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Trade Competitiveness of the Middle East and North Africa

Policies for Export Diversification

José R. López-Cálix, Peter Walkenhorst, and Ndiamé Diop
Editors



THE WORLD BANK

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Contents

<i>Acknowledgments</i>		<i>xix</i>
<i>Contributors</i>		<i>xxi</i>
Chapter 1	Trade Reforms for Export Competitiveness: What Are the Issues for the Middle East and North Africa?	1
	<i>Ndjamé Diop, José R. López-Cálix, and Peter Walkenhorst</i>	
	Export Diversification	3
	Services Trade	5
	Relations with China and India	6
	Regional Integration	8
	Note	9
	References	9
PART I	Export Diversification	
Chapter 2	FDI Flows and Export Diversification: Looking at Extensive and Intensive Margins	13
	<i>Julien Gourdon</i>	

	Export Diversification in the Middle East and North Africa	14
	The Potential Impact of FDI on Export Diversification	22
	The Model	26
	Conclusions	35
	Annex	36
	Notes	44
	References	44
Chapter 3	Promoting New Exports: Experience from Industry Case Studies	47
	<i>Claudia Nassif</i>	
	Export Diversification in “Resource-Poor” Countries in the Region	48
	Case Studies	51
	Designing Proactive Policies to Encourage Experimentation and Imitation	57
	Conclusion	60
	Notes	61
	References	61
Chapter 4	Export Diversification in Algeria	63
	<i>Ricardo Hausmann, Bailey Klinger, and José R. López-Cáliz</i>	
	The Structure of the Algerian Economy	64
	Why Is Algeria So Dependent on Hydrocarbons?	68
	Applying a New Methodological Approach to Export Diversification	74
	Using the Product Space to Scan the Possibility Space for Algerian Exports	81
	Policy Implications of the New Methodology for Industrial Strategy	88
	Annex	96
	Notes	100
	References	101

PART II	Services Trade	
Chapter 5	Emerging Export Services: Where Does Tunisia Stand?	105
	<i>Olivier Cattaneo, Ndiame Diop, and Peter Walkenhorst</i>	
	Can Emerging Export Services Contribute to Growth and Poverty Reduction?	105
	How Has Tunisia Performed in Emerging Export Services?	110
	Are Tunisia's Emerging Export Services Internationally Competitive?	117
	What Needs to be Done to Strengthen Competitiveness?	124
	References	132
Chapter 6	Anchoring Services Reform: The European Neighborhood Policy and Morocco	135
	<i>Ndiame Diop</i>	
	Liberalization Reforms and the Openness of Morocco's Services Sectors	137
	The Need to Strengthen the Regulatory Framework	137
	Options for Regulatory Convergence with the European Union in Selected Sectors	140
	Implementing Competition Policies	155
	Notes	157
	References	160
Chapter 7	Services Trade as an Engine of Development: Situation and Prospects in Algeria	163
	<i>Olivier Cattaneo, Said Ighilahriz, José R. López-Cálix, and Peter Walkenhorst</i>	
	Quantifying the Importance of Services for Algeria	163
	Trade in Services: An Important but Often Poorly Understood Concept	169

	Strengthening the Economy by Bolstering Trade in Services	175
	Issues for Policy Makers	185
	Notes	187
	References	188
PART III	Relations with China and India	
Chapter 8	Economic Growth in China and India: Challenges and Opportunities for the Middle East and North Africa	193
	<i>Elena Ianchovichina, Maros Ivanic, and Will Martin</i>	
	Messages from the Literature	194
	Methodology, Data, and Simulation Design	203
	Results	206
	Concluding Comments	214
	Annex	217
	Notes	221
	References	222
Chapter 9	Globalization and Competition from China and India: Policy Responses in the Middle East and North Africa	227
	<i>Paul Brenton, Lulu Shui, and Peter Walkenhorst</i>	
	Globalization and the Export Performance of Countries in the Middle East and North Africa	228
	Imports from China and India	239
	Gaining Access to Overseas Markets	241
	Exploitation of Existing Opportunities for Export Growth	247
	Conclusions and Policy Messages	250
	Annex: Export Growth and Constant Market Share Analysis	251
	Notes	264
	References	264

PART IV	Regional Integration	
Chapter 10	Regional Integration: Status, Developments, and Challenges	267
	<i>Lulu Shui and Peter Walkenhorst</i>	
	Reasons for the Failure of Past Integration	
	Attempts	269
	Open Regionalism	294
	References	295
Chapter 11	Economic Gains of Regional Agreements in the Maghreb: Deeper versus Wider Integration	299
	<i>Paloma Anos Casero and Ganesh Kumar Seshan</i>	
	Some Conceptual Issues	300
	Some Methodological Issues	302
	Scenarios	303
	Conclusions	312
	Annex: Methodology	313
	Notes	327
	References	328
Index		331
Boxes		
3.1	How Entrepreneurship Makes a Difference	53
3.2	Spurring Exports in Tunisia through FAMEX	59
5.1	Promoting Exports through a Technology Park	130
6.1	Major Directives Governing the Telecommunications Sector in the European Union	141
6.2	Liberalization of the Telecommunications Sector in Estonia	145
6.3	Reform of Port Services in Romania	152
7.1	Missed Opportunities in the Algerian Legal Market	179
7.2	French Entry into the Algerian Supermarket Sector	181
7.3	Why Liberalization Often Produces Disappointing Results: Sequencing, Regulation, and Access Policies	186

10.1	The Long History of Integration in the Middle East and North Africa	270
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Figures

2.1	Theil Index for Trade in Several Countries	16
2.2	Herfindahl Index for Trade in Several Countries	17
2.3	Gini Index for Trade in Several Countries	19
2.4	Theil “Within” Index for Selected Groups of Countries, 1988–2006	20
2.5	Theil “Between” Index	21
2.6	Actual and Potential FDI Flows in Selected Countries, 1990–95 and 2000–05	23
2.7	FDI Inflows and Export Concentration in Developing Regions	26
2.8	Coefficients Measuring the Impact of FDI on Export Concentration	34
2.A.1	Shares of Within and Between Components in Overall Theil Index	39
3.1	Herfindahl-Hirschmann Index of Export Concentration, 1990 and 2005	49
4.1	Per Capita Oil Exports and Oil Exports as Percentage of Total Exports in Selected Countries, 2004	66
4.2	Non-Oil EXPY of Selected Countries, 1986–2004	67
4.3	Algeria’s Real Effective Exchange Rate, 1980–2006	69
4.4	Volatility of Real Exchange Rate (1996–2006) and Exports per Capita (log)	70
4.5	Top Business Constraints Identified in the 2007 Investment Climate Assessment of Algeria	72
4.6	Relationship between Number of Products Exported and Doing Business Ranking in Selected Countries	73
4.9	Relationship between Open Forest and GDP per Capita in Selected Countries, 2004	79
4.10	Most Optimistic Open Forest Calculations in Selected Countries, 2006	80
4.13	New Products 2 Standard Deviations above Average Density, Weighted by World Trade	84
4.14	New Products 2 Standard Deviations above Average Density, Weighted by Strategic Value	85

4.15	New Products 1.5 Standard Deviations above Average Density, Weighted by World Trade	86
4.16	New Products 1.5 Standard Deviations above Average Density, Weighted by Strategic Value	87
4.17	Unoccupied Products 1 Standard Deviation above Average Density, Weighted by World Trade	88
4.18	Unoccupied Products 1 Standard Deviation above Average Density, Weighted by Strategic Value	89
4.19	Sectors Targeted under Government of Algeria's New Strategy	91
4.A.1	Relationship between Export Sophistication and GDP per Capita in Selected Countries, 2004	97
5.1	World Services Exports, by Type, 1995–2006	106
5.2	Offshoring Potential of Selected Service Industries	107
5.3	Offshore, Onshore, and Insourced Call Center Activity in the United States, United Kingdom, and France, 2006	108
5.4	Number of Call Center Seats Serving Francophone Clients, by Country, 2006	108
5.5	Size Distribution of ICT Companies in Tunisia, France, and the United States, 2004	115
5.6	Activities of ICT Companies in Tunisia, 2004	116
5.7	Index of Tunisia's Share of World Export Receipts, 2000–05	116
5.8	Multidimensional Attractiveness of Offshoring	117
5.9	Engineering Graduates as Percentage of Economically Active Population in Selected Countries, 2004	118
5.10	Cost of Operating a Call Center in Selected Francophone Countries, 2005	120
5.11	ICT Professionals' Perceptions of Strengths of Tunisia as Exporter	120
5.12	Impediments to Exports Cited by ICT Professionals in Tunisia	123
5.13	ICT Professionals' Perceptions of Administrative and Financial Obstacles Facing Tunisian Firms	132
6.1	Openness of Telecommunications, Air Transport, Banking, and Accounting Sectors in Selected Countries	138
7.1	Value-Added by Sector in Algeria, 1995 and 2005	164

7.2	Annual Growth in the Value Added of Services in Algeria, 1990–2005	165
7.3	Service Sector Employment in Algeria, by Industry, 2004	167
7.4	Distribution of Female Employment in North Africa, 2006	168
7.5	Female Share of Sectoral Employment in North Africa, 1996 and 2006	168
7.6	Composition of Algerian Service Sector Output, by Industry, 2005	169
7.7	Balance of Trade in Algerian Service Sectors, 2005	170
7.8	Composition of Algerian Service Sector Trade, by Industry, 2005	171
7.9	Service Sector Imports and Exports by Algeria, 2000–05	172
7.10	Worker Remittances and Mean Wages of Algerians Temporarily Working Abroad, 1990–2004	176
7.11	Algerian Firms Slated for Privatization, by Sector	177
8.1	Projected Changes in Volume of Exports from the Middle East and North Africa Associated with Extra Growth in China and India	211
8.2	Projected Changes in Volume of Resource-Based Manufactured Exports Associated with Extra Growth in China and India	212
8.3	Projected Changes in Volume of Manufactured Exports Associated with Extra Growth in China and India	213
8.4	Projected Changes in Export Volumes Associated with Extra Growth in China and India under Growth and Growth and Quality Scenarios	215
9.1	Average Tariffs in the Middle East and North Africa, 1997–2007	236
9.2	Average Tariffs in the Middle East and North Africa, by Country, 2007	237
9.3	Overall Logistics Performance Index of Countries in the Middle East and North Africa	238
9.4	Tariffs in China, India, and Selected Countries in the Middle East and North Africa, 2006	239
9.5	Number of Domestic Tariff Peaks on Imports from China and India in Agadir Agreement Countries, 2006	240

9.6	Number of Agadir Country Exports Experiencing Import Surges from China and India, by Country, 1998–2006	241
9.7	Clothing Exports by Countries in the Middle East and North Africa, 1995–2006	242
9.8	Exports of Knitted and Nonknitted Clothing by Egypt, Jordan, Morocco, and Tunisia, by Importing Country, 1995 and 2006	243
9.9	Average Tariffs in China and India, 1997–2007	247
9.10	Bilateral Import-Weighted Average of Import Duties by China and India on Exports from the Middle East and North Africa, 2006	248
10.1	The Number of Regional Agreements Grew Strongly over the Past Two Decades	268
10.2	The Network of MENA Regional Agreements Is Dense	271
10.3	Many MENA Countries Have Increased Their Intraregional Trade over Time	273
10.4	Exports to the Region Remain Generally of Minor Significance	274
10.5	MENA Destinations Are of Some Importance for Non-Oil Exports	275
10.6	Exports of Parts and Components Have Increased in Some Maghreb Countries	277
10.7	Import Tariffs Vary Markedly Across MENA	281
10.8	Nontariff Measures are Highly Restrictive in MENA Countries	283
10.9	Trade Procedures in MENA Are Cumbersome	284
10.10	Trade Procedures in MENA Are Time Consuming	285
10.11	The Logistics Performance of Most MENA Countries Is Below Expectations	286
10.12	Logistics Performance Varies Within Country Groups and Across Components	287
10.13	GATS Commitments Illustrate Varying Reform Mindedness across the Region	288
10.14	Major Services Exporters Have Significantly Increased Their Output	289
10.15	MENA Contains Both Net Exporters and Net Importers of Services	290

10.16	Total and Intra-MENA Tourism Exports Have Grown Strongly	291
10.17	Inward FDI Stocks Have Expanded Substantially in Resource-Poor Countries	292
10.18	Remittances Flows Are in Line with Labor Endowments	293
11.1	Projected Real per Capita Income in Maghreb Countries, 2005 and 2015	303
11.2	Projected Real per Capita Income under Regional Trade Agreement with European Union, 2005 and 2015	306
11.3	Projected Non-Oil Exports in Maghreb Countries under Regional Trade Agreement with European Union, 2005 and 2015	307
11.4	Projected Real per Capita Income in Maghreb Countries Given Service Liberalization and Investment Climate Reforms, 2005 and 2015	309
11.5	Projected Value of Non-Oil Exports in Maghreb Countries Given Service Sector Reforms, 2005 and 2015	310
11.6	Projected FDI Stock in Maghreb Countries Given Service Liberalization and Investment Climate Reforms, 2005 and 2015	311
11.7	Projected per Capita Income in Maghreb Countries Given Maghreb Regional Trade Agreement, EU Regional Trade Agreement, and Service Sector Reforms, 2005 and 2015	312

Tables

2.1	Motives behind Foreign Direct Investment in the Middle East and North Africa	25
2.2	Determinants of Export Diversification	31
2.A.1	Coefficients for Shares of Within and Between Components in Overall Theil Index	40
2.A.2	GMM Estimations to Control for Endogeneity	41
2.A.3	Approaches to Defining New Exports	42
3.1	Decomposition of Export Growth into Intensive and Extensive Margins in Selected Countries, 1995–2005	50
4.1	<i>Doing Business</i> 2008 Indicators for Countries in the Middle East and North Africa	71

4.2	Potential Up-Market Export Sectors in Algeria, 2006	81
4.A.1	Contributors to Algeria's EXPY, 2004	98
5.1	Number of Foreign Patients and Volume of Exports in Tunisia, by Nationality, 2004	111
5.2	Costs of Most Popular Cosmetic Surgery Procedures in Selected Countries, 2005	121
5.3	Potential Regulatory Obstacles to Trade in Professional Services in Tunisia	127
6.1	Short- and Medium-Term Provisions for Financial Services in European and Accession Partnerships, by Country	149
6.2	Regulatory Reform Options for Morocco	153
7.1	Growth Rates and Percentage of Small and Medium-Size Enterprises in Algeria's Service Sector, by Subsector, 2006	166
7.2	Urban and Rural Employment in Algeria, by Sector, 2008	166
7.3	FDI Flows to the Middle East and North Africa, by Economy, 1997–2006	173
7.4	Home Country of Foreign Companies Established in Algeria, 2006	174
7.5	Examples of Foreign Service Providers Established or Investing in Algeria	175
7.6	Household Spending in Algeria, Morocco, Tunisia, and France, by Sector	180
7.7	Average Percentage Change in Consumer Price Index for Selected Goods and Services, 2001–05	180
7.8	Examples of Bilateral, Regional, and Multilateral Agreements	184
8.1	Correlation of Export Shares of India, China, and the Middle East and North Africa	198
8.2	Impacts of Extra Growth in China and India on Selected Economies	207
8.3	Projected Changes in World Commodity Prices Associated with Extra Growth in China and India	209
8.A.1	Annual Baseline Growth Rates in Selected Economies, 2005–20	217
8.A.2	Changes in Exports Caused by Extra Growth in China and India, 2005–20	218

8.A.3	Changes in Output Caused by Extra Growth in China and India, 2005–20	219
8.A.4	Changes in Exports Caused by Extra Growth in China and India with the Assumption of Improvements in Quality and Variety	220
9.1	Rate of Export Growth and Change in Global Market Share in the Middle East and North Africa, by Country, 1995–2006	229
9.2	Growth in Exports to and Change in Market Share of European Union, by Country, 1995–2006	229
9.3	Intensive and Extensive Margins of Export Growth of Countries in the Middle East and North Africa, 1995–2005	231
9.4	Index of Export Market Penetration, by Country, 1995 and 2005	248
9.5	Bilateral Index of Export Market Penetration for Selected Countries	249
9.A.1	Key Contributors to Export Growth and Decline at the Intensive Margin	251
9.A.2	Key Contributors to Export Growth and Decline at the Extensive Margin	255
9.A.3	Constant Market Share Analysis of MENA Countries' Exports to the European Union, 1995–2006	259
10.1	Bilateral Treaties within the Middle East and North Africa	272
10.2	Trade with Partners in Regional Agreements, 2006	276
10.3	Bilateral Trade Complementarity within the Middle East and North Africa, 2006	279
11.1	Projected Impact of Unit Increase in Service Reform Index on Annual per Capita Real GDP Growth in Maghreb Countries	308
11.2	Projected Impact of Unit Increase in Service Reform Index on FDI Stock in Maghreb Countries	311
11.A.1	Economies Used in FDI Regression	315
11.A.2	Regional Model of the Level of FDI Stock	316
11.A.3	Actual and Predicted FDI Stock to GDP in Algeria, Morocco, and Tunisia	317
11.A.4	Growth in FDI Stock to GDP Implied by Creation of a Maghreb Regional Market	317

11.A.5	South-South Regional Trade Agreements	318
11.A.6	Documentation of Data Used in Panel Analysis for Service Reforms	319
11.A.7	Fixed-Effects Panel Estimates of FDI Stock to GDP on Service Sector Reforms, 1990–2004	320
11.A.8	Impact of Unit Increase in Reform Index on Stock of FDI-to-GDP Ratio, 1990–2004	321
11.A.9	Impact of Unit Increase in Reform Index on Real Export Growth, 1990–2004	322
11.A.10	Fixed Effects Panel Estimates of per capita GDP growth and Service Sector Policies, 1990–2004	323
11.A.11	Impact of Unit Increase in Service Reform Index on Annual per Capita Real GDP Growth, 1990–2004	325
11.A.12	Definition of 4.3 Ranking on Reform Indices	325
11.A.13	Country Fixed-Effects Growth Regression, 1980–2004	326
11.A.14	Fixed-Effects Panel Estimates of (Log) Real Export Value on RTA Market	327

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CHAPTER 1

Trade Reforms for Export Competitiveness: What Are the Issues for the Middle East and North Africa?

**Ndiamé Diop, José R. López-Cálix,
and Peter Walkenhorst**

International trade was deeply affected by the global financial and economic crisis. Mimicking worldwide trends, imports from and exports to the Middle East and North Africa dropped significantly in 2009.

This sudden decline in global trade should not divert attention away from four major developments in global economic integration that have shaped the region's trade policies and performance over the past decade: the emergence of global supply chains, the growth of trade in services, the rise of China and India as major international trading powers, and regional integration. Each of these issues is discussed in detail in this book.

The first development is the rise of global production networks in which different stages of the production of a single good occur at different locations. As a result of this development, consumer products often contain parts, components, and inputs from a large number of countries. This development, driven by reductions in trade barriers and advances in transport and telecommunications, has significantly changed the meaning

of competitiveness. Being competitive now requires not just being able to produce at low cost but also being able to establish state-of-the-art supply and logistics chains, including high-performing transport, customs, communications, and financial services. Countries that succeed in readying themselves for integration into global production chains have good prospects of breaking into new markets and developing a more diverse production and export structure.

The second major trend relates to trade in services. With the wave of liberalization and of information and communications-related technological developments, offshoring in services such as back-office work processes, call center operations, medical transcription, accounting, and legal research has boomed. India is a good example of a country that has hugely benefited from this trend. This development offers a promising avenue for trade diversification and job creation in the region and other developing countries.

The third important development is the emergence of China and India as new trade, innovation, and growth poles alongside the United States and Europe. The formidable growth of these countries, notably China, has led to a significant increase in demand for and the price of natural resource-based goods exported by countries in the Middle East and North Africa. At the same time, these countries face major competitive challenges from China, both at home and in third-country markets such as the United States and the European Union (World Bank 2009a).

The fourth development is the increase in regional and preferential trade agreements, which have been proliferating, not least because progress in multilateral trade negotiations under the auspices of the World Trade Organization has been slow. Integration with selected partners can help countries reap benefits from international integration while avoiding the large-scale adjustment needs that are often associated with broader-based trade reforms. Of course, preferential integration with various partners runs the risk of introducing a variety of technical standards, customs requirements, and rules of origin provisions that are cumbersome and costly to administer, and of depriving local producers and consumers of efficient, low-cost supplies from nonpartner countries.

The Middle East and North Africa comprises countries that are resource-poor but labor-abundant, resource-rich and labor-abundant, and resource-rich and labor-importing, each displaying its own idiosyncrasies. The four developments in global trade described above, together with natural resource endowments, have influenced trade policy and diversification outcomes across all of these types of countries.

Like other developing countries, the countries in the Middle East and North Africa increased the pace of trade integration reforms to harness the opportunities offered by the changed global market. Reform has been limited compared with that of other regions, however. In East Asia and Eastern Europe, trade reforms have focused mainly on industrial goods, leaving out agriculture and services, both of which affect the countries of the Middle East and North Africa. No clear attempts have been made to strategically exploit the rise of China and India (for example, no country in the region has signed a free trade agreement with China). A recent World Bank report on private sector development finds that the private sector in the Middle East and North Africa is constrained by public sector governance, discretion, and privilege (World Bank 2009b). Increased competition would allow more firms to enter, helping expand trade and job creation. Taken together, these factors explain the relatively limited export diversification that has occurred in the region.

The 11 chapters of this volume examine the region's trade policy reforms and performance by focusing on the four key developments in international trade, with a twist. Instead of examining production chains as such, the volume focuses on export diversification (part I), a major development challenge in the region, especially for oil exporters. It then explores services trade (part II), the relations with China and India (part III), and regional integration (part IV).

Export Diversification

Part I is devoted to emerging lessons for export diversification. Countries naturally seek to diversify into production and export activities that provide a higher return to the labor and capital resources employed. At the same time, a more diverse structure of exports reduces a country's vulnerability to pronounced price swings in international markets. The importance of this effect has been evident during the financial and economic crisis, when many developing countries and emerging economies—including a large number of countries in the Middle East and North Africa that rely heavily on fuel and commodity exports for their income—experienced a marked drop in export prices and a corresponding deterioration in their terms of trade.

In chapter 2, Gourdon takes stock of the degree of export concentration in different groups of countries and examines how it has evolved over time. Resource-rich countries continue to show highly concentrated export structures and very little change toward diversification, in both

total exports and nonfuel exports. In contrast, resource-poor, labor-abundant countries are significantly more diversified in their exports and have been able to broaden their export portfolio since the 1980s. Econometric analysis suggests that this increased diversification is driven by foreign investments in nontraditional export products, which gained importance in the overall portfolio over time. In contrast, the diversification that occurred in resource-rich countries was often driven by foreign investors developing new, nontraditional product lines for export. This diversification was more modest and often insignificant.

Chapter 3, by Nassif, investigates the emergence of new export products by drawing on the findings of a set of country case studies. The author analyzes 23 successful cases in the Arab Republic of Egypt, Jordan, Lebanon, Morocco, and Tunisia to assess the factors that trigger or constrain the discovery of new exports at the firm level. Although several factors were found to play a role, the most important element in the discovery process turned out to be a combination of information about new business opportunities and a willingness to take risks and adopt new technologies and management techniques. Conversely, the high cost of gathering important information and the resulting uncertainty were reported to be major obstacles to initiating a new export activity. First movers were not concerned about competition from domestic followers. In fact, they often facilitated and even encouraged imitation through knowledge sharing and collaboration to achieve essential economies of scale in branding and marketing.

Producer clusters and the degree of similarity of skills and tasks in different export activities are also at the core of the analysis of Hausmann, Klinger, and López-Cálix in their assessment of export diversification in Algeria, in chapter 4. Drawing on a new methodological approach, the authors identify a list of products that could serve as targets for industrial development, based on the tradeoffs among several factors: whether the new product requires capabilities similar to those used to produce existing products, so that switching to the new product is relatively easy (“proximity”); whether the new product increases the level of technology of the export basket, a key determinant of growth (“sophistication”); and whether the new product facilitates the export of additional new products, because they require capabilities similar to those used to produce the new product (“strategic value”). This analysis generates a list of products that would be the most efficient targets of industrial policy. Agroindustry, aluminum smelting, and steel and metal works are found to have high potential and substantial strategic value. This perspective also

underlines the importance of providing sector-specific public goods that are selected in consultation with the private sector in a transparent manner. Simply removing general barriers to competition, although important, is not sufficient to achieve the structural transformation required for sustained growth.

Services Trade

Part II examines developments with respect to services trade. For a long time, most services were considered to be nontradable, but innovations in information and communication technologies have led to a fragmentation that has made it possible for many more services to be provided at a distance, including across borders. Indeed, services exports from countries in the Middle East and North Africa have grown dynamically in recent years, driven by the ongoing trend in industrial countries of outsourcing back office and information technology functions to take advantage of advanced skills and to reduce the labor costs of specialized service providers. Other modes of services trade—consumption abroad (tourism), commercial presence (foreign direct investment) and the temporary movement of workers—are equally, if not even more, important for the economies of the region.

In chapter 5, Cattaneo, Diop, and Walkenhorst assess the prospects for emerging services exports in Tunisia. They identify a number of significant strengths that have driven growth in services exports, including the large pool of skilled engineers willing to work at relatively low wages and the geographical and cultural proximity of Europe. The authors note a number of impediments that could hamper further expansion and warrant the attention of policy makers. Lack of competition in fixed-line telecommunications and restrictions on the entry of foreigners into professional services drive up the costs of service providers; poor payment discipline of public procurement services exacerbates the financial difficulties facing small and medium-sized firms; and weaknesses in selected areas of education and training, such as nursing and managerial education, create staffing bottlenecks for aspiring exporters. The authors see substantial potential for growth in medical tourism, back-office outsourcing, and information technology-enabled services for Tunisia.

In addition to being a key area of export growth potential, services are also important for economic efficiency and growth. In chapter 6, Diop looks at several “backbone” services (telecommunications, banking, and air and maritime transport) in Morocco. These services play critical roles in

determining the production costs and competitiveness of all producers in the economy. The author examines the entry and competition regulatory “distance” of these sectors from the European Union (EU) and argues that gradual regulatory alignment with the European Union in the context of the European Neighborhood Policy offers Morocco the opportunity to anchor productivity-enhancing reforms, particularly in air transport, road transport, and energy. A particular challenge is that convergence with EU rules requires acceptance of important principles regarding competition policy and state aid, which Morocco would need to accommodate in its policy framework. Effective reform of Morocco’s backbone services sectors would help reduce production costs, increase foreign direct investment, promote vertical knowledge spillovers, and expand markets, all of which would enhance competitiveness.

Converting services trade into an engine for growth requires identifying the key priorities of a comprehensive reform agenda. Algeria is preparing its services sectors for international integration. In chapter 7, which is based on international experience and research supported by local data and interviews, Cattaneo, Ighilahriz, López-Cálix, and Walkenhorst identify those policies that promise to boost the further development of service trade in Algeria. First, an ambitious privatization program has been announced; about half of the enterprises that are to be shifted from public to private ownership are active in the services sector. The authors find that more openness in private services resulting from this program is essential to attract sufficient know-how and investment capital from domestic and foreign sources. Second, a tourism development strategy has been launched that aims at better exploiting the country’s natural and cultural endowments, improving the quality of services and the reputation of the country, and rehabilitating tourism infrastructure. Third, desired changes toward an enhanced regulatory regime for services should expand the domestic market and promote an improved efficiency of domestic producers. Fourth, international trade agreements may play a complementary role by serving as anchors for the reform process and shielding the government from domestic lobbies.

Relations with China and India

Part III investigates the emergence of China and India as major international trading powers and the implications for the region. The extent to which the countries in the region can cope with the challenges and take advantage of the opportunities that the rise of China and India present will

likely have a significant impact on their recovery from the global financial and economic crisis and, more generally, their development prospects.

In chapter 8, Ianchovichina, Ivanic, and Martin quantify the expected trade effects of the rise of China and India on the Middle East and North Africa. Using a computable general equilibrium model calibrated to the base year 2004, they assess the impact of continuing strong growth of the Asian Giants on the imports and exports of countries in the Middle East and North Africa through 2020. They find that the region would likely benefit substantially from the growth of China and India: an increase in the Giants' growth rate of 2 percentage points a year over the 15-year baseline projection would raise real incomes in the region by \$24 billion at 2004 prices. Most of these gains stem from improvements in the terms of trade as a result of increased demand for energy. In volume terms, total exports from the Middle East and North Africa are projected to fall, as the increase in fuel exports is more than offset by the decline in exports of manufactures and services caused by stronger competition from China and India in third markets. Imports of manufactures and services into the region are also projected to increase. The effects at the country level are mixed across countries, with fuel exporters experiencing considerable gains and resource-poor countries projected to face substantial adjustment in their manufacturing and services sectors. Policies aimed at facilitating social and economic adjustments are thus important to reduce the costs associated with competition from China.

What should the policy response of countries in the region be to the emerging trade challenges posed by the Asian Giants? In chapter 9, Brenton, Shui, and Walkenhorst argue that it is not entirely clear that increased imports from the two Asian countries come at the expense of domestic producers. They find evidence of import surges from China and India into the Middle East and North Africa, but most of them coincide with strong import reductions from alternative import suppliers, suggesting that the emergence of China and India leads primarily to an adjustment in the structure of imports. Also, although some countries in the region have seen their share of international manufactures exports fall, others have been able to expand their exports to the European Union and the United States by taking advantage of trade preferences. The authors conclude that rather than implement policy measures specifically targeted at China and India, policy makers in the region should continue to reduce the antiexport bias in their trade regimes and reduce logistics-related trade transactions costs to make it possible for their exporters to take full advantage of the proximity to the large European market.

Regional Integration

Part IV looks at the status and prospects for regional integration. There has been no shortage of regional trade and investment agreements among the region's countries. Such agreements include many bilateral preferences, the Pan-Arab Free Trade Area, the Arab Maghreb Union, and the Agadir Agreement. The impact of these preferential integration efforts has been disappointing, however, because of the narrow focus in terms of preferential trade coverage on industrial goods, insufficient political commitments to live up to the spirit of the agreements, and administrative challenges of implementation.

In chapter 10, Shui and Walkenhorst show that there are substantial untapped opportunities from regional integration by the countries of the Middle East and North Africa, particularly through expansion of coverage of preferential agreements to agricultural products, services, foreign direct investment, and labor flows. The authors identify the proliferation of agreements in the region as a challenge for effective implementation and highlight the need for high-level political support to ensure that free-trade provisions in regional agreements are implemented. They view regional integration as a complement rather than an alternative to integration into global markets.

Quantifying the benefits and costs of regional integration initiatives provides policy makers with a sense of the direction and magnitude of prospective changes in production, income, and employment. In chapter 11, Anos-Casero and Seshan compare shallow integration, which includes preferential reforms for merchandise trade only, with deep integration, which also opens services sectors to partner trade and includes regulatory reforms to strengthen competition and market contestability. Their findings show that shallow integration is likely to generate very limited gains but that benefits would multiply if deep integration were pursued. If the EU serves as the external anchor for services integration and investment climate reforms, reforms could have an even greater effect.

In conclusion, this book shows that the Middle East and North Africa region has yet to seize all the opportunities offered by the four recent global trends that shape trade policy and performance around the world. It also identifies additional reforms that could strengthen global production networks, allow countries to benefit more from trade in services, better capture the opportunities offered by the rise of China and India, and harness the potential of regional integration. All of these reforms could help boost growth and job creation in the region.

Note

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PART I

Export Diversification

CHAPTER 2

FDI Flows and Export Diversification: Looking at Extensive and Intensive Margins

Julien Gourdon

Identifying the determinants of export diversification in the countries of the Middle East and North Africa (MENA) should yield valuable research and policy recommendations regarding the room for active government interventions and their expected outcomes. Surprisingly, few researchers have studied this issue. Notable exceptions are Imbs and Wacziarg 2003, who explore the link between development, as measured by per capita income, and production concentration, and Martincus and Estevadeordal 2005, who investigate the role of trade policy. Therefore, for MENA countries, the level of export diversification would be a matter of level of development or trade policy, although other explanations should be taken into account to explain their level of export diversification in MENA countries. Of particular interest is the impact of foreign direct investment (FDI) on export diversification. Since 2000, both FDI and export diversification have increased in the region, suggesting that the increase in FDI may have been a motor behind export diversification.

This chapter is organized as follows. The first section addresses the extent of export concentration, as measured by three commonly used indexes (Theil, Herfindahl, and Gini), and decomposes trends in export

diversification into traditional versus new product lines. The second section measures the potential impact of FDI inflows on diversification in MENA. It briefly reviews recent trends in FDI inflows, presents an econometric model of the determinants of diversification, and estimates the model using data from MENA. The last section summarizes the chapter's main findings.

Export Diversification in the Middle East and North Africa

According to a vast body of empirical literature, export diversification has a strong, positive impact on growth, through various channels. First, export diversification increases productivity through knowledge spillovers (Feenstra and Kee 2004). Indeed, new economic growth models argue that new export products may represent innovations that are preceded by creative effort and new knowledge. Unlike goods and factors, ideas and knowledge can be freely used even if restricted by property rights. Such knowledge spillovers help the economy as a whole accumulate knowledge—the stock of useful ideas—allowing it to then grow without limits (Hausmann and Klinger 2006; Hwang 2006; Hausmann, Hwang, and Rodrik 2007). Second, a more diversified export structure stimulates new industries and expands existing industries elsewhere in the economy, simply by adding new production opportunities for industries. This is particularly the case if diversification takes place by adding new exports to the existing export basket. Third, in the presence of external economies, diversification can lead to stronger links and the development of products as cost reductions are passed on to downstream industries. Fourth, export diversification reduces the volatility of export revenue. By reducing dependence on a limited number of products that are subject to major price and volume fluctuations (such as agriculture and oil), a country can increase its export and terms-of-trade stability (Acemoglu and Zilibotti 1997; Bertinelli, Salins, and Strobl 2006; Levchenko and Giovanni 2006).

Export diversification in MENA countries has been limited, with countries in the region underperforming other countries with similar income levels in discovering new exports.¹ All countries in the region rely heavily on a few export commodities. In addition, exports are generally produced with low levels of skill and are unsophisticated: only 21 percent of exports from the MENA5 (the Arab Republic of Egypt, Jordan, Lebanon, Morocco, and Tunisia) are classified as medium or

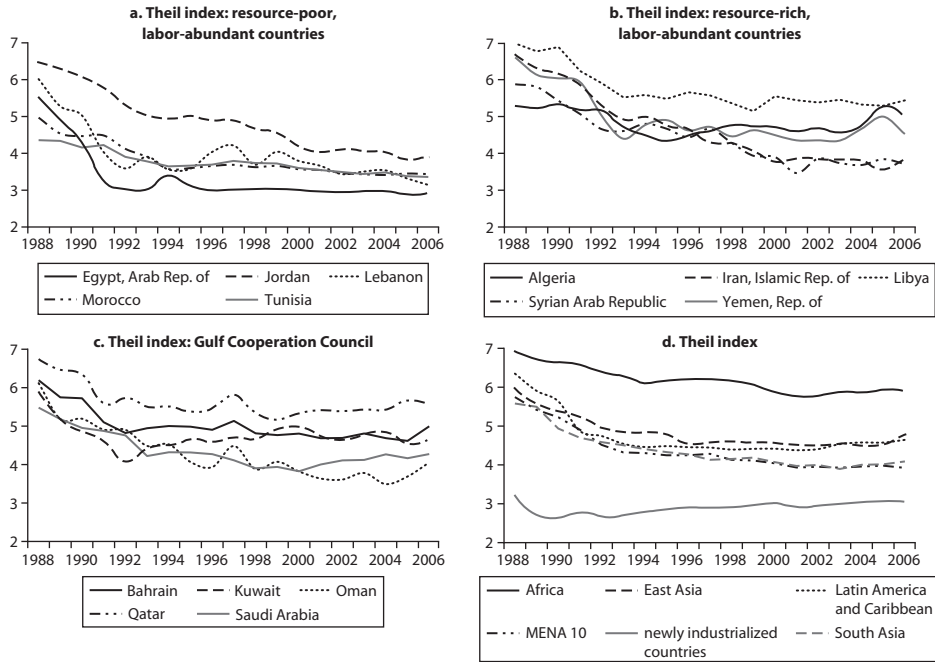
high-technology, compared with almost 37 percent of exports in other emerging economies. This technology structure hurts productivity in MENA, which is low given its countries' income levels. The export structure also constrains export growth: most MENA countries would have enjoyed more rapid export growth in the 1990s if their product orientations had better matched global demand.

Trends in Export Diversification

Concentration ratios, as measured by the Theil, Herfindahl, and Gini indexes (see annex for descriptions), reveal the high export concentration in MENA. According to the Theil index (see figure 2.1), which is influenced most by changes in the share of small export sectors, exports from the MENA10 countries (that is, all MENA countries except those in the Gulf Cooperation Council [GCC]) show a high but slightly decreasing trend in concentration since 1988. A clear difference can be seen in the level and trend of export concentration in resource-poor labor-abundant (RPLA) and resource-rich labor-abundant (RRLA) countries. Some RPLA countries (Lebanon, Morocco, and Tunisia) have low levels of export concentration compared with Asian countries; Jordan has reduced its export concentration from high levels at the end of the 1980s. In contrast, RRLA country exports are highly concentrated (even if oil sectors are excluded), with some decline in concentration since the late 1980s. GCC countries also show a high level of concentration, which has declined very little since 1990.

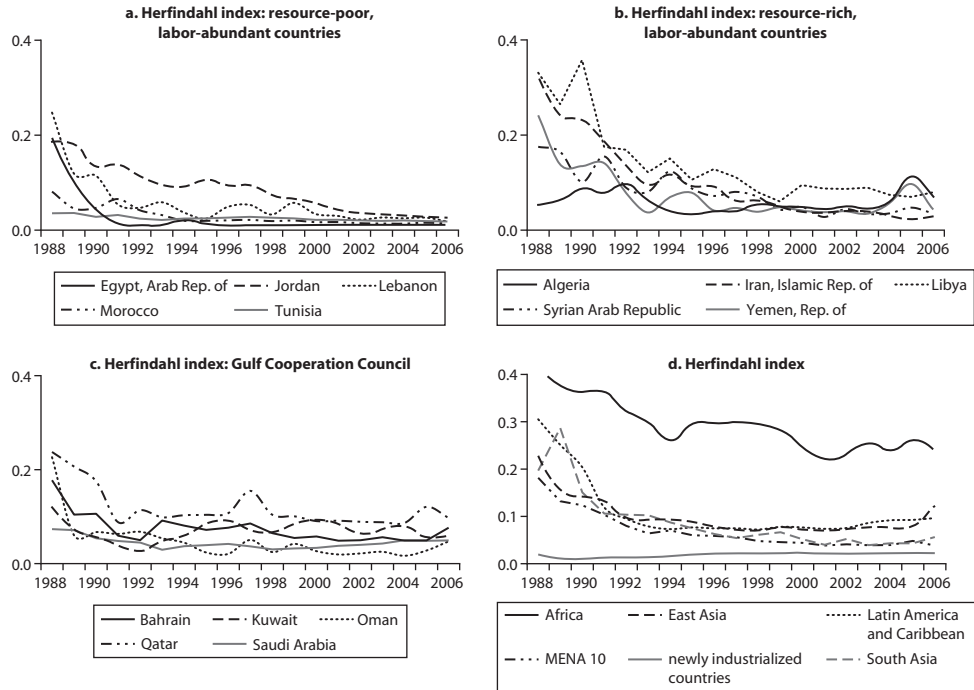
The Herfindahl index (see figure 2.2), which is influenced most by changes in products with the largest shares of total exports, provides an additional perspective on the degree of export concentration. The concentration ratios for the MENA10 countries indicate a trend similar to that revealed by the Theil index, although in comparison with East Asia and Latin America and the Caribbean, the average level of concentration is lower and the decline more pronounced (that is, the decline in the concentration in MENA10 exports is greater because the shares of the largest export sectors are greater). The Herfindahl index does not show a decreasing trend in export concentration for the GCC countries—a trend that was evident using the Theil index—suggesting some success in increasing the share of the relatively small export sectors. The Islamic Republic of Iran and the Syrian Arab Republic show a less pronounced decline in export concentration with the Herfindahl index than with the Theil index; the difference between the two indexes is smaller for Algeria, Libya, and the Republic of Yemen.

Figure 2.1 Theil Index for Trade in Several Countries



Source: Author's calculations, based on UN Comtrade.

Figure 2.2 Herfindahl Index for Trade in Several Countries



Source: Author's calculations, based on UN Comtrade.

The Gini index (see figure 2.3), which is influenced most by changes in the middle of the distribution and (unlike the other two indexes) is not influenced by the level of aggregation, shows a clearly decreasing trend in export concentration in MENA. Relative to the Theil and Herfindahl indexes, this measure indicates a smaller reduction in concentration ratios in MENA10 countries relative to other regions. This may indicate that the decline in export concentration relative to other regions shown by the other two indexes reflects either the level of aggregation or changes in the middle of the distribution rather than changes in the largest or smallest export sectors.

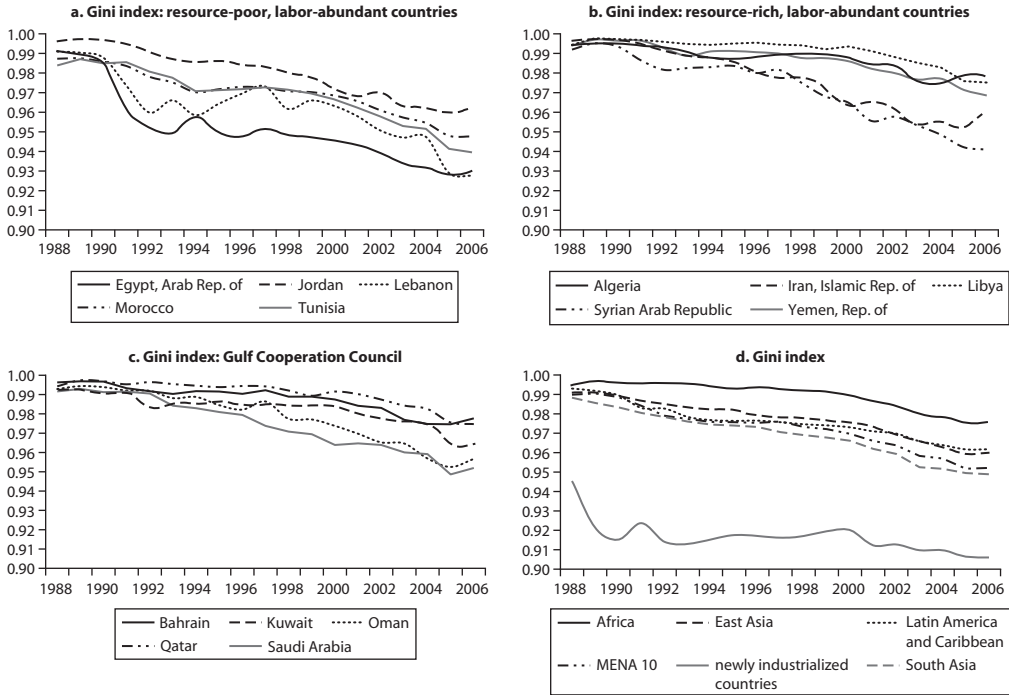
Diversification through New Products and Markets

Do changes in concentration in the MENA region reflect the introduction (or disappearance) of new export products (known as changes in the extensive margin) or changes in traditional exports (known as changes in the intensive margin)?² The Theil index is used to address this question, because it has mathematical properties that make it easy to decompose the two concepts: the “within” component of the Theil index largely reflects the intensive margin, whereas the “between” component reflects the extensive margin (see annex).

Analysis shows quite different trends in concentration ratios in MENA and most other developing regions. Broadly speaking, the decline in concentration ratios in many non-MENA countries has come about through the introduction of new products (the extensive margin); traditional products (the intensive margin) have become more concentrated (figures 2.4 and 2.5). By contrast, MENA declines in concentration ratios have been largely attributable to lower concentration of traditional products and relatively limited progress in the introduction of new products. The concentration of traditional exports in the MENA10 countries appears to have fallen slightly, with RPLA countries showing high but stable concentration ratios in traditional products and the RRLA countries following no uniform trend.

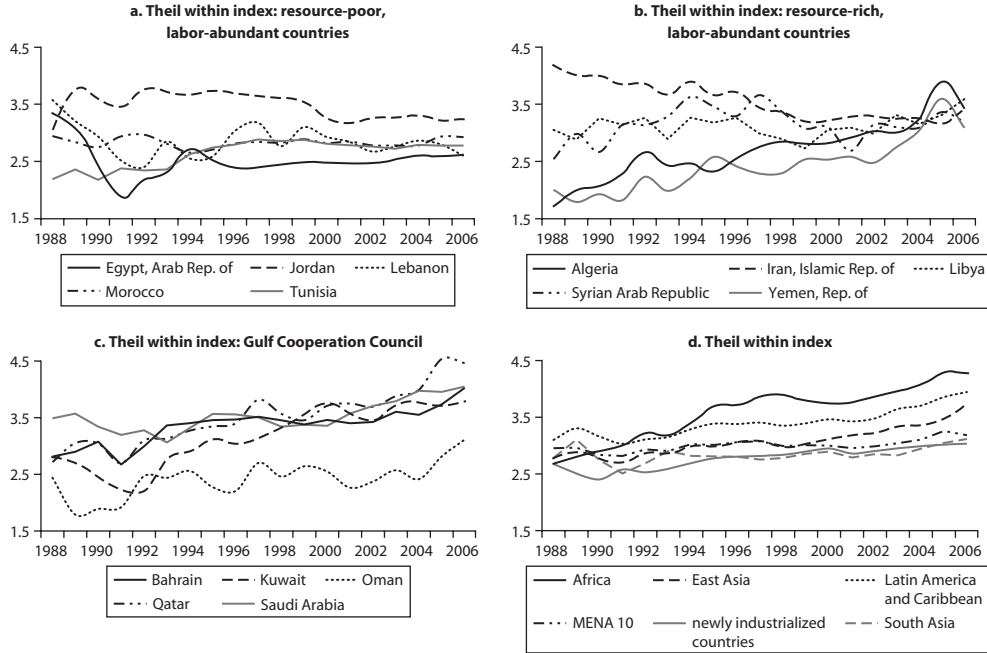
These results confirm the finding from comparison of the Herfindahl and Theil indexes that the decline in concentration ratios in the MENA10 countries reflects the decline in the concentration of traditional exports rather than the introduction of new exports or the penetration of new markets. By contrast, traditional export sectors have seen huge increases in concentration in the GCC countries, accompanied by some progress in introducing new export lines.

Figure 2.3 Gini Index for Trade in Several Countries



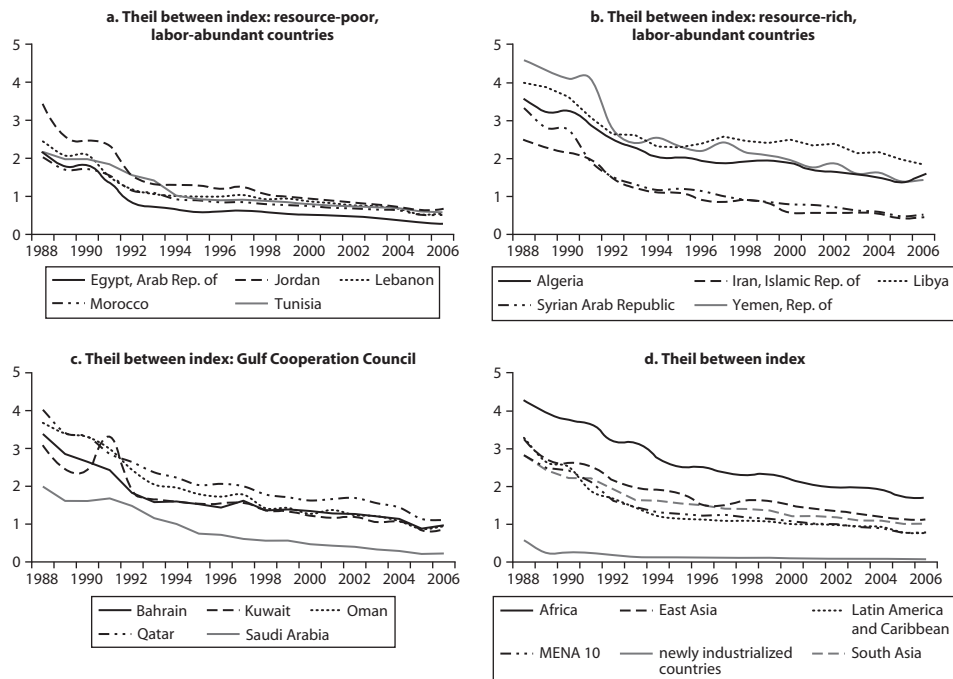
Source: Author's calculations, based on UN Comtrade data.

Figure 2.4 Theil “Within” Index for Selected Groups of Countries, 1988–2006



Source: Author's calculations, based on UN Comtrade.

Figure 2.5 Theil "Between" Index



Source: Author's calculations, based on UN Comtrade.

The Potential Impact of FDI on Export Diversification

MENA countries cannot rely on their own forces alone: they need to deepen integration with the world to obtain the resources for development they cannot generate on their own. FDI inflows are expected to increase a country's output and productivity, encourage local investment, and stimulate the development and dispersion of technology (Alfaro and others 2004). Although horizontal FDI (market-seeking investment aimed primarily at the domestic market in the host country) is most prevalent, vertical FDI (efficiency-seeking investment to minimize global costs) is growing, even in MENA countries. This type of FDI is likely to have a greater impact on export diversification (positive or negative), depending on whether the foreign-owned plant is producing different or similar goods than other exporting firms in the host country.

