institute for Industrial Property, Chile), 336
incentive schemes, 84
- income tax holidays (ITHs), 131, 141, 146
Index of Economic Freedom, 331
India, xv, 5, 81–119
- associability in, 337
- brand equity and, 260
- Brazil compared with, 273, 279, 280f, 303
- business environment in, 19
- business process outsourcing (BPO) in, 12, 132, 133, 154, 187, 238
- contact centers in, 136
- domestic markets and, 246
- earnings in, 285, 334–35
- economy of, 277
- elections in, 258b
- electronic infrastructure in, 46
- English language proficiency in, 194, 219, 285
- fiscal incentives in, 17, 141
- geographic determinants and, 38, 40
- higher education institutions in, 51, 168, 188
- investment holding companies in, 168
- labor costs in, 194, 219, 221
- preferential market access and, 340
- as remittance recipient, 127b
- service export promotion in, 347
- service exports, characteristics of, 83, 95–103, 95f
- cross-border, 95–97
- destination markets, 98, 98r, 218, 281
- firm types, 98–101, 100r
- foreign direct investment (FDI) and, 11, 101–3, 102f, 103t, 104f, 182, 291
- information technology and IT-enabled service, 82, 96, 97–98, 108, 218
- institutions, role of, 52, 107–8, 114
- revealed comparative advantage (RCA) and, 96–97, 96f
- software services, 28–30, 42, 75–76n7, 97–98, 97f, 98r, 99, 100r, 101, 101t, 114, 116n14, 269
- service exports, success factors for, 84, 103–14
- diaspora, role of, 40–41, 84, 108, 113–14, 177
- education and human capital, 7, 18, 82, 93, 94f, 111, 114
- export processing zones (EPZs), 109–10, 117n27
- foreign investment policy, 110–11
- import policy, 84, 108–9
- industry associations, 17, 19, 82, 112
- intellectual property, 84, 111–12
- other commercial services (OCSs), 83–84, 95–96, 103–7, 105f, 106f, 321
- software technology parks (STPs), 8, 14–15, 51, 84, 109–10, 111f, 114
- service growth, international perspective on, 1, 83, 84–95, 316
- concentration of, 89–90, 90f
factors explaining, 91–95, 91f, 93t, 94f, 270
sectoral shares and growth rates, 25, 84–89, 85–88f
tax policy in, 281, 286
time zone advantages and, 219
India-Europe Software Alliance, 112
India-Japan Software Alliance, 112
Indian Institute of Engineering, 114
Indian Institutes of Technology, 111, 113
Indonesia
air transport in, 148, 168, 177
contact centers in, 136
English language proficiency in, 178
e-readiness score for, 190
foreign labor from, 175
healthcare facilities in, 168
higher education institutions in, 168
infrastructure in, 131–32
as outsourcing destination, 218
assembly in, 145, 146, 149, 172, 174
The Indus Entrepreneurs (TiE), 113
industrial clusters, 347
Industrial Development Agency (IDA), 52
Industrial Master Plans (Malaysia), 162
industry and manufacturing. See also industry associations
defined, 115n2
foreign direct investment (FDI) and, 102, 181
growth factors for, 92, 115–16n11
sectoral shares of, 84–86, 85–86f, 88f, 89, 94, 115n3
service export significance and, 164
transport services and, 165–66, 166f
industry associations, 17, 19, 82, 112, 302–3. See also specific associations
“infant industry” arguments, 347
inflation rates, 175, 203
information and communication technology (ICT)
Chilean service exports and, 12, 15
customization and, 250
Egyptian service exports and, 8, 15, 194, 217–26, 219f, 220–21b, 225t, 230–31
export share of, 165
geographic determinants and, 38
government support for, 177, 292, 301
growth of, 273, 282, 304
infrastructure for, 335
internationalization of, 270, 303
Kenyan service exports and, 237, 239–40, 246, 248
labor force skills and, 187, 260, 273, 284–85
marketing and, 254
penetration rates, 352
success of, 279–81
training in, 266
information technology (IT). See also IT-enabled service
development of, 273
Indian diaspora and, 113–14
Indian service exports and, 82, 96, 97–98, 108, 218
institutions and, 33
language determinants and, 40
offshoring of, 242, 243f
Information Technology Agreement, 82, 333
Information Technology Industry Development Authority (ITIDA), 7, 15, 194, 222, 223b, 224, 225
infrastructure. See also electronic infrastructure
derowment of, 349
private sector involvement in, 312
service exports and, 335–36
Innova, 343
Innovation Capacity Index, 334
Institute for Management Development World Competitiveness Yearbook, 331
institutional framework
Egypt service exports and, 204–5, 204f
Indian service exports and, 52, 107–8, 114
quality of, 353
as service export determinant, 5, 29, 31–34, 51, 52
Intel, 12
intellectual property, 84, 111–12, 336
Inter-American Development Bank, 300
International Accreditation Federation Council, 183