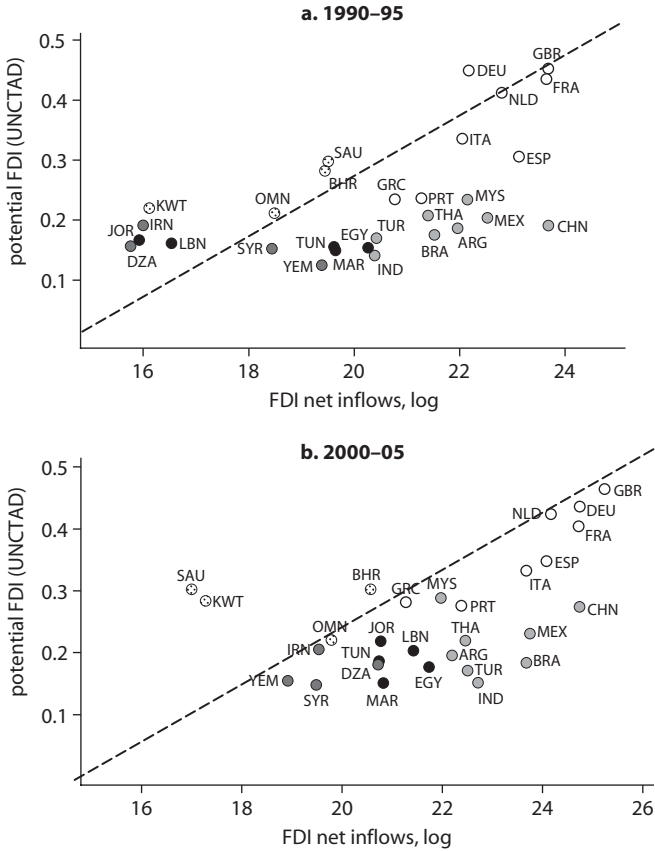
FDI can lead to diversification of the host country's exports, directly or indirectly. It can do so directly by entering the nontraditional export sector (because foreign firms possess certain ownership advantages that make them more capable of exporting than domestic firms) or indirectly (by increasing exports of traditional exports with the lowest share).

Trends in FDI Inflows

Until recently, MENA countries were not very successful in attracting FDI. Net FDI inflows to MENA stagnated between 1985 and 1999, a period during which FDI inflows as a percentage of GDP grew sixfold in most other regions (Chan and Gemayel 2004). Many MENA countries shared similar characteristics that deter FDI, including political instability, the restriction of FDI to a few sectors, the requirement that foreign firms work with local partners and hold only a minority ownership stake, and the relatively slow pace of privatization (Eid and Puaa 2003). Other factors that contributed to low FDI flows in several MENA countries included heavy reliance on oil, government monopolization of the oil sector, and appreciated exchange rates, which discourage manufacturing activity; weak infrastructure; state dominance of the economy; low level of integration with the world; underdeveloped financial and capital markets; underdeveloped institutions; and low rates of return on human and physical capital (Bashir and Hassan 2002; Makdisi, Fattah, and Liman 2002).

FDI inflows have increased since 2000, because of efforts to make the business environment more open and step up structural and institutional reforms. One way of estimating this progress is to compare the relationship between FDI flows and an index of FDI potential (figure 2.6).³ In 1990–95, several MENA countries had FDI inflows that fell below their

Figure 2.6 Actual and Potential FDI Flows in Selected Countries, 1990–95 and 2000–05



Source: Author's calculations based on UNCTAD Investment Report and WDI.

potential (those above the 45 degree line in figure 2.4); by 2000–05, almost all MENA countries' FDI inflows exceeded their potential (in some GCC countries, FDI inflows remain below their potential levels). Jordan and Lebanon among RPLA countries and Iran and Algeria among RRLA countries enjoyed particularly high levels of FDI.

Impact of FDI on Export Diversification

The impact of FDI on export diversification is a priori ambiguous. If FDI is directed mainly to the exploitation of natural resources, it should lead to a more concentrated output and export structure. This may be the case

for oil-exporting countries in the sample (that is, the RRLA and GCC countries). Alternatively, foreign firms may invest in order to serve the market in the host country (referred to as *market-seeking* or *horizontal FDI*). Here the impact on export concentration should be nil or even negative if domestic costs rise as a consequence of the foreign capital inflows (Aizenman and Marion 2004).

Firms also undertake FDI to reduce production costs (referred to as *efficiency-seeking* or *vertical FDI*), where output is often produced for overseas markets. This form of FDI often increases export diversification in developing countries, for several reasons. First, if the foreign-owned plant produces export products that differ from those of other exporting firms in the host country, efficiency-seeking FDI will affect the composition of the export bundle. Because vertical FDI is often used to establish integrated, cross-border production chains in products that otherwise could not be produced in the host country, export diversification may rise. Second, foreign firms often possess certain ownership advantages—such as higher levels of technological skills, better marketing skills, and international orientation—that make them more capable of exporting than domestic firms in the same industry. Third, firms in some sectors find it difficult to export because of high fixed costs (the costs of informing potential customers in the global economy, for example, or meeting standards set in importing markets). FDI in these sectors can reduce these costs. Because such sectors tend to have limited or no exports, FDI leads to diversification of exports.

The evidence on the importance of these different types of FDI, and therefore the impact of FDI on export diversification, is mixed. Surveys indicate that access to domestic markets is an important motivation for foreign investment in MENA (table 2.1). The second-most-cited motive for investment is proximity to markets and customers, which could refer either to the host country or to neighboring countries. The European Union and Sub-Saharan Africa are both relatively accessible from MENA, and MENA is increasingly playing a role in trade to both regions (World Bank 2009). Because market-seeking FDI is often directed to countries with high trade barriers and barriers to trade have been declining in MENA (especially in RPLA countries), this form of FDI may be becoming less important.

The impact of FDI on export diversification varies within the region. Studies emphasize the importance of low wages in making the region competitive (Iqbal and Nabli 2004). This would suggest the potential for efficiency-seeking (vertical) FDI in the region, at least in RPLA countries, that might affect the structure of exports. The impact of FDI through ownership advantages of foreign investors may be particularly important

Table 2.1 Motives behind Foreign Direct Investment in the Middle East and North Africa*Percentage of respondents citing*

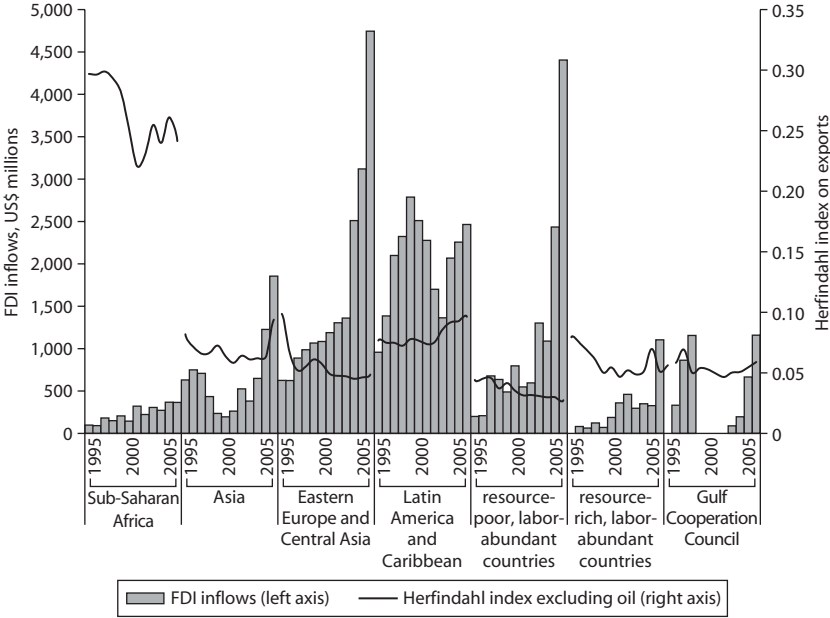
Domestic market growth potential	27
Proximity to markets or customers	25
Finance incentives or taxes or funding	8
Infrastructure and logistics	8
Lower costs	6
Attractiveness and quality of life	6
Information and communications infrastructure	4
Investment promotion agency or government support	4
Regulations or business climate	4
Skilled workforce availability	2
Natural resources	2
Industry cluster and critical mass	2

Source: OCO Monitor data 2007.

in host countries in which several sectors have to be discovered, which is the case for RPLA and particularly RRLA countries. The role of FDI in reducing fixed costs is likely to be particularly important in countries that have already discovered several export sectors but have not fully developed them (for example, RPLA countries). Egypt and Syria have large markets and expanding manufacturing sectors, providing incentives for FDI in the manufacturing sector (for export or domestic production). In the GCC countries, the expanding service sector is a significant determinant of FDI. It may therefore be more difficult to observe the impact of FDI on the export structure of manufacturing for these countries.

Simple observation of the data reveals that MENA countries experienced some decline in export concentration (measured by the Herfindahl index) between 1995 and 2005, when net FDI inflows were rising (figure 2.7). This is most pronounced for RPLA countries, where the rise in FDI took off from a very low level. Net FDI inflows for GCC countries are variable, in part because these countries have significant FDI outflows. The confluence of declining export concentration and rising FDI is also seen in Sub-Saharan Africa and Eastern Europe and Central Asia. In Asia and in Latin America and the Caribbean, this relationship is less clear. Nevertheless, there is a large variation in FDI inflows and export concentration across countries, both within MENA and in other regions.

Figure 2.7 FDI Inflows and Export Concentration in Developing Regions



Source: Author's calculations based on UN Comtrade and World Development Indicators.

The impact of FDI on export diversification in MENA cannot be determined by casual inspection of the data. More rigorous econometric analysis, presented in the next section, is required.

The Model

Has FDI reduced the concentration of exports in MENA? If so, has it done so by reducing concentration among traditional export products or by adding new products and markets? A panel data set of 127 countries, covering 1988–2006, was constructed by combining different synthetic indexes of specialization (obtained with disaggregated manufacturing exports data at the Harmonized System six-digit level, excluding mineral fuels, oils, and products of their distillation) and country-specific characteristics that potentially influence diversification patterns. The model estimates the following equation:

$$\log (Conc)_{it} = \alpha_i + \delta_t + \beta_1 \log (Y_{pc}) + \beta_2 [\log(Y_{pc})]^2 + \gamma_1 \log (Tariff) + \gamma_2 \log (FDI) + \varepsilon_{it}$$

where $Conc_{it}$ is the concentration index of export concentration for country i at time t ; Y_{pc} is GDP per capita; $Tariff$ is the share of import duties on total imports; FDI is FDI inflows in dollars; α_i represents fixed country effects; and δ_t represents time effects.

Export concentration is measured by the Herfindahl, Theil, and Gini indexes. The impact of changes in per capita GDP on diversification may depend on the level of income. According to Imbs and Wacziarg (2003), when income rises, the opportunities for risk diversification increase through sectorally diversified investment. On the consumption side, nonhomothetic preferences push in the same direction. However, as income grows beyond some threshold, the impetus to diversification declines: richer economies tend to be economically and institutionally more stable, which reduces business risks and thus the need for diversification, while economies of scale may push toward greater specialization. Nevertheless, rich economies are characterized by higher total factor productivity and a better business climate, so that entrepreneurs may have greater opportunities to broaden their productive mix. Thus, the impact of per capita income on diversification is an empirical matter. Imbs and Wacziarg (2003) find that per capita income growth has a positive impact on diversification for countries with low incomes, but that at relatively high per capita income levels, further growth in income is related to greater concentration.

The level of tariffs reflects, among other things, a country's competitiveness and its integration in international markets. Its impact on diversification is ambiguous. Low tariffs that improve productivity may facilitate the development of new lines of production, thus boosting diversification, or enable the exploitation of increasing returns to scale, thus reducing diversification (Martincus and Estevadeordal 2005). A study by the World Bank (2009) finds that tariff protection is a major obstacle to export diversification in MENA countries.

FDI refers to net FDI inflows in dollars. Other studies have used other definitions, including the ratio of FDI to GDP and FDI per capita (the precise concept used is not always clear). Different concepts can have differing implications for policy and the validity of empirical studies. A high FDI/GDP ratio may not be desirable, because of the risks of dependency and impaired sovereignty. Moreover, GDP and the size of the population can influence the extent of export diversification. Thus, if the dependent variable is the ratio of FDI to GDP (or population), it may be difficult to measure the separate effects on export diversification of FDI and GDP (or population).

A dummy variable for the time trend is included to pick up the impact of the growth of world trade over time. The impact of world trade growth on diversification is ambiguous: the availability of a larger number of final goods through imports could promote specialization of domestic production and export, or the increase in the bundle of intermediate goods available through trade could encourage the production and exports of new domestic goods, thus increasing diversification.

The model includes several additional variables, which control for the influence on diversification of factors that are not the primary goals of the study:

- Access to credit, the quality of infrastructure, and the gross investment ratio are indicators of macroeconomic efficiency that enhance the growth prospects of firms (the implications for export diversification remain an open theoretical question).
- The size of GDP and population are included because larger countries tend to have more diversified economic structures. Krugman (1981) and Helpman and Krugman (1985) argue that market size directly affects the degree of product differentiation. Models of monopolistic competition imply that larger countries can produce a wider range of products. Hummels and Klenow (2005) find that economic size is positively related to the degree of specialization.
- The distance from major markets (New York, Rotterdam, and Tokyo) and the climate zone (latitude) are included as proxies for transport costs that may affect a country's ability to diversify. Economic geographers (Amiti and Venables 2002; Venables and Limao 2002) suggest that proximity to world markets and other geographical characteristics are important in determining economic structure. The influence of distance on trade has been shown through the long empirical tradition of gravity models (Deardorff 1984; Brun and others 2005).
- A measure of spatial correlation captures the impact of proximity to potential trade partners. Spatial correlation may affect trade patterns because countries in close proximity may share a common institutional framework (as a result of "cultural spillovers" and integration agreements) (Greene 2008). Each country's specialization pattern is assumed to depend substantially on the degree of specialization of other countries. This influence is more pronounced in geographically closer countries. An index was constructed using a

spatial weighing scheme using a symmetric matrix W ($N \times N$) with elements w_{ij} (i and j refer to single countries).⁴ This index yields the following formula:⁵

$$Spat_{Corr_{it}} = \sum_{j=1}^N W_{ij} Spec_{jt}$$

Estimating the impact on FDI of distance to market, lack of access to the sea (landlocked), and latitude, which are invariant over time, presents an econometric challenge. The problem is that one of these fixed effects will pick up the impact of all variables that are time invariant. The equation could be estimated using random effects, but doing so would assume that all explanatory variables are uncorrelated with the individual specific effects, which is unrealistic. A Hausman test run after the random-effects estimation always rejects the hypothesis of no correlation between individual effects and some explanatory variable, such as GDP per capita and population. Moreover, the Breush-Pagan test shows that random effects are not heteroscedastic, whatever concentration index is used.

The Hausman-Taylor estimator allows time-invariant effects to be estimated without imposing the strong assumption that all variables are uncorrelated with individual specific effects. The main challenge in this estimator is determining which of the variables are correlated with individual specific effects and which are not. Based on the Hausman test, GDP per capita, population, infrastructure, and spatial correlation of specialization are considered endogenous variables (that is, possibly correlated with other political, social, historical, cultural, or economic aspects not included in the model and captured by the individual specific effects).

Empirical Results

The dependent variables are the three concentration indexes, with the Theil index decomposed between its within (intensive margin) and between (extensive margin) components. The independent variables include per capita income, tariffs, and FDI, plus fixed time and country dummies.

As expected, the impact of per capita income on export concentration follows a *U*-shaped pattern, declining first as a function of income and rising afterward (as shown by the negative sign on the level of per capita income and the positive sign on the level of per capita income squared). Second, tariffs have a positive impact on the level of concentration. At

first, for relatively low tariffs, an increase in import duties is associated with greater export concentration, consistent with the notion that the decline in export profitability will allow only a relatively limited number of firms to afford the fixed costs of exporting (see Faini 2004). Both findings are consistent across the different specifications of the dependent variables displayed in columns 1–3 in table 2.2.

FDI significantly reduces concentration as measured by the Gini index; the results for the Herfindahl and Theil indexes are not significant. The impact of FDI on concentration depends on the motivation (natural resource development, market seeking, efficiency seeking). Because all three types of FDI may be present at the same time (different motivations may underlie even a single project), it is difficult to distinguish among them. The positive relationship between FDI and export concentration may appear surprising, given that efficiency-seeking FDI dominated flows to developing countries in the 1990s. However, the sample includes high-income countries, in which natural resource development (among high-income oil exporters) and market-seeking FDI may have been more important. Including interacted regional dummies reveals that FDI increases export concentration for high-income and upper-middle-income regions (where natural resources and market-seeking FDI likely dominate) and reduces export concentration for most lower-middle-income and low-income regions (where efficiency-seeking FDI likely dominates) (see annex tables).

Other explanatory variables have the expected signs. Improvements in infrastructure and increases in investment and domestic credit reduce export concentration. Improvements in infrastructure and increases in investment decrease export concentration by boosting exports of nontraditional products (column 5 in table 2.2). Increases in domestic credit decrease export concentration by equalizing the share of traditional exports (column 4). Larger country size reduces export concentration, except as measured by the Gini index, which is not sensitive to size. By contrast, distance to the market, lack of access to the sea (landlocked), and reduced proximity to potential trade partners increase export concentration.

Further insight can be gained by disaggregating the impact of FDI across regions (see annex tables). FDI has a significantly negative impact on export concentration in RPLA countries, the largest impact among developing country regions, when measured by the Theil index. The effect of FDI on concentration in RRLA countries is also negative but not significant, perhaps because of the differing impact in Iran and Syria on the one hand and Algeria and Yemen on the other. The negative effect of FDI on export concentration for GCC countries is highest using the

Table 2.2 Determinants of Export Diversification

Variable	(1)	(2)	(3)	(4)	(5)
	<i>Hausman-Taylor</i>	<i>Hausman-Taylor</i>	<i>Hausman-Taylor</i>	<i>Hausman-Taylor</i>	<i>Hausman-Taylor</i>
	<i>Herfindahl</i>	<i>Theil</i>	<i>Gini</i>	<i>Theil within</i>	<i>Theil between</i>
Ln(GDP per capita)	-2.745*** (5.86)	-0.624*** (6.70)	-0.053*** (4.99)	-0.514*** (4.17)	-0.092 (0.48)
Ln(GDP per capita) ²	0.225*** (7.54)	0.049*** (8.36)	0.004*** (5.39)	0.037*** (4.72)	-0.009 (0.71)
Ln(Tariffs)	0.563 (1.47)	0.255*** (3.35)	0.034*** (4.01)	0.131 (1.22)	0.453*** (2.76)
Ln(FDI)	-0.048 (0.55)	0.024 (1.40)	0.005** (2.32)	-0.083*** (4.00)	0.207*** (6.45)
Ln(Main phone lines ^a)	-0.051 (1.00)	-0.014 (1.33)	-0.000 (0.41)	0.018 (1.42)	-0.048** (2.39)
Ln(Share of domestic credit in GDP)	-0.083** (2.25)	-0.020*** (2.71)	-0.002*** (2.76)	-0.024** (2.57)	0.027* (1.88)
Ln(Gross fixed capital formation in GDP)	0.067 (0.18)	-0.092 (1.25)	-0.003 (0.40)	0.516*** (5.55)	-0.431*** (3.00)
Ln(Spatial correlation)	1.151*** (6.47)	1.326*** (9.90)	1.490*** (8.75)	0.591*** (2.76)	2.349*** (7.09)
Ln(Population)	-1.102*** (5.84)	-0.169*** (4.81)	0.002 (0.36)	-0.099*** (2.86)	-0.333*** (6.04)
Ln(Distance)	28.262*** (3.31)	7.154*** (4.99)	0.770*** (4.15)	3.562*** (3.68)	4.088*** (2.61)
Landlocked	0.244 (0.35)	0.096 (0.82)	0.010 (0.64)	-0.096 (0.92)	0.177 (1.05)

(continued)

Table 2.2 Determinants of Export Diversification (continued)

Variable	(1)	(2)	(3)	(4)	(5)
	<i>Hausman-Taylor</i>	<i>Hausman-Taylor</i>	<i>Hausman-Taylor</i>	<i>Hausman-Taylor</i>	<i>Hausman-Taylor</i>
	<i>Herfindahl</i>	<i>Theil</i>	<i>Gini</i>	<i>Theil within</i>	<i>Theil between</i>
Latitude	0.257*** (2.99)	0.067*** (4.68)	0.008*** (4.07)	0.032*** (3.33)	0.041*** (2.65)
Longitude	-0.013** (2.01)	-0.003*** (3.12)	-0.000*** (2.84)	-0.002** (2.35)	-0.003* (1.93)
Constant	-175.211*** (2.61)	-44.879*** (3.89)	0.023 (0.02)	-14.338* (1.76)	-25.319* (1.90)
Time effects	Yes	Yes	Yes	Yes	Yes
Number of observations	1,490	1,490	1,490	1,351	1,351
Country	125	125	125	124	124

Source: Author compilation.

Note: Ln = natural logarithm-normal distribution.

*** Significant at the 1% level; ** significant at the 5% level; * significant at the 10% level.

a. Mean number of main phone lines per 1,000 inhabitants.

Herfindahl index; and it is not significant with the Theil index, suggesting that FDI led to diversification by decreasing the share of the larger sectors rather than increasing the share of the smaller export sectors. When concentration is measured by the Gini index, Sub-Saharan Africa, South Asia, and some countries in Latin America and the Caribbean show a stronger negative effect.

The impact of FDI on concentration can be disaggregated into the impact on existing product lines (the within component of the Theil index) and new product lines (the between component of the Theil index) (figure 2.8). For the full sample, FDI appears to reduce export concentration by equalizing the shares of existing product lines (column 5 in table 2.2) and to increase concentration by increasing the share of traditional products relative to new products. Trade barriers significantly raise export concentration by impeding the development of new products and markets rather than by equalizing the shares of traditional exports.

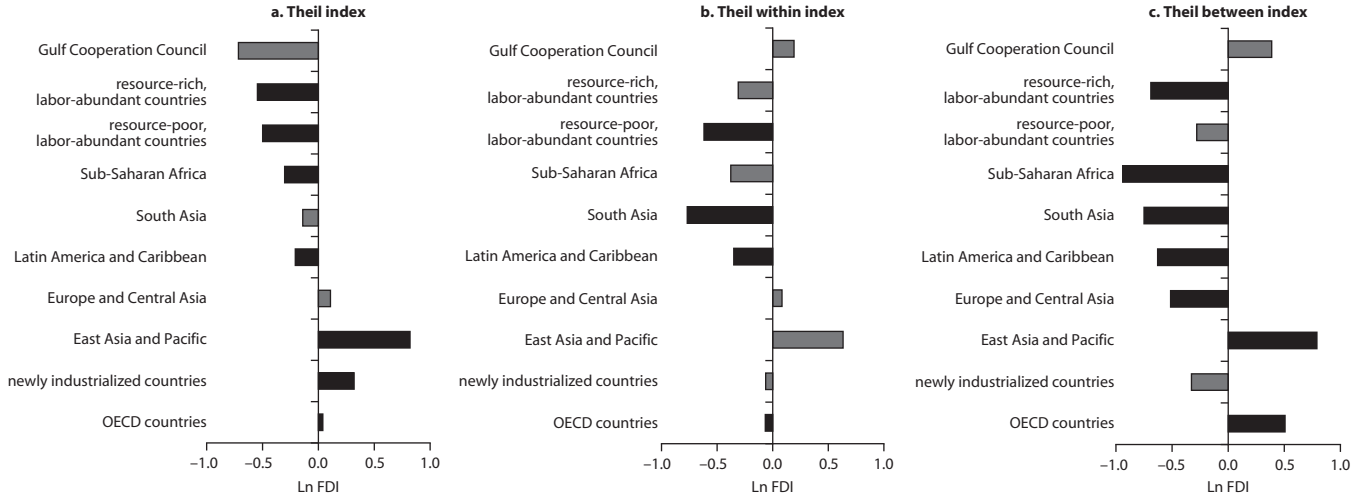
FDI reduces export concentration in RPLA countries by equalizing the shares of traditional exports (as in South Asia). In RRLA countries, FDI reduces concentration by boosting new exports (as in Sub-Saharan Africa). The nonsignificant FDI coefficient for the within component for RRLA may reflect the diversity among these countries. In high-income countries, FDI tends to reduce the share of new products, which are potentially less and less important for already diversified countries, and to diversify export values among traditional exports. For countries in East Asia and Pacific, FDI increases export concentration along both extensive and intensive margins.

Robustness

A potential problem is that FDI and GDP per capita may be endogenous (that is, in part determined by export concentration, the dependent variable). If this is the case, their coefficients will be biased. An instrumental variable procedure is adopted to control for the possible endogeneity of FDI, using the FDI potential index, as computed by the United Nations Conference on Trade and Development (UNCTAD), as an instrument. Although the results obtained are the same as in the first two estimations, the usual tests reject the instrumentation. Moreover, the model includes no valid instrument for GDP. A generalized moments method estimator is therefore used, which yields essentially the same results (see annex table 2.A.2).

To check the robustness of the results to other definitions of traditional versus nontraditional export products, one could order the export product shares from smallest to largest and define traditional

Figure 2.8 Coefficients Measuring the Impact of FDI on Export Concentration



Source: Author's calculations.

Note: Ln = natural logarithm-normal distribution; OECD = Organisation for Economic Co-operation and Development.

goods as the top half of the distribution and nontraditional goods as the bottom half. A problem with this approach is that it cannot account for goods that switch categories. A second possibility would be to consider the goods that make up the top 95 percent of export shares as traditional exports and the bottom 5 percent as nontraditional. A problem with this approach is that it would not identify products that are really new. A third idea would be to define nontraditional export products as “discoveries” (as in Klinger and Lederman 2004). We adopt this approach, identifying as nontraditional exports products whose exports exceeded \$1 million in 2003–06 and totaled less than \$10,000 in 1990–93.

All of these approaches yield essentially the same results (see annex table 2.A.3): FDI reduces concentration through the within component of the Theil index (the intensive margin) but increases concentration through the between component (the extensive margin); high tariffs increase concentration by impeding the development of the extensive margin; and infrastructure, investment, and domestic credit reduce concentration. The only difference concerns the impact of GDP per capita on concentration: In the extended model, the relationship between GDP per capita and export concentration as defined by the between component of the Theil index was not significant. By contrast, when nontraditional exports are defined using the approach in Klinger and Lederman (2004), the relationship between GDP per capita and export concentration follows an inverted *U*-shaped curve. Using the two other approaches yields the expected *U*-shaped curve.

Conclusions

Export concentration in MENA has declined over time. The change reflects some decrease in the concentration among sectors that initially had the highest shares of exports; reductions in the share of products that initially had the highest share of exports; and some rise in the share of products that were initially small or nonexistent, indicating some success in the development of new export product lines.

The results of an econometric model suggest that removing impediments to FDI has been an efficient means of improving export diversification for resource-poor countries in the region. Removal of impediments to FDI should be intensified in resource-abundant countries, to determine whether it has a significant and efficient effect there as well.

FDI has helped new export sectors but not small traditional export sectors. Future research should try to determine whether the failure of these sectors to attract FDI reflects their lack of competitiveness. FDI flows have not succeeded in developing new exports in the GCC countries.

Annex

Indicators of Export Diversification

This annex describes three indexes used to measure export diversifications. It decomposes one of them, the Theil index, into two components.

The Herfindahl and Theil Indexes

The Herfindahl index is a flow-weighted concentration index, which implies that it can be decomposed according to the shares of total flows of each group. The weight given to each group depends on the trade share of each group. The Herfindahl index is normalized to range between 0 and 1:

$$H = \frac{\sum_k (s_k)^2 - 1/n}{1 - 1/n}, \quad (2.A.1)$$

where s_k is the share of export line k in total exports, and n is the number of export lines (5,012 in HS6).

The Theil entropy coefficient (T) is also a flow-weighted concentration index. It is given by

$$T = \frac{1}{n} \sum_{k=1}^n \frac{x_k}{\bar{x}} \ln \left(\frac{x_k}{\bar{x}} \right), \quad (2.A.2)$$

where $\bar{x} = \frac{\sum_{k=1}^n x_k}{n}$. The main difference between H and T is that H is a convex function on the shares of total export flows and T is a concave function on the shares.

The Herfindahl index emphasizes the importance of larger export sectors by assigning a greater weight to them than to smaller export sectors. It gives almost no weight to export sectors with very small proportions of total exports. The Theil index assigns higher weight to those export sectors. This implies that the Herfindahl index is influenced more by changes in the

share of large export sectors, whereas the Theil index is influenced more by changes in the share of small export sectors.

Comparison of the evolution of these two indexes may yield some important information on which export sectors (small or large) have experienced changes in their shares. If, for example, T is relatively constant through time and H increases, the increase in concentration occurs mainly within the group of export sectors that have a large share of total export flows. In this sense, the concave property of T may be of particular interest for studying the evolution of export sectors that have smaller shares of total export flows.

The within component of the Theil index captures the concentration of exports. When the mean value of exports goes up for a country, the within component of Theil's index goes down mechanically, even if all groups are unaffected. Because traditional products account for at least 95 percent of all products and the means of traditional and new products do not differ greatly, the within component is largely dominated by the index of the traditional products group. This index is therefore used as a (more intuitive) approximation of the within index. If diversification is mostly along the intensive margin, individual export values converge, largely among traditional products, which on average account for 99 percent of all active export lines (for example, all exports are at an industrial scale).

Action along the extensive margin will be reflected only in the between component of the index. Unlike the within component, the between component does not involve individual values; it is a function of group means and sizes only. It is zero when average export values are equal across all groups, irrespective of their distribution inside groups, and positive if, and only if, group means differ. If diversification occurs mostly at the extensive margin, convergence occurs in average export values across groups. Two effects may contribute to this convergence. First, as more product lines become active in exports, the size of the group of inactive export lines shrinks; because this group has a very different mean from the other group, its shrinkage mechanically reduces the between component. Second, new products are launched at higher levels, approaching that of traditional ones.

The main shortcoming of the Herfindahl and Theil entropy indexes for the research presented here is that they are sensitive to the number of observations. Although this may be a desirable property, it may be misleading here, because the number of products also varies with the availability of data.

The Gini Index

The Gini index is not sensitive to the number of observations: regardless of the number of sectors in the sample, a change in the number of sectors does not affect the value of the indicator. Brown's formula is used: for each country and year, the sample is sorted by export lines, indexed by k , by increasing order of trade value x , so that $x_k < x_{k+1}$. Cumulative export shares are $X_k = \sum_{l=1}^k x_l / \sum_{l=1}^n x_l$. Cumulative shares in the number of export lines are simply k/n . Brown's formula for the Gini coefficient is then

$$G = \left| 1 - \sum_{k=1}^n ((X_k - X_{k-1})(2k-1)/n) \right|. \quad (2.A.3)$$

The weight granted to each product line in the Gini coefficient depends on its rank and not its absolute value. Consequently, the Gini coefficient translates a function sensitive to variation in rank more than to the variations of export share. If the share of an export sector increases but does not lead to a progression in the ranking of the export sectors, it will not be fully translated in the index.

Gini coefficients are very high, corresponding to Lorenz curves that are almost right angles. The reason has to do with the level of disaggregation rather than any conceptual difference between trade, production, and employment shares. At that level of disaggregation, there are a large number of product lines with small trade values, a relatively limited number of which account for the bulk of all countries' trade (especially in developing countries but also for industrial ones). Thus, the data include a large number of economically irrelevant observations, and economically important categories in machinery, vehicles, computer equipment, and other industries are lumped together in "mammoth" lines. High Gini indexes are thus to be expected for all countries. (The interest here is in the evolution of the Gini index, not its level.)

Decomposition of the Theil Index

Following Cadot, Carrère, and Strauss-Kahn (forthcoming), let us now look at concentration measures within and between three groups of products indexed by j (each group being country specific): traditional products (products exported by the country for at least two years), new products (products that were not active in the country's export trade in

the preceding two years but were exported in each of the following two years), and nontraded products (products whose exports are zero in the whole sample period for that country). The Theil index can be decomposed using these groups into a within (equation 2.A.4) and a between (equation 2.A.5) component:

$$T_W = \sum_{j=1}^J \frac{n_j \bar{x}_j}{n \bar{x}} \left[\frac{1}{n_j} \sum_{k \in j} \frac{x_k}{\bar{x}} \ln \left(\frac{x_k}{\bar{x}} \right) \right] \tag{2.A.4}$$

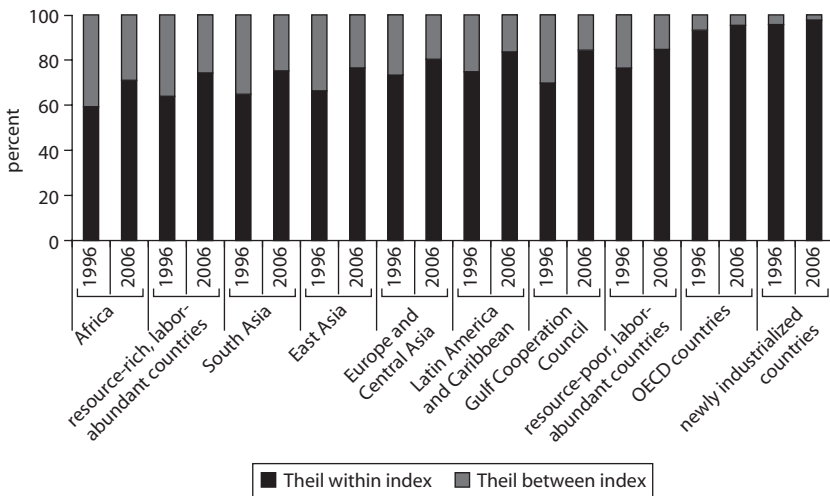
and

$$T_B = \sum_{j=1}^J \frac{n_j \bar{x}_j}{n \bar{x}} \ln \left(\frac{\bar{x}_j}{\bar{x}} \right), \tag{2.A.5}$$

where $T_W + T_B = T$; n_j is the number of export lines in group j , and x_j is the group’s average export value, in dollars.

The Theil index decreased between 1996 and 2006, traducing a decline in the number of new export products that can be discovered (figure 2.A.1).

Figure 2.A.1 Shares of Within and Between Components in Overall Theil Index



Source: Author’s calculations.

Note: OECD = Organisation for Economic Co-operation and Development.

Table 2.A.1 Coefficients for Shares of Within and Between Components in Overall Theil Index

<i>Country group</i>	(1)	(2)	(3)	(4)	(5)
	<i>Herfindahl</i>	<i>Theil</i>	<i>Gini</i>	<i>Theil within</i>	<i>Theil between</i>
OECD countries	0.038	0.043	0.008***	-0.067	0.507***
Newly industrialized countries	1.527***	0.321	0.012*	-0.063	-0.327
East Asia and the Pacific	3.906***	0.820**	0.097***	0.633	0.791*
Eastern Europe and Central Asia	0.672	0.108	0.008	0.084	-0.513**
Latin America and the Caribbean	-0.934**	-0.207	-0.024***	-0.35	-0.629**
South Asia	1.347	-0.140	-0.122***	-0.769**	-0.751**
Sub-Saharan Africa	0.697	-0.302***	-0.171***	-0.377	-0.940***
Resource-poor, labor-abundant countries	-2.246**	-0.499**	-0.052**	-0.618**	-0.280
Resource-rich, labor-abundant countries	-6.220	-0.546	-0.105	-0.310	-0.689***
Gulf Cooperation Council	-4.233	-0.716	0.400	0.192	0.388

Source: Author's calculations.

Note: OECD = Organisation for Economic Co-operation and Development.

*** Significant at the 1% level; ** significant at the 5% level; * significant at the 10% level.

Table 2.A.2 GMM Estimations to Control for Endogeneity

	<i>Herfindahl</i>	<i>Theil</i>	<i>Gini</i>	<i>Theil Within</i>	<i>Theil Between</i>
Ln(GDP per capita)	-1.2519 (1.22)	-0.5218** (2.26)	-0.0854*** (3.44)	-0.1087 (0.36)	-0.9090* (1.83)
Ln(GDP per capita) ²	0.1384** (2.03)	0.0439*** (2.84)	0.0060*** (3.46)	0.0142 (0.74)	0.0491 (1.47)
Ln(Tariffs)	-0.0905 (0.11)	0.1047 (0.59)	0.0047 (0.18)	-0.0919 (0.36)	0.0507 (0.18)
Ln(FDI)	-0.1209 (1.58)	0.0078 (0.52)	0.0051* (1.76)	-0.0574* (1.85)	0.1035* (1.69)
Ln(Main telephone lines ^a)	-0.2516* (1.93)	-0.0492* (1.76)	-0.0027 (0.96)	-0.0318 (0.95)	-0.0732 (1.36)
Ln(Share of domestic credit in GDP)	-0.0477 (0.74)	-0.0089 (0.63)	-0.0015 (0.76)	-0.0294** (1.98)	0.0209 (0.73)
Ln(Gross fixed capital formation in GDP)	-1.0703 (1.37)	-0.3675** (2.18)	-0.0194 (1.30)	0.2064 (1.34)	-0.5155** (2.10)
Ln(Population)	-1.2861* (1.87)	-0.2307 (1.44)	0.0033 (0.19)	-0.1229 (0.73)	-0.2020 (0.65)
Number of observations	1,331	1,331	1,331	1,198	1,198
Country	124	124	124	122	122
Hansen probability	0.36	0.60	0.12	0.23	0.29
Adjusted R ²	0.35	0.79	0.08	0.45	0.36

Source: Author's calculations.

Note: FDI = foreign direct investment, Ln = natural logarithm-normal distribution. Time and country effects are present in all specifications.

*** Significant at the 1% level; ** significant at the 5% level; * significant at the 10% level.

a. Mean number of main phone lines per 1,000 habitants.

Table 2.A.3 Approaches to Defining New Exports

<i>Variable</i>	<i>Klinger and Lederman</i>		<i>Median</i>		<i>Share</i>	
	<i>within</i>	<i>between</i>	<i>within</i>	<i>between</i>	<i>within</i>	<i>between</i>
<i>Theil</i>	(1)	(2)	(3)	(4)	(5)	(6)
Ln(GDP per capita)	-0.924*** (7.28)	0.368* (1.95)	-0.737*** (5.18)	-0.148 (1.29)	-0.675*** (2.84)	-0.565*** (5.05)
Ln(GDP per capita) ²	0.061*** (7.72)	-0.024** (2.04)	0.048*** (5.46)	0.016** (2.20)	0.046*** (3.05)	0.043*** (6.06)
Ln(Tariffs)	-0.142 (1.34)	1.143*** (7.38)	0.111 (0.90)	0.492*** (5.27)	-0.090 (0.46)	0.426*** (4.64)
Ln(FDI)	-0.071*** (2.93)	0.196*** (5.53)	-0.115*** (4.07)	0.182*** (8.54)	-0.134*** (2.99)	0.073*** (3.48)
Ln(Main telephone lines ^a)	0.030** (2.10)	-0.083*** (4.00)	0.032** (1.96)	-0.042*** (3.38)	0.018 (0.69)	-0.016 (1.33)
Ln(Share of domestic credit in GDP)	-0.031*** (3.05)	0.013 (0.85)	-0.033*** (2.84)	0.001 (0.15)	-0.041** (2.16)	-0.017* (1.91)

Ln(Gross fixed capital formation in GDP)	0.402*** (3.94)	-0.163 (1.09)	0.760*** (6.41)	-0.676*** (7.49)	1.230*** (6.48)	-0.299*** (3.38)
Ln(Spatial correlation)	0.872*** (4.75)	2.821*** (10.37)	1.144*** (5.44)	1.800*** (10.90)	0.189 (0.55)	1.814*** (11.27)
Ln(Population)	0.046 (1.26)	-0.482*** (7.20)	-0.041 (1.30)	-0.396*** (8.37)	0.205*** (2.70)	-0.213*** (5.26)
Ln(Distance)	3.729*** (2.90)	9.181*** (3.56)	3.764*** (3.52)	5.421** (2.49)	2.447 (0.89)	8.190*** (5.16)
Landlocked	-0.226** (2.23)	0.456** (2.18)	-0.128 (1.57)	0.197 (1.09)	0.012 (0.05)	0.134 (1.04)
Latitude	0.033** (2.58)	0.096*** (3.70)	0.035*** (3.34)	0.053** (2.40)	0.023 (0.83)	0.078*** (4.91)
Longitude	-0.003*** (2.87)	-0.004** (2.11)	-0.002*** (3.11)	-0.002 (1.11)	-0.002 (1.14)	-0.004*** (3.27)

Source: Author's calculations.

Note: FDI = foreign direct investment, Ln = natural logarithm-normal distribution. Time effects are present in all specifications. Number of countries is 125. Number of observations is 1,490.

*** Significant at the 1% level; ** significant at the 5% level; * significant at the 10% level.

a. Mean number of main phone lines per 1,000 habitants.

Notes

1. The following discussion is based on World Bank (2007a).
2. Following Cadot, Carrère, and Strauss-Kahn (forthcoming), we define the intensive margin as including products that have been exported by a country for at least two years and the extensive margin as including products that were not exported by the country in the preceding two years but were exported in each of the following two years and products that were not exported to a particular market in the preceding two years but were exported to that market in the following two years.
3. The Inward FDI Potential Index captures several factors (apart from market size) that are expected to affect the attractiveness of an economy to foreign investors. It is an average of the values (normalized to yield a score between zero, for the lowest-scoring country, and one, for the highest) of the following 12 variables (no weights are attached in the absence of a priori reasons to select particular weights): GDP per capita; the rate of GDP growth; the share of exports in GDP; the average number of telephone lines and mobile per 1,000 inhabitants; commercial energy use per capita; the share of R&D spending in GDP; the share of tertiary students in the population; a measure of country risk; the world market share in exports of natural resources; the world market share of imports of parts and components for automobiles and electronic products; the world market share of exports of services; the share of world FDI inward stock; and a broad indicator of the attractiveness and absorptive capacity for FDI and the investment climate.
4. The index is based on a bilateral distances matrix from the French Center for International Economic Studies (CEPII).
5. Depending on the outcome variable, "Spec" can be a Herfindahl, Theil, or Gini index.

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CHAPTER 3

Promoting New Exports: Experience from Industry Case Studies

Claudia Nassif

Over the past 15 years, many non-oil-exporting countries in the Middle East and North Africa (MENA) have made strides in liberalizing trade, stabilizing the macroeconomic situation, and improving the investment climate. Supported by a favorable external environment, they have enjoyed remarkable export performance. In many of these countries, export growth outperformed the world average, reaching impressive yearly growth rates of 12–25 percent since 2000. Yet, with the exception of Tunisia, countries in the region enjoyed only half the export growth recorded by other emerging economies. Consequently, they have not strengthened their position in the world market; their shares in global manufacturing exports were less than 0.2 percent in 2005. Moreover, although there has been some progress, especially in new exports, exports remain concentrated in a few commodities.

Faced with the challenge of stepping up the development of exports, many governments in the region are looking for more proactive ways to promote exports. In this context, it is useful to investigate how export promotion can be designed to spur not only growth but also diversification.

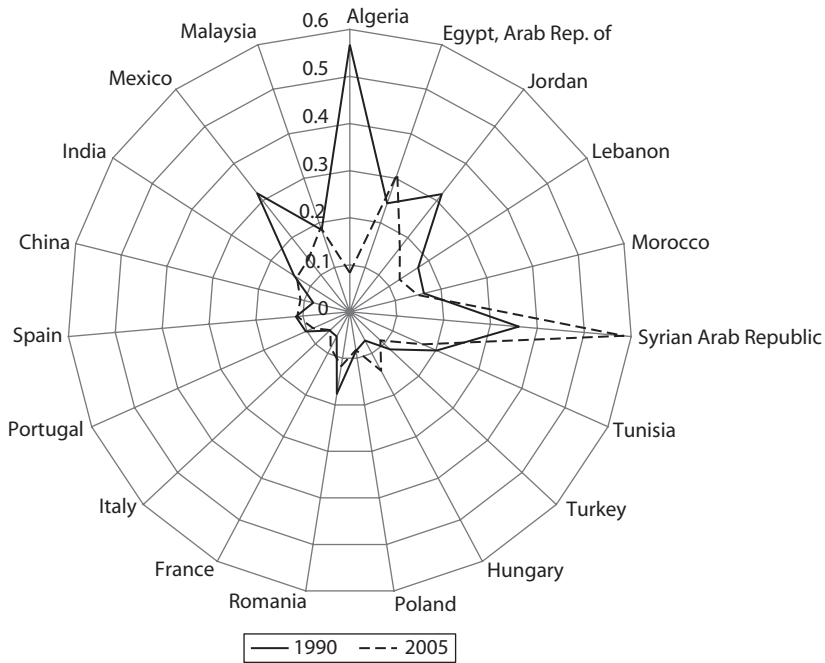
In an effort to better understand the processes underlying export diversification through new exports, the World Bank (2007) conducted an analysis of export diversification in the Arab Republic of Egypt, Jordan, Lebanon, Morocco, and Tunisia. As part of the analysis, 23 cases of successful export discoveries in the five countries were studied. The objective of the case studies was to learn what triggers or constrains the discovery of new exports at the firm level, what makes an entrepreneur take the risk of exporting a new product that has no track record in the economy, and what makes imitators pick up on the new export activity.

This chapter addresses these issues. The first section provides an overview of export diversification in the five MENA countries included in the World Bank study. The second section discusses the case studies. The third section makes recommendations for designing proactive policies that encourage experimentation and imitation. The last section derives further implications from the case study results for export promotion.

Export Diversification in “Resource-Poor” Countries in the Region

At the structural level, exports in MENA are concentrated. Even the non-oil countries rely heavily on a few export commodities, and diversification levels are lower than in other countries of comparable income and size (figure 3.1). Most exports are unsophisticated. The technological structure of exports in the “resource-poor” countries falls short of that of comparable countries in other regions: on average, only 21 percent of the region’s exports entail medium or high technology, while almost 37 percent of exports in other emerging economies fall into these categories.¹ This technology structure hurts productivity in MENA countries, which is low compared with other countries of similar income levels in other regions.

The trade structure in the resource-poor MENA countries is undergoing changes, albeit slowly. This is indicated by the unusual fact that export growth in many of the region’s countries has been heavily driven by the extensive margin (that is, the change in export flows resulting from export flows to new markets and new products) (table 3.1). The extensive margin accounted for just 17 percent of the export growth of all lower-middle-income countries on average and 24 percent of the growth of all upper-middle-income countries; it accounted for more than 38 percent in MENA countries. This is partly explained by the magnitude of the decline in existing flows and the disappearance of exports of particular products

Figure 3.1 Herfindahl-Hirschmann Index of Export Concentration, 1990 and 2005

Source: World Bank 2007.

Note: The Herfindahl-Hirschmann index is a measure of the degree of product concentration, normalized to obtain values from 0 (minimum concentration) to 1 (maximum concentration). It implies that countries with an index closer to zero (middle point) are more diversified.

to particular markets.² If Egypt, for example, had maintained its export flows that declined or disappeared, export growth would have been more than 30 percent higher. But even if one discounts for statistical effects, the incidence of new export activities remains high (World Bank 2009).

The differences in country outcomes are difficult to ascertain. They result partly from a proliferation of preferential trade agreements, especially with the European Union and the United States, and partly from responses to shifts in competition patterns on international markets. For some exports, such as pistachios in the Islamic Republic of Iran, the same product is responsible for a decline in some markets and an increase in others, which indicates trade diversion effects in traditional export markets. Finally, some countries in the region started with fewer export flows, which explains why exports at the extensive margin are more pronounced (World Bank 2009).

Table 3.1 Decomposition of Export Growth into Intensive and Extensive Margins in Selected Countries, 1995–2005
(percent)

<i>Category</i>	<i>Algeria</i>	<i>Egypt, Arab Rep. of</i>	<i>Iran, Islamic Rep. of</i>	<i>Jordan</i>	<i>Lebanon</i>	<i>Morocco</i>	<i>Syrian Arab Republic</i>	<i>Tunisia</i>
Total intensive margin	4.6	26.0	-4.5	62.2	37.9	50.0	40.1	62.5
Increase in existing products to existing markets	57.0	57.2	61.1	78.1	81.8	110.6	99.6	101.6
Decrease in existing products to existing markets	-17.9	-19.1	-39.7	-9.0	-21.8	-47.2	-38.5	-25.0
Extinction of existing products to existing markets	-34.5	-12.1	-26.0	-6.9	-22.1	-13.4	-21.0	-14.2
Total extensive margin	95.4	74.0	104.5	37.8	62.1	50.0	59.9	37.5
New products to existing markets	28.3	10.1	26.4	12.7	14.9	4.5	19.3	8.4
Existing products to new markets	67.1	63.9	77.8	25.0	47.0	45.6	40.6	29.2
New products to new markets	0.1	0.0	0.3	0.1	0.1	0.0	0.0	0.0

Source: World Bank 2009.

Case Studies

Methodology

The case studies are narratives based on interviews that included both standard and open-ended questions. More than 100 interviews were conducted with first movers and subsequent entrants. The selection of the case studies was based on a statistical identification and then through a reality test in which the selected exports were vetted with export and business associations.

The statistical identification of the export discoveries in the case studies follows the methodology described by Klinger and Lederman (2009). For each country, export data at the six-digit Harmonized System (HS) level were filtered for export discoveries. Export discoveries were defined as products that had not been sold abroad (or sold only in very limited amounts) at the beginning of the period (1989) that were consistently exported in large quantities by the end of the period (2004).

Identification of first movers and followers was fairly simple. In most cases, only a few firms were engaged in the export activity of interest. Because most of the businesses had started no earlier than 1990, information on diffusion was easy to track (for example, through interviews with industry analysts or business chambers). In all but two cases, information about the sequence of the development of industry was consistent across sources. The case studies were examined for commonalities in observations, which in many cases were striking, to obtain the results discussed below.

Obviously, this methodology is open to selection bias: 23 case studies in five countries hardly make a case for a representative sample. The results should therefore be treated with the same caution applicable to all qualitative analysis.

Triggers for New Export Activities

Export discoveries can consist of genuine innovation, technological adaptation, customization, or licensed production of foreign-owned products. The case studies covered all of these types of innovation, with discoveries based on technology adaptation the most frequent. The case studies found six possible triggers for export discovery.

- *An external, unpredicted shock:* An unanticipated event, such as a war, can change the profitability of existing businesses and force firms to change strategy. Such a trigger might include changes in global demand or supply that push multinationals to relocate part of their production to stay competitive.

- *Market evolution*: The emergence of a new market or a change in the existing market structure can create an opportunity for new business. Market liberalization is a key example.
- *Capacity to produce in excess of domestic demand*: A firm oriented toward a domestic market learns how to export its excess production.
- *Research*: A technology-oriented firm or person can commercialize a patented invention as a result of research.
- *News*: A discovery is driven by new information about business opportunities.
- *Random walk*: High-risk entrepreneurs can create businesses through trial and error or by seizing a one-time opportunity.

In many cases, more than one trigger was at play. The most decisive trigger was the combination of information about new business opportunities with an entrepreneur willing to take high risks and adopt new technologies and management techniques (box 3.1). Information normally came from business travels, previous study, or work experiences abroad. In a few cases, the process of obtaining information and translating it into business-relevant activities was supported by private sector networks. The similarity of the background, experiences, and attitudes of the entrepreneurs was striking, especially in contrast to the most predominant type of firm owners and managers within their societies, who usually lead a family business and were conservative and rent seeking.

In contrast to characteristics associated with individual entrepreneurs, the case studies did not establish a clear pattern of firm type or size. Discoveries occurred in small and large firms, and they occurred in firms that sold products domestically first and, through various iterations of production changes, learned to export. Sometimes newly discovered products were added to an existing export portfolio; often firms were built up from scratch with the onset of the discovery. Most of the firms had one thing in common, however: they were all domestic, in the sense that they were rarely a result of foreign direct investment (FDI). This makes sense, considering that foreign investors base their investment decision on existing comparative advantages for exports and factors that include, among others, a certain skill level, infrastructure, or local production experience. Investments are less risky in industries in which countries have already proven export or production capacity. Moreover, research and development activities that potentially could lead to the discovery of new products typically do not take place in subsidiaries or production facilities of multinational companies.

Box 3.1**How Entrepreneurship Makes a Difference**

Egypt's leading private exporter association, ExpoLink, organizes firms in industry clusters to promote exports by taking domestic producers with export potential to international fairs, bringing in international consultants, and organizing support networks of successful exporters to work with new entrants. Most firm-level success stories in the furniture industry come from domestically focused producers that were pulled into the export market by ExpoLink.

One example is Meuble El Chark, a family firm that traces its history back to 1944. As of the mid-1990s, the company produced entirely for the domestic market, mainly for restaurants and hotels in Egypt. But as growth in the tourism sector slowed in the late 1990s, Ahmed Helmy, the new chief executive officer (CEO), began looking to the export market for growth. Mr. Helmy had little information about foreign demand. Initially, he thought that with his company's deep knowledge of furniture production and Egypt's status as a medium-technology manufacturer, he might compete in other MENA markets; he never envisioned competing in the highly sophisticated European or U.S. markets.

Mr. Helmy had no idea how to begin; he feared his idea would never get off the ground. An ExpoLink meeting with similar firms encouraged him to enter new markets and change his production toward more customized furniture that meets international standards. The other firms were similar to his—family firms with long histories in the domestic market, headed by a new generation with their eyes on exports. Benefiting from the others' experiences, from trips to trade fairs in Europe and the United States, and from international consultants organized by ExpoLink, Mr. Helmy changed his production and began exporting to European markets. His original goal was to export a small percentage of his output to diversify market risk; he now exports more than 65 percent of production.

The same type of assistance did not bring success to Egypt's domestic shoe industry. Despite substantial support and many of the same natural advantages the furniture industry had, the leather shoe industry did not prove competitive in the international market. The biggest difference between leather manufacturers and those in furniture was the personal characteristics of their leaders. When ExpoLink reached out to the furniture sector, it found a new generation of CEOs with international experience and a desire to push into new markets. In contrast, the leaders of the shoe manufacturers had developed their businesses in the era of large-scale exports to East Germany and the Soviet Union—exports driven by

(continued)

Box 3.1 *(Continued)*

politics rather than demand. With little understanding of foreign demand or experience in penetrating new markets, they floundered in more competitive environments. Many international consultants hired by ExpoLink complained that the leather firms refused to change their production methods or machinery, instead sticking to traditional techniques.

FDI was important in some cases for increasing exports to a more significant level. In Jordan, for instance, FDI, attracted by the incentives provided in special economic zones, triggered a surge in textile exports. Similarly, motivated by domestic call-center activities, the government of Morocco heavily promoted the country as an attractive location for foreign investment, which subsequently contributed to the successful development of the new export sector; today Morocco is a frontrunner in francophone call-center services. However, the role of FDI in export diversification is ambiguous; it is discussed in chapter 2 of this book.

Factors Constraining the Development of New Export Activities

First movers were asked about the problems they faced at the earliest stage of the export development, in an attempt to identify constraints to export discoveries. The inherent weakness of this approach is that it indicates the constraints only of entrepreneurs who were able to overcome them, not of entrepreneurs who failed to succeed for reasons other than those reported. Failures are difficult to observe, because the discoveries never emerge. The constraints reported by successful entrepreneurs can be regarded as the best proxy.

The findings suggest that uncertainty is the major factor constraining the discovery of new export activities. Uncertainty can be caused by a lack of information about demand in specific markets and the price new products or services can command. It may also be hampered by insufficient information about how to produce quality goods and services while maintaining price competitiveness. Neither type of knowledge is easy to obtain, because a product is new to the domestic economy and the knowledge does not yet exist. Gauging potential success in a new export business becomes a shot in the dark. The high cost of gathering the required

information is thus the greatest hurdle in initiating a new export activity (Klinger 2007).

Entrepreneurs in the case studies overcame these uncertainties in four ways:

- Some entrepreneurs partnered with firms that had the required knowledge by entering a formal licensing agreement or forming a joint venture.
- Other entrepreneurs resolved uncertainty through subsidies from the input supplier, who was motivated by cultivating downstream demand.
- Many entrepreneurs simply assumed the higher risks and absorbed the costs of uncertainty alone.
- In a few cases, public support—in the form of export promotion, technical assistance for firm restructuring, or knowledge transfer—was critical in the initial stages of business, predominantly for the (few) entrepreneurs with no previous knowledge of the export business or foreign demand.

Exporters did not mention any policy-induced business constraints. The only pertinent investment climate constraint for new export discoveries cited in the case studies was limited access to finance. Almost all entrepreneurs reported difficulties in acquiring financial resources to start their new business within the domestic financial system. Although all the entrepreneurs eventually obtained the necessary financing—mostly from private resources—the financing constraints had several consequences, including delayed investment, high personal risk, and dependence on informal financial resources.

Except in the few cases mentioned above, government support played only a minimal role in the discovery process. One could therefore conclude that public support is not critical during the discovery phase. However, many entrepreneurs pointed out that initial support—through export promotion schemes, competitiveness programs, innovation grants, and so forth—was just not available to them.

Diffusion and the Fear of Imitation

From a social perspective, the imitation of a successful export discovery is desirable, because it fosters the development of export sectors and economic growth. But as Klinger and Lederman (2009) note, the incentives for exporters to experiment may be reduced by the possibility that

imitators will appropriate part of the returns produced by the new venture. Free entry into the new market could thus undercut the incentive to search for new business opportunities, producing a market failure in which the market produces fewer discoveries than is socially desirable.

In stark contrast to the assumption that fear of competition discourages market entry, none of the first movers in the case studies regarded domestic followers as competitors. In fact, they often facilitated or even encouraged imitation through knowledge sharing and collaboration. The first mover and imitators in the call-center business in Egypt, for instance, regularly met to discuss how to jointly organize trade fair participation and lobby for better telecommunication regulations; they even shared business by lending one another agent positions. In Morocco, the first mover in strawberry exports openly shared information about farming techniques with neighboring farms. In Egypt, medical equipment suppliers joined forces to target geographic markets, visit trade fairs in a group, and engage in national branding. To improve the image of Egyptian medical equipment abroad, the suppliers applied self-regulation, allowing only quality-certified firms to participate in group marketing activities while helping one another achieve the required certifications. How can this be explained?

One explanation could be the limitations of the methodology, which did not allow observation of examples of failed export discoveries; information on failed discoveries would offer more insight into whether the appropriation problem led to market exit. Another explanation is that the first movers weighed the impact of appropriation by followers against the benefits of cooperation—building reputation in export markets, exploiting scale economies, lobbying for better regulations or infrastructure improvements—and found the benefits greater than the losses.

Imitation in geographically limited domestic markets is a problem, because firms compete for input suppliers and buyers. The cost of imitation is lower in export markets, where firms compete without geographical limitations. Competition for imported inputs is relatively minor, and international demand is theoretically unlimited. Some first movers conjectured, though, that competition could become more critical as production expands and input supply (especially labor) becomes scarcer for individual producers.

The first movers in the case studies did fear competition from other countries, particularly countries with a strong market presence. Although the fear of imitation as a cause of market failure cannot be excluded, the cases imply that the benefits of cooperation or coordination can outweigh the potential loss from imitation.

The lack of coordinated or collective action might actually explain why export discoveries in many cases remained individual instances and did not contribute much to the development of new export industries. The diffusion process in the five study countries is fairly fragmented, with weak links between firms and public or private institutions or education facilities and research centers that could catalyze knowledge. Most of the followers interviewed for the case studies said that they did not act upon—or even receive—a signal from a first mover. Instead, export discoveries occurred as parallel phenomena, with simultaneous market entry or the development of differentiated products triggered by the same set of similar factors that drove the first mover. This finding implies that markets in these countries lack the necessary transparency to enable (fast) information exchange. In cases in which FDI was a factor, investors received a general signal about the comparative advantages of the country, usually obtained through market studies. In cases in which followers acted upon signals, they were usually catalyzed by a cluster of firms, informal networks, or an association. This finding bears important implications for countries, like the five studied here, in which knowledge diffusion is hindered by weak private sector organization.

Designing Proactive Policies to Encourage Experimentation and Imitation

Countries will not be able to diversify their exports unless the economic environment is favorable to trade and investment. Diversification requires shifting resources across sectors or investing in new economic activity. This is unlikely to happen unless the economic environment allows for competitive production of goods and services. Export promotion should therefore always be based on policies that reduce antiexport bias, macroeconomic imbalances, and behind-the-border constraints and improve trade facilitation and access to services. Beyond these steps is a continuum of possibilities for proactive policies to foster export growth and diversification if externalities cause an underinvestment in productive activities. However, especially when the objective is to promote diversification through new export activities, policy instruments need to be designed to address the specific constraints first movers face at the very early stages of the discovery process (from the idea to the market). This is not a trivial requirement: assessment of the policy instruments used in the five countries studied here reveals that the eligibility criteria for most initiatives, such as matching grants for marketing activities, business development assistance, or even start-up schemes, favor exporters of traditional

goods and services or those that are considered strategic in terms of their market potential.

Such policies may make economic sense, because the observable and quantifiable returns on such interventions, when effective, are higher than the returns that could be expected from risky business activities that are new to the economy.³ In this respect, governments act with the same logic as private investors, who calculate the risks against their expected returns. However, this approach naturally discriminates against new activities, because their actual return consists mainly of externalities that are intangible in nature and difficult to measure, such as information about the feasibility and productivity of the activity. This approach does not take into account the valuable information for the economy produced by the new activity even if it fails. Failures provide other firms with lessons on activities not to pursue and how not to do business. It could even be argued that public support should focus on promoting new activities. If the production or marketing of a new export proves successful, in the absence of other market frictions, the information about business viability and profitability should be incentive enough for imitators to invest even without subsidies of any kind.

Shifting substantial resources to riskier projects with outcomes that are difficult to measure may not be politically viable. It may also be difficult to establish the right balance between promoting growth in existing trade flows (which may have a large impact in the short and medium terms) and supporting new trade flows (with possible large impacts in the long term). Nevertheless, in countries with low levels of diversification, it may be worth assessing the incentives of export promotion programs and evaluating their impact on both export growth and diversification. Shifting some of the export promotion resources for traditional activities to programs that favor new activities could help achieve diversification objectives.

The way to encourage entrepreneurs to move into foreign and unknown fields is based on a very basic principle: reduce the cost of experimentation. There are different ways of doing this. In Egypt, for example, the private export association ExpoLink actively addressed producers of traditional products, identified those with a strong desire for change and entrepreneurial attitude, formed small business clusters, and pulled them into previously unexplored market segments by taking them on study tours abroad and bringing in international consultants to help transform the business. In the furniture business, which has a long history of producing traditional, hand-crafted furniture, ExpoLink helped small-scale producers move into the international market for modern, customized

furniture for restaurants and hotels. In Tunisia, success has been achieved with an export promotion program known as FAMEX (Export Market Access Fund), which provides matching grants and technical assistance to firms with no previous export experience, to exporters of new products, and to exporters who seek to penetrate new markets (box 3.2).

The development of high-tech exports is intrinsically linked to the capacity of the national innovation system and its links to the private sector. The success stories of China and Taiwan, China, are in large part stories of a long-term strategy focus on fostering indigenous innovation and technology capacity. Some impressive, albeit still limited, results have been achieved in Jordan through public seed money for establishing a

Box 3.2

Spurring Exports in Tunisia through FAMEX

The creation of the Tunisian Export Market Access Fund (FAMEX) in April 2000 marked an important shift of focus for export promotion in Tunisia, away from a trade promotion organization model led by the government to a public-private sector participatory approach. Acknowledging that firms, not countries, compete, the Tunisian government placed emphasis on individual exporters and their associations.

FAMEX helped individual firms implement a systematic strategy to enter, sustain, and expand export markets. The \$10 million fund was set up by CEPEX (Tunisia's export promotion agency) with World Bank assistance. It was privately managed by international and local experts. FAMEX encouraged firms, especially small and medium enterprises, to enter export markets by temporarily covering up to half of the cost of consultant services and providing technical assistance. Services were offered by local consultants and international experts in response to demand from private firms.

In the five years that it existed, FAMEX helped 700 firms become exporters, export new products and services, or enter new markets. Estimates indicate that each \$1 of FAMEX assistance generated more than \$20 of additional exports. A recent survey indicates that 60 percent of the firms that benefited from FAMEX assistance are now willing to pay, or are already paying, full market price for export services (FAMEX 2008). Small export consulting industry has also been created as a result of the program. FAMEX thus served as a catalyst to develop business-to-business markets.

Source: Project documents provided by FAMEX.

high-tech business incubator, iPark. The incubator provides a range of services, actively helping innovative entrepreneurs tap financial resources for research and development and create strategic links to investors. Underlying the success of iPark is a business model that relies on achieving financial self-sufficiency through tenant rentals and revenue sharing. Egypt achieved some success, notably in textiles, through seed financing of self-sufficient, industry-specific technology centers with smart business models based on buying expensive international knowledge and disseminating it at lower costs to domestic producers.

Fostering imitation without undermining the emergence of new export activities requires another set of instruments. Imitation in the case study countries was rare in countries and industries with weak private sector organizations; it occurred more frequently where clusters and networks helped diffuse information. The lesson is to support collective action by creating clusters and networks and by strengthening the role of business associations in export promotion. Building on the experiences of Expo-Link, the Egyptian government reformed its traditional export promotion model into a cluster-based system driven by the private sector. It provides incentives for coordinated and concerted action such as branding initiatives or knowledge sharing through programs that fund export promotion activities to business clusters. Cluster creation in this system remains driven by the private sector, supported by ExpoLink. In some cases, the formation of private associations emerged from the cluster activities that provided export promotion services to their members.

There is an obvious risk to rent-seeking behavior and state capture when firms coordinate their activities. This puts public support of collective action at odds with the objective of reducing barriers to export. These risks are real, and governments should be aware of them as they encourage firms to cooperate. However, the risks can be minimized by enforcing transparency, firmly fostering trade liberalization, and providing a regulatory balance between the creative industries' interest and society as whole.

Conclusion

The specific export diversification experience of the five countries in the case studies provides some interesting lessons. First, theory or empirical evidence does not always conform with realities on the ground, even if it offers guidance *ex ante*. In some countries, especially those with weak export flows, the extensive margin may play a larger role in growing exports

than it does in other countries. The relevance of developing new exports or exporting to new markets should therefore not be underestimated. By the same token, where social objectives seem to undermine those of individual initiative, solutions can be found to overturn fear of imitation if its benefits can be practically demonstrated.

Second, export diversification is a function of export growth. Among the five countries studied, those with the most conducive environment for trade were also those that made the greatest progress in diversification. Achieving export diversification should therefore not be the only goal. At the same time, export promotion policies need to be carefully assessed for their ability to induce entrepreneurs to move into new products or markets that are associated with much higher risks than traditional export activities. At the least, export promotion policies should not undermine diversification efforts, by favoring one sector over another, for example, because its growth potential or economic relevance is considered to be higher.

Finally, institutional experiences, such as that of FAMEX in Tunisia, may be replicable in other countries if the lessons can be harvested. Doing so requires a rigorous evaluation of export promotion policies and instruments that has yet to be conducted in most countries.

Notes

1. Resource-poor countries are those countries where a majority of exports are not oil based.
2. The contribution of each margin to export growth is, because of the nature of such decomposition, influenced by the strength of the other margin. Weak growth at the intensive margin tends to elevate the contribution of the extensive margin.
3. Returns on interventions are measured, for example, by the number and volumes of contracts following participation in a subsidized trade fair or by the number of viable start-ups.

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CHAPTER 4

Export Diversification in Algeria

**Ricardo Hausmann, Bailey Klingler,
and José R. López-Cálix**

This chapter applies new methodologies to examine the history of and future opportunities for export diversification in Algeria. The first section examines Algeria's productive structure, which is highly concentrated in the hydrocarbons sector. It shows that this pattern of specialization is inconsistent with the country's endowment of hydrocarbon resources. The lack of export diversification is suggestive of an inefficient distortion, reversal of which should be a clear policy priority.

The second section reviews some of the traditional explanations for a lack of export diversification in an oil-exporting country and shows that these explanations do not seem to hold for Algeria. It offers an alternative explanation, based not on macroeconomic volatility or real exchange rate appreciation but on the specificity of productive capabilities in the oil sector and their substitutability to other activities. This explanation underlies the notion of a "product space," in which structural transformation occurs.

The third section introduces a new methodology to export diversification in Algeria, which is shown to be specialized in a highly peripheral part of the product space. Even activities that compose the non-oil export basket are highly peripheral in the product space, which helps explain the severe lack of export diversification.

The fourth section applies product space data to Algeria's industrial strategy, using the methodology to identify high-potential export sectors. This data-driven approach has the benefit of systematically scanning the entire set of potential export goods using an empirically validated methodology. It complements other more qualitative and contextual approaches. This section uses the same methodology to review the sectors already identified by the Algerian government in the new industrial policy.

The last section discusses the policy implications of this analysis. A wide variety of methodologies can be used to generate lists of high-potential export sectors; more difficult is determining what to do with such lists. The section offers a few specific policy recommendations and discusses some best practices. But the fact that most required public goods and constraints to investment are sector specific means that recommendations cannot be made at the macro level.

Throughout the chapter, the focus is on the export sector, for a variety of reasons. First, exports are not limited by the small size of the domestic market and hence can grow much more significantly, becoming engines of growth. Second, exports tend to be the most productive activities in a country, so that an increase in their relative size raises overall productivity. Third, the competitiveness of exports is based on the availability in the country of nontradable inputs, because tradable inputs can be imported. A strategy of export growth thus promotes the development of the nontradable sector, albeit in a different way. One important drawback of the approach is that it considers only the goods sector. It ignores trade in services, because data on international trade in services are inadequate. Given the emerging role services exports are playing, this is unfortunate.

This chapter is meant to be a technical input for country experts. Efforts have been made to distil the empirical results into an intuitive presentation; relevant citations and an annex are provided for those seeking further technical detail.

The Structure of the Algerian Economy

Algeria has made steady progress toward macroeconomic stability and an open, more private sector-oriented economy. Reforms are underway in the electricity and telecommunications sectors. Foreign direct investment (FDI) flows increased substantially over the past decade, with more than half dedicated to the services sector.¹ However, productivity has only turned positive in the mid 2000s, after remaining negative for an extended period of time (IMF 2009a). Unemployment is high, particularly

among the young. The share of the private sector in gross domestic product (GDP) fell from 22 percent in 1995 to about 13 percent in 2004, and public investment has been high and increasing in recent years.

Algeria remains weakly integrated into the global economy. Despite its massive hydrocarbon exports, Algeria's trade openness, as measured by the ratio of non-oil exports and imports of goods and services to GDP (21 percent), is the lowest in the Maghreb region (the other Maghreb countries average more than 45 percent [Nabli 2007]). Trade integration is weak. More than half of Algerian products are exported to the European Union, suggesting not only that proximity is the main determinant of competitiveness but also that Algeria is extremely vulnerable to shifts in European market access. Algeria and Libya are the only Maghreb countries that have not completed accession to the World Trade Organization (WTO). Financial integration is also weak.

Algeria is highly specialized in hydrocarbons. The sector accounts for about half of total output, three-quarters of fiscal revenues, and 98 percent of exports—the highest export concentration in Harmonized System (HS) 27 (mineral fuels, oils, and products of their distillation) of any country in the world. The Herfindahl index for the export basket in 2004 was 0.42, among the 10 highest in the world. Even if one uses a simple count of the number of exported products, Algeria is among the lowest in the world, at 184 (the figures are 336 in Saudi Arabia, 1,120 in Morocco, 2,849 in Indonesia, and 3,266 in Mexico [World Bank staff estimates]). Algeria has increased the share of oil in exports over the past 30 years, while other oil exporters, such as the Islamic Republic of Iran, Oman, Saudi Arabia, and the República Bolivariana de Venezuela (until the late 1990s), have diversified away from hydrocarbons.

The manufacturing sector represents a relatively small percentage of total output and is small in absolute terms, even for an oil-concentrated economy. Manufacturing output per capita is half of that of the Arab Republic of Egypt and less than one-fifth of that of Saudi Arabia.

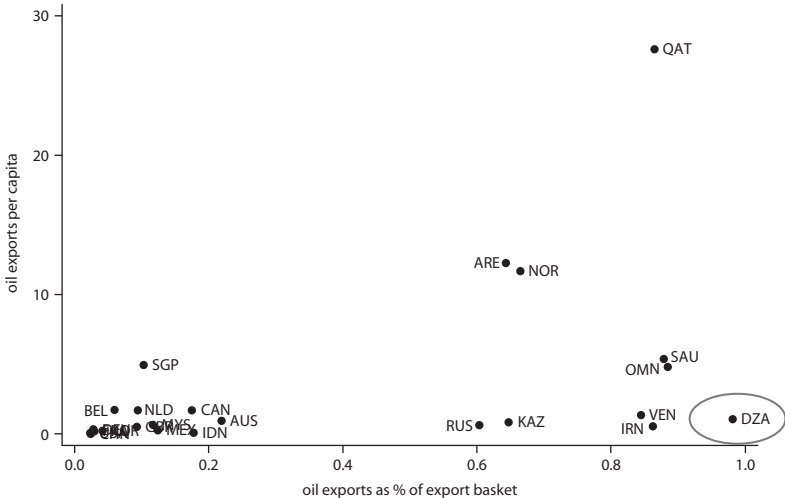
Given this pattern of specialization, it is not surprising that aggregate growth in Algeria is driven in large part by hydrocarbon prices. After a decade of sustained growth, output per capita began to fall in the early 1980s, as oil prices declined; it was further reduced by the civil conflict in the early 1990s. Although output per capita recovered, surpassing its historical peak, it did so in the context of a decline in the rate of population growth, meaning that the working-age population grew faster than the total population. Output per working-age adult in Algeria, a better measure of productivity per worker, is currently at the level it was in 1970, a

mere 85 percent of its historical peak in the 1980s (World Bank, World Development Indicators database).

By itself, high specialization in oil might not be a bad thing, as long as the endowment is sufficiently large for the population to enjoy a high standard of living. This is clearly not the case in Algeria, whose hydrocarbon endowment is small (figure 4.1). Proven oil reserves per capita in Algeria are a small fraction of those of other countries specialized in the hydrocarbons sector. Proven gas reserves are slightly larger but are still less than half of those in countries like Iran, Oman, and Saudi Arabia. Algeria’s economy is much more concentrated than countries with similar levels of exports per capita, such as Iran, Kazakhstan, the Russian Federation, and Venezuela. It is more concentrated than Norway, Oman, Qatar, Saudi Arabia, and the United Arab Emirates, even though its oil exports per capita are a fraction of those in these countries.

In addition to its small size, Algeria’s non-oil export basket is very unsophisticated and unlikely to fuel future growth. This is shown by applying Hausmann, Hwang, and Rodrik’s (2006) measure of export sophistication (EXPY). Rather than measure sophistication based on a product’s customs

Figure 4.1 Per Capita Oil Exports and Oil Exports as Percentage of Total Exports in Selected Countries, 2004

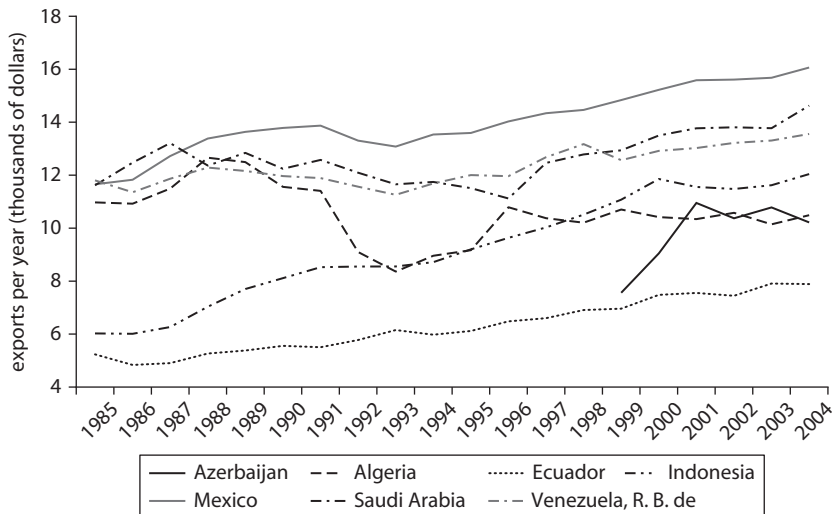


Source: Authors’ calculations, based on data from UN COMTRADE.
 Note: DZA = Algeria.

classification, research and development (R&D) content, or any other a priori notion, EXPY measures sophistication as the GDP per capita of the typical country with that export basket. By construction, rich countries have a high EXPY and poor countries have a low EXPY. But if one controls for GDP per capita, EXPY is a highly significant determinant of subsequent growth. Countries that have managed to export a relatively rich-country export basket, given their level of development, grow more rapidly than countries that do not. Countries “become” what they export, converging to the level of income of their competitors. The content of a country’s export package is thus important for growth.

Algeria’s overall EXPY (exact formula provided in the annex) is uninformative given the country’s extreme concentration in hydrocarbons. We therefore calculate the EXPY of the non-oil export basket² and compare it with the EXPY of non-oil exports for other oil exporters (figure 4.2).³ As of 2004, the non-oil export package of Algeria does not compare favorably to other oil exporters. Particularly over the 1990s, other oil-exporting countries, such as Indonesia, Mexico, Saudi Arabia, and even Ecuador, upgraded their non-oil export package. In contrast, Algeria’s non-oil exports remained stagnant.

Figure 4.2 Non-Oil EXPY of Selected Countries, 1986–2004



Source: Authors’ calculations, based on UN COMTRADE and Feenstra and others 2005.

Note: EXPY is the Hausmann, Hwang, and Rodrik (2006) measure of export sophistication. All calculations drop #27 from HS data and #33 and #34 from Standard Industrial Classification (SITC) data.

Therefore, it is not only the case that Algeria is overly specialized in oil given its small endowment; its non-oil export basket is also highly unsophisticated and offers little growth potential. Structural transformation is therefore a clear necessity for Algeria.

This chapter examines how this transformation can be achieved through exports. The focus is on exports for four main reasons. First, there is an emerging consensus on the link between export diversification and growth. De Ferranti and others (2000) estimate that a 1 percent increase in export concentration is associated with a 0.5 percent decline in GDP growth. Feenstra and others (2005) estimate that a 10 percent increase in export variety leads to a 1.3 percent increase in country productivity, regardless of the industry. Export diversification can boost growth through knowledge spillovers, by stimulating new industries and expanding existing industries (particularly if diversification takes place through new export products) and by reducing macroeconomic uncertainty by lowering export revenue volatility. Second, exports are not limited by the small size of the domestic market. They can hence grow much more significantly and become engines of growth. Third, exports tend to be the most productive activities in the country. An increase in their relative size thus raises overall productivity. Fourth, the competitiveness of exports is based on the availability in the country of nontradable inputs, as tradable inputs can be imported. A strategy of export growth can thus indirectly promote the development of the nontradable sector.

Why Is Algeria So Dependent on Hydrocarbons?

Algeria's constraints to export diversification do not represent an exceptional case. International experience suggests that oil wealth is very difficult to manage. Possible explanations for Algeria's lack of diversification include Dutch disease, real exchange rate volatility, constraints on private sector development, and rent seeking.

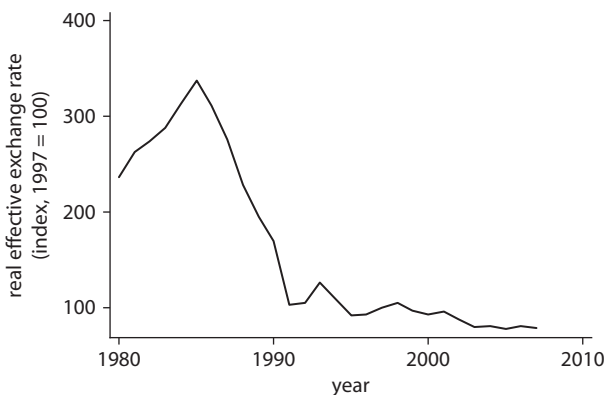
Dutch disease refers to the deindustrialization that follows a resource boom because of appreciation of the real exchange rate. An increase in oil revenues raises the demand for all goods, but the supply of tradables can be increased through imports while the supply of nontradables must be produced domestically. Thus, oil windfalls often raise the price and the profitability of the nontradable sector and draw human capital and other resources away from any non-oil tradable activity, thereby harming export diversification. The clear symptom of Dutch disease is an appreciation of

the real exchange rate, the relative price of nontradables (Corden 1982; Corden and Neary 1984).

Dutch disease is not a plausible explanation for Algeria's high concentration in oil. Algeria's real exchange rate depreciated massively following the collapse of the price of oil in the mid-1980s (figure 4.3), and there was no resulting export diversification away from hydrocarbons. Moreover, it is not the case that the Dutch disease phenomenon operated over the longer term or that its initial impact was prevented by the civil war, as the exchange rate continued to depreciate slightly after 2000, with no export diversification. This is not to say that the current level of the real exchange rate is or is not optimal to spur diversification. But it is clearly not the case that appreciation of the real exchange rate over the past two decades has created a Dutch disease effect in Algeria.

A second potential explanation is the volatility of the real exchange rate. Oil prices are very volatile, often rising or falling by more than 30 percent a year. Highly volatile export revenues lead to high volatility in the real exchange rate, which increases the riskiness of the non-oil tradable sector. This reduces investments in that sector, keeping it small (see Hausmann and Rigobon 2002). Although this channel has been important in other countries, Algeria has enjoyed relative stability in the real exchange rate since 1990 (figure 4.4), with no corresponding diversification out of the hydrocarbons sector. The volatility of its real exchange rate

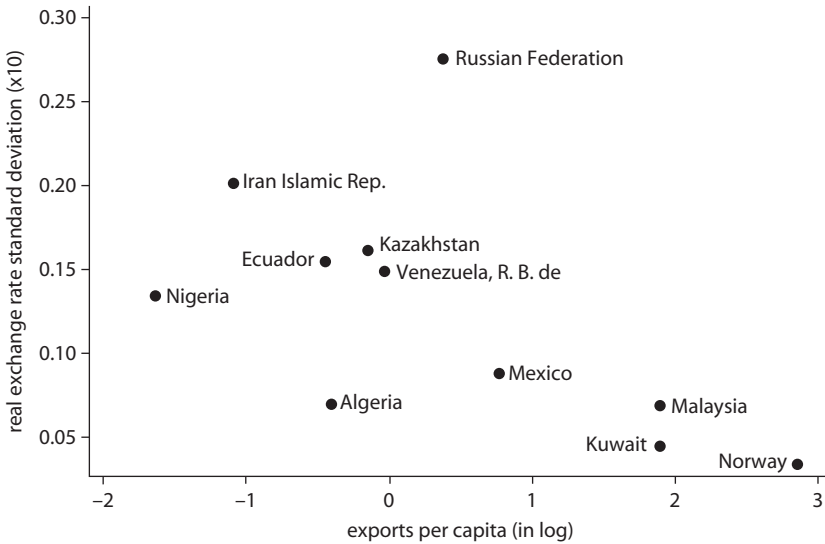
Figure 4.3 Algeria's Real Effective Exchange Rate, 1980–2006



Source: Economist Intelligence Unit.

Note: An increase in the exchange rate is an appreciation.

Figure 4.4 Volatility of Real Exchange Rate (1996–2006) and Exports per Capita (log)



Source: Economist Intelligence Unit.

is a fraction of that exhibited by Ecuador, Iran, Kazakhstan, Russia, or Venezuela, all of which have lower levels of oil export concentration.

A third potential explanation refers to business constraints on the private sector.⁴ The Doing Business Indicators for 2008 suggest that Algeria has erected substantial administrative barriers to investment and business operation (table 4.1).⁵ Investment climate assessments also reveal a host of regulatory and administrative obstacles.⁶ The top six constraints identified by Algerian private entrepreneurs in the 2007 investment climate assessment include corruption, anticompetitive “informal” practices, lack of access to land, lack of access to finance, electricity shortcomings (frequent cuts in services), and high taxes (figure 4.5). Echoing the constraints identified by the Doing Business surveys, the first two constraints suggest a strong need to address the lack of clear, predictable, and well-enforced rules of the game for market activities.

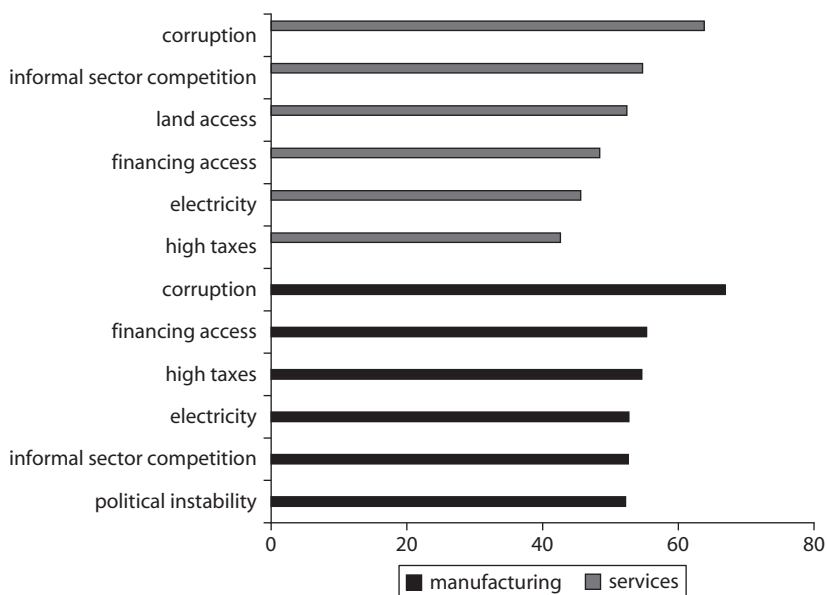
Although they may be reducing productivity, inefficiencies in the business environment are not alone a convincing explanation for the observed lack of export diversification. Algeria’s ease of doing business rank is higher than that of Egypt, Iran, and Morocco, all of which have been much more successful in discovering new export activities and exporting a more diversified, higher EXPY basket. There is a clear

Table 4.1 Doing Business 2008 Indicators for Countries in the Middle East and North Africa
(days, except where otherwise indicated)

<i>Economy</i>	<i>Ease of doing business (rank)</i>	<i>Starting a business</i>	<i>Dealing with licenses</i>	<i>Hiring workers</i>	<i>Registering property</i>	<i>Getting credit</i>	<i>Protecting investors</i>	<i>Paying taxes</i>	<i>Trading across borders</i>	<i>Enforcing contracts</i>	<i>Closing a business</i>
Algeria	125	131	108	118	156	115	64	157	114	117	45
Djibouti	146	165	92	130	131	135	173	51	66	159	126
Egypt, Arab Rep. of	126	55	163	108	101	115	83	150	26	145	125
Iran, Islamic Rep. of	135	77	164	141	143	68	158	97	135	57	118
Iraq	141	164	104	60	40	135	107	37	175	150	178
Jordan	80	133	71	45	109	84	107	19	59	128	87
Kuwait	40	121	85	39	72	68	19	8	99	99	67
Lebanon	85	132	113	53	92	48	83	33	83	121	117
Morocco	129	51	88	165	102	135	158	132	67	114	60
Oman	49	107	130	26	15	97	64	5	104	110	59
Saudi Arabia	23	36	47	40	3	48	50	7	33	136	79
Syrian Arab Rep.	137	169	86	126	89	158	107	98	127	171	77
Tunisia	88	68	96	113	66	97	147	148	28	80	30
United Arab Emirates	68	158	38	65	8	115	107	4	24	144	139
West Bank and Gaza	117	166	132	103	118	68	33	22	77	125	178
Yemen, Rep. of	113	175	35	63	44	158	122	84	128	41	83

Source: Doing Business Indicators database, World Bank 2008b.

Figure 4.5 Top Business Constraints Identified in the 2007 Investment Climate Assessment of Algeria

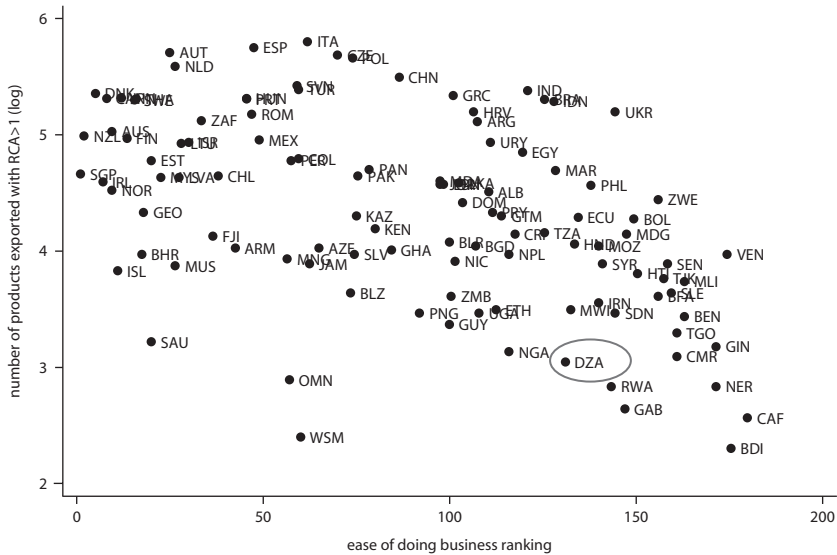


Source: World Bank 2008a.

relationship between ease of doing business and the number of products exported (a crude and simple measure of diversification): countries with better business environments (and higher incomes) tend to be more diversified (figure 4.6). Algeria has the lowest level of export diversification given its business climate. So while the business climate could be improved, problems with the business climate do not seem to explain Algeria's lack of export diversification.

A fourth potential explanation is that a highly protected domestic market is dampening the incentives to search for new opportunities in external markets. Despite recent tariff reductions with respect to the European Union, Algeria's economy continues to be highly protected. The average nominal tariff was 18.7 percent in 2004, well below the more than 30 percent averages in Morocco and Tunisia. However, if one takes into account nontariff and behind-the-border barriers (as measured by the Trade Restrictiveness Index), Algeria's level of protection is the fifth highest in the world (Kee, Nicita, and Olarreaga 2006). According to Ecotechnics (2004), protectionism offers high returns to selected Algerian firms in the domestic market, discouraging firms that would introduce

Figure 4.6 Relationship between Number of Products Exported and Doing Business Ranking in Selected Countries
(average of all years)



Source: Doing Business Indicators database, World Bank 2008b.

Note: DZA = Algeria; RCA = revealed comparative advantage. Ease of doing business ranking is the country average rank for all years for which data are available. The number of exported products with a revealed comparative advantage greater than 1 was calculated using 2000 UN Comtrade data.

new export products. This may dull incentives to search for new export activities, but it does not eliminate them, particularly for potential new entrants to the private sector, outsiders, or domestic-focused firms wishing to expand beyond the small domestic market. It is therefore not a convincing explanation for the lack of export diversification in Algeria.

A related explanation is that the availability of rents from the oil sector diverts entrepreneurs' attention from other export activities. When a substantial share of a country's wealth is allocated by the government, there is always a danger of diverting entrepreneurs from productive activities to competition for government resources (see Baland and François 2000 on rent-seeking because of oil). Obtaining data on this phenomenon is extremely difficult, but it is reasonable that these rents, as with a protected domestic market, may be dulling (but not eliminating) the incentives for private sector investment in new export activities.

Beginning in the 1960s, Algeria, like other countries in the region, embarked on an ambitious economic program with strong

state intervention in all sectors of the economy. The period featured nationalizations and investment in newly formed state-owned enterprises in priority sectors (often heavy industry but also in light manufacturing). The dominance of the economy by the government repressed the private sector, with entrepreneurs continuously searching for niches of opportunities in the “shadow” of state *dirigisme*.⁷ The breadth of these niches varies, but the extent of business opportunities for the few entrepreneurs allowed to exploit them could still be large. In contrast to the experiences in other transition economies, the incomplete first-generation reforms and limited openness undertaken in Algeria have not resulted in the emergence of a large and diversified new business elite or driven out of business (or modernized) previously protected and privileged entrepreneurs deeply entrenched in the state. In this political context, export diversification can succeed only if a reinvigorated second wave of liberalization reforms, like the ones Algeria implemented between the late 1990s and mid-2000s, allow for an expanded business elite.

Rent-seeking not a convincing explanation of the lack of diversification of the Algerian economy. A great many countries have much larger endowments of oil—and therefore much higher rents to capture. Many of the countries shown in figure 4.1, such as Kazakhstan and Russia, feature significant state intervention in the economy but nevertheless have much more diversified export baskets. In some cases, movement to these new sectors was even spurred by such dirigisme.

These more traditional explanations do not seem to capture the special situation of Algeria as a hyperspecialized oil exporter without a commensurate endowment. This is not to say that an inefficient business environment, protectionism, state intervention in the economy, or real exchange rate volatility are good things; addressing these issues might very well improve economic performance. But to understand why Algeria has suffered such lagging export diversification, one must look elsewhere.

Applying a New Methodological Approach to Export Diversification

This section introduces a new methodology to export diversification in Algeria. The country is shown to be specialized in a highly peripheral part of the product space—and not only because of its concentration in hydrocarbons. Even the activities that compose the non-oil export basket are highly peripheral in the product space, which helps explain the severe lack of export diversification.

Rather than a consequence of exchange rate dynamics and a protected and rent-rich domestic market, Algeria's pattern of specialization may be the principal cause of lagging export diversification. In standard trade theory, changes in the export basket are passive consequences of changing comparative advantage based on factor accumulation. To grow, countries accumulate physical or human capital or improve the way they are mixed together (total factor productivity). These fundamental changes result in a different export mix, with the assumption being that there is always a product or set of products through which a country can express its factors of production (see, for example, Leamer 1987). Put in another way, structural transformation will be a passive consequence of a country increasing its education, financial resources, overall productivity, and so on. One can therefore forget the world of products and instead focus on the underlying fundamentals.

Export diversification may be more complicated than this picture suggests, for many reasons. Factors such as industry-specific learning by doing (Arrow 1962; Bardhan 1970) or industry externalities (Jaffe 1986) may create market failures in changing the export mix. There may also be technological spillovers among industries (Jaffe, Trajtenberg, and Henderson 1993). The process of finding out which of the many potential products best express a country's changing comparative advantage may create information externalities (Hausmann and Rodrik 2003; Klinger 2007). These hypotheses suggest that moving to new export products may not be a passive consequence of factor accumulation or a smooth process that occurs along a continuum.

Hausmann and Klinger (2006, 2007) investigate the process by which countries move to new export activities and motivate the concept of a "product space." In this space, some products are very near one another and others are far apart; countries change their export mix by moving to new export activities that are near their current activities.

The notion is based on the idea that every product requires capabilities that are highly specific to that activity. Knowledge, physical assets, intermediate inputs, labor-training requirements, infrastructure needs, property rights, regulatory requirements, and so on are not homogeneous. Rather, there are knowledge, physical assets, intermediate inputs, and labor skills specific to the production of each sector. The capabilities required to produce wine are very different from those used to produce cotton. Established industries have already sorted out the many potential failures involved in ensuring the presence of all of these inputs, which are then available to subsequent entrants in the industry. Firms that venture into

new products will find it much harder to secure the requisite capabilities (for example, they will not find workers with experience in the product in question or suppliers who regularly furnish that industry). Specific infrastructure needs, such as cold storage transportation systems, may not exist; regulatory services, such as product approval and phytosanitary permits, may be underprovided; R&D capabilities related to the industry may be absent; and so on.

As the set of capabilities specific to a new activity do not yet exist, firms seeking to enter a new activity must adapt those capabilities that already exist, which are specific to other activities. Entrepreneurs seeking to enter a new export activity such as fresh artichokes will not have access to trained agronomists with experience cultivating artichokes in that country's growing conditions; they will not find the particular set of inputs, such as artichoke seeds or other capabilities specific to that activity. They will have to adapt those capabilities from existing export sectors to the new export activity. If, for example, the country already exports asparagus, then entrants to the artichoke industry will find firms set up at the scale required for commercial artichoke production, rural infrastructure in the appropriate climactic zones for both artichokes and asparagus, regulatory and customs regimes that can support the export of fresh produce, and so on.

This example highlights the fact that the set of capabilities required for one industry can be more or less easily redeployed to another industry. The broad set of capabilities required for artichoke exports are similar to those required for asparagus production. Therefore, it will be easier for firms in a country to enter an industry if the other industry already exists. Artichokes and asparagus are "close" to one another in the product space.

But what if there is a disconnect between firms' intentions and the country's technological conditions? What if firms were trying to enter the artichoke industry in a country that did not have an asparagus industry but instead had a large and technologically advanced deep gold mining industry? The engineers, deep drilling equipment, and heavy rail lines from mines to ports used in deep gold mining are much less suited to artichokes and more difficult to redeploy to that activity. Artichokes and gold are therefore "far" from one another in the product space. For this reason, it is more likely that a country will diversify its export basket toward artichokes if it is an asparagus exporter than if it is a deep gold miner. Countries will move to new export activities that are nearby existing activities in the product space.

In more technical terms, the assets and capabilities needed to produce one good are imperfect substitutes for those needed to produce another good, and this degree of asset specificity will vary. Correspondingly, the probability that a country will develop the capability to be good at producing one good is related to its installed capability in the production of other similar, or nearby, goods from which existing productive capabilities can be easily adapted. The barriers preventing the emergence of new export activities are less binding for nearby products that require only slight adaptations of existing capacity.

Hidalgo and others (2007) map this product space empirically. Rather than attempting to define and measure the similarity of requisite capabilities directly, they measure the distance between two products based on the probability that if a country exports one good it exports the other.⁸ If two goods need the same capabilities, a country that has a comparative advantage in one is likely to have a comparative advantage in the other.

This measure gives the distance between every pair of export activities that creates the product space. The distance is measured across all countries. It is a technological feature of products. There is therefore one product space in which countries move rather than a product space for each country.

Using the tools of network analysis, Hidalgo and others (2007) construct an image of the product space. The backbone of the space is created by taking each product and connecting it to its nearest neighbor. The links between products are then color-coded on the basis of their strength (see figure 4.7 in the color insert at the back of the book).

Each node is a product; its size is determined by its share of world trade. Physical distances between products are meaningless in this depiction: proximity is shown by color-coding the links between pairs of products. A light-blue link indicates a proximity of less than 0.40, a beige link a proximity of 0.40–0.55, a dark-blue link a proximity of 0.55–0.65, and a red link a proximity greater than 0.65. Links below 0.55 are shown only if they make up the maximum spanning tree (that is, if they are to the nearest neighbor). Products are color-coded on the basis of their Leamer (1984) commodity group.

Figure 4.7 reveals that the product space is highly heterogeneous, with a core-periphery structure. There are both peripheral products of the product space that are only weakly connected to other products and some groupings among these peripheral goods, such as the garments cluster (the very dense green cluster at the bottom of the network). There is also a core of closely connected products in the center of the network,

mainly of machinery and other capital-intensive goods, as well as a cluster of electronics (light blue products at the top-right of the space) that is well connected to the core.

This heterogeneous structure of the product space has important implications for export diversification. If a country is producing goods in a dense part of the product space, the process of export diversification is much easier, because the set of acquired capabilities can be easily redeployed to other nearby products. In contrast, if a country is specialized in peripheral products, redeployment is more challenging, because there is not a set of nearby products requiring similar capabilities. Hausmann and Klinger (2007) and Hidalgo and others (2007) show very strongly that countries move toward nearby activities over time; it is rare to observe jumps across large distances in this space.

An important feature of this space from Algeria's perspective is the large red nodes at the outer-left periphery of the product space. These are hydrocarbons, which are poorly connected to the rest of the product space. This is not surprising, as oil exporters are well known to have concentrated export baskets and suffer poor export diversification. But this idea of the product space and the structure of the space observed in the data give a much more finegrained explanation for this lack of diversification. The hydrocarbons sector uses a particular set of productive capabilities (in addition to the raw natural resource endowment), such as a central authority, which can secure the extraction site and transmission lines and grant property rights to extraction firms; the physical capital to extract and ship the oil to a port; and so on. These capabilities are very difficult to redeploy to other sectors: artichokes and asparagus cannot be sent down an oil pipeline. The process of export diversification is inhibited because most new activities are very far away in the space and require a completely new set of capabilities.