International Centre for Settlement of Investment Disputes, 155n12
International Financial Reporting Standards (IFRS), 256
International Monetary Fund (IMF), 96, 202, 232n6
International Network for Quality Assurance Agencies in Higher Education, 182
International Organization for Standardization (ISO), 339b
International Society for Quality in Health (ISQua), 183
international students, 168, 170–71, 171f, 179, 183
International Trade Centre, 240
Internet. See also Internet penetration
customization and, 250
Egyptian service exports and, 8, 15, 194, 217–26, 219f, 220–21b, 225t, 230–31
export share of, 165
geographic determinants and, 38
infrastructure for, 335
internationalization of, 270, 303
Kenyan service exports and, 237, 239–40, 246, 248
Internet penetration
bilateral service exports and, 27
effect of, 104, 106, 352–53
electronic infrastructure and, 34, 35, 104
gravity model and, 7–8
increase in, 82
service export determinants and, 43, 46, 48
telecommunications network and, 43, 188,
350, 354, 356
intranets, 250
Investment Climate Assessment (ICA), 131,
132, 140
Investment Priorities Plan (IPP), 131, 141, 145, 152
Iran, international students from, 169, 170
Ireland
Indian software and, 112
service exports from, 33, 52, 347
trade contracts with, 17
Isenberg, Daniel, 257b
Iskandar Development Region, 179
Islamic Banking Act (Malaysia), 178
Islamic finance
export services and, 188, 189
financial products and, 178
foreign direct investment (FDI) and, 180–82
global reach of, 167
Gulf Cooperation Council and, 174
Malaysia as hub of, 179
regulatory framework for, 183–85
Singapore competition in, 188
ISO (International Organization for
Standardization), 339b
ISQua (International Society for Quality in
Health), 183
Israel
Indian software and, 112
trade contracts with, 17
Italy
foreign direct investment (FDI) and, 328
innovation rankings and, 334
IT-enabled service (ITeS). See also information
technology
export experience in, 262–64b
Indian service exports and, 82, 96, 97–98, 108,
218
institutions and, 33
labor force skills and, 260
marketing and, 254
training in, 266
ITHs. See income tax holidays
ITIDA. See Information Technology Industry
Development Authority
IT Infrastructure Library (ITIL), 339b
ITWorx, 224, 233n22
J
Japan
business process outsourcing (BPO) and, 12
Filipino workers in, 126
Indian software cooperation with, 17, 112, 114
Malaysian bilateral agreements with, 180
Philippine business process outsourcing to,
133, 136
tourism and, 145, 172
JCI (Joint Commission International), 183
Jetstar, 188
Joint Commission International (JCI), 183
joint ventures, 103, 136, 177
Jordan
financial services and, 208
migration and, 217
software exports and, 218
JPMorgan Chase, 133
K
Kashangaki, John, 237
Kaufmann, Daniel, 353
KenCall, 237, 242, 257b
Kenya, xv, 5, 237–67
clients and destinations for, 248–50, 249f, 250r
customization and exported services, 250–51,
252–53r
delivery modes, 246–48
exporting process, 251–55, 255b, 266–67n5
incentives in, 16
industry associations in, 17, 19
information and communication technology
(ICT), 237, 239–40, 246, 248
offshoring in, 241–42, 243–44f
policy recommendations, 242, 260–66, 261f
export opportunities, knowledge about,
259, 261–64
regulatory and branding issues, 265–66
skilled labor and, 3, 7, 260, 266
revealed comparative advantage (RCA), 240,
240t, 266n1
service exports, challenges in, 18, 242, 259–60
service exports, characteristics of, 242–46, 247f
service exports, overview of, 26, 237–42, 239f,
240t, 241f, 243–45f
success stories, 256–59, 257–58b
Kenya Airlines, 258b
Kenya Chamber of Commerce, 259
Kenya Economic Update (World Bank), 237
Kenya ICT Board, 265
Kenya Tourist Board, 265
Kimura, Fukunari, 33–34, 37, 38, 39–40, 43
knowledge process outsourcing (KPO), 242
Korea, Republic of
business climate in, 176
education in, 186
foreign direct investment (FDI) and, 102
infrastructure and, 335
international students and, 171
Islamic finance in, 188
labor force skills in, 185
other commercial services (OCSs) and, 321
service exports and, 316, 347
tourism and, 145, 146
Kortum, Samuel, 99
Kox, Henk, 36, 38, 43, 47
KPJ Healthcare, 168
KPO (knowledge process outsourcing), 242, 243f
Kraay, Aart, 353
Kramarz, Francis, 99
Kumar, Utsav, 92
Kumpulan Guthrie Berhad, 167
Kuwait, financial services in, 208

L
labor, skilled. See skilled labor
Labor Code (Philippines), 121
Labor Force Sample Survey, 214
labor mobility, xv–xvi, 4, 11–14
Lall, Sanjaya, 42
LAN Airlines, 310
language skills. See English language proficiency; soft skills
Latinobarómetro, 337