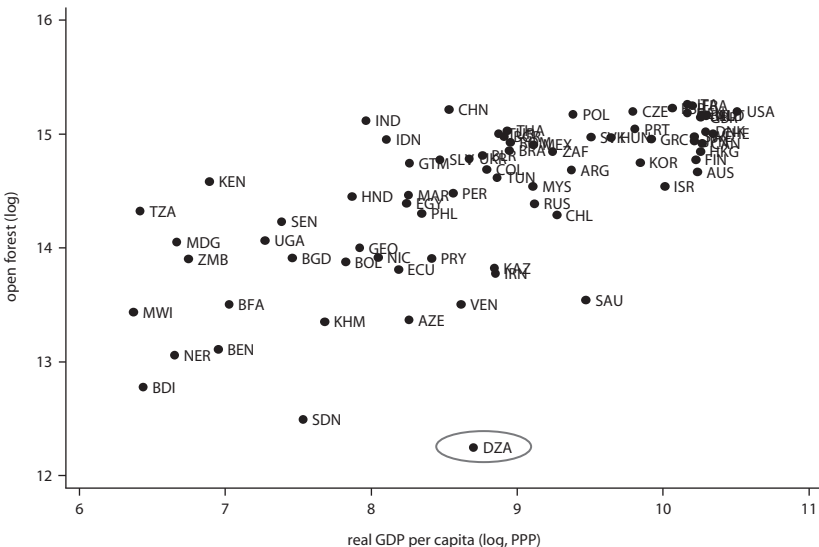
Figure 4.8 (see color insert) shows Algeria's exports in this product space in 1975 and again 25 years later by placing a black square on top of every product in which the country had comparative advantage that year. Not surprisingly, there is almost complete specialization in a very peripheral set of sectors, with little movement to new export activities.

Unlike other oil exporters with higher connectedness for their non-oil exports, Algeria does not have a comparative advantage in any other export sectors located in a more connected part of the product space that could fuel export diversification. It is in an extremely sparse part of the space, suggesting that export diversification will be a major challenge.

Hausmann and Klinger (2006) develop a metric that summarizes the overall level of connectedness of a country's export basket in this space in one number. This "open forest" measure (see annex) is a strong determinant of a country's ability to diversify its exports and move to new, more sophisticated export activities over time (Hausmann and Klinger 2006). Different countries have different opportunities for export diversification; some are specialized in very well-connected export baskets, others are not. Algeria has the least-connected export basket of any country in the sample (figure 4.9).

This is not a new development. Compared with other countries in the region, also oil exporters worldwide, and even least-developed oil exporters, Algeria has been specialized in a very unconnected part of the product space. This is not only because of oil. The country's non-oil export basket is also very peripheral in the product space. Figure 4.10 takes oil out of the export basket and assumes that Algeria has a comparative advantage in every single product it exports. Even this most optimistic open forest that can be calculated for Algeria remains very low relative to other countries.

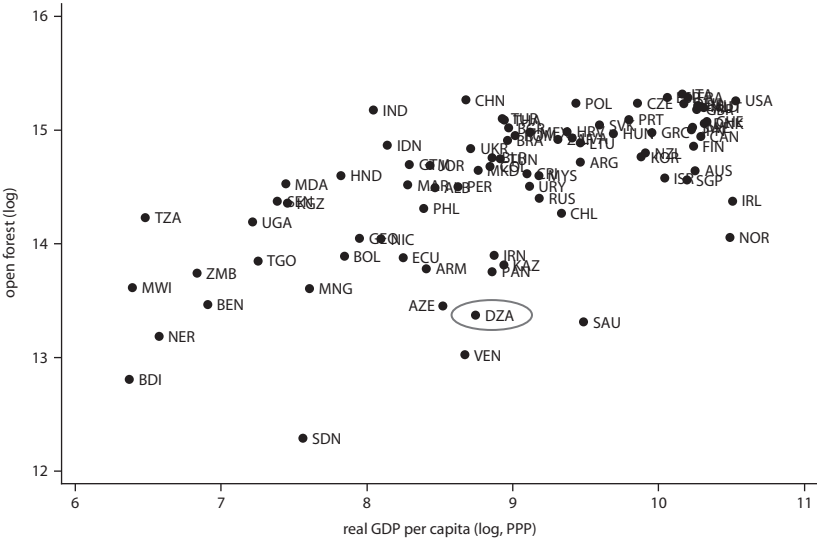
Figure 4.9 Relationship between Open Forest and GDP per Capita in Selected Countries, 2004



Source: Authors' calculations, using data from UN COMTRADE and World Development Indicators.

Note: DZA = Algeria, PPP = purchasing power parity.

Figure 4.10 Most Optimistic Open Forest Calculations in Selected Countries, 2006



Source: Authors' calculations.

Note: Algeria's open forest was calculated assuming that all nonhydrocarbon exports in 2006 had a revealed comparative advantage greater than 1; open forest for all other countries was calculated normally, using 2000–05 UN COMTRADE data. DZA = Algeria, PPP = purchasing power parity.

Given this orientation in the product space, it is not surprising that the data show very little structural transformation in Algeria. Even among oil exporters, Algeria shows the second-lowest rate of new export goods emerging in its basket, lower than even Iran, Nigeria, Saudi Arabia, and Ecuador. Only Kazakhstan shows fewer moves to new export activities during the 1980s and 1990s. It is therefore not surprising that the only export growth observed in Algeria is on the intensive margin.

Was this lack of diversification caused entirely by the country's peripheral location in the product space? We test this hypothesis by regressing the probability of jumping to a new product on a country dummy, controlling for its proximity in the product space. The result is a negative coefficient on Algeria's country dummy that is statistically significant. This means that controlling for the product space, Algeria still shows a surprisingly small number of jumps. This result implies that additional country-specific factors, perhaps the constraints on business and degree of corruption discussed above, also inhibit the process of export diversification.

Using the Product Space to Scan the Possibility Space for Algerian Exports

In this section, we use the results and methodologies described above to identify promising sectors for export diversification. We do so by evaluating important dimensions that can be measured at the product level for Algeria and then combining and aggregating them to get a picture at the sectoral level of what new activities are most attractive.

We use all non-oil sectors that recorded positive exports in 2006. As a first step, we calculate what “new” export sectors are closest to Algeria’s existing export sectors in the product space. We limit our focus to those sectors that are “up-market” for Algeria (more sophisticated than the country’s overall EXPY) (table 4.2). Sectors with the highest “density” (see annex) are those that are closest to the set of existing export activities.

Table 4.2 Potential Up-Market Export Sectors in Algeria, 2006

<i>Product</i>	<i>Density</i>	<i>PRODY (PPP [dollars])</i>
Other live animals, not elsewhere specified	0.060	9,384
Fish, fresh or chilled (excl. fillets and meats)	0.060	12,231
Wheat or meslin flour	0.059	5,652
Sunflower-seed, safflower or cotton-seed oil and their fractions	0.059	5,523
Fish, frozen (excl. fillets and meats)	0.059	12,212
Copper ores and concentrates	0.059	5,824
Asbestos	0.059	9,651
Vegetable products not elsewhere specified or included	0.057	2,412
Mineral or chemical fertilizers, not elsewhere specified	0.057	9,891
Flours, etc, of meat, fish, etc, unfit for human consumption; greaves	0.057	15,027
Fish, salted, dried . . . ; smoked fish; fish meal fit for human consumption	0.057	21,799
Fish fillets and other fish meat, fresh, chilled or frozen	0.057	13,627
Salt and pure sodium chloride; sea water	0.056	10,077
Other oil seeds and oleaginous fruits	0.056	3,030
Molasses resulting from the extraction or refining of sugar (excl. cane)	0.056	5,830
Milk and cream, concentrated or sweetened	0.056	13,162
Melons and papaws, fresh	0.056	6,825
Raw skins of sheep or lambs, but not tanned	0.055	13,464

(continued)

Table 4.2 Potential Up-Market Export Sectors in Algeria, 2006 (continued)

<i>Product</i>	<i>Density</i>	<i>PRODY (PPP [dollars])</i>
Fruit juices (incl. grape must) and vegetable juices, unfermented	0.055	7,766
Citrus fruit, fresh or dried	0.055	9,485
Wood sawn or chipped lengthwise, sliced or peeled, >6mm thick	0.054	13,218
Unmanufactured tobacco; tobacco refuse	0.054	2,166
Sugar confectionery (incl. white chocolate), not containing cocoa	0.054	10,513
Natural cork; waste cork; crushed, granulated or ground cork	0.054	14,283
Live sheep and goats	0.054	3,489
Yeasts; other single-cell micro-organisms, dead; prepared baking powders	0.053	12,714
Manganese ores and concentrates, with a manganese content of >20%	0.053	13,713
Wool, not carded or combed	0.052	17,921
Potatoes, fresh or chilled	0.052	14,878
Builders' joinery and carpentry of wood, including cellular wood panels, not elsewhere specified	0.052	15,190
Wood in the rough or roughly squared	0.051	12,728
Tomatoes prepared or preserved otherwise than by vinegar or acetic acid	0.051	12,611
Preparation of vegetables, fruit, nuts or other parts of plants	0.051	14,370
Animal products, not elsewhere specified; dead of chapters 1 and 3, unfit for human consumption.	0.051	12,633
Toilet paper. . . , bed sheets, etc, articles of clothing, of paper. . .	0.050	14,540
Other manufactured tobacco and substitutes; homogenized or reconstituted tobacco; tobacco extracts and essences	0.050	27,836
Iron ores and concentrates, including roasted iron pyrites	0.050	13,762
Hydrogen chloride (hydrochloric acid)	0.050	14,632
Electrical energy	0.050	16,264
Bread, pastry, cakes, etc; communion wafers, rice paper, etc	0.050	13,803
Uncoated kraft paper and paperboard, in rolls or sheets	0.049	20,124
Fuel wood, in logs. . . , etc; wood chips or particles; sawdust, etc	0.049	13,609
Cereal groats, meal and pellets	0.049	12,690

Source: Authors' calculations, based on UN COMTRADE and Algerian Ministry of External Trade data.

Note: Table shows all products not exported in 2006 for which PRODY (product sophistication) is greater than EXPY. PPP = purchasing power parity.

They are easier to move toward because they use capabilities similar to those of the nonhydrocarbon export sectors already present in Algeria (Hausmann and Klinger 2007).

Some of the very nearby products are rather unsophisticated. This is not surprising, as Algeria is concentrated in a peripheral part of the product space that is dominated by unsophisticated products. Products with a higher level of sophistication and greater growth-generating potential would require longer jumps.

This can be observed in figure 4.11 (see color insert), which shows the distance of each nonexported product from Algeria's current position in the product space on the x-axis. Products farther to the left are closer for Algeria. The y-axis indicates the product's sophistication. A line shows the point at which sophistication is equal to the country's overall EXPY. Products above this line are more sophisticated than the overall export basket.

From the point of view of adding valuable new exports to the current basket, the ideal location on this plane is the upper-left quadrant, where goods are close and highly sophisticated. The figure reveals the tradeoff between proximity and export sophistication: the products that are closest to the current export basket (and therefore farther to the left) are easiest to move toward but unsophisticated; the more sophisticated products are farther away from the current structure of production. There is an efficient frontier in this tradeoff. The most attractive opportunities for structural transformation are on or near this frontier.

A second tradeoff is between proximity (inverse measure from distance) and strategic value (see annex). As the product space maps show, in terms of their connectedness, not all goods are created equal. Some products are in a dense part of the product space, meaning that they are intensive in capabilities that are easily deployed to a wide range of other goods. The implication is that successfully producing these goods would create capabilities with significant value for other new products. Other products are located in the periphery; successfully producing them would offer little in terms of future export diversification, even if they are highly valuable in their own right (that is, have a high product-level measure of sophistication, or PRODY).

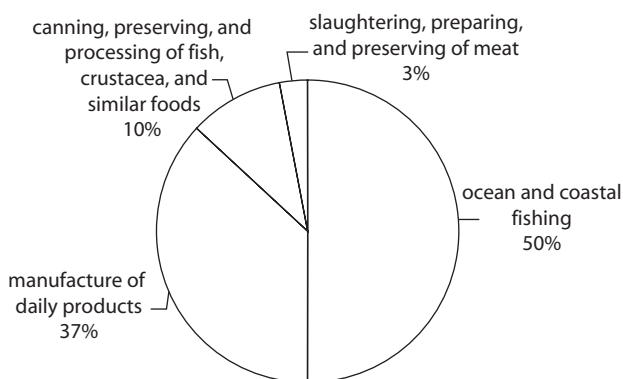
We analyze this tradeoff from the point of view of Algerian firms (figure 4.12; see color insert). We measure the *strategic value* of every good not currently exported by how much open forest would increase if that good were added to the export basket. If a product is closely connected to a wide range of other valuable products not currently exported, production of it would result in a large increase in open forest. It would

therefore have high strategic value, because it would greatly expand the country's option set.

As with the tradeoff between distance and sophistication, the ideal location is the upper-left quadrant: products that are nearby (that is, are easier to move to) and have high strategic value (that is, lead to new and nearby opportunities for subsequent export diversification). Countries are more likely to successfully move to goods that are close to what they currently produce, because such goods require similar capabilities. Yet such goods may or may not have much strategic value. They may be in a sparse part of the product space or so close that they do not imply the development of new capabilities that can be redeployed in other directions. Moving to a nearby product is easier, but moving farther may be more valuable in terms of future structural transformation. As before, there is an efficient frontier in this tradeoff, because some potential exports are both closer to the current export basket and more strategically valuable than others.

With these tradeoffs in mind, we can explore which sectors offer the best combinations of proximity, sophistication, and strategic value while also representing large market opportunities (figures 4.13 and 4.14).⁹ We consider all products not exported in 2006 that are up-market for

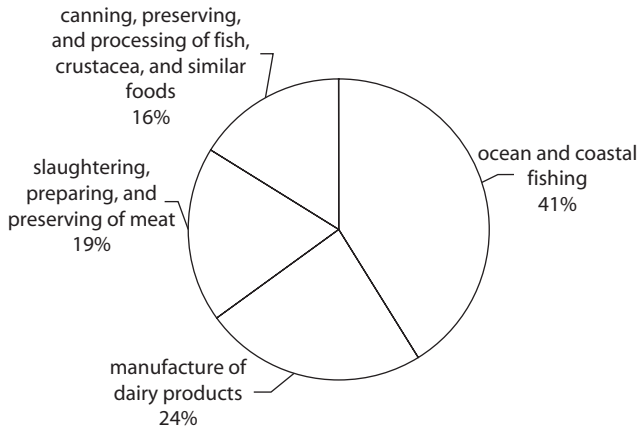
Figure 4.13 New Products 2 Standard Deviations above Average Density, Weighted by World Trade



Source: UN Comtrade.

Note: Figure shows all products not exported by Algeria in 2006, excluding those for which PRODY is less than EXPY; minerals, forestry, and petroleum; and products with a density that is not at least 2 standard deviations above the mean for all nonexported products, combined into International Standard Industrial Classification (ISIC) Revision 2 sectors, weighted by 2006 world exports of all products in that sector meeting the above criteria.

Figure 4.14 New Products 2 Standard Deviations above Average Density, Weighted by Strategic Value



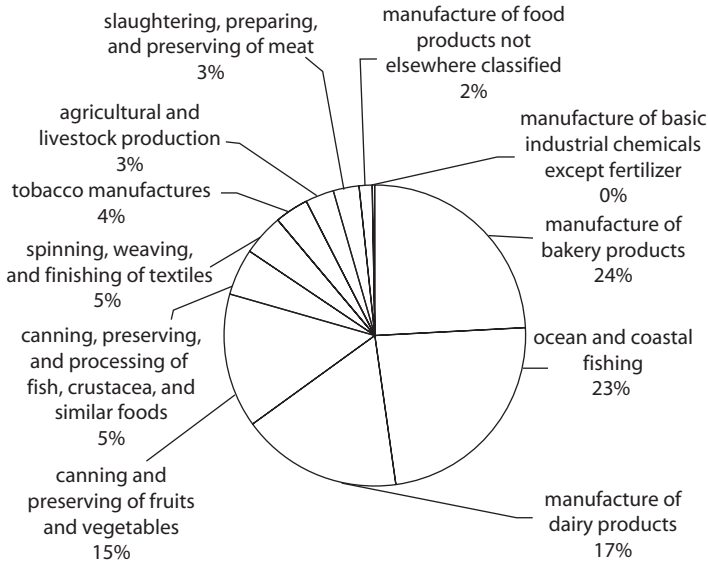
Source: UN Comtrade.

Note: Figure shows all products not exported by Algeria in 2006, excluding those for which PRODY is less than EXPY; minerals, forestry, and petroleum; and products with a density that is not at least 2 standard deviations above the mean for all nonexported products, combined into International Standard Industrial Classification (ISIC) Revision 2 sectors, weighted by 2006 strategic value of all products in that sector meeting the above criteria.

Algeria and sufficiently close to the current structure of production (a density at least 2 standard deviations above the mean). Grouping these products into sectors, we present them first in terms of their world market size and then in terms of their strategic value. Sectors that feature prominently in both figures are close to the current structure of production, are associated with higher-wage countries, have large international markets, and are in well-connected parts of the product space, meaning they will facilitate further export diversification in the future.

These are the sectors that are closest to current production in the product space. However, there is a tradeoff between strategic value and distance: the closest products do not involve the development of new capabilities that have many alternative uses not yet exploited. Moreover, there are not many sophisticated products very nearby for Algeria; sectors that would contribute more to the country's EXPY are farther away. Therefore, we repeat the analysis by decreasing the minimum distance from 2 standard deviations to 1.5 and then to 1 standard deviation, to allow for jumps to sectors that are farther away (figures 4.15–4.18). This iterative analysis gives an idea of how, as ambition increases, the set of attractive new export opportunities changes.

Figure 4.15 New Products 1.5 Standard Deviations above Average Density, Weighted by World Trade



Source: UN Comtrade.

Note: Figure shows all products not exported by Algeria in 2006, excluding those for which PRODY is less than EXPY; minerals, forestry, and petroleum; and products with a density that is not at least 1.5 standard deviations above the mean for all nonexported products, combined into International Standard Industrial Classification (SIC) Revision 2 sectors, weighted by 2006 world exports of all products in that sector meeting the above criteria.

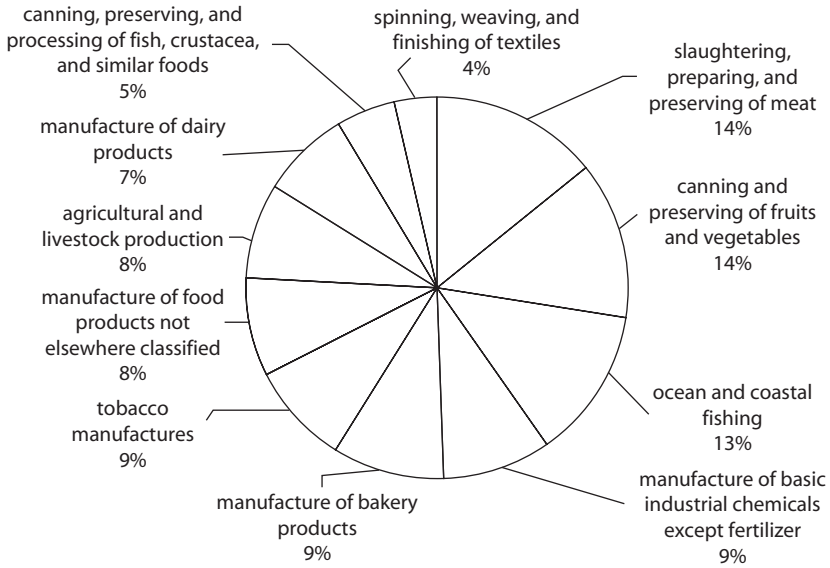
These figures indicate that the following sectors, in order of priority, are among the most attractive nearby export opportunities for Algeria:

- Meat milk, and fishing products
- Other agroindustrial products and chemicals
- Steel and aluminum, metal products, and shipbuilding.

This method of identifying high-potential export sectors has numerous advantages:

- It is highly systematic and evaluates all potential export activities beyond a certain threshold.
- It is customized to Algeria, as it is based on each of the country's current non-oil export activities and its links to all other potential activities. These links, in turn, are based on the product-level export experience

Figure 4.16 New Products 1.5 Standard Deviations above Average Density, Weighted by Strategic Value



Source: UN Comtrade.

Note: Figure shows all products not exported by Algeria in 2006, excluding those for which PRODY is less than EXPY; minerals, forestry, and petroleum; and products with a density that is not at least 1.5 standard deviations above the mean for all nonexported products, combined into International Standard Industrial Classification (ISIC) Revision 2 sectors, weighted by 2006 world exports of all products in that sector meeting the above criteria.

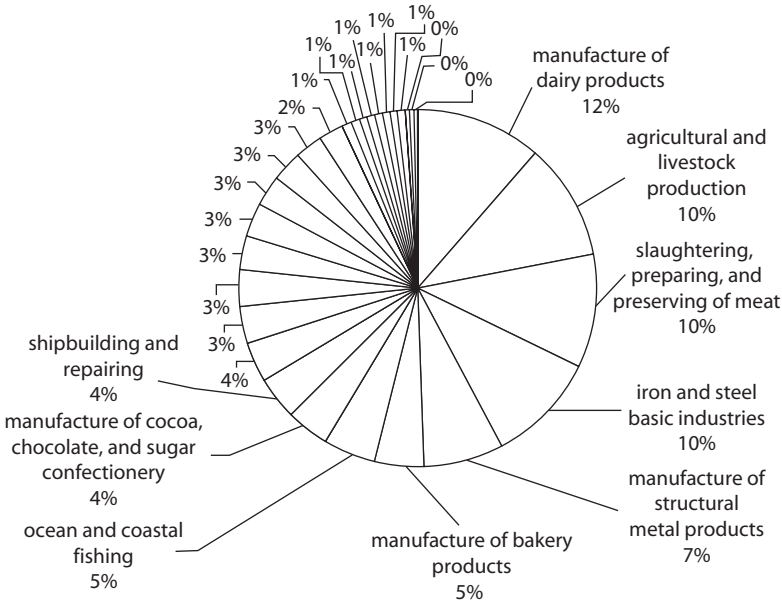
of all countries in the world, meaning a significant amount of information is applied to the evaluation.

- It is based on the systematic relationships that sophistication and distance have with structural transformation and growth that are robustly established in the data.

Compared with other methodologies, this methodology is rigorous, systematic, data driven, empirically supported, and objective.

One important drawback of the approach is that it considers only the goods sector. Trade in services is ignored, because Algerian data on trade in services are partial and inadequate. Given the emerging role services exports are playing, this is unfortunate.¹⁰ Because of this approach's drawbacks, some of which do not affect the methodologies, it should complement rather than substitute for traditional approaches.

Figure 4.17 Unoccupied Products 1 Standard Deviation above Average Density, Weighted by World Trade



Source: UN Comtrade.

Note: Unoccupied products are products that are exported despite their lack of comparative advantage. Figure shows all products not exported by Algeria in 2006, excluding those for which PRODY is less than EXPY; minerals, forestry, and petroleum; and products with a density that is not at least 1 standard deviation above the mean for all nonexported products, combined into International Standard Industrial Classification (ISIC) Revision 2 sectors, weighted by 2006 world exports of all products in that sector meeting the above criteria.

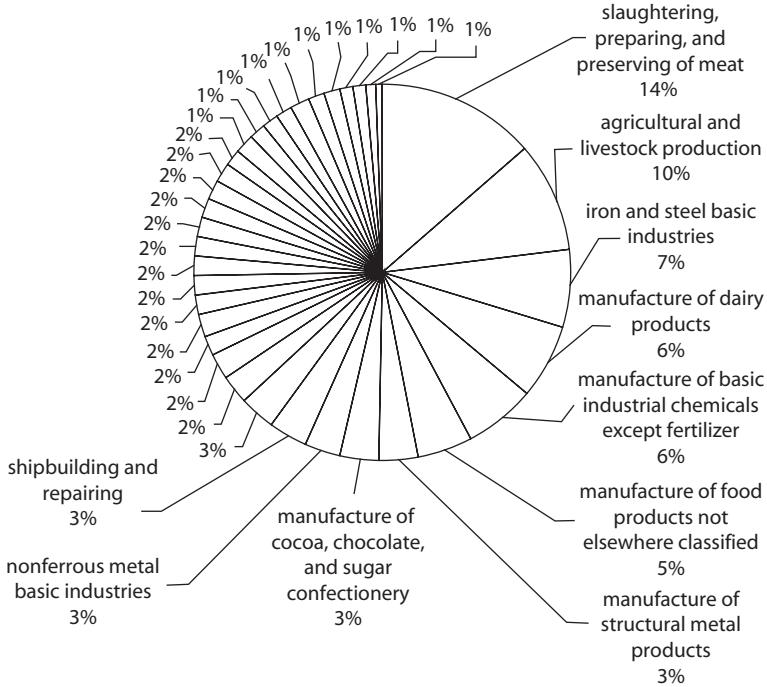
Policy Implications of the New Methodology for Industrial Strategy

In addition to the policies recommended to increase the general incentives in the economy for the search for new export activities, this new methodology calls attention to specific targets for sectoral development, as well as processes aimed at identifying them.

Examining Algeria’s Current Strategy for Industrial Policy

The government of Algeria has prepared an industrial strategy, including a policy aimed at targeting high-potential export sectors. These sectors were identified with more traditional methods, which have the benefit over the product space methodology of incorporating greater country context and a wider set of quantitative and qualitative information. This comes at a cost, however: fewer sectors can be considered, their selection

Figure 4.18 Unoccupied Products 1 Standard Deviation above Average Density, Weighted by Strategic Value



Source: UN Comtrade.

Note: Unoccupied products are products that are exported despite their lack of comparative advantage. Figure shows all products not exported by Algeria in 2006, excluding those for which PRODY is less than EXPY; minerals, forestry, and petroleum; and products with a density that is not at least 1 standard deviation above the mean for all nonexported products, combined into International Standard Industrial Classification (ISIC) Revision 2 sectors, weighted by 2006 world exports of all products in that sector meeting the above criteria.

can be affected by political choices or rent-capture, and characteristics of the chosen sectors do not have the same empirical basis.

Therefore, the methodology presented here is a valuable complement to the government's prioritization. It may have identified sectors the original industrial strategy did not evaluate. In addition, it can be used to reevaluate the broad areas and sectors prioritized by the government, namely:

- Products in which value is added to natural resources (petrochemicals, fertilizers, synthetic fibers, aluminum, steel, and metalworking)
- High value-added consumer goods (pharmaceuticals, specialty electronics, and agroindustry)
- New industries (automobiles, shipbuilding, and repair).

Are these sensible targets? Agroindustry, steel and aluminum, and shipbuilding were identified independently using both methodologies, which is very encouraging. We analyze each of the government's priority sectors, by highlighting all targeted sectors in terms of both distance versus sophistication and distance versus strategic value tradeoffs (figure 4.19).¹¹

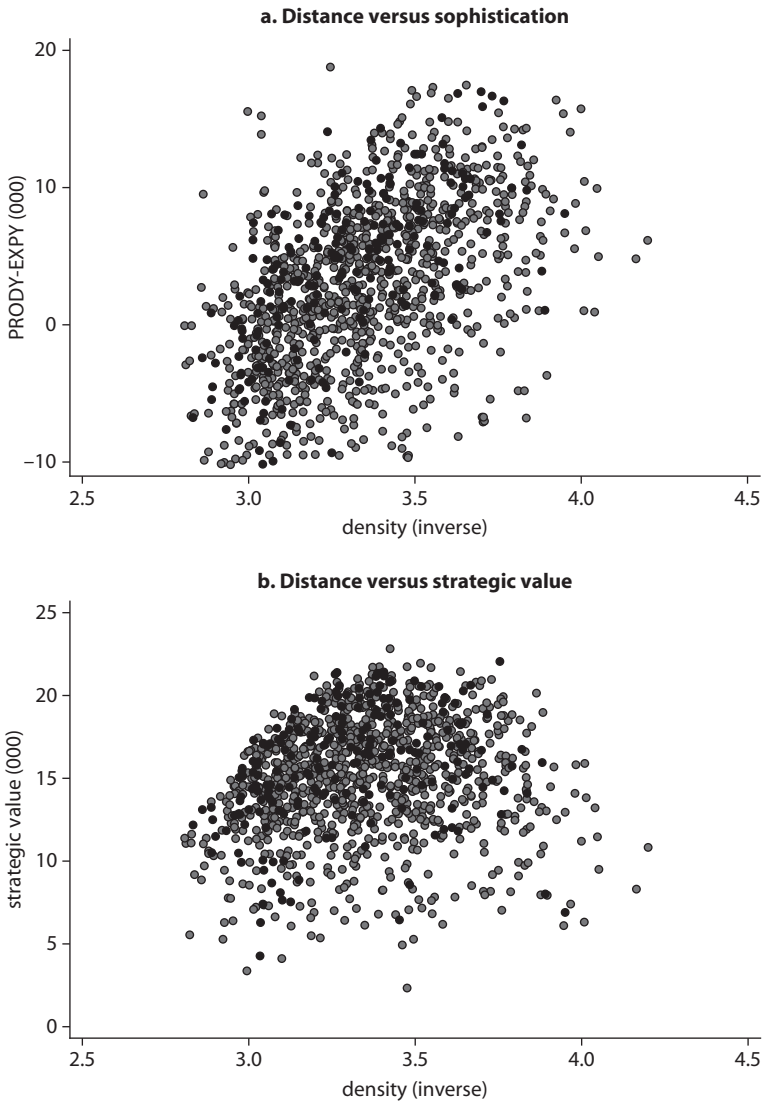
At a first pass, the selections seem sensible. The selected targets tend to be on the efficient frontier in both distance versus sophistication and distance versus strategic value tradeoffs. Several targeted sectors are well inside this frontier, however, and many frontier sectors are ignored, particularly those at the upper end of the distance versus sophistication tradeoff (sectors that are somewhat far from current production but no farther than many of the selected sectors while at the same time at a much higher level of sophistication).

We now consider both tradeoffs sector by sector, again indicating the targeted sectors in black. Starting with the nearest sectors, we see that fertilizers are low-hanging fruit: they are very close to current production. However, they have an extremely low EXPY and low strategic value. This suggests that although this sector might be an easy win, there seems to be little benefit from developing it. In contrast, agroindustry is as close to current production as fertilizers, but many of the targeted activities in this sector have a much higher level of sophistication and strategic value. This sector therefore seems like a very sensible priority.

Aluminum products are definitely on Algeria's efficient frontier. Steel products and metal working are as well, albeit to a lesser extent (particularly on the sophistication margin). Compared with these sectors, petrochemicals are farther from the efficient frontier. Some are of a high level of sophistication and strategic value, but most are farther away from Algeria's current structure of production than other sectors with a higher level of sophistication and strategic value.

Automobiles and shipbuilding are farther away from current production. The automobile sector does not represent the best choice in terms of sophistication, although it is close to the strategic value efficient frontier. Shipbuilding has equivalent levels of sophistication but is much closer to the current structure of production. This implies that shipbuilding is nearer to current production and therefore easier to move toward. Producing automobiles would be much more difficult, although success would create many more opportunities for export diversification.

Compared with the other targets, pharmaceuticals and specialty electronics are far from both efficient frontiers, largely because they are so distant from current production. Given such low densities, it is unlikely that these sectors will emerge any time soon in Algeria. Other sectors that

Figure 4.19 Sectors Targeted under Government of Algeria's New Strategy

Source: Authors' calculations, based on UN COMTRADE and Algerian Ministry of External Trade data.

Note: Sectors highlighted in black are those the government is targeting. The most attractive products are those in the upper-left-hand part of each panel.

represent as attractive targets in terms of their sophistication and strategic value are much closer.

Synthetic fibers are far from the efficient frontier; this sector represents the least sensible choice among the targeted sectors. The sector was

probably chosen because synthetic fibers are downstream products from hydrocarbons. But petrochemicals are also shown to be poorly selected targets. Looking downstream from existing production is a very poor guide to identifying high-potential export sectors. Most countries do not move down production chains over time; they are more successful at moving to other activities that require similar sets of productive capabilities rather than those that are simply related in an input-output relationship (Klinger 2008). As such, the government should reconsider its identification of priorities based on links, particularly synthetic fibers.

Unfolding the Process of Structural Transformation: Policy Considerations

Defining a framework for state intervention in industrial policy is always controversial. Algeria's new industrial policy is part of a wave of new industrial policies emerging in the Middle East and North Africa region. These strategies move from more neutral policies (essentially transversal ones) to more selective interventions. World Bank (2008b) offers an exhaustive summary of the debate surrounding these strategies and a typology of state interventions.

Industrial strategies can be represented in four groups, depending on the extent to which they depart from neutrality. The first group is purely neutral industrial policies. They aim to improve the business and macro environment. The second group addresses coordination failures, favoring sector-specific or "enclave" approaches and not involving price subsidies. The third group involves market interventions that directly address market failures and modify equilibrium prices and quantities (subsidized credit lines, industrial land subsidies, energy subsidies). The fourth type of intervention is selective policies that combine some sort of subsidies, protection, or tax breaks. The usual justification is the traditional infant industry argument. As shown below, the policy proposal suggested in this chapter mostly combines group I and II policies, under a dynamic and interactive process.

The product space methodology and results have implications for the kinds of policies that are most appropriate in fueling structural transformation. Identifying high-potential sectors is the easy part; the more difficult and important question is what to do with these lists (and as important, what not to do with them). These questions are explored here.

Overall, the structure of the product space suggests that the capabilities required by different sectors are highly specific. The infrastructure and labor skills required by oil are very different from those required by

fresh fruit or garments; fostering the development of such sectors requires more than merely providing more education and investing more in general infrastructure. The types of these and other public goods that the government wishes to provide must be decided, and this will have sector-specific consequences. Seven interrelated tasks are proposed.

The first task of industrial strategy should be to identify the sector-specific public goods that new activities require and provide them. This task also involves identifying regulations that prevent the new activities from emerging and reforming them.

This should be easier for nearby activities than for activities that are far away. Nearby sectors are, international evidence suggests, the most likely to emerge. This implies that there is likely some presence in these sectors already, such as domestic production with a small amount of exports, exporters in related industries that are exploring the new industry, or foreign firms seeking to invest in these activities. These actors will be demanding public goods, many of which are specific to their particular activities and prerequisites for success.

An appropriate policy approach is to orient the government for dialogue with private sector actors. The dialogue should have a single purpose: to identify the necessary sector-specific public goods they require and find a vehicle to provide them. Such a dialogue was likely part of the government's process in identifying high-potential export activities in the first place.

In organizing a dialogue to identify missing sector-specific public goods and sector-specific constraints to investment, one should keep in mind certain principles. First, rather than forcing actors in the private sector to line up according to a predefined aggregated sector, it is better to let promoters self-organize based on shared interest in a particular constraint and come forward. For example, one group of agroindustry producers may have a particular need for port infrastructure, another may require a change in property rights in a particular area. Requiring the two groups to speak with one voice will likely obscure their real needs. Instead, they should have to settle on the few constraints that are shared, though likely not the most binding (for example, tax reduction). For this reason, it is best if the groupings are not predefined but instead coalesce around common needs.

Another design principle for this dialogue is to explore the need for cofinancing to filter requests from private entrepreneurs for truly productivity-enhancing investments and to avoid rent-seeking. The private sector's willingness to pay is correlated with the social returns to the

provision of the public input, so cofinancing will help the public sector allocate scarce resources to their best use. For a further reduction of rent-seeking and capture, such a dialogue should be highly transparent, with all requests made public to discipline the proposals put forth. Moreover, it should be clear that the proposals put forward must be solely for productivity-enhancing investments through the provision of public inputs, not subsidies to compensate for low productivity.

This type of dialogue will allow for the identification of investments demanded by nearby emerging activities to allow the nearby emerging activities to grow more rapidly. This responsive approach is more likely to work for nearby activities, such as fishing, milk, meat products, fertilizers, and other agroindustries. Moreover, this responsiveness need not be limited to the preidentified high-potential export activities but can extend to any new activities the private sector identifies.

The downside to such an approach is that it is less likely to work for sectors that are farther away, such as aluminum and shipbuilding. These kinds of sectors are much less likely to emerge on their own, because they require new sets of capabilities that are unlike those already existing in Algeria. For these sectors, few firms are active in related activities, and few international firms are knocking on the government's door. Simply organizing for dialogue is less likely to be sufficient, as there will probably not be anyone on the other side of the conversation and the needs will be significant.

For these distant activities, the second task is to explore the establishment of new institutions specialized in the search for new activities and in the overcoming of related obstacles. One way this could be done is through a public venture capital fund. Development banks are traditionally conceived as a solution to failures in the financial market. They are often set up to channel money to existing activities and measure performance by the volume of loans they give. A public venture capital fund could be set up to fund new business models and initiatives that could trigger significant future entry. The idea is to create an incentive for potential investors in activities that involve many unknown costs and require potentially new public inputs. Such a fund would give the government access to those ideas, analyze the obstacles they face, and inform public policy, so that the requisite public inputs could be provided if deemed reasonable. The idea is to help trigger investment into areas that are more distant while minimizing the risk that these investments will fail because of inadequate public inputs. Performance of the fund would be based on the amount of "crowded-in" investment from private sources,

even if the second movers into the sector are not funded by the venture capital fund. Guidelines for institutional design can be found in Hausmann, Rodrik, and Sabel (2008).

Few institutions in the world have been designed from scratch with this purpose, but several have stumbled into performing this function. Fundación Chile is a good example of an institution that has invested in new products and business models that have had transformative effects. Its best-known success is farmed salmon, a subsector in which Chile now has a leading position.

Another example is the Industrial Development Corporation in South Africa, which includes such venture capital operations as one of its functions. Many years ago it funded the development of synthetic fuels out of coal; its holdings in that firm (Sasol) now constitute an important part of its asset base. More recently, it has funded investments into new agricultural products, such as cashews and the export of fresh fruit.

Another type of institution that could accomplish this task is the industrial park (if possible supported by logistical export corridors). The idea is to attract investors by providing specific public inputs within the park or by informing and lobbying government for those that cannot be directly provided. Although industrial parks are often created with some specific activities in mind, experience suggests that once they start looking for investors they are forced to cast a much wider net and include other sectors that were not anticipated at the outset, but turn out to be quite profitable. In the process, they become active searchers of the space of capabilities and obstacles.

Algeria opened a logistical corridor for the export of dates in 2007. The government created special procedures for processing paperwork, passing customs, and obtaining required export logistical facilities. This so far exceptional experience proves that even under a very constrained business environment, some Algerian entrepreneurs have found a way to bypass constraints. Replicating such experience is the challenge ahead.

This chapter offers guidelines for organizing dialogue to identify the needs of new sectors and to more proactively search for and provide the broad set of capabilities required by more distant activities. The guidelines are, and must be, general rather than specific policy proposals: the entire underlying logic of the product space is that constraints are specific to each sector and activity. The identification of high-potential nearby activities gives policy makers some indication of where to begin looking for sector-specific constraints, but this is the limit of what can be done with such data. Policy reforms at the macro level would complement the

strategy for industrial policy, with a focus on orienting the Algerian private sector away from a protected and rent-filled domestic market toward export diversification.

Annex

This annex provides some technical detail on the metrics used in the chapter. Further discussion can be found in the source papers.

Export Sophistication (EXPY)

EXPY is calculated by first measuring the sophistication of each product (PRODY) as the revealed comparative advantage–weighted gross domestic product (GDP) per capita of each country that exports the good:

$$PRODY_{i,t} = \sum_c \frac{(xval_{i,c,t} / X_c)}{\sum_j (xval_{j,c,t} / X_c)} Y_c,$$

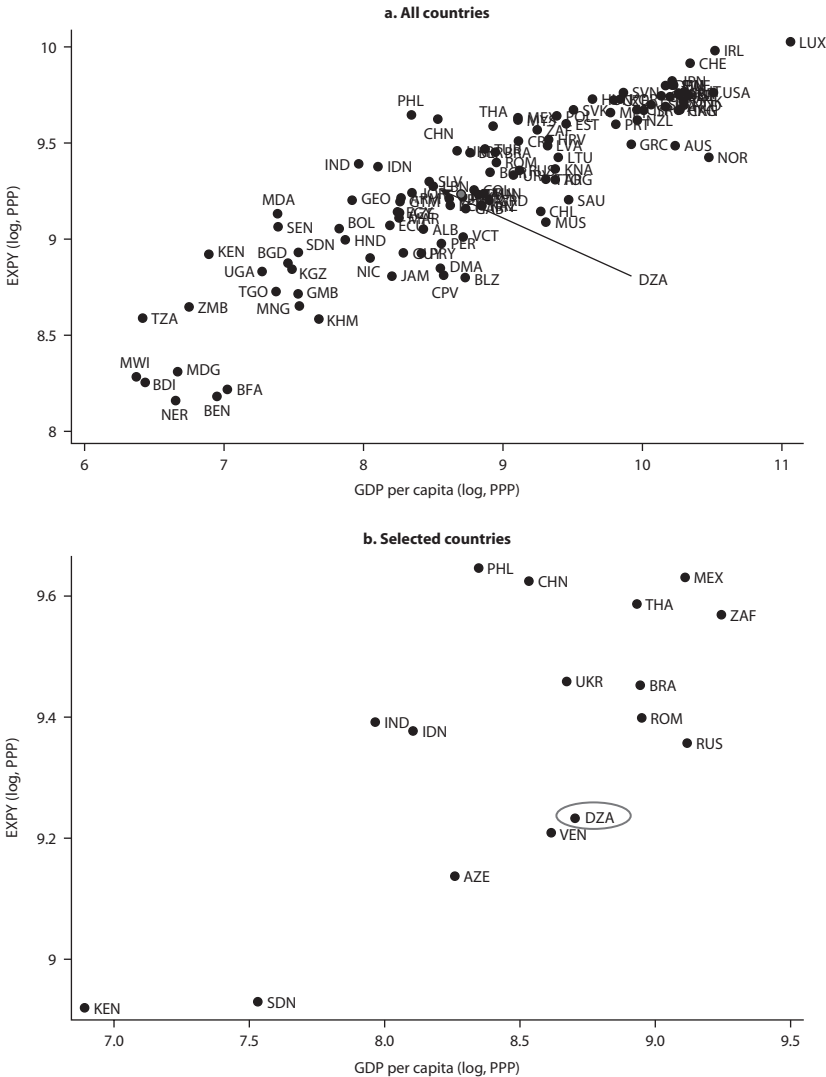
where $xval_{i,c,t}$ equals exports of good i by country c in year t ; X_c equals total exports by country c ; and Y_c equals GDP per capita of country c . This product-level measure of sophistication is then used to measure the sophistication of a country's export basket as a whole. This measure, *EXPY*, is simply the *PRODY* of each good i that country c exports, weighted by that good's share in the country's export basket (X_c). It represents the income level associated with a country's export package:

$$EXPY_{c,t} = \sum_i \left(\frac{xval_{c,i,t}}{X_{c,t}} \right) PRODY_{i,t}.$$

This metric differs from traditional measures of sophistication that attempt to measure research and development (R&D) intensity or technological sophistication. *EXPY* is a measure of sophistication in that it implicitly captures the wages supported by production of that good. High *EXPY* may be because of technological sophistication, complexity of production, the sophistication of the regulatory and contracting institutions needed to allow for production, or a host of other reasons. *EXPY* is therefore a broader and more inclusive measure of sophistication than intensity in technology or R&D. Moreover, unlike many other measures of sophistication that are based on an arbitrary decision of the most important type of sophistication, this outcomes-based measure has been very robustly linked to subsequent economic growth (Hausmann, Hwang, and Rodrik 2006).

Figure 4.A.1 calculates EXPY conventionally; table 4.A.1 lists the main products contributing to Algeria's EXPY. Given that Algeria's export basket is highly concentrated in a narrow range of hydrocarbon products, this metric is of limited use. This is why the body of this chapter

Figure 4.A.1 Relationship between Export Sophistication and GDP per Capita in Selected Countries, 2004



Source: Authors' calculations, based on UN COMTRADE.

Note: DZA = Algeria, PPP = purchasing power parity.

Table 4.A.1 Contributors to Algeria's EXPY, 2004

<i>Product</i>	<i>Exports (US\$ million)</i>	<i>PRODY</i>
Petroleum gases and other gaseous hydrocarbons	11,000	12,169
Ammonia, anhydrous or in aqueous solution	105	10,247
Flat-rolled products of iron/nonalloy steel, ≥ 600 mm wide, hot-rolled, not clad/plated/coated	40	10,300
Flat-rolled products of iron/nonalloy steel, ≥ 600 mm wide, clad/plated/coated	23	16,788
Hydrogen, rare gases and other nonmetals	24	14,726
Unwrought zinc	25	13,559
Acyclic alcohols and their halogenated . . . or nitrosated derivatives	18	12,743
Articles of natural cork	9	16,602
Flat-rolled products of iron/nonalloy steel, ≥ 600 mm wide, cold-rolled, not clad/plated/coated	10	11,284
Motor vehicles for the transport of goods	5	16,016
Buttermilk, curdled milk and cream, yogurt, etc	5	15,889
Coal; briquettes, ovoids and similar solid fuels manufactured from coal	5	13,600
Silicates; commercial alkali metal silicates	5	12,042
Cocoa butter, fat and oil	5	10,587
New pneumatic tires, of rubber	5	18,662
Interchangeable tools for hand tools, whether or not power-operated	3	19,975
Accessory parts suitable for machinery	3	19,342
Agglomerated cork and articles of agglomerated cork	3	17,683
Motor vehicles for the transport of passengers, public transport	3	13,519
Semi-finished products of iron or non-alloy steel	4	11,149

Source: Authors' calculations, based on UN COMTRADE data.

focuses only on non-oil EXPY. Because it is not suitable to compare non-oil EXPY for Algeria with total EXPY of other countries, the body of the chapter examines the non-oil export baskets of oil-exporting comparators.

Distance

The inverse measure of distance between goods i and j in year t , which we call *proximity*, equals

$$\varphi_{i,j,t} = \min \left\{ P(x_{i,t} | x_{j,t}), P(x_{j,t} | x_{i,t}) \right\},$$

where for any country c

$$x_{i,c,t} = \begin{cases} 1 & \text{if } RCA_{i,c,t} > 1 \\ 0 & \text{otherwise} \end{cases}$$

and the conditional probability is calculated using all countries in year t . The conditional probabilities are calculated using disaggregated export data across a large sample of countries from the world trade flows data from Feenstra and others (2005) and UN COMTRADE.

Open forest is calculated first by measuring the density of the current export basket of a country around any good. This is the distance of good i from country c 's export basket at time t , calculated as the sum of all paths leading to the product in which the country is present, divided by the sum of all paths leading to the product. Density varies from 0 to 1, with higher values indicating that the country has achieved comparative advantage in many nearby products and should therefore be more likely to export that good in the future:

$$density_{i,c,t} = \left(\frac{\sum_k \varphi_{i,k,t} x_{c,k,t}}{\sum_k \varphi_{i,k,t}} \right).$$

Hausmann and Klinger (2007) show that this measure of density is indeed highly significant in predicting how a country's productive structure will shift over time: countries are much more likely to move to products that have a higher density, meaning they are closer to their current production.

We aggregate this measure of density, which is for a country around any single product, to an overall measure of the connectedness of a country's export basket. This country-level measure is called *open forest*. A higher value indicates that the current export basket is in a part of the product space that is well connected to other new and valuable opportunities for structural transformation. A high value of open forest indicates that the country is located in a dense part of the product space; a low value of open forest indicates that the country is specialized in a sparse, unconnected part of the product space. In essence, this value summarizes the visual analysis conducted above with the product space maps.

Open forest is calculated as follows:

$$open_forest_{c,t} = \sum_i \sum_j \left[\frac{\varphi_{i,j,t}}{\sum_i \varphi_{i,j,t}} (1 - x_{c,j,t}) x_{c,i,t} PRODY_{j,t} \right].$$

Notes

1. Statement is based on a list of projects made available by the Euro Mediterranean Network of Investment Promotion Agencies.
2. Non-oil EXPY is calculated by eliminating #33 and #34 from the 1975–2000 Standard International Trade Classification (SITC) data and #27 from the 2000+ Harmonized System (HS) data.
3. The conventional calculation of EXPY is shown in the annex. According to that metric, export sophistication in Algeria is moderate. However, more than 95 percent of the country's export basket is hydrocarbons. EXPY as traditionally measured is simply the revealed comparative advantage–weighted average GDP per capita of oil exporters. For this reason, it is more relevant to consider non-oil EXPY. For consistency, this should be compared only with other oil exporters' non-oil export baskets.
4. This paragraph was based on World Bank 2008b.
5. The Doing Business Indicators focus on the time and money costs and the complexity or completeness of key procedures. Many indicators measure either the formal procedure described in national law or the cost and time taken for a prototypical enterprise of specified characteristics.
6. Investment Climate Assessment surveys capture the actual experience and attitudes of active business managers.
7. This argument is based on World Bank (2008b).
8. The distance between any two products is the minimum of the pairwise conditional probabilities of having comparative advantage. See the annex for details.
9. Interesting and useful extensions to this analysis would match export data to investment climate or household survey data to measure each sector's intensity in labor or match them with imphis is done.
10. For a recent study exploring the increasing market for services in Algeria, see chapter 7 of this volume.
11. The identification of targeted sectors was graciously provided by M. Boulkia. As above, this analysis is only on merchandise exports, and cannot consider services (such as ship repair). Furthermore, we limit our focus to “new” sectors: those in which the country has not yet achieved comparative advantage (some of the targeted sectors, such as hydraulic binders, are already exported with comparative advantage).

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PART II

Services Trade

CHAPTER 5

Emerging Export Services: Where Does Tunisia Stand?

Olivier Cattaneo, Ndiame Diop,
and Peter Walkenhorst

Can Emerging Export Services Contribute to Growth and Poverty Reduction?

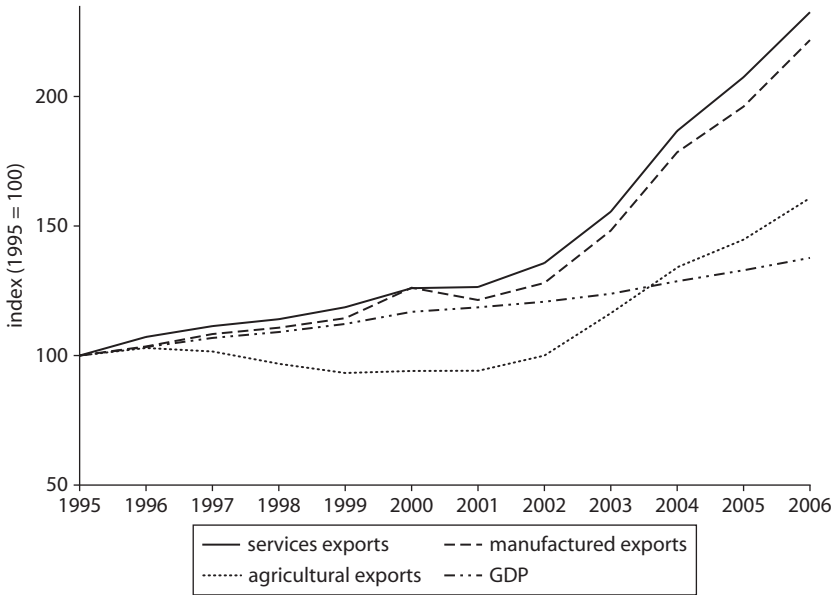
The global services market offers rapidly increasing opportunities to generate export revenues. International trade in commercial services more than doubled between 1995 and 2006, outpacing exports of agricultural products and manufactures (figure 5.1). Rapid advances in information and communication technologies (ICT) and the ongoing global liberalization of trade and investment in services have increased the tradability of many service activities and created new kinds of tradable services, particularly as the production of services has become increasingly location independent. Because demand for services has a high income elasticity, the potential for further increases in services exports remains as economies grow richer.

Offshoring as a Driver of Trade

Professional and ICT-enabled services are among the most dynamic growth segments of the global services sector. Firms in high-income

Figure 5.1 World Services Exports, by Type, 1995–2006

(1995 = 100)

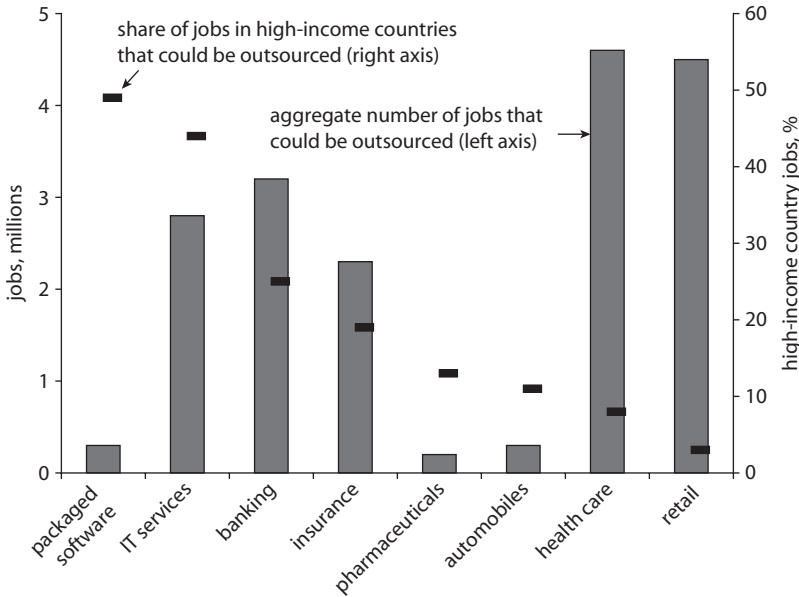


Source: WTO 2006.

countries increasingly outsource back office and information technology (IT) functions. Most of this outsourcing still goes to companies in the country of origin (“onshoring”), although cross-border arrangements (“offshoring”) are increasingly common.

Forrester Research estimates the potential for IT offshoring to low-wage locations from the United States alone to amount to 3.3 million jobs by 2015 (McCarthy 2002). Because of the limited need for direct client contact, regional knowledge, and complex interactions, IT services and packaged software are particularly amenable to offshoring. About 44 percent of all ICT employment in high-income countries—some 3 million jobs—could potentially be offshored (figure 5.2) (McKinsey Global Institute 2005b). For some location-insensitive ICT activities, such as call centers, the outsourcing rate could reach more than 90 percent.

By 2003, about 7 percent of ICT jobs in high-income countries had been offshored. The process was most advanced in the United States, the United Kingdom, and Germany, which together accounted for three-quarters of global offshoring demand (McKinsey Global Institute 2005b).

Figure 5.2 Offshoring Potential of Selected Service Industries

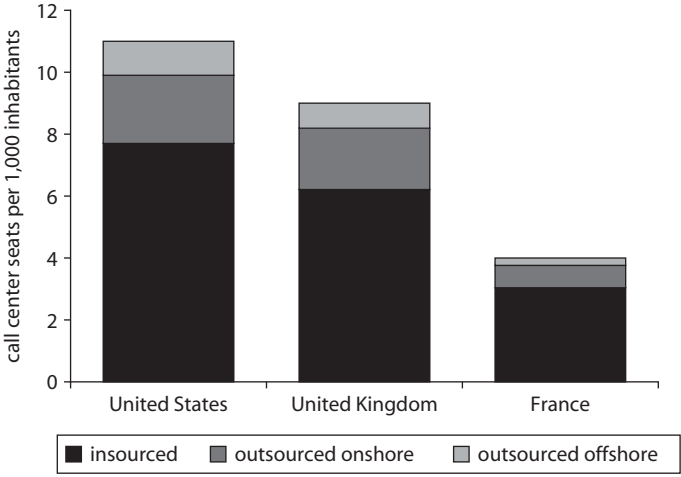
Source: McKinsey Global Institute 2005b.

Potential for Offshoring in Francophone Markets

Companies in francophone countries have been more reluctant than those elsewhere to move employment abroad, limiting their offshoring activities largely to call centers. Estimates indicate that more than 90 percent of all back-office process outsourcing in French-speaking offshoring locations consisted of call centers in 2005. In contrast, the corresponding share amounted to less than 30 percent in India (Roland Berger 2006). Despite this focus on call center offshoring, France outsources a substantially smaller share of its call center activity than the United States or United Kingdom (figure 5.3). This low degree of outsourcing may partly reflect political and trade union resistance to moving employment abroad. It could also suggest that France may experience an acceleration and catch-up in sourcing talent abroad in the medium term.

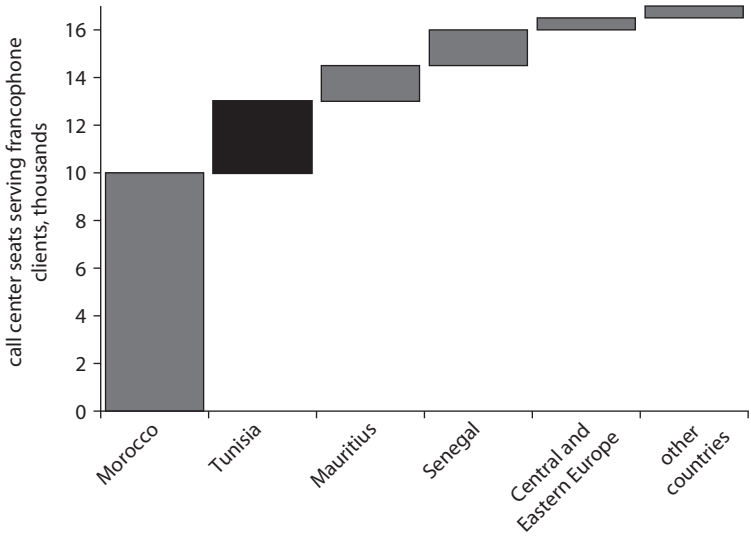
Worldwide, about 17,000 call center staff served French-speaking markets in 2006, of which more than three-quarters are located in Morocco and Tunisia (figure 5.4) (Roland Berger 2006). North Africa's wage advantage over Europe is not as strong as that of competitors in East Asia,

Figure 5.3 Offshore, Onshore, and Insourced Call Center Activity in the United States, United Kingdom, and France, 2006



Source: Roland Berger 2006.

Figure 5.4 Number of Call Center Seats Serving Francophone Clients, by Country, 2006



Source: Roland Berger 2006.

but geographical and cultural proximity, well-established commercial ties, and the strong French-speaking communities make the Maghreb the destination of choice for “nearshoring” of French and other francophone companies. Outsourcing from the French market is projected to grow at an annual rate of 12–13 percent between 2007 and 2012 (Roland Berger 2006).

Companies in high-income countries that outsource some of their services functions can realize cost reductions, thereby improving their international competitiveness. The receiving countries benefit through enhanced employment opportunities (including for women) increased inflows of foreign direct investment (FDI), and improved service quality for the domestic market. There can also be positive spillover effects through technology and knowledge transfer and stronger incentives for individuals to invest in education.

The prospects for growth in North Africa’s emerging export services look good. Sectoral expansion is unlikely to create many jobs for the unskilled and poor, however. Poverty reduction from this sector should come mainly through the trickle-down effects of general economic growth.

Forward-Looking Policies That Can Help Countries Grasp Opportunities

Tunisia has heavily invested in human and physical capital and undertaken important regulatory reforms to become a knowledge economy. Many of these investments—in, for example, telecommunication networks and higher education—are now sunk and no longer have to be considered when deciding on governmental initiatives. Policy now needs to determine how public authorities can further improve the regulatory set-up and provide an enabling business environment that will allow the private sector to take the lead in propelling Tunisia toward knowledge-based growth and prosperity.

The analysis presented here contributes to the policy dialogue by describing and evaluating recent and prospective developments concerning professional and ICT-enabled service exports in the context of Tunisia’s growth and competitiveness agenda. The discussion is comprehensive, covering medical services, accounting, engineering, and legal services as well as software production, back-office processing, and call centers. Performance is compared with that of similar countries to put it into a broader perspective.

The rest of the chapter is divided into three sections. The next section discusses Tunisia's recent performance in professional and ICT-enabled services, paying special attention to structural peculiarities of the subsectors. The following section examines the international position of providers of emerging export services. The last section addresses issues that warrant the attention of policy makers.

How Has Tunisia Performed in Emerging Export Services?

Professional and ICT-enabled services are important inputs to the economy. Provision of efficient services is essential to maintaining Tunisia's competitiveness and productivity gains. At the same time, consumers should be protected against deceptive practices. The government must therefore strike the right balance between liberalization (which encourages competition, cost effectiveness, and improved quality of service) and domestic regulation.

The experience of Eastern and Central Europe shows that the opening of service sectors to foreign competition and the adoption of regional/international standards can help reduce prices and enhance the variety and quality of services offered to local consumers. Outdated rules—including restrictions on advertising, recommended fee scales, and entry into professions—resulted in seriously damaging anticompetitive practices and price-fixing in Europe, according to the European Commission (COM 2004). Although regulation is justified, flexibility is required to accommodate the evolution of the profession and clients' needs.

Medical Services

Tunisia has a long tradition of exports of medical services, in particular to its neighbor Libya. These flows have remained limited, however. With the emergence of "medical tourism," prospects for services growth have improved.

Many countries compete for foreign patients, who spend more than regular tourists (on fees paid to surgeons and hospitals, stays in five-star hotels, excursions, and so forth). Tunisia is a front-runner in the Maghreb region, although a latecomer compared with Asia or Latin America.

The two main Tunisian tour operators in the field are Esthetika Tour and Cosmetica Travel, both established in 2004, each of which attracts only about 30 foreign patients a month. The bulk of patients (80 percent of whom are from Libya) come to private clinics in

Tunisia without depending on an intermediary. A few have been treated for diseases or problems that occurred in the course of their stay in Tunisia.

Based on a survey of clinics, one study estimates that in 2003, Tunisia hosted more than 42,000 foreign patients, who generated revenues of about TD27 million (about 24 percent of the clinics' total revenues) (Lautier 2008). Based on these figures, the study extrapolates the total value of Tunisia's medical services exports at TD69 million. These exports created more than 10,000 jobs (half of them in the health sector) and generated total revenues (including accommodations and other expenses) of TD133 million (table 5.1).

Engineering

About 12,000 engineers and 1,000 architects were employed in Tunisia in 2004, and about 2,000 companies specialized in design, engineering, and consulting services. Some of these companies, such as SCET Tunisia, STUDI, and COMETE, have emerged as leading engineering firms in the region.

For more than two decades, Tunisian engineering firms have exported their services—traditionally to other North and Sub-Saharan African countries, now to the Middle East and elsewhere. This early success resulted from the combination of several factors:

- Foreign participation through capital and technological transfers, including qualified personnel and know-how, which resulted in higher standards and a reputation for quality
- An initially largely protected domestic market, which enabled local firms to reach a critical size, gain experience, and then export

Table 5.1 Number of Foreign Patients and Volume of Exports in Tunisia, by Nationality, 2004

<i>Nationality of patient</i>	<i>Number of foreign patients</i>	<i>Exports (TD million)</i>	<i>Exports/Total clinics' output (TD million)</i>
Libyan	34,034	22.35	19.50
Algerian	1,320	0.84	0.70
European	4,484	2.80	2.40
Other	2,373	1.68	1.50
Total	42,211	27.67	24.14

Source: Lautier 2008.

Note: Based on a 2003 survey of 79 private clinics in Tunisia.

- A voluntary donors' policy to short-list African engineering firms for projects in the region.

Engineering in Tunisia is the most open of all professional services sectors and also the most successful in international markets. Major companies achieve double-digit growth rates, and trade takes place under all four modes of delivery (cross-border supply, consumption abroad, commercial presence, and presence of natural persons).

Accounting

As of 2004, Tunisia had 464 accountants (working in 110 accounting firms) belonging to the *Ordre des Experts Comptables* and 160 declared tax advisers, 40 of whom belong to the *Chambre Nationale des Conseils Fiscaux*. The profession has grown rapidly, with a doubling of the number of accountants between 1997 and 2004. Access to the profession remains very selective, however, with only about 30 of more than 1,000 candidates passing the exam each year.

The Big Four (KPMG, PricewaterhouseCoopers, Ernst & Young, Deloitte & Touche) account for almost all of Tunisia's international trade in accounting. The Tunisian offices of these companies are entirely Tunisian. However, they have no foreign capital or foreign accountants primarily because of nationality requirements. The presence of these foreign names has been extremely beneficial to the profession in Tunisia, contributing to raising standards and to training a number of accountants who could later launch successful individual high-caliber practices. These firms employ a large number of accountants and staff (more than 100 for the largest of them).

Because of the limited size of the Tunisian market, trade is essential to the accounting profession: expansion (or even survival) requires export opportunities. It takes place under all four modes of delivery. Up to a third of the Big Four's clientele are outside Tunisia. These clients are reached through modes 1 (through e-mail) and 4 (through movement of accountants and staff abroad). More than half of their clientele are foreigners (20 percent of trade takes place under mode 2). Mode 3 is the least developed mode; only five Tunisian firms have offices abroad (in France).

Trade flows in the sector are not measured. Accounting is one of the most promising candidates for statistics improvement. Accountants and auditors are required to declare some specific missions to the *Ordre des Experts Comptables* (although firms have not diligently done so). This

information could be collected to determine how much of their business is conducted with foreigners. The *Ordre des Experts Comptables* has recently started offering a service in which it handles visa applications to the French Embassy for accountants planning business travel abroad. Information about visa requests could help determine the importance of mode 4 for the profession. It could also help determine whether the profession is facing serious obstacles to mobility.

Outsourcing could create new trade opportunities for Tunisian accountants and bookkeepers. So far, only three or four accounting firms are processing data for accountants based in France. These activities might expand in the future, because of technological progress and potential savings for French companies. Obstacles remain, however, and new software applications already threaten the core activity of this trade (data processing).

Legal Services

Tunisia had about 5,000 lawyers in 2004, and the number is expected to double by 2012. The *Ordre National des Avocats* has suggested tightening access to the profession (through creation of a new professional school, discussed below), with a view to limiting the flow of new entrants.

The profession remains dominated by individual practices. Only a dozen specialized law firms have emerged with significant international practice; up to 90 percent of this practice is with foreign clients (modes 1 and 2). These firms remain very small, and they serve largely as correspondents of major global law firms (mode 1 exports), without being fully integrated. Only one law firm has offices abroad (mode 3 exports).

The profession is strictly regulated and largely closed to foreign practitioners. However, this lack of openness does not prevent global law firms from doing business with Tunisian firms: some major companies present in Tunisia seek legal advice abroad. Mode 1 has become a substitute for mode 3, increasing leakages in legal services trade.

ICT-Enabled Services

The government has undertaken several initiatives in the areas of infrastructure upgrading, human resource development, and regulatory reform to meet its ambitious objectives for the ICT sector. Examples include major telecommunications reforms (such as the licensing of private mobile phone and Internet access providers), institutional innovations (such as

the establishment of the Institut National des Télécommunications and the Agence Nationale des Fréquences), and public promotion programs (such as family computer programs and Internet connection of all schools). Tunisia hosted the World Summit of the Information Society in 2005, which provided an international showcase for the country's achievements in the ICT sector and its commitment for further development.

Between 1997 and 2005, the number of ICT firms almost tripled. The sector's contribution to GDP increased from 4.6 percent in 2002 to 7.0 percent in 2005, with employment in the sector rising from 40,200 to 55,200 over the same period. Export revenues surged from TD23.8 million in 2002 to TD51.0 million in 2005.

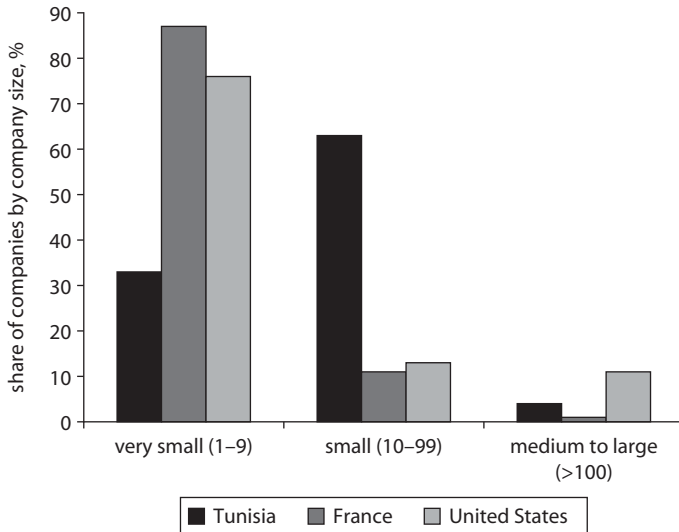
Most employment and revenues in the sector are generated by a few large public sector firms. Tunisie Telecom alone accounts for about two-thirds of sectoral revenues, and only 40 percent of the remaining revenues are estimated to accrue to private telecommunications and Internet access providers (IDATE 2005). The almost 1,300 private sector IT enterprises, which employed about 10,000 people in 2005, accounted for only about 20 percent of total sectoral output.

Within the telecommunications subsector, the establishment of call centers initially lagged developments in other Euro-Mediterranean countries, notably Morocco, but quickly caught on. After the first two call centers were set up, in 1999, the number of centers and related employment increased steadily. In 2005, 65 call centers were in operation, providing employment for 5,200 phone operators.

Despite the growth of the ICT sector, the impact on employment remains limited. About 1.8 percent of the economically active population work in the sector. Hence, although a continuing strong expansion would provide opportunities for underemployed graduates of technical schools and universities, it would have only a modest effect on the overall unemployment rate. Nevertheless, strong growth of ICT jobs could make an indirect contribution to poverty reduction, as the value added per ICT employee is about four times the national average. ICT expansion would thus add considerable purchasing power to the economy, which could raise demand for goods and services that are or could be produced by the poor and underemployed.

Most ICT firms in Tunisia are relatively young and small: about 80 percent have fewer than 50 employees (figure 5.5). Tunisia has fewer companies with fewer than 10 employees than high-income countries, however. This structural peculiarity may reflect the fact that private sector demand for ICT-enabled services is still nascent in Tunisia, which

Figure 5.5 Size Distribution of ICT Companies in Tunisia, France, and the United States, 2004



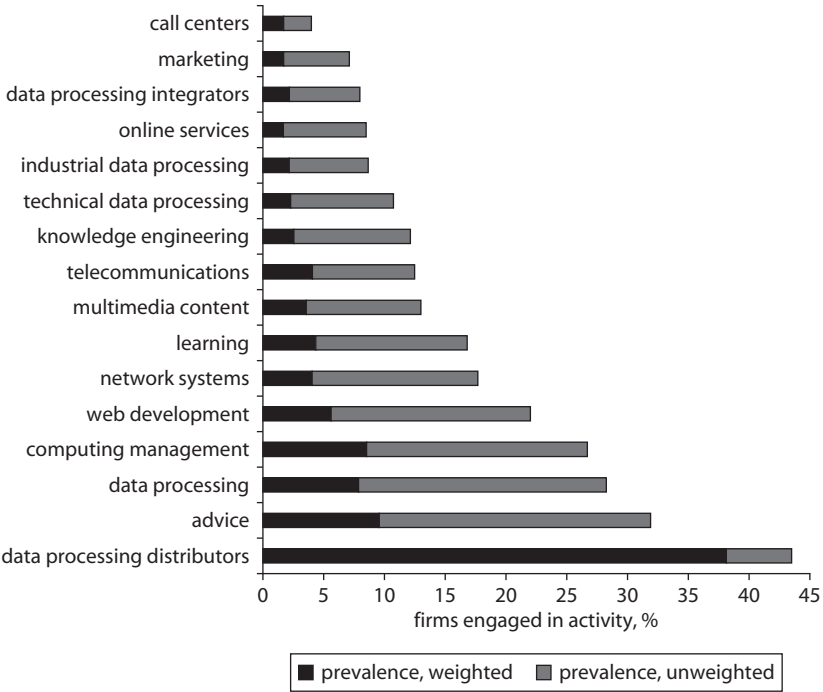
Source: IDATE 2005; McKinsey Global Institute 2005a.

therefore does not support many one-person companies targeting the supply of very specialized service products. Indeed, most demand for ICT services in Tunisia comes from public sector enterprises, which typically order larger-scale service packages.

A related observation concerns the scope of activities of ICT firms. Analysis of 577 ICT companies listed in the 2005 industry directory (*Symboles Média*) reveals that almost half of all firms (and more than 70 percent of all nonretail firms) pursued more than one ICT service activity (figure 5.6), with some engaging in as many as 13 tasks. This broad scope of service activities may be related to unstable domestic demand, which makes a high degree of specialization undesirable.

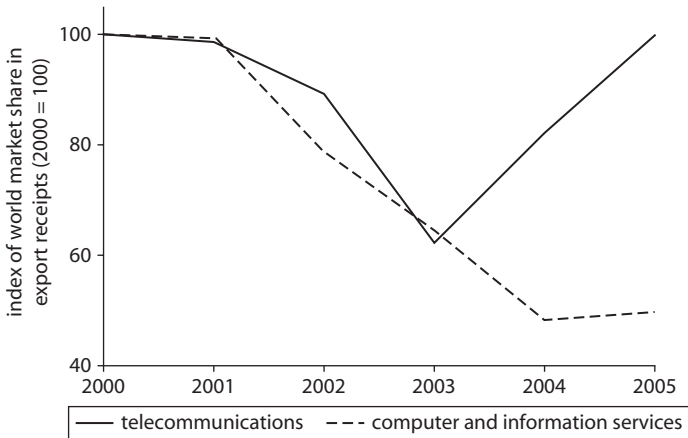
The export success of Tunisia's ICT service providers has been mixed. Although export receipts have increased in absolute terms, the country has been losing world market share in this very dynamic segment of international trade. Telecommunications and IT services reveal different pictures. Export receipts from telecommunications services increased as a result of strong call center activity, but the share of receipts from computer and information service exports stabilized in 2005 at about half the 2000 level (figure 5.7).

Figure 5.6 Activities of ICT Companies in Tunisia, 2004



Source: Symboles Média 2005.

Figure 5.7 Index of Tunisia’s Share of World Export Receipts, 2000–05



Source: Authors’ calculations, based on IMF 2006.

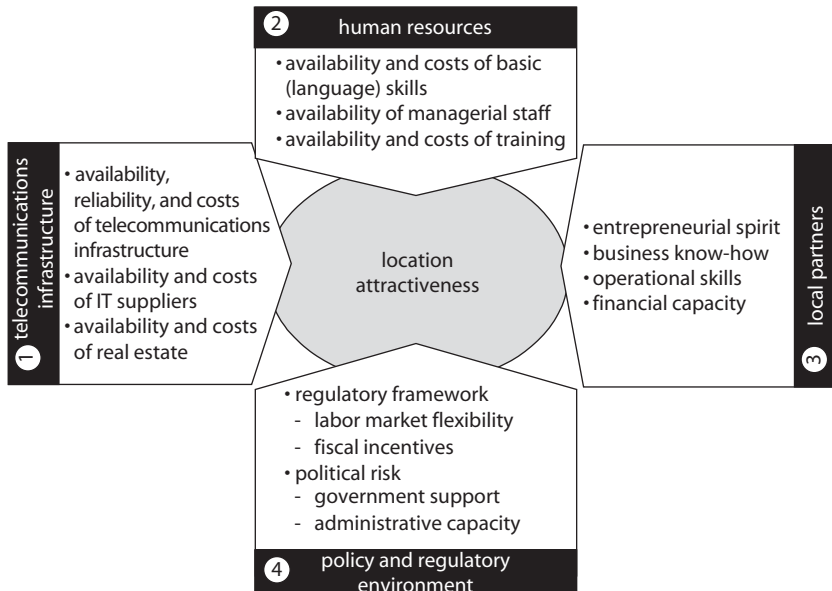
Note: World market includes all countries that reported export statistics in all years 2000–05.

These findings should be treated with care, because information on trade in services is difficult to compile and the quality of statistics may not be as good as that on merchandise trade. That said, the analysis highlights the difference between the telecommunications and IT segments of the ICT services sector. It also suggests that the strong headline statistics on the contribution of the sector to GDP and employment are apparently driven exclusively by dynamic developments in the domestic telecommunications sector, notably following the opening of the mobile phone market, and are not necessarily mirrored in international market success.

Are Tunisia's Emerging Export Services Internationally Competitive?

Tunisia has a number of strengths that suggest potential for expansion of professional and ICT-enabled services (figure 5.8). In offshoring, locational attractiveness depends on several factors, including financial structure, people skills and availability, and the business environment.

Figure 5.8 Multidimensional Attractiveness of Offshoring



Source: Authors' representation.

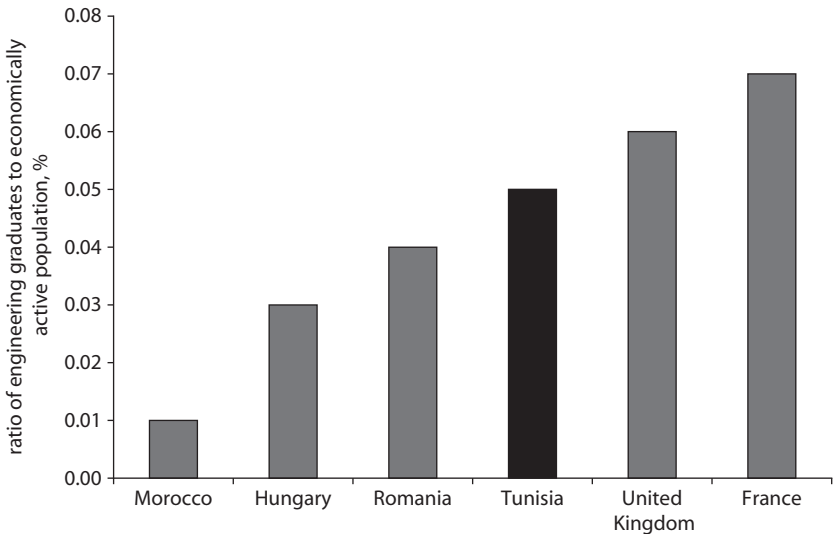
Some observers assign greater importance to financial considerations (compensation, infrastructure, real estate, and regulatory costs) as the main driver of offshoring decisions. In fact, the other dimensions, examined below, are just as relevant (A. T. Kearney 2004).

Strong Human Resource Base

Tunisia boasts a relatively large number of engineers and technicians—as a share of population, almost five times the number in Morocco and almost as many as the United Kingdom (figure 5.9). The number of graduates in science and engineering has been increasing rapidly, more than tripling between 2002 and 2008 to 23,473. As a result, the ratio of science and engineering graduates to the 20–29 cohort increased from 0.4 percent to 1.1 percent.

In addition to a high level of education and expertise, reputation is key in professional and ICT-enabled services. Tunisia scores well on this front. Many of its most eminent doctors, engineers, accountants, and lawyers obtained their degrees abroad (in France, Canada, Belgium, or the United States). Exchange programs have been developed (between French and Tunisian hospitals, among others), and some joint degrees are put in place (between the University of Lyon III and the universities of Tunis and

Figure 5.9 Engineering Graduates as Percentage of Economically Active Population in Selected Countries, 2004



Source: FIPA 2006.

Sousse in accounting, for example). According to the Ministry of Higher Education, about 13,000 Tunisian nationals were studying abroad in 2004, 9,000 of them in France. Studies leading to professional services are particularly popular among these students: half of the scholarships granted to Tunisian students in France are in engineering (France in Tunisia, http://www.ambassade-france-tn.org/france_tunisie/). This exposure has contributed to a harmonization of standards between France and Tunisia, helped build networks across the Mediterranean, and strengthened Tunisia's reputation as a provider of high-quality services.

Standards are also essential. In accounting, Tunisia (along with Canada) is one of the most advanced francophone countries in the implementation of the International Financial Reporting Standards (although some lacunae remain in the adoption of the most recent updates and the presentation of accounts required by the Tunisian government). One Tunisian accounting firm even obtained the Public Company Accounting Oversight Board certification, which is required for auditing U.S. firms. The leading engineering firms are also certified by the International Organization for Standardization (ISO). In contrast, most health clinics have neglected to adopt international standards, putting them at a disadvantage with respect to their competitors in Asia, which are systematically ISO certified. A strategy to develop medical tourism will need to remedy this neglect.

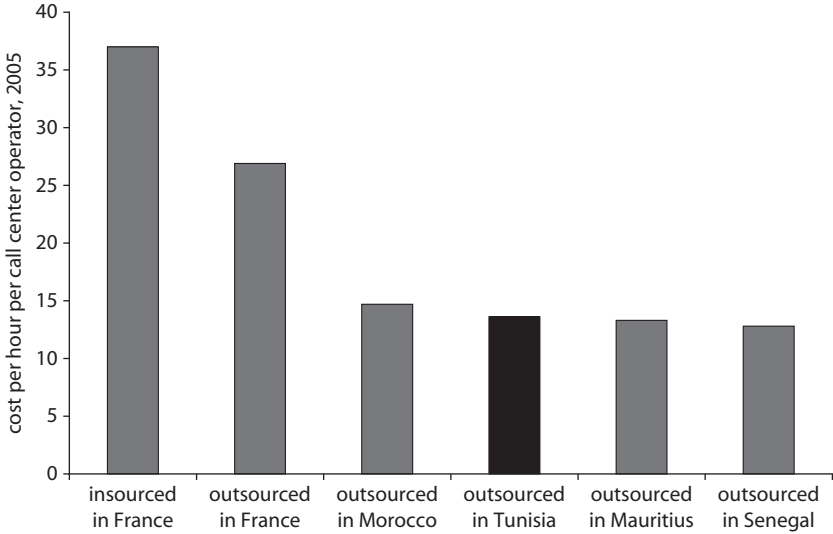
Competitive Compensation Costs

With its rich supply of well-trained technical graduates willing to work at moderate wages, Tunisia is in a relatively strong position as an exporter of services. Operating a call center in Tunisia costs about 50–70 percent as much as doing so in France (Roland Berger 2006). Tunisia has a slight cost advantage over its main competitor, Morocco, and is only marginally more expensive than Mauritius and Senegal, which tend to provide less sophisticated services (figure 5.10).

Industry surveys frequently cite low wage costs as a competitive advantage for Tunisian service providers (figure 5.11). Combined with proximity to Europe and good infrastructure, this cost advantage makes Tunisia a serious potential contender in the services sector.

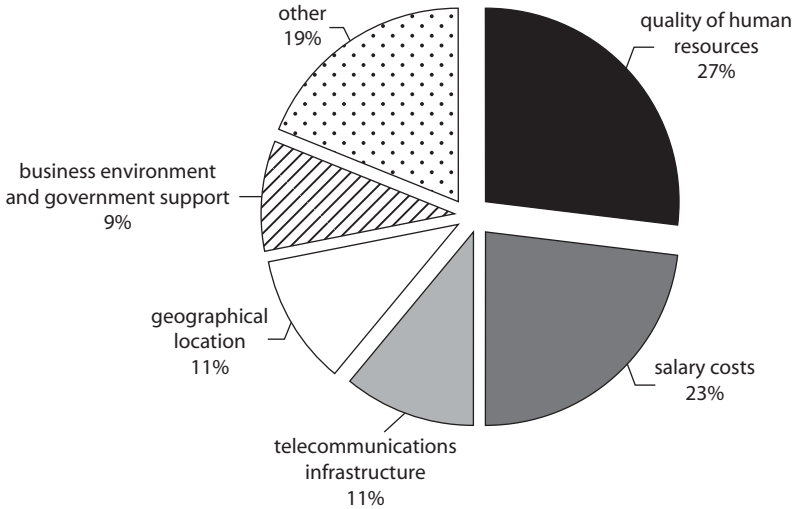
Tunisia's professional services seem equally cost competitive. Tunisian companies can provide high-quality engineering services at a lower price than their European competitors: according to the Association Nationale des Bureaux d'Etudes et d'Ingénieurs Conseils (ANBEIC), on average, Tunisian engineers are paid one-third less than their European counterparts. As a result, Tunisian engineering firms can offer their services at a substantially lower price than European competitors.

Figure 5.10 Cost of Operating a Call Center in Selected Francophone Countries, 2005



Source: Roland Berger 2006.

Figure 5.11 ICT Professionals' Perceptions of Strengths of Tunisia as Exporter



Source: Grupo Santander, Louis Lengrand and Associés, and Banque d'Affaires de Tunisie 2005.

Note: Responses are based on survey of 40 ICT firms in Tunisia.

Other developing countries (for example, China) appear to be more competitive than Tunisia for less technically challenging tasks. Tunisia's advantage appears to be in the provision of higher value-added services. Therefore, any sector development strategy should focus on improving the supply of highly trained professionals, to keep salaries low relative to Europe without attempting to compete in low value-added segments of the market.

Comparison of prices of the most common cosmetic surgery procedures around the world leads to the same conclusion: Tunisia is less expensive than Europe (including Central and Eastern Europe and Turkey) but more expensive than some Latin American and Asian countries (table 5.2). The country's attractiveness rests mainly on cultural and

Table 5.2 Costs of Most Popular Cosmetic Surgery Procedures in Selected Countries, 2005

	<i>Rhinoplasty (nose reshaping)</i>	<i>Breast augmentation</i>	<i>Alteration of upper and lower eyelids</i>	<i>Facelift</i>
<i>Europe and United States</i>				
Belgium	2,400–4,200	3,000–5,000	2,400	2,400–4,500
Croatia	1,700–2,200	3,400	2,100	4,000
Czech Republic	2,700	3,500	1,800	3,000
France	2,500–3,500	4,000	2,000–3,000	4,500–6,000
Germany	5,100	4,500	2,800	5,100–9,000
Spain	3,600	4,400	3,100	4,800
Turkey	2,400	2,600	2,000	2,400
United Kingdom	4,500–6,000	5,200–7,500	3,000–5,500	6,000–9,000
United States	6,500 and up	6,500 and up	4,000 and up	8,000–12,000
<i>Africa</i>				
Egypt, Arab Rep. of	2,200	3,000	1,800	3,100
Morocco	1,500	2,000	1,200	2,200–2,900
South Africa	3,100	3,300	2,700	4,900
Tunisia	1,800–1,900	2,300–2,600	1,400–1,800	2,700–3,600
<i>Latin America</i>				
Brazil	2,300	3,500	2,300	3,000
Costa Rica	1,200	2,200	1,200	2,400
<i>Asia</i>				
India	1,300–2,400	2,000–3,900	1,500–1,800	2,700–4,200
Philippines	800–1,800	2,000–3,300	1,300	1,300–2,400
Thailand	1,600–2,200	1,800–2,300	800–1,200	2,600–2,800

Source: Web sites of selected private clinics.

Note: Prices were collected from Web sites of clinics offering plastic surgery procedures; they do not necessarily reflect the complete range of prices.

linguistic ties to France, proximity to Europe (2.5-hour flight from Paris), and the quality of the service provided (because of highly trained medical professionals and efficient travel operators.).

Lack of Scale and Poor Telecommunications

The small size of businesses is a feature of professional services in the developing world. Tunisia is an extreme case, however, with a predominance of family-owned businesses. This often results in management and marketing problems. Access to credit (including export credit) is limited, because these enterprises lack physical collateral. For the professional service sector as a whole, credit represents just 5 percent of output (the figure is 10 percent in tourism or manufacturing).

Lack of sufficient scale characterizes all professional services in Tunisia:

- In the medical services sector, the number of beds per clinic is limited. As a result, clinics cannot offer a complete range of services, and they often lack the size needed to become major exporters of medical services. By contrast, some private hospitals in Thailand are listed on the stock exchange.
- In the engineering sector, only three firms provide services to international markets, and even they are relatively small (hundreds of employees compared with thousands in other countries). There are about 2,000 microfirms that will never reach the critical size to become significant exporters.
- In the accounting sector, only the Big Four are large enough to export services.
- In the legal sector, the number of specialized law firms is very limited (about a dozen), each with a maximum of 40 lawyers. By comparison, Morocco has attracted a dozen foreign law firms, each employing up to 250 lawyers.

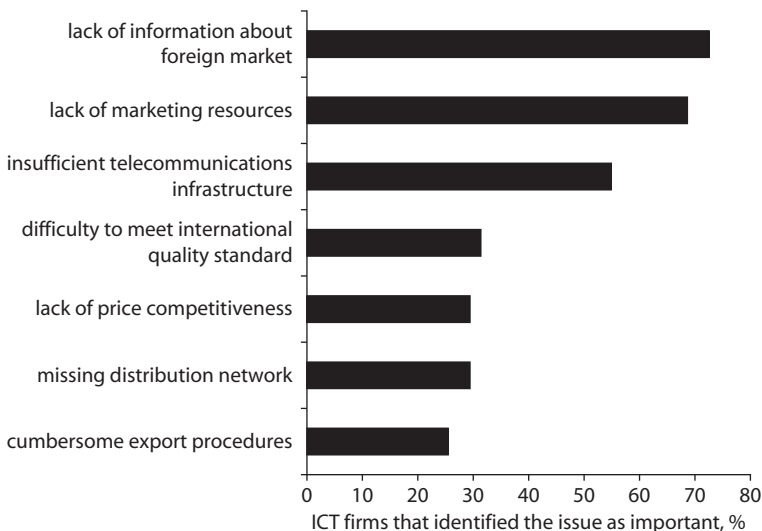
In the ICT sector, the government has made substantial efforts to promote computer and Internet use by households and in the public sphere (schools, government agencies). As a result, IT penetration has increased steadily, reaching 15 Internet subscriptions and 50 computers per thousand inhabitants in 2005. In comparison with high-income countries, however, the level of IT use remains low, and IT spending per capita is only a fraction of that in most Organisation of Economic Co-operation and Development (OECD) countries. The private domestic market for IT products is thus small.

With only modest private sector demand, ICT firms interested in expanding have the option of either supplying public sector organizations or searching for clients abroad. Many choose the public sector route, despite complaints about lengthy and cumbersome tendering procedures and slow payment. In a sample of companies polled, less than a third reported earning more than 30 percent of their revenues from exports, and less than 6 percent claimed that they were oriented more toward the international than the national market (IDATE 2005).

The lack of export orientation can be partly attributed to the predominance of young, small firms that lack overseas contacts, project references, and the funds necessary to acquire and execute international orders. Many start-ups are dominated by engineers, whose main strengths are on the technical rather than the marketing side of the business. Indeed, more than two-thirds of ICT firms cite the lack of information about overseas markets and the shortage of marketing resources as important impediments to exports (figure 5.12).

More than half of all surveyed firms also complain about insufficient telecom infrastructure. Given the government's major investments in the network and far-reaching reforms of telecommunication regulation, such a finding may appear surprising. Yet segments of the telecommunications

Figure 5.12 Impediments to Exports Cited by ICT Professionals in Tunisia



Source: IDATE 2005.

Note: Responses are based on a survey of 51 ICT firms in Tunisia.

sector have not undergone any significant liberalization, and the monopolistic power of the incumbent service provider seems to result in poor service quality. Indeed, the general manager of a call center visited by a World Bank team reported that he had a phone service outage for many hours the previous day (and similar service cuts over the previous year). He was furious about the lack of responsiveness of the telecom operator and even more upset about his lack of alternative providers.

What Needs to be Done to Strengthen Competitiveness?

One area of cross-cutting importance concerns the quality of statistics about structures and developments in trade in services that is available to policy makers. Better statistics are needed to enable the government to design suitable sectoral trade promotion strategies, including strategies for cooperation at the interministerial level. International statistical guidelines and good practices are contained in the Manual on Statistics of International Trade in Services, developed and published jointly by the European Commission, the International Monetary Fund, the OECD, the United Nations, the United Nations Conference on Trade and Development, and the World Trade Organization (WTO). (The document—UN document ST/ESA/STAT/SER.M/86—is available on the Web sites of the six organizations.)

Tunisia has multiple tools in hand with which to develop trade professional and ICT-enabled services. Most progress could be achieved through unilateral reforms. Bilateral agreements—conventions on health, mutual recognition of diplomas or qualifications, and facilitation of the movement of people, for example—have also proven to be a useful and pragmatic approach to opening foreign markets. Regional negotiations could help promote a deeper integration of professional services within the Maghreb region and with Europe: beyond the removal of obstacles to trade, this level of negotiations facilitates harmonization of standards, practices, and regulatory frameworks. Tunisia could use the WTO to trade existing and prospective reforms for further market access with its major trading partners. It could use international commitments to anchor domestic reforms, protect the government against future pressure of interest groups, and send a positive signal to foreign investors. Specific areas of reform are described below.

Strengthen University Training and Professional Standards

Professional and ICT-enabled services are among the high value-added activities that Tunisia could develop to diversify its exports and avoid falling

into the trap of directly competing with low-paid and low-qualified workers in other developing countries. Significant investments in education and standards improvement are needed if it is to do so.

Professional education and training in Tunisia have some shortcomings (World Bank 2007). For some university degrees (management, finance, law), the number of graduates greatly exceeds the absorption capacity of the labor market. As a result, more than two-thirds of all law graduates remain unemployed 18 months after finishing their studies (World Bank 2007). To remedy the problem, the universities need to find ways to improve the employability of their students and channel more of them into career paths with good employment prospects, such as engineering.

In all professional services sectors, efforts are being made to reform training. For example, in May 2006 a new law created a professional school dedicated to training lawyers. This school supplements other teaching institutions. Admission to the school is open to students with undergraduate law degrees who successfully pass an entry examination. The reform was intended to provide entrants to the legal profession with specialized knowledge and training, thereby improving the quality of new lawyers. This reform is welcome. The profession has concerns, however, about the independence of the new school (and the profession), which is under the government's supervision. Lack of independence could be a serious drawback for the profession and trade.

The quality of Tunisian medical doctors is good, but the training of nurses, midwives, and other support and paramedical staff is often inadequate. A reform of nurses' training was initiated in 2006 to recruit at the baccalauréat level and provide three years' training in nursing schools (at the university level). More effort must be made to teach languages if Tunisia wants to develop medical tourism activities. Paramedical disciplines (for example, thalassotherapy, nutrition, physiotherapy) could be developed to meet the needs of health and well-being tourism.

Looking forward, the government should maintain the pace of reforms in professional education to preserve the reputation of the Tunisian workforce for solid qualifications and high-quality service. It should adapt training to the needs of the global market and introduce international standards where appropriate.

Review Restrictions to Market Access

Liberalizing and opening professional services is not about suppressing domestic regulations: on the contrary, the maintenance of high-quality service and the protection of consumers against malpractice are essential

to the reputation and trade success of a country. Sometimes liberalizing means adopting new rules. Some rules are more restrictive than necessary to achieve legitimate policy objectives (such as the protection of consumers), however.

In Tunisia, the interests of professionals seem to prevail over those of consumers. The lack of openness limits competition on the domestic market, with the most efficient firms primarily supplying their services abroad (duality of the market). Tunisian consumers and businesses would therefore be the main beneficiaries of the removal of unnecessary obstacles to trade in professional services.

Some obstacles (for example, nationality requirements) are common to most professional services; others are sector specific. The restrictiveness index developed by Nguyen-Hong (2000) indicates that regulation of professional services is strict in Tunisia relative to other countries (table 5.3). Creating a census of all rules that affect trade in each sector would be useful in the context of regional and multilateral negotiations. (Morocco completed this exercise in the lead-up to its free trade agreement with the United States.)

Medical services. Many countries providing medical services to foreigners attract big names from abroad to promote their facilities. Tunisia's requirement that only nationals can practice medicine in Tunisia has a negative impact on medical tourism. Foreign doctors can provide and receive training in Tunisia, with the authorization of the Ministry of Education and the Ordre des Médecins, but they cannot practice in Tunisia. These nationality requirements largely defeat the purpose of agreements on the mutual recognition of diplomas.

These restrictions apart, Tunisia suffers more from a lack than an excess of rules on medical tourism. The government could take a new look at the corpus of rules to adjust it to the needs of this new form of trade and ensure respect of medical ethics and good practices.

Engineering. Engineering is the most open of all professional services sectors in Tunisia, a common feature in many countries (architecture remains more regulated). Nationality requirements are a problem, and foreigners face limitations in practicing engineering in Tunisia. Many engineering firms provide consulting services, however, which foreigners are permitted to provide. Some foreigners hold managerial positions in leading Tunisian engineering firms. Diplomas are more readily recognized across borders than in other professions.

Table 5.3 Potential Regulatory Obstacles to Trade in Professional Services in Tunisia

<i>Type of restriction</i>	<i>Medical services</i>	<i>Engineering and architecture</i>	<i>Accounting, auditing, bookkeeping, and taxation</i>	<i>Legal services</i>
Form of establishment	Clinic, hospital, individual practice	Bureau d'études or individual practice	Cabinet d'audit	Société d'avocats or individual practice
Foreign partnership, association, joint venture	Authorized, restrictions apply	Authorized, restrictions apply	Prohibited	Prohibited, exception for legal counsel
Investment and ownership by foreign professionals	Authorized, restrictions apply	Authorized, restrictions apply	Prohibited	Prohibited, exception for legal counsel
Investment and ownership by nonprofessional investors	Authorized, restrictions apply	Authorized, restrictions apply	Prohibited	Prohibited, exception for legal counsel
Nationality/citizenship requirements	Must be Tunisian	Must be Tunisian	Tunisian for at least 5 years	Tunisian for at least 5 years
Residency and local presence	No	No	No	Must be a resident
Quotas/economic needs tests on the number of professionals and firms	Numerous clauses (e.g., for example, pharmacy and inhabitants)	No, but for initial selection	No, but for initial selection	For some professions (e.g., notaries)
Licensing and accreditation of foreign professionals	Possible recognition of foreign diplomas	Possible recognition of foreign diplomas	Possible recognition of foreign diplomas	Possible recognition of foreign diplomas

(continued)

Table 5.3 Potential Regulatory Obstacles to Trade in Professional Services in Tunisia (Continued)

<i>Type of restriction</i>	<i>Medical services</i>	<i>Engineering and architecture</i>	<i>Accounting, auditing, bookkeeping, and taxation</i>	<i>Legal services</i>
Licensing and accreditation of domestic professionals	Inscription on the Tableau de l'Ordre des Médecins	Inscription on the Tableau de l'Ordre des Architectes or Ingénieurs	Inscription on the Tableau de la Compagnie des Experts Comptables	Inscription on the Tableau des Avocats
Movement of people	Usual visa conditions, exceptional authorizations to practice (e.g., training)	Usual visa conditions, exceptional authorizations to practice (up to 1 year)	Usual visa conditions	Usual visa conditions, some bilateral reciprocity agreements
Activities reserved by law to the profession	Yes, practice of medicine	Yes (e.g., architect mandatory for most buildings)	Yes (e.g., audit)	Yes (e.g., notary acts, pleading in courts)
Multidisciplinary practices	Authorized, restrictions apply	Authorized, restrictions apply	Authorized, restrictions apply	Prohibited, some exceptions
Advertising, marketing, and solicitation	Prohibited for doctors, authorized for clinics with restrictions	Authorized, restrictions apply	Authorized, restrictions apply	Prohibited
Fee setting	Yes, distinction between public and private	For some activities only (e.g., public buildings)	For auditing only	For some activities only (e.g., notaries)

Source: Authors, based on laws and regulations; restriction index based on Nguyen-Hong 2000.

Note: This table is not exhaustive: it gives an idea of potential regulatory obstacles to trade. The table does not address the adequacy of the domestic regulations. Some are fully justified to ensure the quality of the service; others may be more restrictive than necessary to achieve this end.

The regulation that most affects trade in engineering services pertains to public tenders for construction projects. A 2003 reform raised concerns among the Tunisian engineering community because of the increased weight of prices in the selection process (and the concomitant reduction in emphasis on quality). Some firms interviewed suggested that this regulation prevented new engineering firms from emerging and exporting after gaining enough experience on the domestic market. According to some Tunisian engineers, most reputable Tunisian firms can no longer compete, despite good quality, because of the low prices offered by foreign competitors. The regulation suggests that different rules be applied for “complex orders,” but administrative burdens attached to these orders have prevented any public body from characterizing a tender as “complex.” Harmonization of these rules with those of European Union or African countries could be useful.

Accounting. To become an accountant in Tunisia, a person needs to have been a Tunisian national for at least five years. This regulation restricts the establishment of foreign firms, although the Big Four have opened offices owned and staffed entirely by Tunisians (these firms use the name of a foreign company but are fully Tunisian).