Law 73/1971 on public sector employees (Egypt), 215
Law 88/2003 on banking sector reform (Egypt), 195, 211
Law 111/1983 on emigration (Egypt), 215
Law of Technological Innovation of 2005 (Brazil), 15, 293
Lebanon
financial services and, 208
software services and, 231
Lee, Hyun-Hoon, 33–34, 37, 38, 39–40, 43
Lee, Jong-Wha, 107
legal framework, 43, 47–48, 52. See also regulatory framework
legal services, 260, 295–96
legal transcription. See transcription services
Lejour, Arjan, 36, 38, 39, 43, 47
Lemme, Marta, 283
Lennon, Carolina
on bilateral trade in goods, 31
on commercial services, 39
on distance, effects of, 38
on institutions, 33
on Internet penetration, 35, 46
on language, 40, 43
on O-ring theory, 76n9
on school enrollment, 47
Libya
education and health services exports to, 213, 214, 215
financial services in, 209
migration and, 217
Limkokwing University, 168
Lin, Justin Yifu, xvi
linkage analyses, 162–64, 190n1
literacy rates, 93
location readiness index, 267n6
logistics costs, 156n26
Loke, Wai Heng, 166
London Stock Exchange, 208
Low-Cost Carrier Terminal, 178
low-income countries. See developing countries
Lula da Silva, Luiz Inácio, 307n4
Lundstrom, Susanna, 193

M
Maadi Park, 224
Macao SAR, infrastructure in, 335
“macroeconomic jumping,” 296
Maersk Line, 166
Malawi, advertising in, 265
Malaysia, xv, 10, 161–92
business process outsourcing (BPO) in, 263b
comparative advantage for, 164, 164t
ecotourism in, 176
foreign direct investment (FDI) and, 12, 102, 167–68, 169–70r, 180–82
government support, 177–78, 189
institutions in, 77n30
international students and, 168, 170–71, 171f, 179
Internet penetration in, 8
liberalization in, 12, 161, 179–80, 189
medical tourism and, 172, 172t, 178–79, 188
multiplier effect and, 162, 163t
natural endowment and cultural factors, 176–77, 189
as outsourcing destination, 218, 281
quality assurance, 182–83, 189
regulatory framework for, 11, 183–85, 184t, 189
service exports, constraint factors for, 162, 185–88, 189–90
broadband, 188
competition from other countries, 187–88, 190
skills shortages, 7, 18, 131, 185–87, 187t, 190
tertiary education and, 186, 186t, 188
trade restrictions and, 185, 190
service exports, destination of, 168–74
service exports, success factors for, 162, 174–85, 189
business climate, 175–76, 175–76t
domestic competition, 179
economic performance, 175
special factors, 177–85
strategic positioning, 178–79
service sector in, 162–74
balance of payments data and, 165, 166–67
composition of, 165–66, 166f
significance of, 164
tourism in, 149, 151, 167, 172, 173–74t
world economy and, 316
Malaysian Airlines, 177
Malaysian Medical Association, 183
Malaysian Qualifications Agency (MQA), 182, 185
Malaysian Qualifications Framework, 182
Malaysian Society for Quality in Health (MSQH), 183
Malaysian Sukuk Ijarah, 167
management skills, 37, 42
Manova, Kalina, 99, 116
manufacturing. See industry and manufacturing
Marconini, Mário, 269
marine protected areas, 176
maritime transport, 166, 200
marketing efforts, 150–52, 151f, 154, 254, 262b, 265. See also branding techniques
Massoud, Nada, 226
Mastruzzi, Massimo, 353
Mattoo, Aaditya
on barriers to trade in services, 185
on comparative advantage, 200
on data availability, 5
on Indian service exports, 81, 116n12
on institutions, 204
on service exports, 1, 25
on skilled labor, 30–31, 93
Maurer, Andreas, 5
Mauritius, investment holding companies in, 168
Mayer, Thierry, 38, 39, 40, 43, 47–48
MCI, 222
MCIT. See Ministry of Communications and Information Technology (Egypt)
McKinsey Global Institute, 141, 238
medical tourism
competition in, 188
Malaysian service exports and, 172, 172f, 178–79, 188
Philippine service exports and, 172
medical transcription. See transcription services
Medium-Term Philippine Development Plan 2004–2010 (MTPDP), 148, 150
Melitz, Marc J., 98–99, 101
men, migration of, 127b
Mercer Consulting Group, 334
“merchanting” activities, 322, 357n9
Mercosur, 14, 23n9, 270, 274, 293
Messenger, Jon, 138
MetroBank, 129b
Mexico
certification programs in, 339b
Chilean exports to, 327b
China compared with, 280f
compensation costs in, 286
foreign direct investment (FDI) and, 291, 328
Indian software and, 112
Internet rates and, 335
as remittance recipient, 127b
salaries in, 335
service exports from, 26, 324
tax benefits in, 286
trade contracts with, 17
Microsoft, 218, 220b, 221b, 257b
migrant workers
education and health services and, 213–14, 217, 230
labor force skills and, 187
service exports and, 18
unemployment rates and, 215
mining industries, 356n1, 357n10