Auditing is subject to strict price controls, aimed at ensuring that the cost of compliance with auditing requirements is not excessive for businesses. Some firms interviewed suggested that the market could adequately regulate prices and that the rules do not promote improvements in quality. Some flexibility could be introduced to take better account of the difficulty of certain audits. Opening the profession could also help promote higher quality at a lower price.

Legal services. Legal services are the most regulated of all professional services in Tunisia, where it is impossible for foreign firms to practice law. Only one foreign law firm has opened an office in Tunis (with great difficulties), with a practice limited to “legal counseling” (a profession that is not regulated).

Barriers to trade vary within the legal services sector. Notaries are even more heavily regulated than lawyers. The result is a closed sector that has not taken off, despite signs of dynamism and legal services trade in more open neighboring countries.

Throughout the world, the specificity of national laws makes it difficult for legal professionals to practice in foreign countries. However, the level of protection in place in Tunisia is not justified on consumer protection grounds. The government could revise rules in the light of the prospects for rapid growth in the worldwide services market.

Encourage Structural Consolidation

The small size of most professional services and ICT firms and the lack of large offshoring companies means that Tunisian professional and ICT services have low visibility abroad. A structural approach that balances a strong small and medium-size enterprise sector with scale-efficient national firms and affiliates of multinational companies seems to be called for.

The government recognizes the size-related obstacles to development of the ICT sector and has been trying to establish technology clusters in order to promote information exchange and business contacts. It has established five regional cyber parks to promote the creation of ICT clusters within office complexes that can accommodate 50–80 technical employees each (box 5.1). By 2005, the five complexes together housed 48 ICT companies (software development, Web site maintenance, call centers), with a total staff of about 300.

In the professions, scaling up is a necessary step to international competitiveness: trade has to play a major role in the structural consolidation

Box 5.1

Promoting Exports through a Technology Park

The 65-hectare El Gazala technology park, outside Tunis, has been in operation since December 2001. It serves as an incubator for new enterprises, providing advice and financial support during the start-up phase, establishing an industry network and contacts with universities and international firms, organizing training and information exchanges, and managing the common infrastructure and property. By 2005, El Gazala housed 38 companies, including affiliates of four multinationals (Alcatel, Ericsson, Huawei, and ST Microelectronics), and employed about 1,000 people.

The ICT companies in El Gazala appear to be more export oriented than the industry average. This may reflect the administrative and managerial support available as well as the greater opportunities for international contacts that the park provides. More than a third of the companies installed in the park, employing half of all staff, work exclusively for export. Another sixth export at least a third of their output. Further development of the park could foster ICT service exports and help overcome the scale disadvantage many Tunisian firms face when trying to export.

Source: Elgazala Pole of Communication Technologies, <http://www.elgazalacom.nat.tn>.

of the sector. The accounting and engineering sectors suggest that partnerships with foreign firms help promote the sector's concentration and competitiveness. This, however, is not enough to ensure the long-term growth of the sectors. Private sector efforts must be supported by coherent governmental policies.

In the medical services sector, structural consolidation should start at the government level. Countries that have been the most successful in the health tourism race, such as Thailand and India, have dedicated horizontal administrative structures that ensure coherence of strategies across ministries and actors. In 2004, for example, Thailand's ministries of commerce and health collaborated to design a five-year strategic plan for medical tourism. An integrated approach would also ensure that key (and scarce) human resources are not diverted from the domestic market. The costs and benefits of an offshore approach to health tourism could be balanced with alternatives such as the authorization of private hospitals open to both foreigners and locals (along the Asian model). In the legal sector, the partial liberalization of trade could be an integral part of legal and judicial reforms (including legal training).

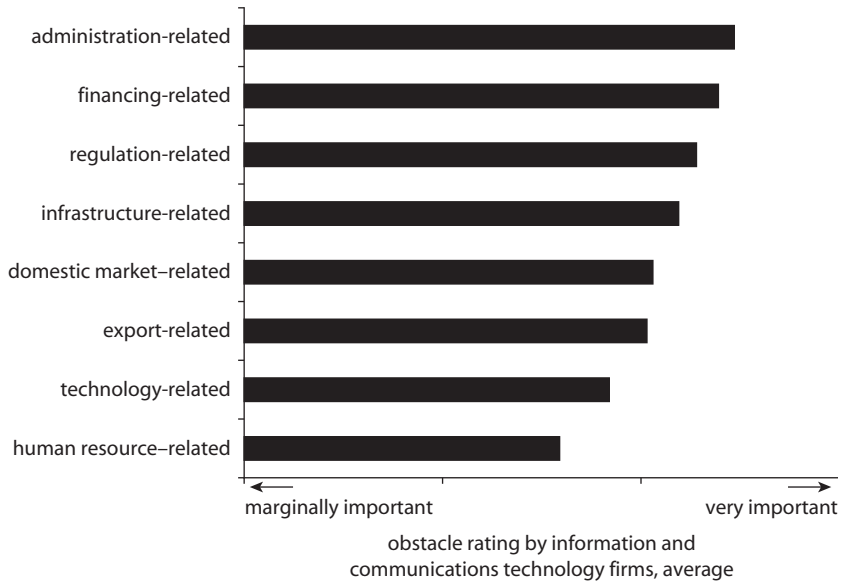
Address Administrative and Financing Constraints

Because of their limited managerial resources, small-scale enterprises, such as professional and ICT firms in Tunisia, are particularly vulnerable to the administrative burdens placed on them by regulatory requirements and strict conditions for access to credit. Indeed, in an enterprise survey, respondents cited administrative and financing obstacles as major factors limiting business and export development (figure 5.13). Recent university graduates with good business plans are held back by administrative requirements and lack of credit.

The government has set up risk capital schemes (the *Sociétés d'Investissement à Capital Risque* [SICAR]), but the take-up by ICT firms has been weak because of substantial collateral and guarantee requirements. At the same time, the Tunisian banking system is reluctant to grant credit to producers of services. Proactive efforts to strengthen the capital base of small-scale services firms and improve their access to credit appear called for to improve the business environment for professional and ICT services firms.

One opportunity for government action concerns public tenders. Procedures are cumbersome, 40 percent of public tenders are later cancelled, and payments are often delayed for several months (Grupo Santander, Louis Lengrand and Associés, and Banque d'Affaires de

Figure 5.13 ICT Professionals' Perceptions of Administrative and Financial Obstacles Facing Tunisian Firms



Source: Grupo Santander, Louis Lengrand and Associés, and Banque d'Affaires de Tunisie 2005.

Tunisie 2005). The government should streamline tendering practices and adopt more timely payment schedules to free up scarce managerial resources and help alleviate financial bottlenecks of small-scale services firms.

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CHAPTER 6

Anchoring Services Reform: The European Neighborhood Policy and Morocco

Ndiamé Diop

Backbone services—telecommunications, financial services, transport, and so forth—are crucial to the productivity and international competitiveness of Moroccan firms. They are critical inputs for both the domestic economy and the export sector. Opening them to competition and trade can help reduce production costs, increase foreign direct investment (FDI), promote vertical knowledge spillovers, and expand markets, all of which enhance competitiveness. Backbone services also affect the ability to competitively export goods and services. Efficient ports and maritime services, for example, are crucial for competitively exporting goods such as textile products; the ability to participate in business process outsourcing and to export information and communication technology (ICT)-enabled services (such as call centers) depends on the state of telecom services. Reducing restrictions on key backbone services can enhance competitiveness and lead to more choice, lower prices, and greater efficiency in general.

Morocco has made significant progress in its reform program, but performance in opening backbone services to private sector competition has

been mixed. Reforms are very advanced in telecommunications and air transport, which are among the most open and dynamic sectors in the country. In contrast, fewer restrictions to entry and competition could improve performance in banking, ports, maritime transport, and professional services.

This chapter examines how regulatory convergence with the European Union through the European Neighborhood Policy (ENP) framework can help Morocco further liberalize, upgrade, and modernize its backbone service sectors. The ENP is a new EU initiative that offers EU neighbors the prospect of moving beyond their existing relationship to forge a deeper degree of integration, including a stake in the internal market and the possibility of participating progressively in key aspects of EU policies and programs. It can constitute a powerful incentive for reforms.¹

The European Union is Morocco's largest economic partner, absorbing close to three-quarters of Morocco's exports and providing 63 percent of FDI flowing to Morocco. Morocco is already participating in EU production networks in textiles and clothing and increasingly in mechanical and electrical engineering.

Much of the potential for deepening integration with the European Union lies in services and agriculture. Both Morocco and the European Union have signaled their readiness to deepen integration in services. The question is how Morocco can make its regulations gradually compatible with those of the European Union to reduce cross-country and cross-jurisdiction differences that impede participation in the EU internal market.

The ENP offers Morocco the opportunity to lock-in reforms and effectively integrate some of its markets into the European Union's by helping anchor regulatory reforms. In the medium term, Morocco could achieve regulatory convergence in air transport, road transport, and energy. Regulatory convergence in banking and telecommunications can be envisaged only in the long term. In professional services, such convergence can occur only with some EU member countries, given the heterogeneity of regulations within the European Union. However, even in sectors and areas in which immediate convergence would not be the most appropriate strategy in the short to medium term, Morocco can benefit from twinning partnerships with EU member states to improve the quality of its institutions, in particular its supervisory and regulatory bodies.

Liberalization Reforms and the Openness of Morocco's Services Sectors

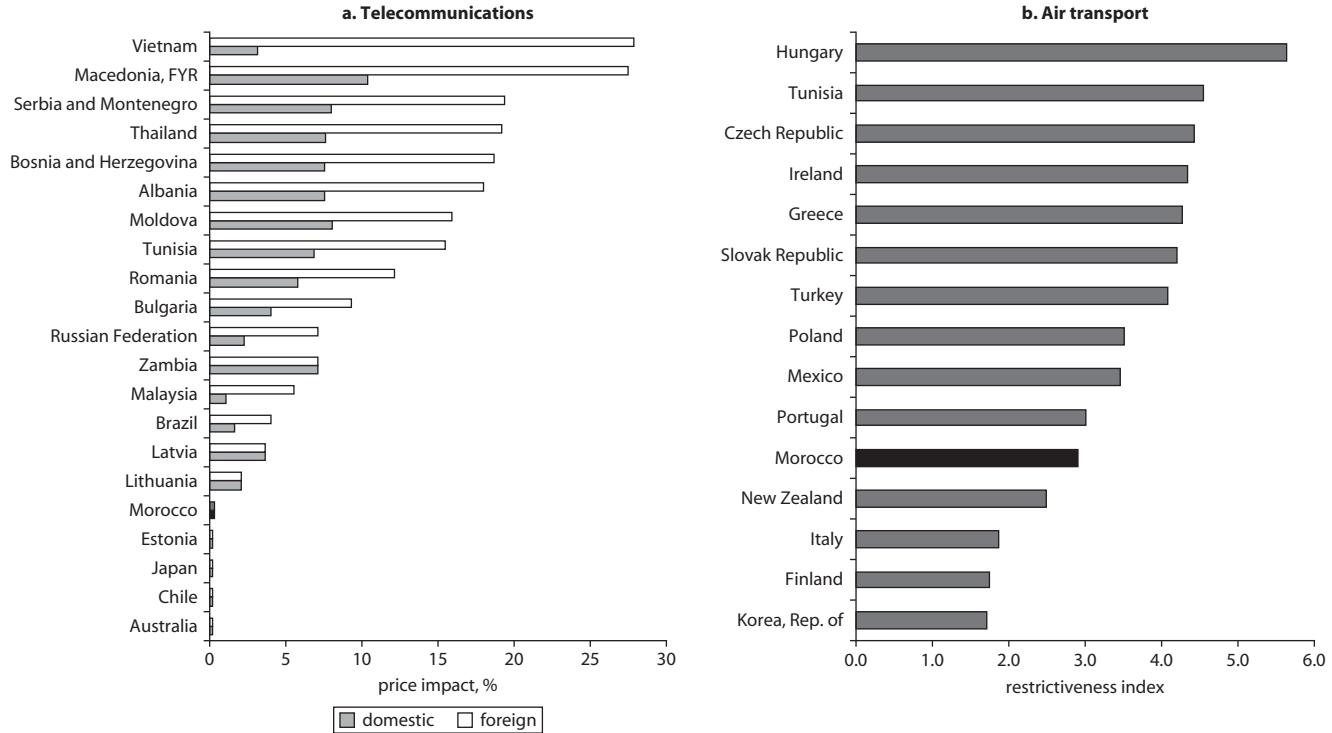
The reform of Morocco's backbone services is well under way. Almost all backbone services have opened up to a certain degree in recent years, with many restrictions that once constrained private sector participation and competition reduced unilaterally. Morocco's initial offer in the Doha Round represents a major improvement over its General Agreement on Trade in Services (GATS) commitments in terms of signaling and reform credibility, even if it merely consolidates recent unilateral reforms. It increases the sectoral coverage of commitments from 7 in its Uruguay Round Agreement schedule to 10. In the free trade agreement with the United States, Morocco went even farther, making new commitments under cross-border supply (mode 1) in 66 percent of the service sectors included in GATS and under commercial presence (mode 3) in 53 percent (Roy, Marchetti, and Lim 2006). Important concessions to U.S. services suppliers and investors were made, in particular in banking and insurance.

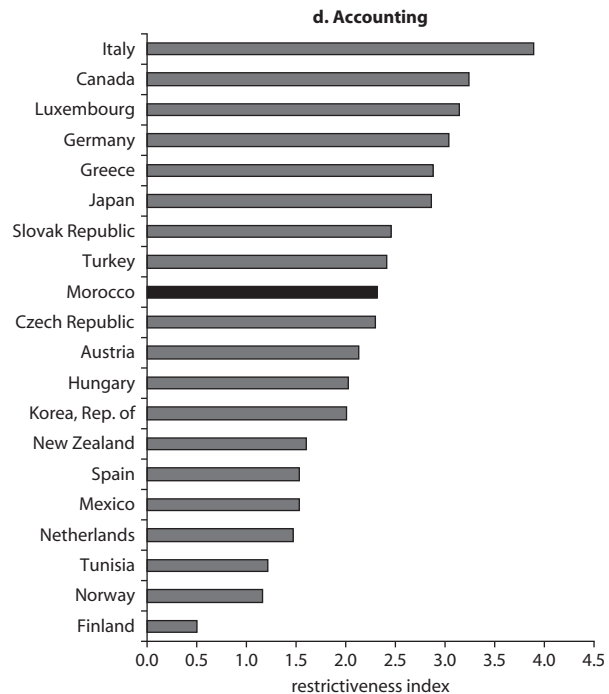
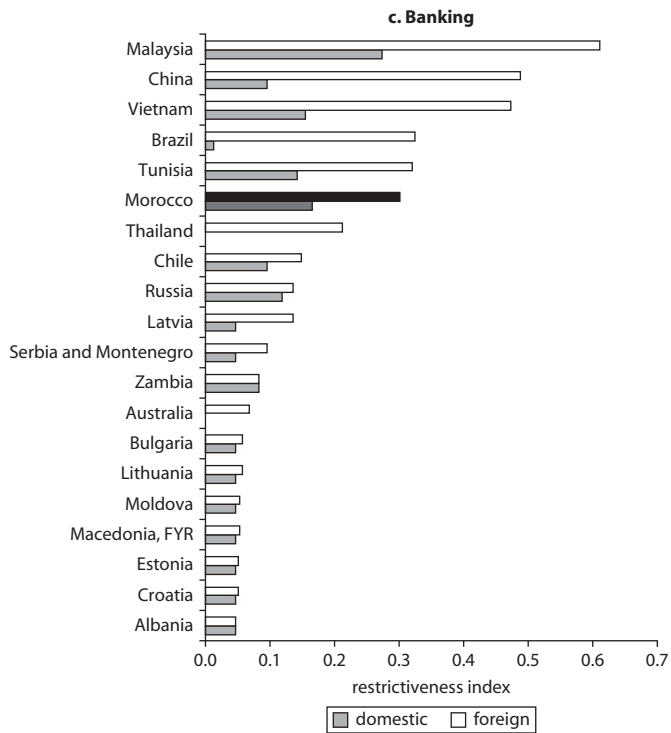
A World Bank study (World Bank 2007a) benchmarks the degree of openness of Morocco's service sectors against other countries using restrictiveness indices. It indicates that telecommunications, air transport, and accounting are Morocco's most open backbone services sectors (figure 6.1). The greater market contestability and competition in these sectors has had beneficial effects in the economy: better and more diverse services, lower prices, and spillover effects to the rest of the economy. Banking, engineering, and shipping services have an intermediate degree of restrictions and competition. Morocco scores worst in the shipping and ports sectors, in which regulation is very restrictive (World Bank 2007b). The score for maritime and ports is likely to change in the near future, as Moroccan ports are being reformed and private sector participation is expected to increase. These indicators are consistent with those calculated by a World Bank survey (World Bank 2007a) and by the Forum Européen des Instituts de Sciences Economiques (FEMISE 2007).

The Need to Strengthen the Regulatory Framework

The ENP covers a wide range of policy issues, both economic and noneconomic. On the economic front, it aims to build solid foundations for deepening economic integration between Europe and its neighbors to enhance trade, investment, and growth. Unlike the EU accession process,

Figure 6.1 Openness of Telecommunications, Air Transport, Banking, and Accounting Sectors in Selected Countries





Source: World Bank 2007a.

Note: Figures are for 2005–07.

which requires that candidates harmonize their regulations with the European Union by adopting the entire *acquis communautaire*, the ENP allows Morocco and other nonaccession countries to choose à la carte from the *acquis*, implementing only those regulations that are expected to yield significant benefits at low costs.²

The ENP offers a variety of new opportunities, including the following:

- Greater integration with the European Union, including the possibility of participating progressively in key aspects of EU policies and programs
- Convergence of economic legislation, which, combined with the continued reduction of trade barriers, should stimulate investment and growth
- Targeted technical assistance and twinning schemes, with a view to preparing convergence with EU legislation in the areas covered by the action plan (see below)
- Increased financial support from the European Union for implementation of all the sections of the association agreement and operations identified in the action plan, support from the European Investment Bank for infrastructure investment and private sector development, and partnership through the Facility for Euro-Mediterranean Investment and Partnership (FEMIP) facility.³

Morocco officially adopted an ENP action plan to achieve the reforms envisioned in the ENP in October 2005. The plan, currently being implemented, sets out priority reforms on both economic and noneconomic fronts, including the negotiation of an agreement on services, participation of Morocco in select areas of the internal market (such as the EU transport network), and reforms aimed at reinforcing the investment climate in Morocco.

Options for Regulatory Convergence with the European Union in Selected Sectors

The action plan considers the integration of the service sectors a precondition for deeper integration in other spheres. It is not, however, specific on how to achieve progressive and selective participation in the EU internal market. This section shows how the ENP tools can be used to anchor reforms in seven backbone service sectors. (For a discussion of the reform program in each sector, see World Bank 2007a.)

Telecommunications

Participating in the EU telecommunications market would require converging to the regulations indicated by the directives that govern the EU market (box 6.1). Doing so is necessarily a long-term effort, given the regulatory distance between Morocco and the European Union.

Box 6.1

Major Directives Governing the Telecommunications Sector in the European Union

More than 20 years after gradually opening the sector, the European Union enjoys fully competitive telecommunications markets in all member states except Ireland, Greece, Luxembourg, Portugal, and Spain. The abolition of barriers to entry into the sector has allowed the European Commission to focus, since 2002, on ensuring a common regulatory framework, competition principles, and competition practices for electronic communications, including telecommunications, media, and information technology services. Efforts have been made through five major rules: the framework directive, the authorization directive, the access directive, the universal service directive, and the local loop unbundling regulation. (For details, see the EU telecom page, at http://ec.europa.eu/information_society/topics/telecoms/index_en.htm.)

The framework directive emphasizes the independence of national regulatory authorities, which member states must guarantee; the right to appeal decisions by national regulatory authorities; mechanisms for imposing ex ante regulation on firms with significant market power; market definition and market analysis procedures; and national regulatory authorities' duties to resolve disputes within four months when negotiations on access and interconnections fail. The directive also introduces the principle of technological neutrality—the principle that there shall be no separation between different means of transmission for regulatory purposes. Equivalent rules apply to all telecommunications networks (fixed or wireless) and broadcast networks (terrestrial, satellite, and cable).

The authorization directive abolishes individual licensing and establishes a system of general authorization. Older licensing schemes for different telecommunications services (that is, public voice and data providers) and facilities-based and resale providers were removed within the European Union. The directive indicates that member states may require at most a notification. No permissions

(continued)

Box 6.1 *(Continued)*

or other administrative barriers to entry can be imposed, and applications must be finalized within certain time limits. Obtaining a general authorization is as simple as it can be. However, if the undertaking does not comply with the general conditions laid down by the national regulatory authorities, it may be subject to financial penalties or be prohibited from providing services. To prevent the use of licensing as a barrier (as in the previous system), the directive indicates that the tariff requested for any license should reflect only the costs incurred by the national regulatory authorities while issuing it.

The access directive stresses the possibility for new entrants to interconnect with the incumbent network and other operators' networks at reasonable cost and conditions. Member states cannot restrict private negotiations between undertakings for interconnections. Operators, except for those with significant market power, cannot be obliged to discriminate between different undertakings for equivalent services. They are obliged to negotiate interconnection when asked to do so (when necessary, national regulatory authorities can impose obligations on an operator to facilitate interconnections). The obligations may be imposed only on an objective, transparent, proportionate, and nondiscriminatory basis. National regulatory authorities can impose additional measures related to access on operators with significant market power by permission of the European Commission.

The universal service directive states that "the current regulatory framework requires national regulatory agencies to place obligations on network operators to ensure that a defined minimum set of services of a specified quality are available to all, independent of their geographical location, at an affordable price." Universal service, as defined in EU legislation, includes the provision of voice telephony, fax, and voice band data transmission via modems (that is, access to the Internet).

These directives are the core regulations with which member states must comply in order to participate in the EU common telecom market. They are at various stages of transposition pending adoption by member countries.

The local loop unbundling regulation aims at facilitating access to the least competitive segments of the liberalized telecommunications market. It recognizes that new entry to the fixed-line infrastructure market is very difficult and that existing infrastructure was financed by state-controlled monopolies, using public funds. In the framework of Regulation 2887/2000, notified operators are obliged to meet reasonable requests for unbundled access to the local loop

(continued)

Box 6.1 (Continued)

under transparent, fair, and nondiscriminatory conditions. According to the regulation, the national regulatory authorities have the responsibility to identify “notified operators” as those that have significant market power in fixed public telephone networks, to ask notified operators to publish a reference offer for unbundled access to their local loops and related facilities, and to supervise notified operators with regard to a cost-based pricing and a transparent, fair, and nondiscriminatory unbundled access provision for other operators to the local loop.

Source: European Commission. “Telecoms in the European Union.” http://ec.europa.eu/information_society/policy/ecomm/index_en.htm.

Morocco’s regulatory system differs from that of the European Union in many ways. First, whereas European regulation establishes that member states can no longer use individual licenses to regulate the sector, the Moroccan government has a regime of licenses and class licenses, which it awards one by one, thereby determining how many operators can operate in the market. Adopting the EU system would require establishing a general authorization for all types of electronic communication services and networks, including fixed and mobile networks and service, data and voice services, broadcasting transmission networks, and related services.

Second, the European Commission identifies product markets in the telecommunications industry, within which national regulators define geographic or additional product markets for their localities. Within each product market, regulators also assess the effectiveness of competition, including whether companies have single or joint market dominance. If they do not, the regulator may remove existing obligations or, at the least, decide not to impose new obligations. In this case, companies with single-market dominance are subject to *ex ante* regulation (such as accounting separation and cost orientation proportionate to their level of dominance). Under Moroccan Law 55-01, the Agence Nationale de Réglementation des Télécommunications (ANRT), the Moroccan telecommunications regulator, has been given the responsibility of defining markets and assessing market power; it has largely applied the EU framework (the application was only to the wholesale market). However, whereas the EU system defined 18 product markets for regulation, Morocco selected only 4—mobile, fixed, leased lines, and Internet—for treatment.

Third, whereas in the European Union prices are set by the market competitively, Morocco requires firms, including those that do not dominate the market, to submit tariffs to the regulator for approval. In the European Union, the regulator checks for general competitiveness in the market but does not regulate prices. Price regulation is decried as a mechanism that slows down the market.

Fourth, participating in the EU common market would mean an institutional adjustment for the sharing of regulatory responsibility between the government, the ANRT, and the European Commission. With the constitution of a common telecommunications market at the EU level, responsibility for regulation is now shared by the European Commission, which publishes directives and guidelines; national governments, which implement appropriate legislations; and national regulatory agencies, which implement the full framework. The European Commission plays an important role in ensuring that rules are applied consistently in all member states, in cooperation with other national regulatory agencies. National regulatory agencies in particular have to assess the degree of effective competition in relevant markets and decide which regulatory obligations to impose on players with significant market power.

Short- to medium-term priority in Morocco should perhaps be given to further developing infrastructure to meet the rapidly growing demand for high-speed Internet services and developing the data segment of the market. Unbundling the local loop would allow new service providers to reach end users through the existing network. Subscribers would then be able to choose freely among all operators without having to have a subscription with Maroc Telecom. The ANRT's objective is to achieve full unbundling in the medium term.

The ANRT could benefit from technical assistance in the form of twinning from the European Union for the purpose of converging gradually to the EU framework. It could, for instance, further improve the governance of the sector by incorporating the most recent trends in the European Union in managing, allocating, and pricing the radio spectrum. The regulatory gaps identified above could gradually be closed as appropriate through technical cooperation. Estonia provides a convincing example of the importance and benefits of using EU technical assistance and twinning (box 6.2).

Air Transport

Fully participating in the EU *acquis* in air transport is challenging for Morocco, because the European Union has the most deeply integrated

Box 6.2**Liberalization of the Telecommunications Sector in Estonia**

As a small country with limited natural resources, Estonia recognized the strategic importance of developing and liberalizing its service sector. In January 2001, when it ended the monopoly of Eesti Telecom in fixed-line telephone services, it became the first country in Central and Eastern Europe to completely liberalize its telecommunications market.

Estonia made extensive use of EU technical assistance and advice, including the twinning program, to strengthen the institutional capacity of the Estonian National Communications Board as an independent regulator. The EU accession process mechanisms also provided an efficient monitoring instrument for the liberalization process, mostly in the form of regular reports on progress toward accession.

The liberalization and privatization of the telecommunications services sector led to several positive developments, including modernization of the communications infrastructure, higher FDI, and better access of consumers to telephone services, especially in rural areas (through broader access to mobile phones, lower prices, and greater reliability in telephony and data transmission). The number of mobile phone users increased by a factor of almost 50 between 1995 and 2005. By 2005, mobile penetration exceeded 100 percent, and Internet penetration topped 50 percent, placing Estonia among Europe's leaders (Rannu 2003; Estonia Telecoms Market 2006).

Establishment of a modern and reliable telecommunications network laid the foundation for the development of the information society in Estonia. Exports of communications and computer and information services increased more than fivefold between 1997 and 2004 (IMF 2005).

Source: Paul Budde Communications (2006).

regional air transport market in the world. Air transport between most countries in the world is governed by the Chicago Civil Aviation Convention.⁴ Liberalization consists of increasing the number of weekly flights, the number of entry and exit airports, and the list of national carriers within tightly defined reciprocal arrangements. Within the European Union, all regulatory distinctions between international and domestic services have been abolished; bilateral air traffic agreements between EU member countries no longer exist, and national ownership restrictions have been eliminated. National airlines in the European Union are

thus no longer shielded from competition from other EU companies (Muller-Jentsch 2007a).

The Morocco-EU open skies agreement, which seeks to harmonize Morocco's air transport regulatory framework with that of the European Union, entails major regulatory reforms for Morocco. The major changes required include enhancing flight safety and security; harmonizing competition, state aid, and consumer protection rules with those of the European Union; and providing environmental protection. These changes require modification, to varying degrees, of two dozen regulations and directives.

Morocco has already implemented a number of measures bringing security and safety norms up to EU standards. In other cases, EU rules apply only beyond certain thresholds that Morocco will not cross in the short to medium term. Such examples include airport noise (which kicks in only above a certain number of departures), competition in ground handling (which applies only above a certain number of passengers or level of cargo), and rules on slot allocation (in the case of capacity limitations). However, the alignment of national legislation with the open skies agreement requirements entails substantial, detailed legal reforms of national aviation code and by-laws.

Some adjustments to the governance structure of the sector may be called for in the medium term. According to international best practices, aviation policy is the responsibility of transport ministries, and an autonomous civil aviation authority is in charge of safety and economic regulation. Like any regulatory agency, the civil aviation authority should be given full political and institutional independence. The EU *acquis* requires that air traffic control also be handled by a separate entity. All other operational functions—such as airline, airport, and ground-handling services—should be separated from both the line ministry and the regulator (Muller-Jentsch 2007a).

Morocco and the European Union have agreed to implement open skies in two phases. During the first phase, scheduled to last two years, Morocco will gradually integrate the EU aviation rules—aviation safety, air traffic management, environment, consumer protection, computer reservation systems—into the regulatory regime of its aviation sector. Market access restrictions will also be partially lifted during this phase, with unrestricted third and fourth freedoms for both Moroccan and EU carriers—the right to carry passengers and cargo between Morocco and the European Union. The first phase will begin once the agreement is ratified by all parties (that is, Morocco and the 27 member states of the European Union) and safety arrangements are deemed

satisfactory (a few EU countries have yet to ratify the agreement, so it is still not operational).

A second phase—which will begin when the relevant EU regulations and directives scheduled for the first phase are satisfactorily implemented—aims at further improving market access. It should culminate by giving fifth-freedom passenger rights to Moroccan carriers in the European Union and fifth-freedom passenger rights to EU carriers extending beyond Morocco to countries involved in the Neighborhood Policy.⁵ In other words, Moroccan air carriers will be able to fly to and through any airport in Europe, provided that they depart from Morocco. Reciprocally, EU airlines departing from Europe will be able to operate without restriction between any point in Europe and any point in Morocco.

Morocco benefits from EU assistance in aligning domestic regulations with the air transport provisions of the *acquis communautaire*. Morocco's regulatory reform is indeed supported by an EU program with a set of agreed-upon actions tying disbursement with implementation of a short but detailed list of EU directives and regulations. Cooperation between Morocco and the European Union in air transport is perhaps the best illustration of what the ENP can offer: participation in the EU internal market, deeper integration convergence, and financial and technical assistance from the European Union.

Banking

The ENP action plan for Morocco sets very general goals and initiatives for the financial sector. Two main objectives are developing a regulatory framework that brings financial markets in line with those of the European Union and reinforcing the supervisory authorities in accordance with international standards. The EU regulatory framework is based on the principles of the Basel Committee on Banking Supervision. Morocco's efforts to comply with changes in the banking sector regulations thus broadly serve both EU and international standards: the new banking law and the new status of Morocco's central bank, both of which went into effect in 2006, aim at aligning Morocco's legislation with international standards.

In the longer term, deeper integration or participation in the EU internal banking market will require converging to the European Union's Second Banking Directive, adopted in 1989 by Council directive and implemented in 1993. This directive has three major components. First, it defines exactly what is meant by banking. In addition to traditional banking activities, credit institutions can engage in all forms of transactions in

securities, including transactions for their own accounts or for the accounts of customers in all types of securities, participation in share issues, and portfolio management and advice. This component of the directive thus implies that Morocco would have to lift its current restrictions on foreign banks' participation to the securities market.

Second, it defines the principle of home-country control, or mutual recognition. According to this principle, each country acknowledges the regulation of its partners and accepts service provision by foreign institutions as if they were domestic entities. Hence, banks are regulated by, and conform to, the regulation and legislation of their home country. If a bank does business in another EU country, the regulatory authorities of the host country recognize the primacy of the home country. Because the European Union has more open regulation of foreign banks, Morocco would have to reciprocate.

The Second Banking Directive also outlines the concept of a single passport. Mutual recognition of the single banking "license" eliminates the need for EU banks to obtain a local banking charter from the host country for branches or bank products permitted by their home-country bank regulations. A bank licensed to do business in any EU country is allowed to do business in any other EU country on whatever basis it considers most advantageous. The host country is not allowed to impose any barriers to such action. The implication is that Morocco will have to close the gap between the degree of openness of its banking sector and that of the European Union.

Morocco would have to adopt many other directives to participate in the EU internal banking market. According to the capital adequacy directives, credit institutions are subject to prudential requirements with respect to supervision of solvency, adequacy of own funds to cover market risks, and large exposures calculated on a consolidated basis, if the parent group is a financial holding company. Generally, the supervisory authority of the member country that authorized the parent company of this group is responsible for consolidated supervision of the group, although the capital adequacy directive does permit delegation to other competent authorities in certain circumstances. This provision is too sophisticated for Morocco's banking sector; its adoption would raise the cost of compliance for Moroccan banks, which are smaller than those in the European Union. In addition to the above provisions, the European Union could ask Morocco to include provisions on money laundering, capital movements, and related issues, as it did in the case of European and accession partnerships (table 6.1).

Table 6.1 Short- and Medium-Term Provisions for Financial Services in European and Accession Partnerships, by Country

<i>Country</i>	<i>Short term</i>	<i>Medium term</i>
Albania	<ul style="list-style-type: none"> Strengthen legal and supervisory framework for banking and insurance sectors, including by establishing independent and properly staffed supervisory authorities. 	<ul style="list-style-type: none"> Continue privatization, in particular in financial and energy sectors.
Bosnia and Herzegovina	<ul style="list-style-type: none"> Set up Insurance Agency of Bosnia and Herzegovina, and ensure that it becomes fully operational. Bring banking supervision to state level, and ensure effective functioning of supervisory authority. 	
Croatia	<ul style="list-style-type: none"> Strengthen regulatory and administrative framework for supervision of financial services; in particular, prepare for transition toward planned integrated supervisory authority for nonbank financial services. Prepare introduction of new capital requirements framework for credit institutions and investment firms. 	<ul style="list-style-type: none"> Complete alignment with EU prudential requirements and continue strengthening supervisory practices. Complete implementation of new capital requirements framework for credit institutions and investment firms.
Macedonia, FYR	<ul style="list-style-type: none"> Strengthen prudential and supervisory standards in banking and insurance sectors. Continue alignment of legal framework for financial sector, and ensure swift implementation to ensure, in particular, rapid catch-up with international standards and practices. Reinforce legislation and supervisory framework, including enforcement, for financial sector, in particular regarding insurance sector and securities markets. Establish independent and properly staffed supervisory authority for insurance sector. 	
Serbia and Montenegro	<ul style="list-style-type: none"> Serbia: Complete banking sector reform, in particular the privatization of state-owned banks. Continue restructuring and privatization of insurance sector. Montenegro: Adopt and implement law on insurance supervision. 	<ul style="list-style-type: none"> Kosovo: Develop capacity of banking sector to provide competitive banking services and long-term competitive financing. Ensure reliable and effective supervision of banking, insurance, and pension institutions.

Source: Author, based on Muller-Jentsch 2007b.

The convertibility of the Moroccan dirham, which is convertible only for current transactions, is also an issue: full integration within the EU banking market is not conceivable without full convertibility. Morocco has decided to gradually move toward full convertibility and to allow freer capital movements. However, the authorities recognize the need to strengthen the sector as a precondition for the successful liberalization of capital flows. They also fear that capital account liberalization may lead to capital flight and corruption, as foreign banks may be used as an easy channel for capital drain.

The challenge for participating in the EU banking *acquis* is daunting. The gap between Moroccan and EU regulation is wide, a reflection of the development gap between the two entities. In the short term, it is desirable to focus on implementing the regulatory reforms in the 2006 banking law. On the supervision side, a priority is to strengthen the credit institutions' supervision directorate at the central bank and to reinforce coordination of the supervisory authorities for the banking, insurance, and stock market operations. The ENP's other instrument, twinning, seems more suitable to help strengthen the independence and effectiveness of the banking and insurance markets.

Maritime Transport and Port Services

Morocco's ENP action plan emphasizes the need to increase the competitiveness of the maritime sector, promote short sea shipping, introduce competition in port services, strengthen the maritime authorities, train seafarers with regard to safety and the prevention of sea pollution, implement relevant international conventions, and continue to align maritime legislation with that of the European Union. Although convergence to EU maritime legislation is cited among the goals, the action plan is not specific about what regulatory convergence with the EU *acquis* in maritime transport means. In the short term, convergence with EU maritime regulations is a daunting task.⁶ Regulation 4055/86, for example, would require the phasing out of any national restrictions that reserve the carriage of goods or passengers between countries to vessels flying the national flag (the transport of goods or passengers between states is not covered by this regulation). Existing cargo-sharing arrangements in bilateral agreements with non-EU countries are to be adjusted or phased out according to this regulation. If such agreements are not phased out, they have to be brought into conformity with EU law.

Regulation 954/79 provides that the cargo-sharing formula contained in the maritime code shall not be applied between EU member states or,

on a reciprocal basis, between EU members and other Organisation for Economic Co-operation and Development (OECD) countries that are parties to the code. Cargo-sharing arrangements in future bilateral agreements with nonmember countries will be limited to those member states whose shipping companies would not otherwise have an opportunity to ply for trade to and from the particular nonmember country. This is relevant for Morocco, which has cargo-sharing schemes with many partner countries.

The EU framework for port services remains unclear, making it difficult for Morocco to move toward further integration. In 2003, the European Parliament rejected the European Commission's proposal for a directive on market access to port services. The Commission's subsequent proposal, which to a large extent reiterates the principles in the earlier version, has been going through the legislative process.

Conforming to the above set of regulations will be challenging for Morocco in the short run. Adoption of the EU *acquis* could reduce the market share of Moroccan shipping companies, unless they enter into strategic alliances and partnerships with large foreign companies. The twinning instrument therefore presents the best opportunity to support regulatory reforms in the short run. Twinning could be used as an instrument for designing measures to upgrade Moroccan shipping companies and support their efforts to overcome liberalization challenges. In port services, the National Agency for Ports, the new port regulatory agency that was split off from the National Port Operations Office, could benefit greatly from a twinning partnership with an EU member state to help it secure genuine independence and carry out its responsibilities. Twinning would be the first step toward regulatory convergence, as capacity needs to be strengthened for effective implementation of superior regulations. The Romanian port Constantza provides an example of how openness, combined with institutional strengthening through twinning and the inflow of foreign capital, can strengthen maritime services (box 6.3).

Professional Services

Creating an EU common market in the professions is a long, cumbersome, and still largely unfinished process. Traditionally, rights of establishment of companies across Europe have been more strongly enforced than rights of individuals to move within the European Union to supply services. As a result, for a long time, labor mobility within the European Union was much weaker than capital mobility and goods trade (Messerlin 2001).

Box 6.3**Reform of Port Services in Romania**

The Romanian port of Constantza is strategically located on the western coast of the Black Sea. Its development in the 1990s was slowed by the low level of public investment in infrastructure and inadequate port institutions. The Romanian government adopted a two-pronged approach to taking advantage of the partnership with the European Union and allowing private involvement in port management, which had been successful in some South American and Asian countries.

The country made extensive use of the EU twinning mechanism to improve the management of the port and strengthen the administrative structures in the maritime sector. During 2003, the Swedish maritime administration helped Romanian authorities implement EU legislation and best practices. Similar maritime safety projects led by the United Kingdom were successful in Estonia and Poland.

By working closely with the European Commission, adopting the transport *acquis* early, investing in port infrastructure, and encouraging the participation of foreign partners, Romania initiated the process of integration into EU transport networks even before it acceded to member status. It received financing from the European Commission, the European Investment Bank, and the European Bank for Reconstruction and Development for major infrastructure projects in the maritime sector.

The Romanian government also started the process of privatization. It sought established private sector partners to manage its port terminals through the landlord port model. The Dubai Ports World Group, a leading global port operator, took over the management of the Constantza South Container Terminal in January 2004. Within just two years, the company became the leading container hub port for the entire Black Sea.

The European Union's approach to international cooperation in the area of professional services and the temporary movement of professional workers has been rather conservative. The European Commission cannot make a GATS offer that would go beyond binding the rules and regulations currently in force in the member states, and each member state drafts its own GATS offer and decides on the opportunity and scope of new commitments. As a result, laws and regulations governing foreign professional

services providers are even more heterogeneous across the European Union. To add to the difficulties, barriers in these sectors are set largely by domestic lobby groups across Europe.

The situation in Europe affects the extent to which ENP countries can use any EU “common” regulation to anchor their own reforms. In these sectors, the ENP as such is not of much help. Morocco should seek to improve its regulations based on international best practices.

Locking In Reforms

There are many ways to use the ENP tools to implement regulatory reform (table 6.2). As shown above, in some cases, regulatory convergence could help anchor needed reforms.⁷ Gradual convergence to EU regulatory standards makes sense for air transport and energy—sectors in which Morocco needs to effectively and physically integrate with

Table 6.2 Regulatory Reform Options for Morocco

<i>Sector or reform area</i>	<i>Recommendations</i>	<i>ENP instruments</i>
<i>Banking</i>		
Prudential rules at state-owned banks	Gradually reverse the policy exempting state from key prudential rules.	
International standards	Gradually adopt Basel II, International Financial Reporting Standards, and International Accounting Standards.	
Independence of the central bank	Strengthen the Credit Institutions Supervision Directorate at the bank, and provide necessary training.	Twinning, financial assistance
Coordination of supervisory authorities	Strengthen coordination between supervisory authorities for banking, insurance, and stock market operations.	Institutional designs of European Union and member states
<i>Insurance</i>		
Government and political pressure on regulatory and supervisory bodies	Strengthen the independence of the Insurance and Social Security Department of the Ministry of Finance by removing it from the formal structure of the ministry.	
Institutional capacity of supervisory body	Strengthen the institutional capacity and staffing of the independent supervisory body.	Twinning, financial assistance

(continued)

Table 6.2 Regulatory Reform Options for Morocco (Continued)

<i>Sector or reform area</i>	<i>Recommendations</i>	<i>ENP instruments</i>
Licensing	Resolve the potential conflict of interest created because the Consultative Committee on Insurance, which plays an important advisory role in the area of licensing, is made up largely of insurance operators.	
<i>Air transport</i>		
Safety, security, and competition harmonization	Implement the two-phase plan of the open skies agreement with the European Union according to schedule.	Twinning, especially in the aviation safety and air traffic management
Consumer and environmental protection	Implement the two-phase plan of the open skies agreement with the European Union according to schedule.	Twinning: exchange of experiences and know-how
<i>Maritime transport</i>		
New National Agency for Ports	Clarify the roles and mandates of the National Agency for Ports.	Twinning: financial aid, exchange of experiences and know-how
Price regulation	Simplify and relax the pricing regulations in the port services sector.	
Strengthen competitiveness of local companies	Put in place an upgrading program for shipping companies.	Twinning: financial aid, exchange of experiences and know-how
<i>Accounting</i>		
Educational requirement to become a chartered accountant	Reduce length of studies (currently several years longer than in European countries), and admit larger number of students each year.	Experience sharing
Entry of foreign companies	Adopt more transparent sectoral regulation regarding the entry of foreign companies into the sector, rectifying the existing phenomenon of dualism.	

Source: Author.

European networks in the medium term. In other sectors, such as banking, telecommunications, and maritime transport, regulatory convergence with the European Union could at best be a very long-term objective, because Morocco is at an early stage of modernizing its regulations. Morocco's financial environment is still dominated by banks. In contrast,

EU regulations include complex rules for securities and equities markets. Morocco could adopt some international standards (such as Basel II), but for banking, as well as maritime transport, greater economic integration with the European Union is possible without full regulatory convergence in the short run.

In the professions, regulatory convergence with the European Union as a regional entity is inappropriate, because EU member countries are still trying to agree on common policies and national regulations are still heterogeneous. In these sectors, Morocco should be selective about which EU country has regulatory features that are suitable for it and seek bilateral agreements with those countries. At the same time, Morocco should continue to monitor key developments in these sectors in the European Union. The ongoing discussions on the mobility of patients within the European Union, for example, could have important repercussions for the competitiveness of Morocco's health services.

Even in sectors in which immediate convergence would not be the most appropriate strategy, Morocco could benefit from twinning partnerships with EU member states to improve the quality of Moroccan institutions, especially its supervisory and regulatory bodies. Twinning is an initiative of the European Commission that was launched in 1998 in the context of the preparation for enlargement of the European Union. It was conceived as an instrument for targeted administrative cooperation to help candidate countries strengthen their administrative and judicial capacity to implement Community legislation as future member states of the European Union.⁸

Implementing Competition Policies

Policies governing competition also offer challenges to Morocco's integration with the European Union. International trade and economic integration can provide both the rationale and the opportunities for firms to engage in anticompetitive behavior. In the absence of effective competition policy, firms can collude to keep domestic and foreign competitors out of their markets, counteracting the benefits of market opening. Multinational and other exporting firms can abuse their dominant position in foreign markets by dividing those markets among themselves. Mergers and acquisitions (including those between foreign and domestic firms) can create firms that dominate specific markets.

A related issue is public aid or special treatment targeted to improve the performance of domestic import-competing or exporting firms. Such

subsidies can distort competition and are therefore relevant issues to discuss as Morocco seeks to integrate more deeply with the European Union.

Competition policies were included in the Morocco–European Union association agreement signed in 1996; they have been in force since 2000. Morocco’s ENP action plan specifically refers to implementing the provisions of the agreement in these two areas. The action plan, however, is not specific.

Morocco’s 1996 Constitution proclaims the principle of freedom to do business. It serves as the basis for the adoption of Law 06-99, on pricing freedoms and competition, and its implementing decree.⁹ The competition law establishes the principles of pricing freedom and pricing based on free competition and spells out circumstances and areas in which the government has the right to intervene, including monopoly situations, supply difficulties, legislative or regulatory provisions, disasters or abnormal market situations, and excessive price fluctuations.¹⁰ At the request of professional organizations or at the initiative of the government, prices may be subject to approval. The law also sets out rules on transparency; prohibits restrictive practices among economic operators;¹¹ prohibits concerted action, agreements, understandings, or collusive action and the abuse of a dominant position when the objective is to prevent, restrict, or distort competition (with the exceptions of small and medium-size enterprises, agricultural and handicrafts cooperatives, and export promotion); and requires submission of economic concentration projects liable to prejudice competition to the Competition.

These laws are useful, but Morocco’s Competition Council, responsible for implementing them, is not effective. The Competition Council plays an advisory role regarding concentration, anticompetitive practices, and pricing; it has no decision-making authority. It may be consulted by Parliament; the government; regional councils; urban communities; chambers of commerce, industry, and services and professional chambers; trade union and professional organizations; and consumers’ associations.¹² It cannot, however, act on its own initiative or at the instigation of an enterprise. Recommended sanctions usually fall within the competence of the courts. The prime minister may, however, decide not to have recourse to the courts, instead, on the recommendation of the Competition Council, ordering that the anticompetitive practices be terminated within a specified period or imposing special conditions (WTO 2003).

As far as integration with the European Union is concerned, the Morocco–European Union association agreement leaves the precise competition rules to be determined by the Association Council.¹³ But unlike

many other Mediterranean agreements, it explicitly refers to the core legislation of EU competition and state aid policy (Article 36.3 of the agreement).¹⁴ This means that practices that run counter to Article 36.1, which covers collusive behavior, abuse of dominance, and state aid, will be assessed on the basis of Articles 81, 82, and 87 of the Treaty of the European Community. This direct reference to European Community law means that Morocco has committed to adopt EU legislation where it concerns competition or state aid that could touch on trade with the European Union. The time frame implementing the rules is five years after the agreements enter into force (that is, 2011).

Morocco would greatly benefit from the ENP tools in the area of competition policy, both regulatory convergence and twinning. The ENP action plan is quite specific about cooperation with the European Union in the area of competition. It calls for implementing Article 36(3) of the association agreement;¹⁵ exchanging experience and know-how; building administrative capacity for the enforcement of the competition law; identifying other possible cooperation measures (market analysis techniques, conduct of competition investigations, merger control, dealing with disputes, and so forth); developing legislation and an enforcement mechanism compatible with those in the European Union; and ensuring the right of appeal to independent courts against antitrust decisions and the specialized training of judges dealing with competition cases.

Improvement of the legislative texts and the strengthening of the administrative capacity and decision-making power of the Competition Council would be good places to start, because many disputes over competition have been brought before the courts in recent years. Examples include confusion and disputes regarding the right of entry of a new operator in maritime transport, a dispute between partners in the retailing sector, distribution monopoly issue in petroleum products, and abuse of a dominant position case in aerated beverages.¹⁶

Notes

1. The ENP covers a wide range of policy issues. The initiative's most novel and far-reaching aspect is progressive participation in the EU internal market to create an economically integrated space with participating EU neighbors, including Morocco. These countries can adopt part of the *acquis* and, through this harmonization, share the benefits associated with the relevant elements of the European Union's internal market. To operationalize the ENP, Morocco adopted an ENP action plan in October 2005.

2. The à la carte approach entails some risks. Indeed, piecemeal liberalization may disappoint, as many sectors are closely linked. Liberalizing one sector may not bring the expected benefits if others remain protected.
3. The European Commission's new European Neighborhood and Partnership Instrument (ENPI) also covers the key issue of cross-border and transnational cooperation between Morocco and the European Union. This chapter analyzes only the nonfinancial instruments of the ENP.
4. The Convention on International Civil Aviation (also called the Chicago Convention) was the first attempt to initiate a global civil transport regime—that is, a framework within which civil air transport could develop. The Chicago Convention introduced nine freedoms of the air (from the right to fly across the territory of a state to the right to transport cabotage traffic within a foreign state) for states that adopted the convention and entered into bilateral treaties that may grant certain rights or privileges for scheduled international air services. Because only the first five “freedoms” have been officially recognized by international treaties, the International Civil Aviation Organization considers the remaining “freedoms” “so-called.” The first freedom is the right to fly across the territory of either state without landing. The second freedom allows planes to land in either state for nontraffic purposes (for example, refueling without boarding or disembarking passengers). The third freedom is the right to land in the territory of the first state and disembark passengers coming from the home state of the airline company. The fourth freedom is the right to land in the territory of the first state and board passengers travelling to the home state of the airline. The fifth freedom is the right to land in the territory of the first state and board passengers travelling on to a third state in which passengers disembark (for example, a scheduled flight from the United States to France could pick up passengers in the United Kingdom and take them to France (sometimes termed *beyond rights*). “Beyond fifth freedom” gives airlines the right to carry passengers from a second country to a third country. “Intermediate fifth freedom” gives airlines the right to carry passengers from the third country to the second country.
5. Economies affected included Algeria, Armenia, Azerbaijan, Belarus, the Arab Republic of Egypt, Georgia, Israel, Jordan, Lebanon, Libya, Moldova, Morocco, the West Bank and Gaza, the Syrian Arab Republic, Tunisia, and Ukraine. Two subcategories are distinguished within the fifth freedom: beyond and intermediate.
6. These include Regulation 4055/86 on freedom to provide services to maritime transport, Regulation 4056/86 on competition, Regulation 4057/86 on unfair pricing practices, and Regulation 4058/86 on coordinated action to safeguard access to cargoes.
7. EU “laws” come in the form of regulations (legally binding for all member states upon entry into force) and directives (general principles to be transposed into national law). The full *acquis communautaire* is the body of EU law.

8. In the context of the ENP, twinning was introduced as a cooperation instrument for the countries of the south and east Mediterranean and the Middle East (called MEDA countries). MEDA countries like Morocco have started to benefit from the program. The process is similar to the one for the transition economies: twinning project funding is given to EU member states to work with partner EU neighboring countries on institution building (legislation, administration, and implementation) and infrastructure strengthening (systems and equipment). Projects usually last one to two years and require a resident twinning adviser (project manager) to be stationed in the country for the duration. Short-term experts from the European Union provide technical inputs to the various components. Twinning has been very successful in Central and Eastern Europe; Morocco should take advantage of these opportunities. By early 2008, Morocco had signed three twinning projects with the European Union: one with the Ministry of Environment, one to strengthen the maritime regulatory body (the Direction de la Marine Marchande), and one to upgrade and harmonize customs procedures.
9. The law, which went into effect in 2001, replaces Law 008-71 on price regulations and controls and requirements for stocking and selling products and goods.
10. Exceptions to the freedom of price fixing exist for a list of activities. For services, price regulation was supposed to remain in force for a transitional period of five years as of the date of entry into force of Law 06-99 (2001). In fact, they remained in force for two additional years for many products, and regulation is still in place for electricity; passenger and freight road and rail transport; domestic air transport of passengers; urban passenger transport; pilot and towing services in ports; compulsory car insurance; commissioning of insurance intermediaries; acts by midwives and nurses in the private sector; physicians' and veterinarians' fees; dental surgery; medical analyses; and legal, judicial, and administrative announcements and notices.
11. Practices deemed restrictive include the following: practices that affect the consumer's freedom of choice; restrict trade relations among professionals (the obligation to provide an invoice and to communicate price lists and terms of sale, a ban on compulsory minimum resale prices, discriminatory practices, refusal to meet buyers' requests and tied sales); and relate to storage of goods (the law combats smuggling and speculation by prohibiting "clandestine storage").
12. The Competition Council must be consulted on regulatory texts that may restrict competition, before the fixing of prices and terms of sale, and on the granting of state or local authority aid.
13. The association agreement created formal structures, such as the Association Council (ministerial level), which is supposed to meet once a year; the Association Committee (senior official level); and subcommittees at expert

- levels for the effective and continued implementation of the agreement and discussion of professional matters as they arise.
14. Association agreements between the European Union and Algeria and Lebanon do not include such a provision; the European Union's agreements with Jordan, Tunisia, and the Palestinian Authority contains similar provisions.
 15. This article sets out a long list of rules to promote cooperation and coordination between the parties in the application of their competition laws to ensure that restrictions on competition do not block or cancel out the benefits that should be ensured following the progressive liberalization of trade between the European Community and Morocco.
 16. Related to competition policy, cooperation in the field of consumer protection is also called for in the Action Plan, which aims to exchange experience and know-how on enforcing Moroccan consumer protection law and, in the framework of the relevant subcommittee, to discuss measures accompanying the establishment and strengthening of administrative capacity for the implementation of consumer protection rules.

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CHAPTER 7

Services Trade as an Engine of Development: Situation and Prospects in Algeria

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José R. López-Cálix, and Peter Walkenhorst

Trade in services can make a substantial contribution to economic development, by improving the availability, efficiency, and quality of services in the domestic market and increasing the supply and efficiency of inputs to production. Services are often the most rapidly growing sector in developing economies. They are a major source of employment and can help improve export diversification (for example, through tourism and integration with the global economy). The purpose of this chapter is to raise awareness of critical issues in Algeria and help the government define priorities for policy reform.

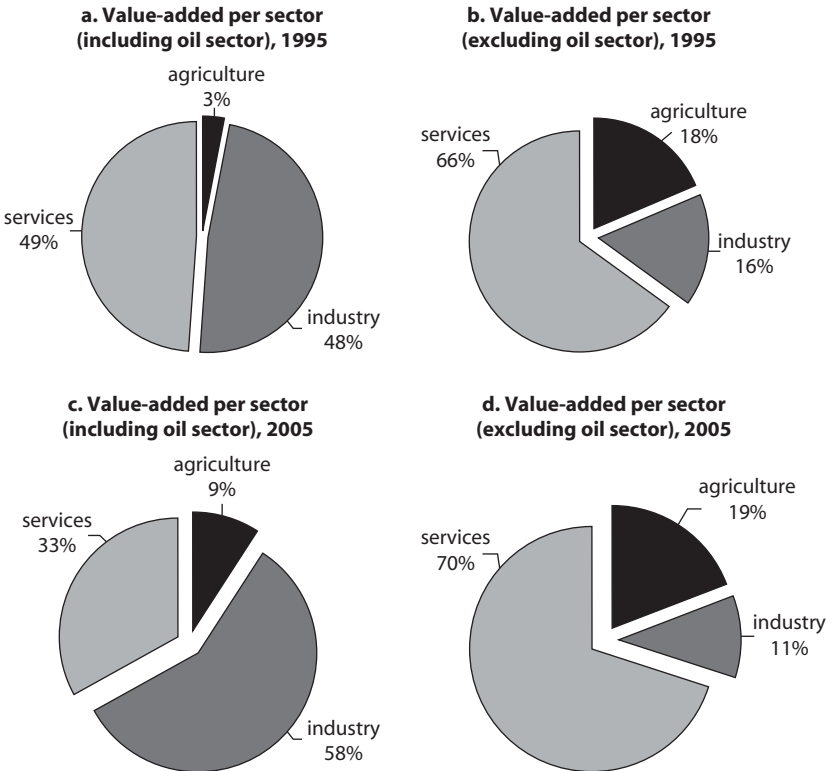
Quantifying the Importance of Services for Algeria

Statistics on trade in services are weak in Algeria, as in many countries, developed and developing. The collection of data is complicated by the nature of the exchange and the different modes of delivery commonly used, as described in the General Agreement on Trade in Services (GATS): cross-border (mode 1), consumption abroad (mode 2),

establishment abroad (mode 3), and movement of natural persons (mode 4).¹

At first sight, the contribution of services to the Algerian GDP seems abnormally low. At about 30 percent, this figure compares unfavorably with the 60 percent average in most developing countries (56 percent in Tunisia and Morocco, 62 percent in Senegal) and the 80 percent average in developed economies (77 percent in France) (World Bank 2007a). Moreover, this contribution seems to have declined over time, falling from 49 percent in 1995 to 33 percent in 2005 (figure 7.1). In fact, both observations are biased by the exceptional contribution of fuels (oil and gas) to Algeria’s GDP. Services are the second-most important sector of the economy. Excluding the oil sector, they account for 70 percent of Algeria’s GDP, up from 66 percent in 1995. Using this measure, the size

Figure 7.1 Value-Added by Sector in Algeria, 1995 and 2005



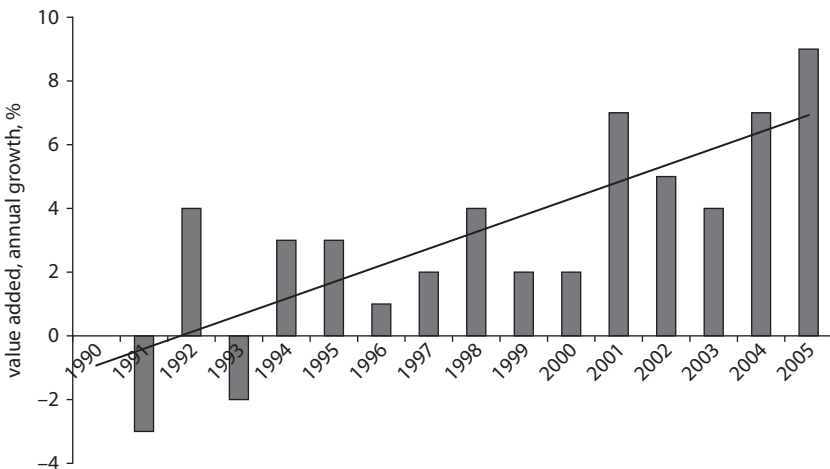
Source: ONS Statistiques Economique.

of the service sector in Algeria compares favorably with that in other middle-income countries.

Since 1990, the service sector has been the fastest-growing sector in the economy. Annual growth accelerated from 2 percent in 1995–2000 to 6 percent in 2000–05 (figure 7.2). This dynamism is reflected in the mushrooming of small and medium-size enterprises: In 2001, companies with fewer than 10 employees represent about 90 percent of the businesses active in the sector (table 7.1). Annual growth rates in four sectors (building and construction, retail, transport and communications, and business services) are close to or exceed 10 percent.²

The service sector is Algeria's dominant source of employment (table 7.2). The sector employs 6 million people—about two-thirds of the total active population, compared with only 18 percent for agriculture and 14 percent for industry. The main sources of employment are wholesale and retail trade (23 percent), public service (21 percent), and building and construction (19 percent) (figure 7.3). In developing countries, services typically dominate youth employment (services account for 80–90 percent of youth employment in Latin America, for example), as sectors such as trade, hotels, restaurants, and information and communication (ICT) technologies offer a means for young people to enter the labor force (ILO 2004). Expanding services is thus

Figure 7.2 Annual Growth in the Value Added of Services in Algeria, 1990–2005
(percent)



Source: World Bank 2007b.

Table 7.1 Growth Rates and Percentage of Small and Medium-Size Enterprises in Algeria's Service Sector, by Subsector, 2006

<i>Subsector</i>	<i>Number of small and medium-size enterprises</i>	<i>Percentage of total</i>	<i>Annual growth rate (percent)</i>
Building and construction	86,590	33.4	12.3
Retail and distribution	44,639	17.2	11.0
Transport and communications	23,245	9.0	9.2
Services provided to households	18,863	7.3	6.9
Hotels and restaurants	15,630	6.0	6.4
Business services	13,167	5.1	13.9
Services provided to the oil sector	171	0.0	—
Financial services	830	0.0	—
Real estate services	704	0.0	—
Services provided to collectivities	1,584	0.0	—
Subtotal for services	205,423	78.0	—
Other sectors (agriculture and industry)	53,859	22.0	—
Total	259,282	100.0	—

Source: Ministère de la Petite et Moyenne Entreprise et de l'Artisanat 2006.

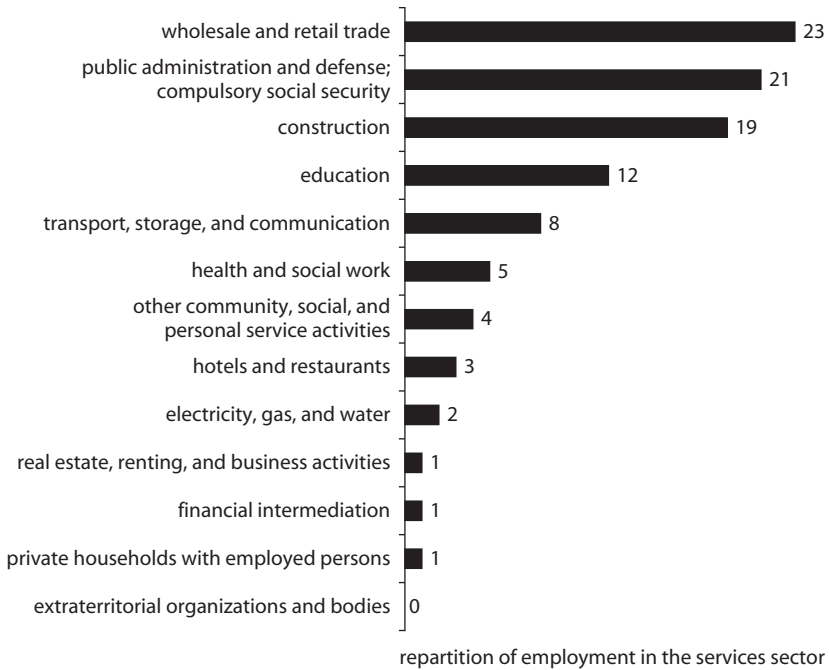
Note: Data are based on first half of year. — = Not available.

Table 7.2 Urban and Rural Employment in Algeria, by Sector, 2008

<i>Sector</i>	<i>Urban</i>	<i>Rural</i>	<i>Total</i>	<i>Percentage of total employment</i>
Agriculture	303,639	1,305,994	1,609,633	18.1
Industry	839,568	424,023	1,263,591	14.2
Services	4,147,388	1,848,193	5,995,560	67.6
Construction and public works	744,737	512,967	1,257,703	14.2
Commerce, other services, and administration	3,402,651	1,335,226	4,737,877	53.4
Total	5,290,595	3,578,209	8,868,804	100.0

Source: ONS Statistiques Economique.

one means of addressing Algeria's high youth unemployment rate (about 30 percent for people under 25, twice the total unemployment rate). Services also employ a disproportionate share of women in North Africa, accounting for 55 percent of all female employment (women hold 26 percent of all service sector jobs) (ILO 2007) (figures 7.4 and 7.5).

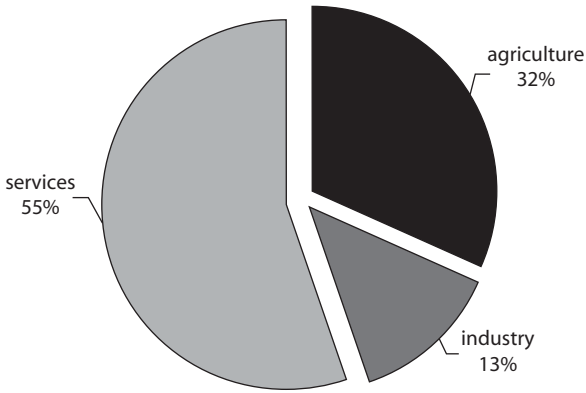
Figure 7.3 Service Sector Employment in Algeria, by Industry, 2004*(percent of total services employment)*

Source: ILO 2004.

In 2005, an estimated 1.3 million service sector employees in Algeria were working in the informal sector—about one worker in four (one in three if public administration is excluded). Informality is particularly acute in the service sector: in 1996, the Ministry of Labor estimated that the retail sector was most affected (35.0 percent informal employment), followed by other services (31.7 percent) and construction (25.6 percent) (by way of comparison, “only” 7.6 percent of the workforce in the industrial sector is employed by the informal sector) (CNES 2006).³ This trend seems to be growing: informal employment grew at an average rate of 8.2 between 1999 and 2003—almost twice the 4.6 percent annual growth rate of total employment.

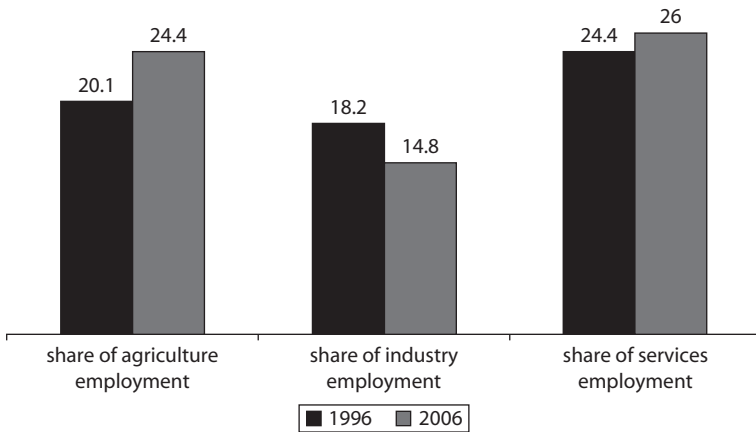
The high rate of informality in the service sector means that the bulk of the workforce is not properly insured and the government does not harvest all the fruits of growth in the form of income taxes. The problem also affects the attractiveness of Algeria for foreign investors. A survey sponsored by the World Bank and the United Nations Development

Figure 7.4 Distribution of Female Employment in North Africa, 2006



Source: ILO 2007.

Figure 7.5 Female Share of Sectoral Employment in North Africa, 1996 and 2006 (percent)



Source: ILO 2007.

Programme reveals that for 28 percent of business executives and potential foreign investors, “unfair competition from the informal sector” is a major obstacle to investment in Algeria (second only to access and cost of credit, at 29 percent) (World Bank 2002). Successful development of trade and investment will require tackling the informality issue.

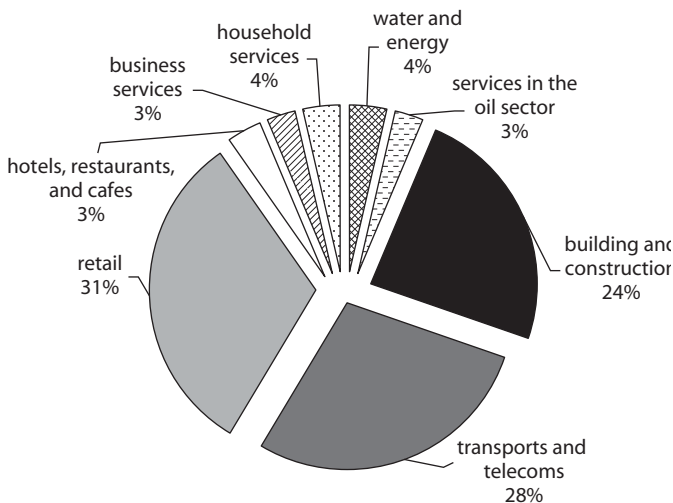
Trade in Services: An Important but Often Poorly Understood Concept

Algeria’s service sector is mostly inward looking—that is, dedicated to satisfying the basic needs of the domestic population (figure 7.6). Retail represented 31 percent, transport and telecommunications 28 percent, and building and construction 24 percent of sector output in 2005.⁴ Although these sectors can have important export potential (as shown by the success abroad of South African retail stores, Egyptian telecom companies, and Turkish construction companies), Algerian companies have so far concentrated on their home market, struggling to meet rapidly growing domestic demand.

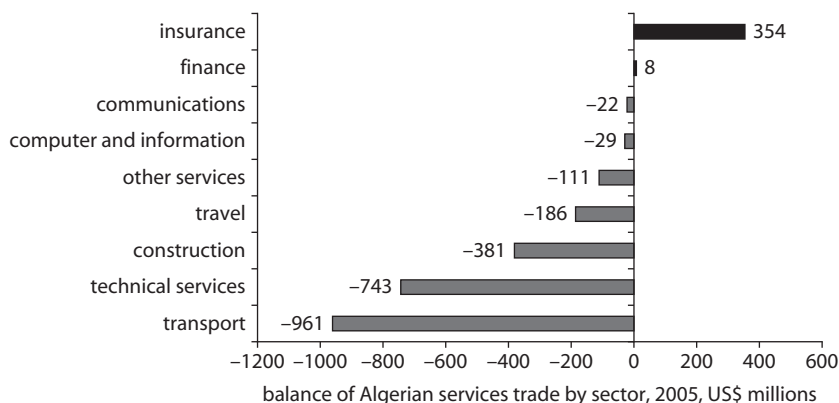
Together with the \$19 billion deficit in non-oil goods, Algeria’s trade deficit in the service sector, which exceeded \$2 billion in 2005, was financed by \$45.6 billion in oil exports (figure 7.7). The deficit in services reflects rapid growth in economic activity, as the most important imported services (transport, engineering services, and building and construction) are direct inputs to the productive sector. To the extent that it is sustainable, this deficit is therefore a sign of the good health of the economy.

For most sectors, trade in services remains small. However, the data should be interpreted with care. Transport accounts for the largest share of

Figure 7.6 Composition of Algerian Service Sector Output, by Industry, 2005



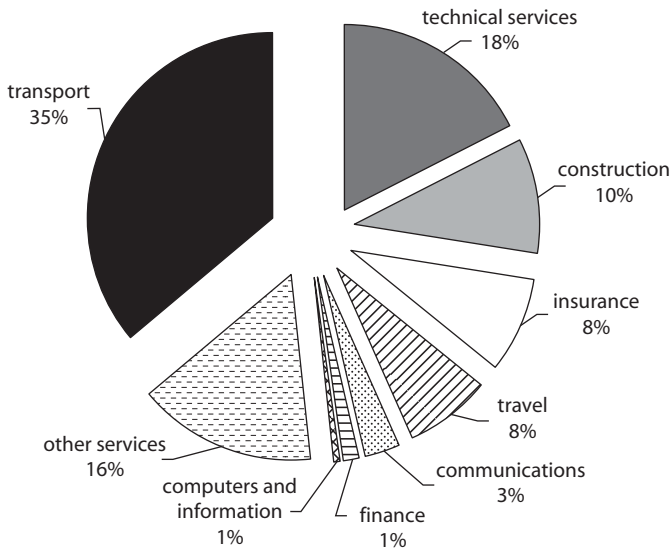
Source: ONS Statistiques Economique.

Figure 7.7 Balance of Trade in Algerian Service Sectors, 2005

Source: IMF 2007.

trade in services (figure 7.8), but it is calculated as an assumed fixed share of the value of goods exports and may not accurately reflect transactions. The surplus in insurance services is difficult to interpret, given the relatively undeveloped state of Algeria's insurance sector. Some sectors of vital importance to the Algerian economy according to the national income accounts are completely absent from the trade statistics. For example, wholesale and retail trade—the largest service industry—does not appear in the balance of payments statistics. This does not mean that trade does not take place: entry on the Algerian market of Carrefour and other foreign providers contributed to changing the domestic distribution landscape. Trade under mode 3 is captured in the country's capital account, not its current account. Trade under modes 2 and 4 is hard to quantify.

Between 2000 and 2005, the growth of imports (260 percent) and exports (270 percent) was almost identical (figure 7.9). On the exports side, the fastest-growing sectors were insurance (3,700 percent), communication services (2,000 percent), and computer and information services (1,000 percent).⁵ Growth of the other sectors reflects the growing importance of new technologies and the catch-up phenomenon (Algeria started from a very low base and therefore enjoys extremely high growth rates). The same sectors are the fastest growing on the imports side: computer and information services (3,300 percent), communication services (880 percent), and insurance services (440 percent), followed by more traditional sectors that contribute to development, such as construction (430 percent) and technical and engineering services (370 percent).

Figure 7.8 Composition of Algerian Service Sector Trade, by Industry, 2005

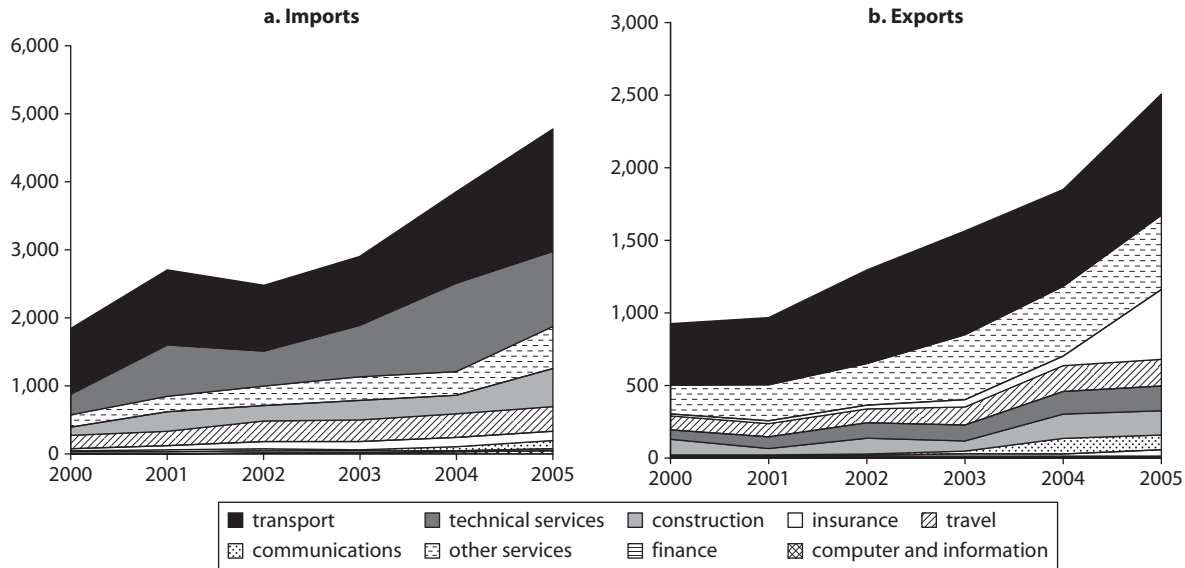
Source: Banque d'Algérie Bulletin Statistiques.

Note: Trade is the sum of exports and imports.

Trade under mode 3 (establishment abroad) can play a crucial role in providing certain services domestically. The government's efforts to encourage inward flows of foreign investment, including through its privatization program, has started to produce positive results. Inward foreign direct investment (FDI) flows to Algeria have grown rapidly, reaching \$3 billion in 2006 (table 7.3). Although the FDI data do not provide any information about the sectoral destination of the investments, analysis of the list of FDI projects made available by the Euro-Mediterranean Network of Investment Promotion Agencies (ANIMA) suggests that the service sector attracted 62 percent of foreign investment projects in Algeria in 2006, up from 55 percent in 2005. Of course, the number of projects is not necessarily indicative of the amounts received. (Many projects in the service sector are modest in scale.)

The commerce register provides additional evidence of the importance of FDI to Algeria (although it does not measure the volume of trade and provides information about imports only).⁶ In 2006, the Centre National du Registre du Commerce listed 3,261 *sociétés étrangères* (companies with a foreign manager) and 1,178 *entreprises étrangères sous statut de personne physique* (foreign-owned companies),

Figure 7.9 Service Sector Imports and Exports by Algeria, 2000–05



Source: Banque d'Algérie Bulletin statistique.

Table 7.3 FDI Flows to the Middle East and North Africa, by Economy, 1997–2006

<i>Economy</i>	<i>1997</i>	<i>1998</i>	<i>1999</i>	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>
Algeria	260	501	507	438	1,196	1,065	634	882	1,081	3,000
Cyprus	491	264	685	804	652	297	891	1,079	1,166	—
Egypt, Arab Rep. of	887	1,065	2,919	1,235	510	647	237	2,157	5,376	5,300
Israel	1,628	1,760	2,889	4,392	3,044	1,648	3,745	1,619	5,587	13,200
Jordan	361	310	158	787	100	56	436	651	1,532	1,500
Lebanon	150	200	250	298	249	257	2,860	1,899	2,573	1,000
Malta	81	267	822	652	314	-375	958	309	562	—
Morocco	1,188	417	1,376	423	2,808	428	2,429	1,070	2,933	2,300
West Bank and Gaza	149	58	19	76	51	41	—	3	—	—
Syrian Arab Rep.	80	82	263	270	205	225	180	275	500	2,000
Tunisia	365	668	368	779	486	821	584	639	782	1,500
Turkey	805	940	783	982	3,266	1,037	1,752	2,837	9,681	17,100
Total	6,445	6,532	11,039	11,136	12,881	6,147	14,706	13,420	31,773	46,900

Source: ANIMA 2007.

Note: — = Not available.

up from 2,604 *sociétés étrangères* and 1,142 *entreprises étrangères sous statut de personne physique* in 2005. Of the foreign firms established in Algeria, 16 percent were headquartered in the Syrian Arab Republic, 11 percent in China, 8 percent in the Arab Republic of Egypt, 7 percent in Tunisia, and 6 percent in Turkey (tables 7.4 and 7.5).⁷ The liberalization and promotion of trade with other developing countries in North Africa and beyond should therefore not be neglected. Closer analysis of the commerce registry is needed to identify the sectors (services versus industry) that are most open to foreign establishment.

Mode 4, the temporary movement of people to deliver services abroad, is of particular importance to developing countries that have a large supply of labor, although the movement of some skilled professionals (such as doctors and nurses), even temporary movement, can exacerbate skills shortages in the domestic economy. For many developing countries, workers' remittances have become a major source of income.

For the measurement of mode 4, two proxies are commonly used in the balance of payments: workers' remittances and compensation of employees.⁸ Analysis of these proxies suggests that remittances represent a growing source of income for Algeria. Between 2000 and 2004, remittances tripled, rising from \$0.8 to \$2.5 billion a year, bringing Algeria close to entering the top 20 remittances recipients in the world (World Bank 2006) (figure 7.10).

Table 7.4 Home Country of Foreign Companies Established in Algeria, 2006

<i>Item</i>	<i>Entreprises étrangères sous statut de personne physique</i>	<i>Sociétés étrangères</i>
Number of businesses	1,178	3,261
Nationality of investor or manager (percent)	China: 5 France: 2 Egypt, Arab Rep. of; Jordan; West Bank and Gaza; and Syrian Arab Republic: 14 Morocco: 35 Tunisia: 42	China: 11 Belgium and Germany: Less than 2–3 Egypt, Arab Rep. of: 8 France: 18 Italy: 5 Morocco: Less than 1 Spain, Tunisia, and United Kingdom: 7 Turkey: 6 Syrian Arab Republic: 16

Source: CNRC 2006.

Table 7.5 Examples of Foreign Service Providers Established or Investing in Algeria

<i>Sector</i>	<i>Companies</i>
Tourism, restaurants, and transport	Accor, CIS, CMA CGM, Eddar-Sidar, Faki, Frans Maas, Marriott, Portek, Quick, Saraya, Starwood, Swissport, Veolia
Banking and insurance	Amlak, Attijari Wafa Bank, Banques Populaires, Biat, Blom Bank, BMCE, BNP Paribas Cardif, Brinks, BTEI, Byblos Bank, Calyon, Cetelem, Citibank, Control Risks, Emaar Properties, Fransabank, Gras Savoye, HSBC, Natexis Swisscorp, Netconseil, Prudent, Salam Bank, Société Générale, Tunisie Leasing, UIB
Telecoms and postal services	Alcatel, Bouygues, Chronopost, Egypt Telecom, El Watania, Emirate Thuraya, France Telecom, Orascom, Monaco Telecom, Motorola, Republic of Korea Telecom, UPS, ZTE
Business services and real estate	Century 21, Comete Engineering, Discovery Informatique, IBM, LDM Networks, Novell, Promosalons, Viveo, Wink Global Ventures
Wholesale and retail and distribution	Bricorama, Carrefour, Franprix
Construction and public works	CITIC/CRCC, Cojaal, Dessau Soprin, Euzebiose Filhos, Sagebat
Energy, water distribution, and environment	Epur, Geida, General Electric, Mediterranean Environmental Services, Sogreah, Suez

Source: ANIMA 2007.

Note: Based on declared FDI projects for 2004–06.

Strengthening the Economy by Bolstering Trade in Services

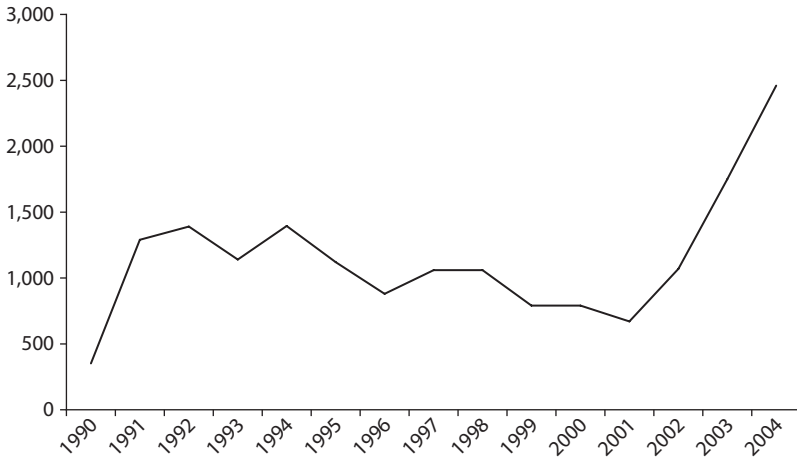
This section describes the importance of ensuring access to efficient services to meet the needs of the domestic economy and examines the role of services in diversifying and boosting exports. It then discusses reforms to improve the efficiency of service provision, including unilateral measures and the role international agreements (bilateral, regional, and multilateral) can play in isolating the government from interest group pressures and locking in reforms.

Developing Trade in Services to Meet the Economy's Needs

Openness to trade in services, including FDI, is at the core of the reform program launched by the Algerian government. The ambitious privatization program will require continued interest by foreign investors, which initially submitted more than a third of all bids. With a view to attracting FDI, the government adopted legislation that ensures equal treatment of national

Figure 7.10 Worker Remittances and Mean Wages of Algerians Temporarily Working Abroad, 1990–2004

(US\$ millions)



Source: World Bank 2006.

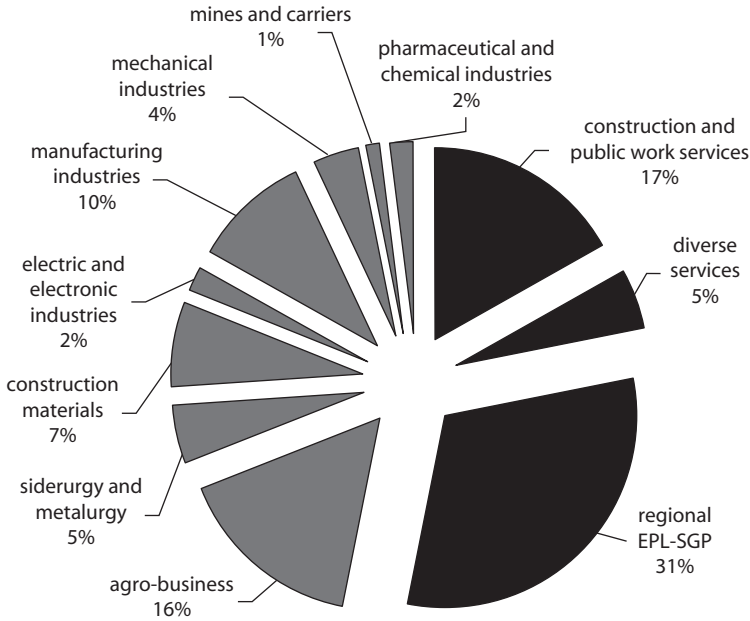
and foreign investors and provides some guarantees with regard to the repatriation of capital. These laws were supplemented by the ratification of a number of international investment treaties. Beyond access to capital, it is in the government's interest to ensure that the vast sectors of the Algerian economy that are privatized remain viable and become more competitive. Efficient operation of these privatized companies is in the best interest of Algerian consumers.

This imperative applies in particular to the service sector, which is still characterized by the strong presence of state-owned enterprises, which employed 250,000 people in 2005. With about half of the enterprises that are to be privatized in the service sector, the creation of a business-friendly environment is particularly necessary in this sector to attract foreign investors (figure 7.11).

Most of the priority sectors selected under Algeria's ambitious investment program are in services. They fall under four rubrics:

- Improvement of living conditions: housing, education, training, health, water distribution, youth and sports, culture, energy distribution, communication, social services, environment services
- Development of basic infrastructures: transport, public works, water supply

Figure 7.11 Algerian Firms Slated for Privatization, by Sector



Source: Ministère de la Participation et de la Promotion des Investissements 2006.

Note: The black segments represent the service sectors (regional Entreprises Publiques Locales Sociétés de Gestion des Participations).

- Support to economic development: tourism, small and medium-size enterprises
- Development and modernization of public services: postal services, new information and communication technologies, justice, trade.

Trade has an important role to play in improving the productivity of public spending in all of these sectors. In construction, public operators (37 enterprises) are under budgetary constraint, and the private sector is growing rapidly to satisfy the high demand. Foreign services providers have played a key role in the sustainability of the investment program: highly competitive Chinese companies have won many construction deals, and a number of companies from the Middle East and Turkey have been selected to promote or implement the projects.

Trade could contribute to improving the quality and efficiency of services that are critical to productivity. Algeria's service sector is dominated by microenterprises (often family owned) that show little specialization.

Opening to international competition could prompt concentration and restructuring, allowing the resulting units to reach the size necessary to benefit from economies of scale. This process should be accompanied by appropriate regulatory reforms, such as ensuring competition on the domestic market, improving the business environment, and facilitating access to credit.

The availability of competitive, high-quality services from foreign sources can also help strengthen the business environment. Restrictions on trade such as nationality requirements can impede access to appropriate legal services and discourage the return of expatriate lawyers (box 7.1). Under the European Union's Statutory Audit Directive and the United States' Sarbanes-Oxley Act, multinational firms are bound to use international standards for accounting. Absent the availability of domestic accountants fully qualified to audit accounts in accordance with these standards, domestic subsidiaries of multinationals have to outsource these services. The operation of multinationals thus depends on a regulatory regime that facilitates access to foreign accounting services (which could mean allowing foreign accounting firms to establish offices in Algeria).

Increased trade could help satisfy the growing demand for a larger and more diversified supply of services. Absent trade, new resources (human and capital) would have to be dedicated to services through training (which often takes time) and by shifting resources from other activities. Thus, relying wholly on domestic sources of services can create bottlenecks and generate inflationary pressures.

Rising prices in housing (construction), transportation, and communication suggest the need for more government attention to improving the regulatory framework, as dominant suppliers would otherwise take advantage of their market power (table 7.7). Rapid economic growth often results in the import of services (where permitted), which then decelerates over time as domestic suppliers come on stream (assuming the business environment is conducive). In a third phase, domestic suppliers export their services, first to other developing countries at an earlier stage of development and then to the rest of the world.

With high growth over the past decade, Algerian consumers have reduced the share of their expenditures on foodstuffs while increasing the shares on housing and medical care (table 7.6). However, a full transition to a developed economy consumption model (and a services-driven economy, in which services represent more than 80 percent of GDP), is still far from being achieved: spending on education and entertainment, transportation and communications, and other services remains very low compared with France, for example, even though some

Box 7.1**Missed Opportunities in the Algerian Legal Market**

The Algerian legal market remains characterized by the profusion of individual or family law practices and the absence of specialization, with the exception of some maritime lawyers. There are few renowned business lawyers, a problem recognized by foreign investors, trade partners, and law firms that require local expertise for securing international transactions. The problem may partly reflect the fact that legal education in Algeria is available only in Arabic, limiting the number of lawyers capable of dealing with international contracts and other issues that require specialized terminology in a foreign language. Algeria counts 20,000 lawyers, which is insufficient to meet the country's needs. In particular, economic growth, reforms, and privatizations created a large demand for corporate lawyers that could not be satisfied by domestic firms.

The legal profession is strictly regulated in Algeria. Foreign lawyers cannot be registered in the *Ordre des Avocats* (an exception exists for 20 countries that signed reciprocity agreements with Algeria, but these agreements are not always implemented correctly). The profession of legal counsel remains unregulated, but only one foreign law firm has so far established an office in Algeria (the French firm Gide Loyrette Nouel, which opened an office in 2003, headed by an Algerian). The U.S. firm Thompson and Knight LLP has an associate office in Algiers (established more than 80 years ago); the tax specialist KPMG also operates in Algeria. It is unclear whether this limited presence of foreign firms reflects the lack of interest or regulatory obstacles to trade.

The ban on foreign lawyers has not prevented them from advising clients on a number of matters pertaining to Algeria. The firm of Denton Wilde Sapte has no official presence in Algeria, but it has advised a number of clients in the oil and energy sectors. Norton Rose acts for a wide variety of regional and international clients in the oil and gas, telecommunications, tobacco, energy and utilities, shipping, and financial services sectors. Herbert Smith LLP has an Algerian lawyer in its Paris office, where its Africa practice is based. It boasts strong mining and energy capability with clients and has a major practice in infrastructure work. Lovells represents clients in the oil, gas, and energy sectors. White and Case remains active in Algeria in telecommunications.

In sum, strict nationality requirements have not prevented trade from occurring. It has, however, prevented the benefits from accruing to local lawyers. Some Algerian lawyers operate out of the Paris offices of major firms, adding to the loss of human capital and local expertise. Other firms operate from their headquarters in the United States or Europe.

Source: Authors' elaboration based on Legal 500.

Table 7.6 Household Spending in Algeria, Morocco, Tunisia, and France, by Sector (percent)

Sector	Algeria		Morocco	Tunisia	France
	1988	2000	2001	2000	2003
Foodstuffs, beverages, and tobacco	52.5	44.6	41.3	38.0	17.7
Clothing and shoes	8.2	8.6	4.8	11.1	4.5
Housing	7.7	13.6	22.1	21.5	24.1
Furniture	4.7	3.4	3.8	—	5.9
Health and medical care	2.1	6.3	7.6	10.0	3.7
Transportation and communications	11.4	9.4	7.5	9.7	17.1
Education and entertainment	4.4	3.9	3.6	8.7	17.2
Other goods and services	8.8	10.4	9.3	1.0	9.7

Source: Statistical institutes of Algeria, Morocco, and Tunisia and Eurostat.

Note: — = Not available.

Table 7.7 Average Percentage Change in Consumer Price Index for Selected Goods and Services, 2001–05

Sector	2001	2002	2003	2004	2005
Foodstuffs, beverages, and tobacco	5.5	0.3	3.9	3.7	-0.7
Clothing and shoes	3.6	1.0	0.0	0.3	0.2
Housing	2.4	0.0	1.7	1.7	13.4
Furniture	2.0	0.4	-0.4	-0.2	-0.3
Health and medical care	6.8	2.6	1.0	0.0	1.1
Transportation and communications	3.3	2.9	5.6	10.7	9.8
Education and entertainment	0.3	1.0	0.2	0.8	0.3
Other services	3.1	5.8	0.4	3.6	0.0
General index	4.2	1.4	2.6	3.6	1.6

Source: IMF 2007.

services, such as telecommunications, have experienced strong price increases over time (table 7.7).

Given the importance of foodstuffs and clothing in household spending, the reform of the distribution sector will be a key component of development in Algeria. This sector also provides a good example of the role that trade can play in meeting the changing needs of the population. Until recently, Algeria did not have a modern distribution sector: small retail

shops and markets remained predominant. Some initiatives to develop larger shops (*supérettes* of 250–400 square meters) in the 1960s and 1970s (Galeries Algériennes) and the 1980s (Souks el-Fellah) were unsuccessful and led to closures in the 1990s. Attracted by a market of 33 million consumers, Carrefour and Auchan (French retail companies) invested in Algeria (box 7.2).

Promoting Economic Diversification and Export Growth

Trade in services is at the heart of the government's efforts at diversification. Algeria's dependence on fuels, which represent more than 98 percent of exports and half of GDP, raises questions about the sustainability of growth in the medium term. The government aims to boost economic growth and attract FDI in other sectors. Services have a key role to play toward this end. Increasing service exports could also help reduce Algeria's

Box 7.2

French Entry into the Algerian Supermarket Sector

The first Carrefour supermarket opened in Algiers in January 2006. The 3,000-square meter (278.7 square foot) store met with immediate success, with thousands of visitors daily. The group is planning to open 18 supermarkets in Algeria by 2012.

Establishment of the initial store benefited Algeria in various ways:

- It brought in direct investment of €3 million, created 350 direct jobs, and increased human capital through learning-by-doing and training.
- It created thousands of indirect jobs, because 70 percent of the products it sells are produced locally.
- It provided consumers with access to higher-quality products at a lower price.
- It created spillover effects in the food and agriculture and the consumer goods (white goods) sectors, as producers adjusted their production standards (packaging, quality, and so forth) to meet Carrefour's standards, possibly allowing them to start exporting their products to France or other countries.

Carrefour's investments should also create spillover effects through competition, further investment, and the emergence of domestic competitors. Barriers to the development of local initiatives—such as remaining constraints on the development of commercial real estate—should be lifted to ensure that the full benefits are reaped.

dependence on Europe and the United States for export markets, given the importance of trade in services flows in the Maghreb and beyond.

Trade statistics on exports are generally not detailed or accurate enough to give a clear idea of the export potential and comparative advantages of the service sectors. Anecdotal evidence of success stories should be the starting point for crafting sectoral export strategies, keeping in mind the importance of reputation, human capital, and natural endowments. It could also be useful to look at success stories in neighboring countries and draw lessons from them for Algeria. The trade potential of the service sectors identified by the government as priorities in the growth program should be confirmed, so that the trade dimension of these sectors is not neglected. A trade strategy should be elaborated in parallel, with a view to making the government's efforts sustainable (trade incomes could supplement public spending).

Among the priority sectors identified by the government, tourism is the most obviously trade oriented (all expenses by foreign tourists count as exports under mode 2). For the period 2005–09, the Complementary Program to Support Growth (Programme complémentaire de soutien à la croissance [PCSC]) allocated DA3.2 billion to the sector. In 2004, the Ministry of Tourism has identified 146 *zones d'expansion touristiques* and launched a sectoral development strategy aimed at better exploiting the country's natural and cultural endowments, improving the quality of services and the reputation of the country, and rehabilitating hotels. According to the ministry, the sector counts more than 300 investment projects; foreign providers include Accor, Al Hamed, Eddar-Sidar, Marriott, and Starwood. These efforts have been supported by renewed interest by Aigle Azur, Air France, Alitalia, British Airways, Lufthansa, and Qatar Airways in flying to Algeria.

Given Algeria's size, location, coast line, infrastructure, and desert, its potential for tourism is substantial. This potential remains largely untapped, however. In 2005, 1.4 million people visited Algeria, originating primarily from France (34 percent), Tunisia (29 percent), Libya, Syria, and Egypt. A key to the development of tourism will be finding the right niches. The country's desert and cultural assets seem to be particularly promising in this regard. A number of reforms are necessary, however, to unleash this potential. For example, 80 percent of hotels do not meet international norms, and there is a shortage of skilled professionals.⁹

The new technologies of information and communication have also been identified as a priority. This sector has proven an important potential source of exports for developing countries, including in the Maghreb: in Morocco and Tunisia, call centers have mushroomed, and the wider market of business process outsourcing is even more promising.

Algeria's location and use of French could be major assets—if the economy is poised to take advantage of them. The World Economic Forum (2004) has identified Algeria as one of the countries with the slowest progress toward e-readiness. Further study could help assess the real trade potential of Algeria in the sector and design a strategy for competing. The results of the new incentives adopted by the government to develop the sector could also be reviewed.

Making the Best Use of International Trade Integration Tools

Service sector reforms can typically be made unilaterally: they are first and foremost aimed at improving services delivered domestically, and the country engaging in the reforms is the main beneficiary. However, achieving reform through international agreements can improve the prospects for success. The government can cite the potential benefits from the trade agreement in arguing against vested interests and in making a case for the expenditures often required to implement reforms. Entering into international commitments can also bolster the credibility of the government's commitments. Hence, different types of trade integration arrangements offer different advantages (table 7.8).

In Tunisia, the *Ordre des Experts Comptables* (order of certified accountants) negotiated with the French consulate the right to collect all requests for visas from its members, which the consulate agreed to fast-track (see chapter 5). Bilateral agreements have proven to be an efficient tool of negotiation for market access in many service sectors. Some negotiated bilateral agreements fail, however: based on reciprocity, lack of implementation by one party is enough to make the agreement void. Algeria, for example, has concluded some reciprocity agreements in the legal sector, but implementation has proven difficult.

Domestic reform can prepare a country for subsequent international integration. Reforms by the government and the transition to a market economy are significant steps toward Algeria's accession to the World Trade Organization (WTO), which Algeria has been negotiating since 1987. Anticipated benefits include the increased security and predictability of trade transactions, which would facilitate deeper integration in the world trading system and increase the attractiveness of investment.

Regional trade negotiations can be horizontal (for example, within the Maghreb region) or vertical (for example, between the Maghreb and the European Union). They can lead to deeper integration. Regionalism can

Table 7.8 Examples of Bilateral, Regional, and Multilateral Agreements

<i>Type of agreement</i>	<i>Example</i>
Bilateral	Mutual recognition agreements for diplomas and qualifications (for example, right of lawyers to appear in domestic courts, right of doctors to practice on a temporary basis) Fast-track procedures in key consulates to obtain business visas (for example, for accountants or engineers) Bilateral treaties (for example, bilateral conventions on social security, bilateral investment treaties, open sky agreements, tax treaties) Facilitation of the movement of key personnel through cooperation for training and research (for example, in the medical sector)
Regional	Harmonization or mutual recognition of education curricula or qualification requirements (for example, EU higher education) Freedom of establishment or movement of key personnel (for example, EU Lawyers Establishment Directive) Harmonization of certain norms or standards (for example, international accountancy norms (CGNC, IAS-IFRS), standards and certifications of clinics or health processes, telecoms) Harmonization of certain rules (for example, attribution of public work contracts, public procurement) Free-trade agreement (with Europe or within Maghreb)
Multilateral	Consolidation of existing reforms in the GATS in compensation for market access abroad (subject to WTO membership) Participation in the GATS negotiations on rules (subject to WTO membership) Participation in the negotiations on transparency of government procurement (subject to WTO membership)

Source: Authors.

Note: CGNC, Code General de la Normalisation Comptable. IAS-IFRS, International Accounting Standards—International Financial Reporting Standards.

be used to remove obstacles to trade and harmonize domestic rules across the region (leading eventually to regional rules). The earlier analysis of service trade flows suggests that the regional dimension of trade in services is essential to Algeria: vertically, European countries (in particular France) remain the main exporters of services (including through investment and establishment) to Algeria; horizontally, the large-scale investments of Egyptian telecommunications companies or the opening of Tunisian engineering firms or banks in Algeria are proof of the considerable potential of trade development within North Africa. Surprisingly, obstacles to trade, particularly obstacles to the movement of people, are often more serious at the horizontal than at the vertical level.