Ministerial Decree 548/2005 on residential units (Egypt), 229
Ministry of Communications and Information Technology (MCIT, Egypt), 194, 220b, 222, 224–25
Mira, P. Ricardo, 153
Mirza, Daniel, 31, 35, 36, 48, 76n9–10
Mishra, Saurabh, 193
M-Kesha, 258b
mobile service providers, 257–58b. See also telecommunications
monopolies, natural, 32
Monopolistic and Restrictive Trade Practices Act (India), 110, 117n30
Moody’s Investor Service, 331
Moreno-Dodson, Blanca, 154
Morocco
economic performance in, 205
education and health services and, 215
financial services in, 208
Indian software and, 112
service exports from, 1, 26
trade contracts with, 17
Moxnes, Andreas, 33, 37, 38, 41
Mozambique, Kenyan exports to, 266–67n5
M-Pesa, 258b
MQA (Malaysian Qualifications Agency), 182, 185
MSC. See Multimedia Super Corridor
MSQH (Malaysian Society for Quality in Health), 183
MTPDP (Medium-Term Philippine Development Plan 2004–2010), 148, 150
mudaraba contracts, 174
Muder, Nanno, 296, 307n1
Multimedia Super Corridor (MSC), 77n30, 165, 177, 187, 189
mutual recognition agreements for professional qualifications, 265
Myanmar, foreign labor from, 175

N
NAIA (Ninoy Aquino International Airport), 148–49, 155n13
NASSCOM Assessment of Competence (NAC), 17, 112
O-ring theory, 31, 35, 76
other commercial services (OCSs)
  Chilean service exports and, 318–19, 320b,
    321–27, 323t, 354, 356
defined, 8, 9–10b, 10
demand for, 353
growth in, 95–96, 347
Indian service exports and, 83–84, 95–96,
  103–7, 105t, 106f, 321
outsourcing. See business process outsourcing;
  knowledge process outsourcing;
  offshoring
Outsourcing to Africa (Commonwealth
  Business Council & Cyber
  Media India), 218
overseas Filipino workers (OFWs), 121, 127b,
  128t
Overseas Workers Welfare Administration, 126
P
Pakistan
  e-readiness score for, 190
  investment holding companies in, 168
  Malaysian bilateral agreements with, 180
Panama
  infrastructure in, 335
  Internet rates and, 335
Pão de Açúcar, 324
Patnaik, Ila, 99
PDP (Policy for Productive Development), 301
Peru
  Chilean exports to, 327b
  investment in, 328
  service exports from, 324
Petrolin Nacional Berhad (PETRONAS), 181
PEZA. See Philippine Economic Zone Authority
  Philippine Airlines, 149
Philippine Chamber of Commerce and Industry
  for Tourism, 152
Philippine Economic Zone Authority (PEZA),
  122, 131, 141, 152
Philippine Franchise Association (PFA), 126
Philippine International Air Terminals Co.
  (PIATCO), 155n12
Philippines, xv, 5, 11, 121–59
  Brazil compared with, 273, 303
  business environment in, 19
  business process outsourcing (BPO) in, 11–12,
    121, 122–23, 132–44, 152–54
  characteristics of, 132–37, 134–37t, 155n6
  factors contributing to, 137–44, 138t
  government supports, 17–18, 141–44,
    142–43t
  growth in, 123, 124f
  incentives for, 187
  labor costs, 138, 139f, 152
  private sector, 122, 144
  real estate costs, 140–41
  challenges ahead, 152–54
  contract enforcement in, 83
  education and human capital in, 7, 18,
    186, 263b
  industry associations in, 17, 19
  IT-enabled service in, 33
  labor costs in, 194, 219
  labor movement in, 121, 127–30b, 129f, 340
  medical tourism and, 172
  overseas Filipino workers (OFWs), 121,
    127b, 128t
  remittances and, 13
  service exports in economic context, 123–32,
    270, 316
  broad picture of, 126–32
  snapshot of, 123–26, 124f
  software technology parks (STPs) in, 8
  tourism sector in, 16, 121, 122, 123, 144–52,
    145f, 146f, 154
  competitiveness in, 174
  export constraints, 146–47, 147f
  government supports and, 149–50
  industry-specific conditions and, 151–52
  marketing and product development and,
    150–52, 151f, 154
  safety and security and, 150, 154
  transport infrastructure, 122, 147–49, 154
Philippines Overseas Employment Administra-
  tion, 126
Philippine Tourism Authority, 145–46
Philippine Travel Agencies Association, 151
PIATCO (Philippine International Air Terminals
  Co.), 155n12
Piermartini, Roberta, 149
Pioneers Holding Co., 208, 211
PISA. See Programme for International Student
  Assessment
Platform Law (Chile), 341–42
PMRs (product market regulations), 36
  points of scale resistance, 346
  Poisson pseudo maximum likelihood (PPML), 39
Poland
  information and communication technology
    (ICT) and, 218
  innovation rankings and, 334
  Policy for Productive Development (PDP), 301
  Portugal, innovation rankings and, 334
  power outages, 132
  PPML (Poisson pseudo maximum likelihood), 39
  Pradhan, Jaya Prakash, 102
Prime Group, 211
Priority Watch List, 336
Privacy Principles (APEC), 153
private sectors
associations in, 302–3
business process outsourcing (BPO) and, 263
economic reform and, 311
infrastructure and, 312
quality standards and, 32
tourism and, 152, 154
privatization
economic reform and, 311
foreign direct investment (FDI) and, 289, 290
ProChile (Export Promotion Agency)
associability and, 337
delimited regional plans and, 358n30
on export categories, 322
promotion policies and, 16, 340–41, 344–45, 348
on retail business, 327
software industry and, 346
Production Development Corporation
(Corporación de Fomento de la Producción de Chile), 15, 77n30
product market regulations (PMRs), 36
Programme for International Student Assessment (PISA), 283, 333–34, 357n21
Projeto Brasil MIXITUP, 301
Prossoft Company, 291, 304
PTAs. See preferential trade agreements
public-private partnerships, 122, 148
Q
Qantas, 188
Qatar
Filipino workers in, 129
higher education institutions in, 188
migration and, 217
quality control, 32, 153, 182–83, 189, 220
Quarterly Survey of International Investment and Services (QSIIS), 181, 190n4
R
Raya Contact Center, 220
RBI. See Reserve Bank of India
RCA. See revealed comparative advantage
real estate costs, 140–41
regional trade agreements (RTAs), 37, 43
regulatory framework
barriers to trade in services and, 2–3
Kenyan service exports and, 265–66
Malaysian service exports and, 11, 183–85, 184t, 189
service export determinants and, 35–37
remittances, 13, 127–29b, 127f, 152
Reserve Bank of India (RBI), 97, 98, 99, 101, 116n14, 116n17
retail exports, 324, 327b, 344
revealed comparative advantage (RCA). See also comparative advantage theory in disaggregate services, 96–97, 96f
education and health services and, 214
formula for, 155n2
index of, 123, 125t
for Indian service exports, 96–97, 96f
for Kenyan service exports, 240, 240t, 266n1
liberalization and, 198, 199t, 200
Malaysian service exports and, 164, 164t
Reyes, Myla Rose M., 156n25
Ries, John, 38, 39, 40, 43, 47–48
Ritchie, J. R. Brent, 156n22
Roadmap 2010 (BPAP), 144
Roadmap 2016 (BPAP), 144
Rodrik, Dani, 117n22
Romania, contract enforcement in, 83
room capacities for hotels, 151, 228
Rose, Andrew K., 47
Rousová, Linda, 149
RTAs (regional trade agreements), 37, 43
rule of law, 47, 349, 353, 356
Russian Federation economy of, 277
foreign direct investment (FDI) and, 102
other commercial services (OCSs) and, 321
service exports from, 1
Rwanda engineering firms in, 246
Kenyan export clients in, 248, 254
services growth in, 238
S
Sáez, Sebastián, 1, 25, 309
Safaricom, 237, 242, 258b
Sakhr (ICT firm), 224, 233n21
Sakr, Hala, 226
Sakr, Mohamed, 226
San Jose Business Incubator, 77n30
Santiago Chamber of Commerce, 345
São Paulo Federation of Commerce, 302
SARS (severe acute respiratory syndrome), 150
Saudi Arabia Filipinos workers in, 129
finacial services in, 208, 211
healthcare facilities in, 168
software demand in, 194, 219
Schwab, Klaus, 333
SDP. See state domestic product
SECC (Software Engineering Competence Center), 223b
Securities Commission, 178
seemingly unrelated regression (SUR) techniques, 36, 76n10
Sennes, Ricardo, 296, 307n1
September 11 terrorism attacks, 202
Sernatur (National Tourism Service), 341
service export determinants, 4, 25–79
adjacency factors, 39
contiguity factors, 39
service export determinants (continued)
definitions, variables, and data sources on, 52–75
for developing countries, 27–28, 48–51, 49–50
distance, 5, 28, 38–39, 43, 48, 77n25
education and, 5, 29–31, 30f, 43, 46–47, 48, 51, 77n27
electronic infrastructure and, 5, 29, 34–35, 43, 46, 51, 75n6, 75t, 76–77n23
foreign direct investment (FDI) and, 37, 41, 43, 47, 48
government and, 37–40
illustration of, 42–48
income groups and, 25, 26f
institutions and, 5, 29, 31–34, 51, 52
language, colonial history, and culture and, 37, 40–41, 43, 48
literature survey of, 18, 28–42
management or entrepreneurial skills and, 37, 42
policy and regulations and, 35–37
policy conclusions, 28, 51–52
remoteness and, 40
service exports, developing-country perspective on, 1–24
borders in, 2–3, 20–21t
data inadequacies and, 5, 22t
determinants for, 4–18. See also service export determinants
fundamentals, role of, xv, 4, 5–18
investment, labor mobility, and trade policies and, xv–xvi, 4, 11–14
proactive policies in services and, xvi, 4, 14–18
supply modes and, 2
"service revolution," 1, 117n22
Services Dialogue, 302
Service Trade Department (Chile), 340–41, 358n30
Shah, Ajay, 99
Shand, Ric, 117n22
Shariah, 174, 178, 184
Shariah Advisory Council, 178
Shastry, Gauti Kartini, 99, 116n18
Shingal, Anirudh, 31, 34, 37, 38, 46, 47
Sieg Lee, Mei Ling, 166
Silicon Valley, Indian diaspora in, 113, 114
Silicon Valley Indian Professionals Association (SIPA), 113
Singapore
air travel and, 177–78, 188
bilateral air service agreements and, 149
education in, 186, 188
electricity costs in, 132
Filipino workers in, 127b
Indian software and, 112
infrastructure and, 335
international students and, 171
Internet rates in, 335
Islamic finance in, 188
labor force skills in, 185
Malaysians working in, 168
Malaysia’s strategic positioning and, 178–79
other commercial services (OCSs) and, 321
tourism and, 172, 174
trade contracts with, 17
SIPA (Silicon Valley Indian Professionals Association), 113
skilled labor, 3, 7, 260, 266
skills development and availability. See education and human capital
small and medium-size enterprises (SMEs) associability and, 337
government support for, 291, 301, 304
labor productivity of, 136
medical transcription firms as, 137
Smart Village, 51, 194, 221b, 222, 223b, 224
Smarzynska, Beata K., 136
SMEs. See small and medium-size enterprises
soft skills competitive advantage and, 256
as fundamental skills, 336–37
investment decisions and, 263–64b
as service export determinant, 37, 40–41, 43, 48
Software Engineering Competence Center (SECC), 223b
software services. See also software technology parks
Egyptian service exports and, 8, 15, 194, 217–26, 219t, 220–21b, 225t, 230–31
foreign direct investment (FDI) and, 270
government support for, 291–92, 304
human capital and, 106
import policy and, 108–9
India service exports and, 28–30, 42, 75–76n7, 97–98, 97t, 98t, 99, 100t, 101, 101t, 114, 116n14, 269
labor cost and, 286
policies for, 293
software technology parks (STPs) electronic infrastructure and, 51
establishment of, 8, 16, 46, 84, 114
export growth from, 111f
export processing zones (EPZs) and, 109–10
Indian service exports and, 8, 14–15, 51, 84, 109–10, 111f, 114
Philippine service exports and, 8
proactive policies and, 14–15
Software Technology Parks of India (STPI), 110
Somali pirates, 200
South Africa
advertising in, 265
brand equity and, 260
business process outsourcing (BPO) in, 261, 262–64
business services in, 238
cultural skills and, 256
information and communication technology (ICT) and, 218
Kenyan export clients in, 248
service exports from, 26
service growth in, 238–39
technology institutes in, 51
Southern Sudan, engineering firms in, 246
South Korea. See Korea, Republic of
South-South Migration and Remittances data sets, 232n13
south-south service trade, 26–27
Spain
Brazilian investments in, 287
Chilean exports to, 324
double taxation agreements with, 340
foreign direct investment (FDI) and, 289
multinational corporations and, 338
Special 301 Report (Office of U.S. Trade Representative), 336
Standard & Poor’s, 331
state domestic product (SDP), 92, 93t, 94
STPI. See Software Technology Parks of India
STPs. See software technology parks
Strategic Public-Private Council of Offshoring Clusters, 343
strengths, weaknesses, opportunities, and threats (SWOT) analysis, 229, 230t
Strychacz, Nicholas, 237
students. See international students
Subramanian, Arvind, 117n22
Sudan
Kenyan exports to, 248, 251
migration and, 217
Sudan, Randeep, 51, 267n6
Suez Canal, 193, 196, 200
Sukuk issuances, 167
SUR (seemingly unrelated regression) techniques, 36, 76n10
Survey of Tourism Establishments, 151
Sweden, Internet rates and, 335
Swinscoe, Adrian, 226
Switzerland
double taxation agreements with, 340
foreign direct investment (FDI) and, 328
SWOT (strengths, weaknesses, opportunities, and threats) analysis, 229, 230t
Syrian Arab Republic, EFG Hermes (bank) in, 208

takaful operators, 181
Tanzania, Kenyan export clients in, 248, 251
tariffs, 82, 108–9
taxation and tax policies benefits, 286
business process outsourcing (BPO) and, 263b
double taxation agreements, 293, 340, 342
economic reform and, 203
incentives, 281
income taxes, 285–86, 333
income tax holidays (ITHs), 131, 141, 146
information technology (IT) and, 293
market development and, 264
rankings on, 279
service exports and, 231
value added tax exceptions, 341, 358n32
Technical Education and Skills Development Agency (TESDA), 7, 156n21
Technology Incubation Program, 223b
Telecom Egypt, 220b, 224
telecommunications challenges for, 152
costs of, 140
electronic infrastructure and, 34–35
Internet penetration and, 43, 188, 350, 354, 356
liberalization in, 12, 311
networks for, 83, 356
private providers for, 180
Telecommunications Regulatory Authority, 8
Telekom Malaysia Berhad, 168, 169t
Teleperformance, 262b
Tele2, 220
Tenaga Nasional Berhad, 168
10 crore rule, 109
TESDA (Technical Education and Skills Development Agency), 156n21
Test of English as a Foreign Language (TOEFL), 285
Test of English for International Communication, 344
Texas Instruments, 110
TEZs. See tourism enterprise zones
TFP (total factor productivity), 331–32
Thailand
air transport in, 148, 168, 177, 188
available seat kilometers and, 149
business climate in, 176
English language proficiency in, 178
higher education institutions in, 188
labor skills in, 186
as outsourcing destination, 218, 281
preferential market access and, 340
tourism and, 6, 144, 146, 151, 172, 174
Tham, Siew Yean, 180
Tharakan, P. K. M., 38, 40–41, 43
Tholons, 346
TiE (The Indus Entrepreneurs), 113
TIEZA (Tourism Infrastructure and Enterprise Zone Authority), 145–46
Tiger Airways, 150, 188
time-zone differences, 39, 219, 281, 304
TOEFL (Test of English as a Foreign Language), 285
Tohamy, Sahar, 226
TOKTEN. See Transfer of Knowledge through Expatriate Nationals
total factor productivity (TFP), 331–32
Tourism Act of 2009 (Philippines), 145–46, 151, 152
tourism and travel services. See also medical tourism; transport services
comparative advantage in, 164
defined, 9b
ecotourism, 176
Egyptian service exports and, 193, 195, 226–31, 227–28f, 227f
export share of, 165
growth in, 95–96
Malaysian service exports and, 149, 151, 167, 172, 173–74r
natural resources and, 176
Philippine service exports and, 16, 121, 122, 123, 144–52, 145f, 146f, 154
promotion of, 341
Tourism Congress, 152
tourism enterprise zones (TEZs), 131, 146, 155n11
Tourism Infrastructure and Enterprise Zone Authority (TIEZA), 145–46
Tourism Promotion Board, 151
Trade and Industry Department (Philippines), 138
“Training in International Business: Services Exports” course (Banco do Brasil), 273
transcription services, 136–37, 140, 153–54
Transfer of Knowledge through Expatriate Nationals (TOKTEN), 113
transport services. See also airports and air travel; tourism and travel services
Chilean service exports and, 319, 319t
defined, 9b
export share of, 165–66, 166f, 277, 319, 319t
government support for, 177–78, 298–300
growth in, 89, 95–96, 303–4
infrastructure and, 298–300
liberalization of, 271–72
Philippine service exports and, 122, 147–49, 154
promotion of, 344
Travel and Tourism Competitiveness Index (TTCI), 145, 147f, 148, 150, 154, 174, 174r
Travel and Tourism Competitiveness Report 2009 (World Economic Forum), 226, 228
travel services. See tourism and travel services
Trends in International Mathematics and Science Study (2007), 186
trust rankings, 337
Tunisia
economic performance and, 205
engineers from, 6–7, 23n7
information and communication technology (ICT) and, 218
service exports from, 26
tourism and, 228
Turismo Chile, 341
Turkey
economic performance in, 205
geographic distance determinants and, 39
tourism and, 228
turnover, export, 246, 247f
TV Globo, 270
Txteagle, 257b
U
UBS, 3
Uganda
engineering firms in, 246
Kenyan export clients in, 248
“Unclogging the Arteries: The Impact of Transport Costs on Latin American and Caribbean Trade” (Inter-American Development Bank), 300
unemployment rates, 175, 201, 201t, 214–15, 216
United Arab Emirates
economic performance and, 205
Filipino workers in, 127b, 129b
financial services in, 208, 211
higher education institutions in, 188
infrastructure and, 335
software demand in, 194, 218–19, 231
United Kingdom
Brazilian exports to, 274, 300
contact center service to, 218
double taxation agreements with, 340
Indian services export to, 83
Kenyan exports to, 248, 251, 266–67n5
Limkokwing University in, 168
programmers in, 258
United Nations Conference on Trade and Development (UNCTAD), 26, 161, 238
United Nations Economic Commission for Latin America and the Caribbean, 327b
United Nations Human Development Program, 113
United Nations Statistical Division (UNSTATS), 28, 42, 46, 75n5, 76n20–21
United States
Brazilian exports to, 14, 116n12, 274
Brazilian investments in, 287
business process outsourcing (BPO) and, 12, 133
Chilean exports to, 324, 328
Chinese exports to, 116n12
customer care services to, 101
double taxation agreements with, 293, 340
Filipinos in, 13, 127b, 129b, 139–40, 152
financial services in, 211
foreign direct investment (FDI) and, 289, 328
franchising in, 126
free trade agreements with, 343
geraphic determinants and, 38, 39
Indian diaspora in, 113, 114
Indian services export to, 81, 83, 98, 99, 101, 116, 12
Internet in, 34, 335
Kenyan exports to, 248
Malaysian researchers in, 168
medical tourism and, 6
medical transcription and, 153
Oracle Global Support Center in, 221b
salaries in, 334
satellite launch exports from, 3
time zones in, 281, 304
tourism and, 145
transport infrastructure and, 299, 299f
University of Nottingham, 178
UNSTATS. See United Nations Statistical Division
Uruguay
educational rankings and, 334
infrastructure in, 335
innovation rankings and, 334
Internet rates and, 335
service exports and, 25, 347
trust rankings for, 337
Ushahidi (Kenyan firm), 257–58b
V
Valls Pereira, Lia, 296, 307n1
value added tax exceptions, 341, 358n32
Van Beveren, Ilke, 38, 40–41, 43
Van Ourt, Tom, 38, 40–41, 43
Van Wincoop, Eric, 40
Venezuela, República Bolivariana de
Chilean exports to, 327b
Internet rates and, 335
Vietnam
e-readiness score for, 190
foreign direct investment (FDI) and, 182
foreign labor from, 175
global financial crisis of 2009 in, 144
infrastructure in, 132
labor costs in, 194, 221
tourism in, 145, 151
visas, 185, 333, 358n42
Vodafone, 218
Voice over Internet Protocol (VoIP), 140, 262–63b
Wall Street Journal, economic rankings by, 331
Wall Street Journal Europe, contact center services for, 220b
Walsh, Keith, 36–37, 38–39, 40, 43
Washington Accord, 182
“weak associability,” 337
Wei, Shang-Jin, 136
Weinhold, Diana, 34
women
migration of, 127b
unemployment rates for, 214
work permits, 213, 214f, 265
World Bank
on business climate, 122, 175, 232n8, 279
economic reforms and, 202
on emigrants, numbers of, 232n13
on infrastructure, 22n2
on Kenyan economy, 237
on labor skills, 131
on road quality, 148
on trade in services, 4
on unemployment, 201
World Development Indicators, 30, 114
World Congress on Information and Communication Technologies, 144
World Development Indicators, 30, 114
World Economic Forum
on corruption, 131
on global competitiveness, 278, 331
on higher education, 201
on tourism, 145, 174, 226
World Heritage sites, 145
World Tourism Council, 151
World Trade Organization (WTO), 82, 111, 149, 293, 333
worldwide web. See Internet
WTO. See World Trade Organization
X
Xbox technical support, 218
Xceed, 218, 220b
Xoom.com, 129b
Y
Yankee Group, 218, 232n16
Yean, Tham Siew, 161
Yeaple, Stephen R., 98–99, 101
Yemen, education and health services exports to, 213–15
Yi, Soonhwa, 121
Z
Zambia, advertising in, 265
ECO-AUDIT

Environmental Benefits Statement

The World Bank is committed to preserving endangered forests and natural resources. The Office of the Publisher has chosen to print Exporting Services: A Developing Country Perspective on recycled paper with 50 percent postconsumer fiber in accordance with the recommended standards for paper usage set by the Green Press Initiative, a nonprofit program supporting publishers in using fiber that is not sourced from endangered forests. For more information, visit www.greenpressinitiative.org.

Saved:
• 6 trees
• 2 million British thermal units of total energy
• 664 pounds of net greenhouse gases
• 2,992 gallons of waste water
• 190 pounds of solid waste
The past two decades have seen exciting changes with developing countries emerging as dynamic exporters of services. Technological developments now make it easier to trade services across borders. But other avenues are also being exploited: tourists visit not just to sightsee but also to be treated and educated, individual service providers move abroad under innovative new schemes, and some developing countries defy traditional notions by investing abroad in services. Can this dynamism be sustained and replicated in other countries?

To answer this question, *Exporting Services: A Developing Country Perspective* takes an eclectic approach, combining exploratory econometric analysis with detailed case studies of representative countries: Brazil, Chile, the Arab Republic of Egypt, India, Kenya, Malaysia, and the Philippines. Several questions lead the analysis: How did these developing countries succeed in exporting services? What policy mix was successful and what strategies failed to deliver expected results? The analysis evaluates the role of three sets of factors: the *fundamentals*, which include a country’s factor endowments, infrastructure, and institutional quality; *policies affecting trade, investment, and labor mobility* in services; and *proactive policies* in services designed to promote exports or investment.

The case studies illustrate the complex nature of reforms and policy making in the service sector as well as the benefits of well-implemented reforms. This resource will be valuable for policy makers, experts, and academics who are engaged in efforts to reform services and investment policies in their own country.