Liberalizing services, in terms of both increasing domestic competition and opening up to foreign providers, is often more difficult than

liberalizing the goods sectors, for several reasons. Services transactions often involve the promise of a future service for a current payment, increasing the risk of deceitful practices that may require strong oversight. In some service sectors, the sequencing of reforms can be critical (box 7.3). Asymmetry of information (between doctors and patients, for example) is even greater than in the goods sector. For these reasons, it is normal to regulate access to and the supply of services in the professions.

The many issues that govern an appropriate regulatory regime for the service sectors underline the importance of fashioning domestic regulations that are suited to the market, not necessarily guided by the issues that are prominent in trade negotiations. For this reason, WTO regulations on trade in services in Article VI of the GATS are limited to ensuring that. In sectors where specific commitments are undertaken, measures relating to qualification requirements and procedures, technical standards, and licensing requirements do not constitute unnecessary barriers to trade in services (that is, are based on objective and transparent criteria, such as competence and the ability to supply the service); are not more burdensome than necessary to ensure the quality of the service; and, in the case of licensing procedures, do not themselves restrict the supply of the service.

Recognition of the limits of trade concerns on service regulation does not mean that professions should be overly protected. Some professional bodies appear to have pursued the interests of their members over the interests of consumers. Lack of competition can result in predatory pricing and lower-quality services. Where a country is subject to such practices, or simply falls victim to skill shortages, opening to trade is often the safest way to restore an efficient market solution.

Issues for Policy Makers

Policy advice seems particularly fruitful in three areas. First, given the large and growing importance of the service sector and service trade for the Algerian economy, improvements to the statistical system to better capture trends and structural changes seem highly desirable. In the short run, statistics should be made more readily accessible (transparency) and usable to trade policy makers (for example, by collecting information by modes of delivery). The Banque d'Algérie could help policy makers better understand balance of payments data and their significance: How are the transport flows computed? How can the results for the insurance sector be explained? Algerian National Investment Development could

Box 7.3**Why Liberalization Often Produces Disappointing Results: Sequencing, Regulation, and Access Policies**

Although liberalization of services has been a successful path to development for many developing countries, it has produced disappointing results for others. Failure can translate into lack of access to basic services and diminishing trust in reform. Adverse results can often be explained by errors in policy making. Governments and donor organizations sometime behave as if they have complete faith in the power of the markets. They move aggressively, but unevenly, on the elimination of barriers to entry, sluggishly on the development of regulations to deal with market failure, and only notionally on the implementation of access policies.

This does not mean that governments and donors have been naive and did not appreciate the importance of regulation and access. Rather, they did what they could do quickly and relatively easily, which was to privatize and allow entry in some sectors. Ironically, in some cases only limited liberalization was accomplished in sectors in which successful outcomes could have been achieved even without progress in the other two dimensions of reform, whereas barriers were completely eliminated in sectors for which successful outcomes depended critically on complementary reforms. Implementing comprehensive regulatory improvements can be a slow and difficult process. The appropriate form of access policies is still not well understood or implemented outside a few sectors.

Sometimes there is no good reason to hold back on liberalization, even when regulatory reforms and access-widening policies take time to implement. This is true for reforms that are “additive” (the benefit from trade reform is independent of the benefit from domestic reforms and each can be undertaken separately). Thus, there is no economic reason to wait to liberalize until a universal access policy is established (this is the case, for example, in telecommunications). In other cases, reforms are “multiplicative” (a country would benefit more from trade reform if domestic reforms were also implemented and vice versa, but the order in which the two are implemented does not matter). For example, regulatory improvements and competition in transport are mutually beneficial, but the sequence is probably not critical. In other situations, sequencing matters: if the country implements trade reform before the necessary domestic reform, the long-term payoffs will be lower than if the opposite sequence had been followed. In these situations, if the complementary reform cannot be implemented for economic or political reasons, there is a case for gradual liberalization.

Source: Adapted from Mattoo and Payton 2007.

generate data on the sectoral distribution of FDI and better measure the importance of services in FDI flows (mode 3 trade), including the geographical dispersion of trade. The Algerian Trade Registry could obtain a better picture of foreign presence in the service sector.

In the long run, awareness needs to be raised of the trade dimension of services among ministries, professional bodies, and statistical offices, which should be encouraged to collect statistics that would help policy makers design sectoral and holistic trade promotion strategies. For example, what are enterprises in each sector exporting? What are the movements of key personnel? Who are the main foreign investors in the sector?

Second, a market that is more open to foreign service providers promises large benefits for the Algerian economy by overcoming domestic services supply bottlenecks, reducing the input costs for industrial enterprises, and offering role models for domestic services firms in terms of quality and management. To open the market, the government should identify the sectors that have already been liberalized, assess the results, and address remain obstacles to trade. This analysis could include an assessment of the appropriate sequencing of reforms. In addition, for each sector, the strengths, weaknesses, opportunities, and threats should be analyzed, with a view to determining Algeria's export potential and identifying obstacles to be removed and policies to be adopted.

Third, a multifaceted bilateral, regional, and multilateral integration strategy should be developed, to coordinate and enhance efforts to increase access to foreign country markets for Algeria's fledgling services exporters. For each sector, the optimal level of negotiation for liberalization and market access (bilateral, regional, or multilateral) should be identified and the right policy tools (for example, mutual recognition, harmonization, freedom of movement of key personnel) selected for use at each level. The risks and opportunities of opening with specific partners should also be assessed (by, for example, measuring the potential of vertical versus horizontal regional integration).

Notes

1. International efforts are underway to improve statistics on trade in services. The *Manual on Statistics of International Trade in Services* was developed and is published jointly by the European Commission, the International Monetary Fund, the Organisation for Economic Co-operation and Development, the United Nations, the United Nations Conference on

Trade and Development, and the World Trade Organization. It sets out an internationally agreed-upon framework for the compilation and reporting of statistics on international trade in services in a broad sense. The manual (UN document ST/ESA/STAT/SER.M/86) is available on the Web sites of the six organizations.

2. These statistics are based on the database of the Caisse Nationale des Assurances Sociales, which does not include all of the enterprises registered with the Centre National du Registre du Commerce.
3. The Conseil National Economique et Social underlines the difficulty of measuring and providing a definition of the informal sector. Statistics may vary depending on definitions (“uninsured workers” versus “shadow economy,” for example).
4. The building and construction sector is often not treated as a service sector in Algerian statistics. In accordance with common classifications used for trade purposes, this chapter includes construction and related services in the service sector. This may create a statistical bias, because the definition of the sector in Algeria may include industrial activities (cement, factories, and so forth).
5. The success of the insurance industry should be interpreted with great care.
6. The Centre National du Registre du Commerce, which inventories all firms established in Algeria that are foreign owned (*entreprises étrangères sous statut de personne physique*) or have a foreign manager (*sociétés étrangères*), is the most precise statistical instrument available. Because some foreign companies hire local managers and foreign managers can be hired by strictly local companies, it does not exactly reflect foreign presence.
7. The number of foreign firms does not indicate the size of these firms.
8. These measures are not fully satisfactory, because they do not distinguish between service providers and workers in other sectors and they include transfers of permanent migrants (mode 4 covers only the temporary movement of service providers).
9. This section draws on information in Mission Economique de la France à Alger (2005).

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PART III

Relations with China and India

CHAPTER 8

Economic Growth in China and India: Challenges and Opportunities for the Middle East and North Africa

**Elena Ianchovichina, Maros Ivanic,
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A key feature of the economic growth of China and India has been very rapid growth in their trade—arguably the strongest and most direct channel through which growth in China, and more recently India, is affecting other developing countries. China accounted for almost 8 percent of world exports of goods and services in 2007, substantially more than its share of world GDP at market prices (estimated at 5.9 percent) (Development Data Platform [DDP] database). China's degree of openness is high for a large economy, in part because as much as a third of the value of its exports comes from imported inputs (Winters and Yusuf 2007). India is smaller and less open, with 1.3 percent of world exports and 2.2 percent of world GDP in 2007 (DDP database). With annual export growth of nearly 20 percent over 1995–2005, China and India together accounted for 12.8 percent of the total growth in world exports, more than 50 percent more than the 8 percent contributed by the United States. Although the turbulence associated with the current

financial crisis seems likely to cause substantial fluctuations, the underlying trend rates of growth in China and India seem likely to remain strong.

An important feature of the growth of China and India has been the growth in their demand for natural resources, particularly energy. This structural increase in world demand for energy contributed to the sharp increases in energy prices before the emergence of the global financial crisis in mid-2008. It is likely to have major, long-term favorable impacts on the economies of the Middle East and North Africa (MENA). The resulting “Dutch disease” implications for the competitiveness of the traded goods sectors in MENA are likely to be of concern to many, however.

This chapter analyzes the key implications of the growth of China and India for MENA countries. Because modeling databases provide insufficient information on these countries, it was necessary to add data on a number of countries and regions to the database. This was a major undertaking, given the need to balance both bilateral trade flows and the macroeconomic aggregates. As a result of this effort, we were able to break out data for and model a number of countries in the region, including Algeria, Israel, Jordan, Lebanon, and the Syrian Arab Republic.

The chapter is structured as follows. The next section reviews the literature on the nature and magnitude of these effects, examining the effects through four broad channels. The second section describes the methodology used. The third section presents and discusses the results of the simulations. The last section summarizes the chapter’s main conclusions.

Messages from the Literature

The impact of growth in China and India on MENA countries’ trade can usefully be divided into four channels (holding policy settings constant): increases in opportunities for MENA countries to export to China and India, increases in opportunities for MENA countries to import from China and India, increases in third-market export competition from China and India, and indirect trade impacts.

The first interaction is typically seen as a gain, and the second one is frequently seen politically as a loss, although both interactions unambiguously involve gains to MENA countries. The third interaction is the subject of a great deal of attention and angst, as it invariably involves a loss to MENA countries. The fourth interaction is ambiguous in sign. If increased imports by China and India raise the prices of goods that are also imported by MENA countries, the effect can be adverse. If, by contrast, the imports of China and India substitute for goods supplied by

MENA, MENA could expect to gain from increases in the demand for these imports (for example, increases in demand for oil).

Increases in Opportunities to Export to China and India

Opportunities to export to China and India are expanding extremely rapidly. Between 1995 and 2008, China and India accounted for 13 percent of global growth in imports of mineral fuels. Most of this increase represented a net increase in demand as millions of Chinese, and more recently Indian, consumers grew richer and increased their consumption of resource-intensive goods. In metals and coal, China now ranks first in the world, accounting for 15–33 percent of world consumption.

An important factor to take into account in analyzing this issue is the reduction in the cost of energy-intensive goods when energy efficiency increases—a factor that blunts the edge of energy efficiency as an approach to reducing energy consumption. As Shalizi (2007) notes, changes in the energy intensity of growing economies can have a large impact on the demand for energy. The energy intensity of China's economy appears to have declined by two-thirds between 1980 and 2003, while energy intensity in India remained roughly unchanged. Both the likely path of energy efficiency and its implications for industrial structure and the derived demand for petroleum will clearly be important in assessing the implications of growth of China and India for the MENA region.

Increases in Opportunities to Import from China and India

The expansion of trade by China and India is quite different from the expansion of developing country exports considered in much of the traditional development literature, which focused on the deterioration in the terms of trade associated with expanding exports of primary commodities. The growth in trade by China and India involves, for instance, two-way trade in manufactures and services, which make the importing countries the beneficiaries of improvements in efficiency in their trading partners (Martin 1993). Exports by China and India also involve fragmentation and global production sharing, in which part of the production process is undertaken in one economy and subsequent stages are undertaken in another (Ando and Kimura 2003; Gaulier, Lemoine, and Unal-Kesenci 2004). This process can also make participants beneficiaries from, rather than victims of, improvements in the competitiveness of their trading partners.

The growth of China and India has therefore created enormous opportunities for their trading partners to benefit economically from imports of lower-priced and higher-quality goods. Although this is frequently seen as

a political cost, it is potentially a very important source of economic gains. Amiti and Freund (2008) find that the prices of China's exports to the United States fell 1.6 percent a year between 1997 and 2005.

Another notable feature of China's exporting has been technological upgrading. Devlin, Estevadeordal, and Rodríguez-Clare (2006) show how high-tech goods have partly displaced low-tech ones within the set of manufactured exports. This upgrading reflects both imports of more sophisticated products and local improvements in product quality (Branstetter and Lardy 2006). Similar improvements in the quality and variety of service exports have helped fuel explosive growth in exports of services from India in particular.

In addition, the trade patterns of growing countries tend to be quite dynamic. New trade theory recognizes that export expansion does not involve just increases in exports of the same products and services: rapidly growing economies expand the range of products and services they export, improve the quality of exports, and export to additional markets as their exports grow (Evenett and Venables 2002; Hummels and Klenow 2005). These developments generate benefits to the exporting economies and their trading partners, as Dimaranan, Ianchovichina, and Martin (2007) show.

Improvements in the quality of exports from an emerging market supplier increase the demand for their exports at any given price level and hence tend to lead to increases in the actual prices received for imports from these suppliers. Higher-quality goods allow importers to meet their needs with a smaller quantity of the good or consume more in response to a lower effective price of the good. The result is an improvement in the terms of trade and real incomes of both the emerging exporter and the importer when the terms of trade are measured in appropriate units.¹ Moreover, the increase in the number of goods supplied by the emerging market generates a benefit to countries that value an increase in the variety of goods available to them—a phenomenon frequently captured using formulations such as Dixit-Stiglitz preferences (see, for example, Hummels and Klenow 2005).

The magnitude of these gains depends on the extent of the improvement in quality, on the increase in the number of varieties of products being exported, and on the extent to which importers value increases in the variety of goods imported. If policy settings allow imported inputs to be used in partner countries, improvements in the variety and quality of imported inputs can be a particularly important source of dynamism in the manufacturing sector (Amity and Konings 2007).

Third-Market Competition

The trade impacts of emerging economies today are very different from those that have typically been analyzed when considering the impacts of growth in primary-producing developing countries. In the traditional literature, a rapidly growing developing country was typically a supplier to a common set of industrial country markets of a raw agricultural or mineral commodity produced by other developing countries. Although this literature was subsequently extended to take into account the rapid growth in exports of manufactures from developing countries, it continued to consider only negative impacts from the growth of other developing countries' exports.

Third-market competition is one of four interactions determining the impact of high growth in China and India. To the extent that the trade interactions between China and India and other countries involve third-market competition, the countries facing increased competition stand to lose. As Freund and Ozden (2009) and Hanson and Robertson (2009) note, some industries in some countries can and will lose from increased competition from the giants.² A key question is, which countries and which industries will face the most serious competition?

The answer to this question depends a great deal on the extent to which the pattern of exports from China and India overlap with those of MENA. Although both China and India have been successful in expanding their exports and imports, they have done so in very different ways (Dimaranan, Ianchovichina, and Martin 2007). India has relied much more heavily than China on exports of services. India's share of commercial services in total goods and services exports has been much higher than China's, not just since the rapid expansion of exports of computing services around 2000, but for the entire period since 1992 for which comparable estimates are available. However, both countries still have relatively small world shares of trade in services (China accounts for just 1.8 percent of world services exports, and India accounts for just 2.8 percent), and trade in services alone is unlikely to transform India's economy (Winters and Yusuf 2007).

Even within merchandise trade, China's and India's export patterns have been radically different at the six-digit level of the Harmonized System, with only one product—refined petroleum—appearing on both countries' top 25 lists of products.³ Although both China's and India's merchandise exports have been dominated by manufactures (World Bank 2003) and their shares of manufactured intermediate inputs in nonfuel imports in 2004 were very similar, the composition of these manufactures

and the approach to their production differ considerably. The share of parts and components in China's merchandise imports was much higher than India's, as might be expected given China's much greater role in global production sharing and India's greater reliance on exports of services, which typically involve smaller shares of imported inputs.

The two countries differ substantially in the importance of final goods in their exports (Dimaranan, Ianchovichina, and Martin 2007). China has relied primarily on exports of final manufactured products, frequently as part of production-sharing networks, whereas India has focused much more on exports of intermediate inputs. India's exports are frequently of capital- and skill-intensive goods, whereas China has emphasized exports of labor-intensive goods and professional services (although these are increasingly sophisticated) (Rodrik 2006).

The differences in export patterns reduce the risk of a collision in which the exports of China and India are simultaneously depressed. Still, recent research suggests that China's export bundle overlaps with that of developed countries much more substantially than one would expect given either its level of development or its size and that this similarity has increased with time (Schott 2008). China's rank in terms of the similarity of its export bundle with that of the Organisation for Economic Co-operation and Development (OECD) jumped from 19 in 1972 to 4 in 2001. No other country's growth in product penetration comes close to that of China. Quality differences between Chinese and developed countries' exports, however, suggest that competition between China and the developed world may not be as direct as suggested by the overlap of their export baskets.

One simple indicator of the extent to which the exports of two regions compete is the correlation between their export shares. The estimated correlations are very close to 0.5 (table 8.1).

The correlations between MENA and the two countries are similar or slightly lower, at 0.497 for India and 0.423 for China. A correlation of 0.5 between exports from China and India indicates much less

Table 8.1 Correlation of Export Shares of India, China, and the Middle East and North Africa

	<i>MENA</i>	<i>India</i>	<i>China</i>
MENA	1.000	0.497	0.423
India		1.000	0.501
China			1.000

Source: Authors' calculations, based on GTAP 7p3 database.

competition than might be suggested by much popular discussion. The similar or slightly lower correlation between the exports of MENA and the two giants suggests that competition with MENA will also be much weaker than casual reasoning might suggest.

An important concern for countries in MENA and elsewhere will be the extent to which India and, especially, China move up market into their “product space.” India and China have demonstrated their ability to upgrade their performance in specific sectors. China’s export growth has been accompanied by tremendous growth in product variety: China manufactured 9 percent of all manufacturing product categories in 1972 and 70 percent in 2001 (Schott 2008). This growth at the extensive margin is an important factor, which we take into account when evaluating the implications of rapid growth in China and India on MENA countries.

Indirect Trade Impacts

The rapid growth of imports by China and India is likely to change the prices of many goods of interest to MENA countries, even if they do not directly trade them with the two countries. The signs of these effects are ambiguous, because they depend on a number of factors, including the relationship between the mix of these products and those exported by MENA.

The rising exports of manufactures and services from the giants are likely to affect MENA countries even in cases in which they do not compete directly. As China and India increase the quality and quantity of their exports, one would expect a decline in their prices relative to factor prices. Productivity growth or more efficient use of factors in China and India is raising their output and hence putting downward pressure on their prices. As a result, MENA countries could benefit from lower prices on their imports of these goods.

Energy and mineral products are different, in that their supply is constrained by a fixed factor, energy resources. As incomes rise, the demand for energy grows strongly. This tends to push up the price of energy products relative to factor prices. Thus, MENA oil exporters enjoy substantial benefits from the impact of China and India on the prices of their exports. In our baseline simulation, this effect is muted but not completely offset by the increase in the productivity of energy production itself assumed in the analysis.

For agricultural goods, there are several competing influences on prices. The first is the technological change effect described above for manufactures and services, which tends to reduce prices. A second is the presence of a fixed factor (land) in agricultural production, which tends to raise

prices, because world income demand for these goods has risen, as in the case of energy products. A third factor is the well-known Engel effect—the fact that demand for agricultural products, particularly basic foods, tends to rise more slowly than income. A fourth factor is the Rybczynski effect: if growth is associated with increases in the capital-labor ratio, it will tend to reduce agricultural output and raise agricultural prices.

Dimaranan, Ianchovichina, and Martin (2007) find that higher growth in China and India implies increases in output of farm and forestry products in other countries and in output of energy, mineral, and other resource-based products in countries endowed with natural resources. As these two countries achieve major gains in their market shares in manufacturing, most other countries experience relative declines in manufacturing output, especially in clothing and electronics, which are sensitive to increased competition. Therefore, even if China's and India's success is generally good news for other economies, there are adjustment costs that will be borne by different stakeholders within those countries.

Methodological Approaches

A number of approaches can be used to address questions about the impact on world trade of China's and India's growth. DFID (2005) and Jenkins and Edwards (2006) focus on bilateral trade links. Although useful for analyzing the direct trade impacts, this approach ignores the strong spillover effects that may occur if countries compete in the same markets or products.

A second set of studies on the topic, including Lall and Weiss (2004), Goldstein and others (2006), and Stevens and Kennan (2006), considers global markets and compares the trade patterns of China with those of their countries of interest. These studies argue that countries with export patterns similar to China's are likely to suffer losses as China grows, whereas those whose exports match China's imports are likely to receive a boost. Although informative, this approach ignores the two-way trade that is prevalent in trade in manufactures and services and the possibility of gains from this trade where net trade patterns are similar.

A third group of studies uses case studies to analyze developments in particular industries or markets. This approach can be extremely illuminating, although it does not readily lend itself to revealing an overall picture. Using an approach drawing on the new economic geography, Yusuf, Nabeshima, and Perkins (2007) consider the future pattern of manufacturing production and exports to be likely central to development in both countries. Although services will be important to India,

they do not suggest a completely new development model. China's appetite for primary imports seems bound to continue growing.

Yusuf, Nabeshima, and Perkins (2007) believe that these features will combine to favor certain mid-tech and high-tech sectors, including automobiles, electronics, and domestic appliances—and in the future, pharmaceuticals and engineering—and present case studies of these sectors. Given rapid growth of skilled labor, it is possible for China to become a major force in some sophisticated sectors. Competing demand for skills in public service, general management, and education could delay the emergence of such technological leadership for some time. The second driver implies the continuation of low-skilled, labor-intensive manufacturing, but this is most likely to take place inland, where large numbers of farm workers could be trained for industrial work. India has had export success in textiles and clothing, is a growing force in pharmaceuticals, and shows potential in steel, white goods, and electronics. These studies can be used to assess likely sectoral impacts of the growth in China and India on other countries, but it is difficult to add up their effects across sectors.

A fourth group of studies examines the trade links between China and India and their target countries, some key impacts, and the policy responses needed to best adapt to the growth of the emerging giants. Broadman (2007) finds that the share of Asia in the exports of Sub-Saharan Africa rose from 14 percent in 2000 to 27 percent in 2004. This study highlights the importance of barriers to trade—in both Africa and Asia—that prevent both Africa and emerging Asia from taking greater advantage of the potential synergies between them. It uses the gravity model to investigate resistance to trade between China, India, and Africa. A survey by Abdel-Khalik and Korayem (2007) focuses on the links between China and the Middle East.

A fifth group of studies—including Dimaranan, Ianchovichina, and Martin (2007); McDonald, Robinson, and Thierfelder (2008); and Ianchovichina, Ivanic, and Martin (2008)—addresses these problems by employing computable general equilibrium (CGE) models. These models ensure consistency while including important industry detail: each region's exports of particular goods equal total imports of these goods into other regions (less shipping costs); global investment equals the sum of regional savings; regional output determines regional income; global supply and demand for individual goods balance; and demand for a factor in each country or region equals supply. These accounting relationships and the behavioral links in the model constrain the outcomes in important ways not found in partial equilibrium analyses—increased

exports from one country must be accommodated by increased imports by other countries; broad-based increases in productivity that raise competitiveness also raise factor prices and help offset the original increase in competitiveness.

Dimaranan, Ianchovichina, and Martin (2007) study the impact of accelerated growth as a result of productivity improvements in China and India on global economic growth to 2020, using a scenario consistent with the World Bank's macroeconomic projections at that time. They find three broad effects on other countries: countries' exports face fiercer competition because the giants' costs fall; their imports from China and India become cheaper; and they benefit from aggregate demand increases in China, India, and elsewhere as real incomes increase in response to efficiency improvements.⁴ The balance of these forces varies from country to country, but because most countries import significant amounts from China and India and all enjoy a share of the increase in demand, most countries gain overall (exceptions include some countries in Southeast Asia, the rest of South Asia, and the European Union). In the European Union, the rise in the price of energy causes consumption of energy to decline further. This reduction in consumption levels of a good whose consumption is already reduced by domestic taxes leads to an economic efficiency loss of \$7.3 billion, which is enough to outweigh the \$3 billion gain from the terms-of-trade improvement and to create a small overall welfare loss.

China's exports to other markets increase, and other countries' exports—especially manufactured products—decline. The MENA region as a whole increases exports to China and India but loses market share in the European Union and other markets. MENA appears to have an opportunity to strengthen its trade ties with China and India. In the absence of policy measures to boost competitiveness, however, overall exports from the region are expected to decline 1.5 percent relative to baseline by 2020 (Dimaranan, Ianchovichina, and Martin 2007). The message of this work is that many MENA countries will have to improve their competitiveness.⁵

This short survey of the burgeoning literature on the growth of China and India reveals a number of lessons on how to assess the likely implications of their growth for MENA countries. One is to pay attention to the structure of MENA countries' trade and its complementarity or competitiveness with that of the giants. Another is to examine the nature of the direct and indirect trade links between them to assess the extent to which gains from expanded bilateral trade can offset losses

from competition in third markets. The implications of the growth of China and India for the prices of resources, particularly energy and mineral resources, are likely to require particular examination. A key objective is to help identify policy responses, both to take advantage of the opportunities created by the growth of China and India and to avoid potential disruptions.

Methodology, Data, and Simulation Design

Like Dimaranan, Ianchovichina, and Martin (2007), we use the modified version of the standard Global Trade Analysis Project (GTAP) model in Ianchovichina (2004) to analyze the consequences of higher growth in China and India on MENA countries.⁶ This version of the GTAP model features China's duty exemption system, which has been a key driver of the rapid integration of China into global production networks, and the duty drawbacks in India, which have allowed for much deeper integration by India into global production sharing than in the past. Ianchovichina (2004) shows that failing to take into account the presence of a duty drawback or exemption system can lead to serious overestimation of the impacts of trade liberalization.

The duty exemption model allows for two separate activities in each industry. Production of exports is represented as an activity for which imported intermediate inputs are available duty free. Production for the domestic market uses the same technology but requires payment of duties on intermediate inputs. Firms engaging in production for either the domestic market or the export market purchase both imported and domestic intermediate inputs, which are imperfect substitutes.

Factor inputs of land, capital, skilled and unskilled labor, and, in some sectors, a natural resource factor are included in the analysis. The model takes into account the role of intersectoral factor mobility and overall resource constraints in determining sectoral output supply. Product differentiation between imported and domestic goods and among imports from different regions allows for two-way trade in each product category, depending on the ease of substitution between products from different regions.

The model includes the explicit treatment of international trade and transport margins, a "global" bank designed to mediate between world savings and investment, and a relatively sophisticated consumer demand system designed to capture differential price and income responsiveness across countries. As mentioned earlier, the accounting relationships and

the behavioral link in this general equilibrium model constrain the outcomes in important ways not found in partial equilibrium analyses.

Our interest in the MENA countries required us to extend the GTAP 7p3 database beyond the 93 countries and regions represented in it and to aggregate its 57 sectors into 26 sectors based on their importance in China, India, and the MENA region (the 93 countries and regions in the database included too much disaggregation outside and insufficient disaggregation within the MENA region). We retained all of the low- and middle-income countries identified within the MENA region, including the Arab Republic of Egypt, the Islamic Republic of Iran, Morocco, and Tunisia. We separated Algeria, Israel, Jordan, Lebanon, and Syria out of the two GTAP regions representing the remainder of the MENA region—the rest of North Africa (XNF) and the rest of West Asia (XWS). The resulting database included eight low- and middle-income countries—Algeria, Egypt, Iran, Jordan, Lebanon, Morocco, Syria, and Tunisia—and a composite energy-rich “other MENA” region representing Iraq, Libya, the Republic of Yemen, and the Gulf Cooperation Council countries.

The separation procedure was based on bilateral trade and tariff data from MAcMaps; data on the three components of GDP (agriculture, industrial production, and services) from the World Bank’s World Development Indicators (WDI) database; and data on imports and exports of services from the WDI database. The process of separation began with a domestic input-output structure for an individual country that mirrored the input-output structure of the relevant GTAP region. The data most critical for the analysis—such as the trade and protection data—were filled in directly from external sources. An optimization program filled in the remainder of the data, so that the structure of GDP approximated the broad structure of the original economy and the total value of GDP and the value of trade in each commodity equaled the observed values. The structure of internal taxes in the original MENA region was imposed on the newly separated countries. At the end of this procedure, the data for each country or region correctly reflected the size and the composition of its GDP, trade flows, and applied tariff rates—all essential properties for any trade-related policy study.

To examine the implications of more rapid growth in China and India on the Middle East, we needed first to take account of some of the major reforms that are transforming India’s trade structure, in particular liberalization of nonagricultural tariffs, improvements in infrastructure needed to support trade, and the introduction of duty drawbacks, which has removed the burden of tariffs on intermediate inputs used in the production of

exports. As in Dimaranan, Ianchovichina, and Martin (2007), we find the correlation between China's and India's exports of manufactures barely changed in response to these key liberalization reforms in India. This finding suggests that India and China are likely to remain exporters of very different sets of products and hence less likely to be subject to mutually adverse impacts from export expansion.

Next, we made a baseline projection to 2020, to allow for much higher expected rates of growth in many developing countries than in the mature industrial economies and a consequent greater impact of future changes in outcomes in developing countries. For comparability with Dimaranan, Ianchovichina, and Martin (2007), we considered a 15-year baseline designed to replicate the widely used GTAP baseline projections for labor force, human capital, and physical capital growth between 2005 and 2020.⁷ Economywide rates of technical change were determined endogenously in the model to ensure consistency between the exogenous variable forecasts and the GDP growth forecasts that closely follow the World Bank GDP projections.

We examine the implications of higher-than-projected growth in China and India to assess the direct implications of growth there on the MENA countries. We assumed that growth rates in each region were 2 percentage points a year higher than in the baseline. Over the 15-year baseline, this resulted in output levels 34.6 percent higher in each region than under the baseline scenario. Consistent with Kaldor's (1957) stylized facts of economic growth, we increased the stock of human and physical capital in line with overall output in these two growing economies. We allowed economywide productivity growth to adjust to maintain the targeted increase in the rate of economic growth.

A second scenario examines the impact of additional growth supplemented with an improvement in the quality and variety of exports, building on recent evidence that suggests that economic growth of the type considered in this chapter increases both the quality and the variety of the goods exported by the growing economy.⁸ Using the quantity aggregator and empirical estimates from Hummels and Klenow (2005), we specify the reduction in effective prices associated with the combination of increases in variety and quality (this specification is discussed in detail in Dimaranan, Ianchovichina, and Martin 2009).⁹ Improvements in the quality of goods reduce the effective price of the goods at any given actual price, as a smaller amount of each good is required to bring about the same increase in welfare. Where, as in this study, consumers value variety in the products they consume, an increase in the range of varieties available also

reduces the effective price of the good at any given set of actual prices for the goods.

Results

The effects on key variables of higher growth in China and India and higher growth with increased variety and quality of exports are presented for real incomes (welfare), export volumes, and terms-of-trade effects, using the standard estimate of the real income impacts of terms-of-trade changes that does not take into account second-best welfare effects (table 8.2).¹⁰ For each variable, the effect depends on whether the income increases in China and India result in intensive-margin growth of the same exports (“Growth”) or are accompanied by expansion in the range of products exported and improvements in their quality (“G&O”). Increases in real income are presented in percentage changes in equivalent variation, measured in 2004 dollars. Export expansion is presented using percentage changes in the volume of exports. The terms-of-trade effects are presented in 2004 dollars.

The welfare changes are expected to be largest for China and India, which benefit directly from their own growth. The gains for other countries are relatively small in the absence of quality and variety improvements on exports from China and India. High-income countries gain, except EU members and Japan, which may lose in the growth-only scenario despite terms-of-trade gains because of interactions between existing distortions and changes in energy prices (see Martin, Ianchovichina, and Dimaranan 2008). Many countries are expected to benefit from improved terms of trade for their products, as China increases its imports by 28.5 percent and India increases its by 35.2 percent. Some middle- and low-income countries, such as the Republic of Korea, the Philippines, and countries in South Asia, are projected to lose, because competition with China and India in third markets negatively affects their terms of trade.

The improvement in the welfare of the MENA region as a whole, and in all MENA countries except Tunisia, is not associated with increases in export volumes, except in specific cases, such as Lebanon. Oil-exporting countries in the MENA region, represented by the “other MENA region,” experience large increases in welfare, associated with strong expected improvements in the prices of commodities they export. They will thus be able to increase their consumption at any given volume of exports, reducing their need to export. Exporters of manufactures, such as Lebanon and other developing countries, are expected to suffer from

Table 8.2 Impacts of Extra Growth in China and India on Selected Economies
(relative to 2020 baseline)

Region or economy	Growth		G&Q		Exports (percent)		Terms of trade (millions of dollars)	
	EV (millions of dollars)	EV (percent)	EV (millions of dollars)	EV (percent)	Growth	G&Q	Growth	G&Q
Middle East and North Africa								
Algeria	2,871	1.3	3,206	1.5	-0.5	-0.6	2,435	2,695
Egypt, Arab Rep. of	363	0.3	596	0.5	0.2	0.6	297	543
Iran, Islamic Rep. of	2,460	0.9	3,239	1.2	0.2	1.7	2,119	2,856
Jordan	864	1.2	1,067	1.5	-12.4	-14.6	261	454
Lebanon	206	0.3	258	0.3	10.3	11.2	277	390
Morocco	50	0.1	196	0.3	1.7	1.6	-18	144
Syrian Arab Rep.	493	0.5	651	0.6	2.2	2.8	241	461
Tunisia	-57	-0.1	-58	-0.1	-0.5	-1.5	-31	33
Other Middle East and North Africa	16,347	3.0	20,013	3.7	-1.6	-1.0	15,343	18,733
MENA	23,593	1.5	29,168	1.9	-0.9	-0.4	20,923	26,309
East and Southeast Asia								
China	1,033,330	28.9	1,111,113	31.1	33.3	60.9	-55,960	22,879
Hong Kong, China; and Taiwan, China	2,553	0.4	9,350	1.3	1.4	3.2	2,959	9,578
Indonesia	1,178	0.3	2,007	0.4	0.2	0.6	1,125	1,622
Japan	-1,177	0.0	6,653	0.1	3.1	5.5	2116	6,321
Korea, Rep. of	4,750	0.4	11,586	1.0	3.5	5.7	-112	4,310
Malaysia	2,669	1.2	5,323	2.4	-0.7	-0.6	2,118	3,399
Philippines	-472	-0.3	-191	-0.1	0.6	1.0	-415	-186
Singapore	-247	-0.1	1,878	1.0	1.8	3.2	476	2,361
Thailand	409	0.1	2,050	0.4	1.2	2.4	121	1,268
Vietnam	565	0.7	928	1.1	-0.5	-0.9	615	1,157
Rest of Southeast Asia	450	1.9	599	2.5	-1.4	-1.9	442	583

(continued)

Table 8.2 Impacts of Extra Growth in China and India on Selected Economies (Continued)
(relative to 2020 baseline)

Region or economy	Growth		G&Q		Exports (percent)		Terms of trade (millions of dollars)	
	EV (millions of dollars)	EV (percent)	EV (millions of dollars)	EV (percent)	Growth	G&Q	Growth	G&Q
South Asia								
India	393,012	30.5	413,951	32.2	41.4	68.8	-14,628	6,270
Rest of South Asia	-757	-0.2	71	0.0	1.0	2.1	-536	493
North America								
Canada	3,068	0.3	4,670	0.4	-0.7	-0.9	3,252	4,144
Mexico	1,802	0.2	5,231	0.5	0.9	2.7	94	724
United States	-595	0.0	17,531	0.1	1.4	3.2	4,605	21,171
Latin America								
Argentina and Brazil	2,043	0.2	3,804	0.3	0.8	1.4	2,149	3,186
Rest of Latin America	3,414	0.5	5,102	0.7	-0.1	0.4	3,248	4,374
Europe and Former Soviet Union								
EU 25 plus EFTA	-6,186	0.0	12,990	0.1	0.2	0.2	6,771	21,523
Former Soviet Union	8,385	0.8	10,970	1.0	0.4	1.2	7889	9,878
Sub-Saharan Africa	5,996	0.8	8,891	1.2	0.0	0.7	4932	7,619
Other								
Australia and New Zealand	5,127	0.5	8,317	0.8	1.2	2.6	5,092	7,762
Israel	3,397	1.1	3,846	1.2	-1.8	-2.0	2,610	3,114
Rest of world	-1,094	-0.1	-315	0.0	1.0	1.2	-502	1,174
World	1,485,215	2.7	1,675,523	3.0	4.7	8.8	0	171,033

Source: Authors' simulations of modified GTAP model (Ianchovichina 2004).

Note: EV is a measure of the change in real income associated with the reform. G&Q denotes growth accompanied by improvements in export quality and variety. EFTA = European Free Trade Association.

increased competition and lower prices for their exports of manufactures (table 8.3).

Given its sizable exports of energy products and the larger increase in energy prices than in prices of other goods, it is perhaps not surprising that the MENA region as a whole is projected to benefit from the strongest terms-of-trade gains under both simulations (in money terms). In this set of simulations, the welfare gain of the MENA region is exceeded by gains only in the former Soviet Union, China, and India.

Table 8.3 Projected Changes in World Commodity Prices Associated with Extra Growth in China and India
(percentage change between baseline and 2020 projection)

Sector	Growth	Growth, variety, and quality
Rice	1.05	1.71
Wheat	3.16	3.40
Grains	2.58	2.85
Vegetables and fruits	2.08	2.25
Oils and fats	-0.21	-0.70
Sugar	-0.67	-1.29
Plant-based fibers	3.41	3.55
Other crops	1.24	1.15
Livestock and meat	-0.27	-0.80
Dairy	-0.78	-1.44
Other processed foods	-0.82	-1.40
Textiles	-1.15	-1.10
Wearing apparel	-1.90	-0.97
Leather	-1.36	-1.11
Wood products	-1.54	-2.03
Energy	5.52	4.89
Minerals	-1.42	-1.31
Chemicals	-1.17	-1.59
Metals	-1.89	-1.87
Vehicles	-1.76	-2.46
Machinery and equipment	-2.28	-2.22
Electronics	-2.66	-2.71
Other manufactures	-3.63	-1.12
Trade and transport	-1.37	-1.70
Communications	-2.13	-2.42
Other services	-1.66	-2.24
All	-1.24	-1.45

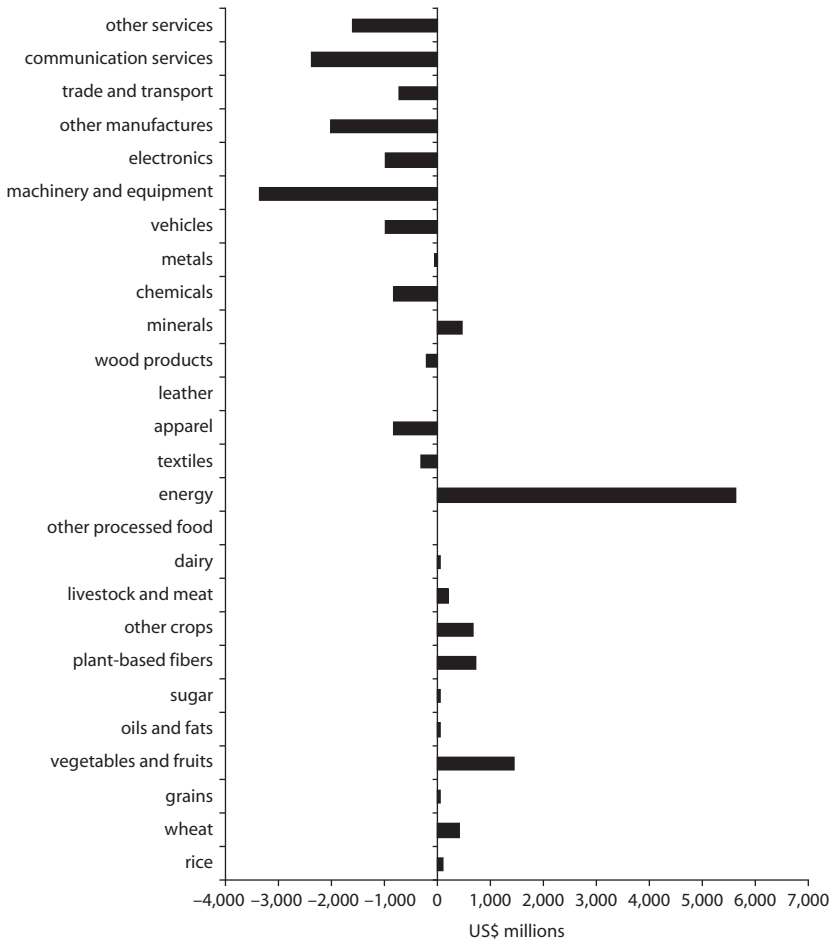
Source: Authors, based on simulations in Dimaranan, Ianchovichina, and Martin 2007.

The increase in world prices of a number of key agricultural products appears to be a consequence of a transfer of resources out of labor-intensive agriculture associated with the rise in the endowment of physical and human capital in China and India. This result is not preordained. In the baseline simulations used to project the model to 2020, the prices of agricultural goods rise rather than fall. In contrast, in the growth simulation reported in Dimaranan, Ianchovichina, and Martin (2007), the prices of agricultural products fall, because the stocks of physical and human capital remain unchanged. The capital deepening in our simulation is expected to draw resources out of labor-intensive agriculture in these countries through Rybczynski effects, contributing to the increase in world prices of agricultural products (see Martin and Warr 1993 and Gehlhar, Hertel, and Martin 1994 for a discussion of this channel). Although many MENA countries are net food importers, and hence potentially adversely affected by increases in food prices, these disadvantages are expected to be strongly outweighed for the energy exporters by the projected increase in the prices of energy products and the declines in the prices of imported manufactures.

Adding improvements in the variety and quality of exports from China and India to the high-growth scenario is projected to increase the welfare gains to the world economy from \$1,485 billion in the baseline to \$1,675 billion by 2020 (see table 8.2). Over the same time period, the volumes of exports from China and India are expected to grow by 61 percent and 69 percent, respectively, relative to the baseline, with positive terms-of-trade effects in all regions except the Philippines.¹¹ Most countries are expected to benefit, because they can import higher volumes from China and India at lower effective prices while exporting higher volumes to the two countries, as demand for imports in China and India grows. The biggest beneficiaries are, of course, China, whose estimated welfare increases 31 percent, and India, whose estimated welfare increases 32 percent. The volume of trade between China and India likely increases by more than either country's trade with the rest of the world, deepening the trade links between the two Asian giants.

MENA is likely to play a smaller role in exporting manufactured goods and services as a result of higher growth in China and India (figure 8.1). Projected losses in export volumes in many MENA countries, including Algeria, Jordan, Tunisia,¹² and other MENA countries (see table 8.2) suggest that the effect from increased opportunities to export to China and India is likely dominated by the effects from increases in third-market export competition from these two countries and increased domestic

Figure 8.1 Projected Changes in Volume of Exports from the Middle East and North Africa Associated with Extra Growth in China and India



Source: Authors, based on simulations of modified GTAP model (Ianchovichina 2004).

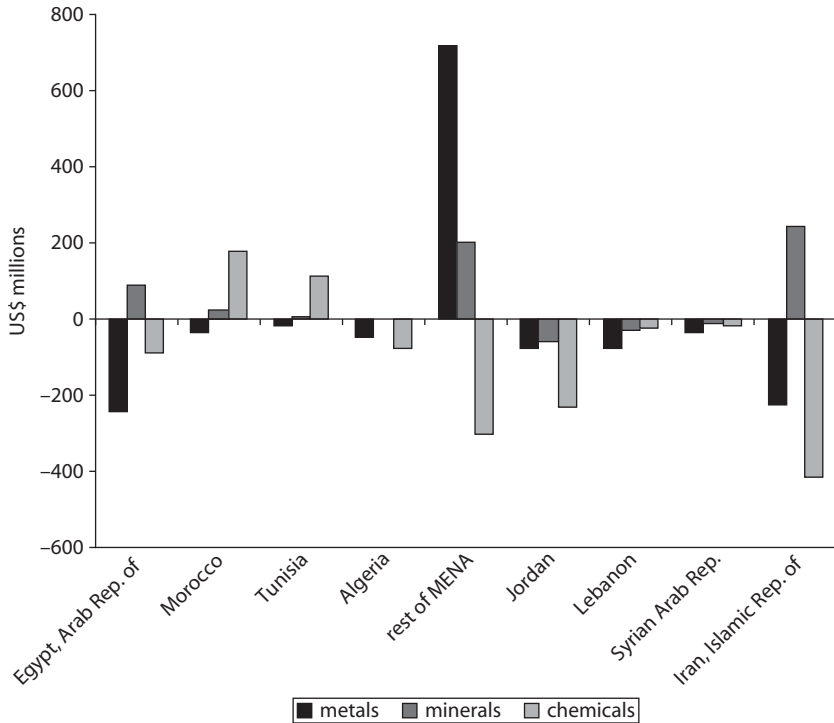
Note: Figure shows changes in value between baseline and 2020.

demand resulting from improvements in the terms of trade. But the boost to China's and India's manufacturing industries is expected to create positive spillover effects through increased demand for intermediate inputs, including minerals, energy, and farm-based natural resources. Indeed, exports of energy products will increase the most, followed by increases in exports of farm products, and minerals.

The aggregate results conceal differences at the country level. The rise in MENA's mineral exports occurs because of strong export growth of minerals and energy from Egypt, Iran, and other MENA countries (figure 8.2). Strong export growth of metal products from countries in the rest of the MENA region will likely be offset by a decline in exports of metal products from the countries shown in figure 8.2. Morocco and Tunisia may expand exports of minerals and chemicals.

Exports of manufactures are projected to be hit hard in all countries. For industries in some countries, these effects could be substantial (figure 8.3). The declines are expected to be much smaller for industry outputs (see annex table 8.A.3). Higher growth of exports from China implies an expansion of its textile industry and a contraction of the textile industries in all MENA countries except Tunisia. The projected growth of China's

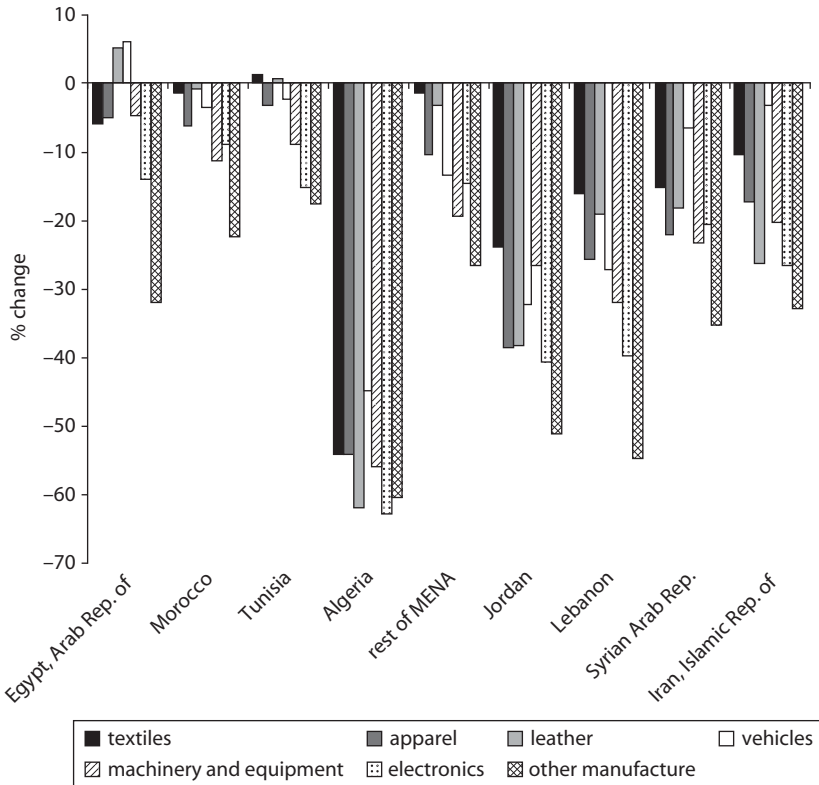
Figure 8.2 Projected Changes in Volume of Resource-Based Manufactured Exports Associated with Extra Growth in China and India



Source: Authors, based on simulations of the modified GTAP model (Ianchovichina 2004).

Note: Figure shows changes in value between baseline and 2020.

Figure 8.3 Projected Changes in Volume of Manufactured Exports Associated with Extra Growth in China and India



Source: Authors, based on simulations with the modified GTAP model (Ianchovichina 2004).

Note: Figure shows changes in value between baseline and 2020.

apparel industry entails sharp contraction of apparel production elsewhere, including in all MENA countries. Large declines are also expected for machinery and equipment, electronics, and other manufactures. Algeria is expected to suffer the most significant contractions in the largest number of manufacturing sectors.

Policy makers are likely to be tempted to protect some sectors against increased competition from imports. Doing so would exacerbate the problems of exporters, by raising export costs and reducing the variety of goods and services exported, reducing the competitiveness of exports. Venables (2004) shows that a reduction in the number of products facing import competition is likely to be associated with a similar reduction in the number of products exported. By contrast, policies that increase

productivity can improve competitiveness and increase the range and quality of products exported.

The expansion of the energy sector and the contraction of manufacturing and services are signs of a Dutch disease effect. All MENA countries may be facing increasing pressures to adjust their domestic and trade policies to increase competitiveness and cushion the effects on their nonenergy sectors.¹³ The challenges—especially the challenge of creating conditions for employment growth to absorb the large number of young people expected to join the labor force in the next two decades—will be great.

When improvements in product quality and variety are taken into account, the reductions in the effective prices of imports from China and India are expected to reduce MENA's estimated export losses; the larger reduction in the effective price of imports from China and India turns the expected trade losses into gains and amplifies the terms-of-trade effects and welfare gains to countries in the MENA region (see table 8.2) The trade gains stem from new opportunities to increase exports of certain crops, vegetables and fruits, minerals, metals, and trade and services (figure 8.4).¹⁴

Concluding Comments

This chapter identifies four broad channels through which the growth of China and India may affect the MENA region:

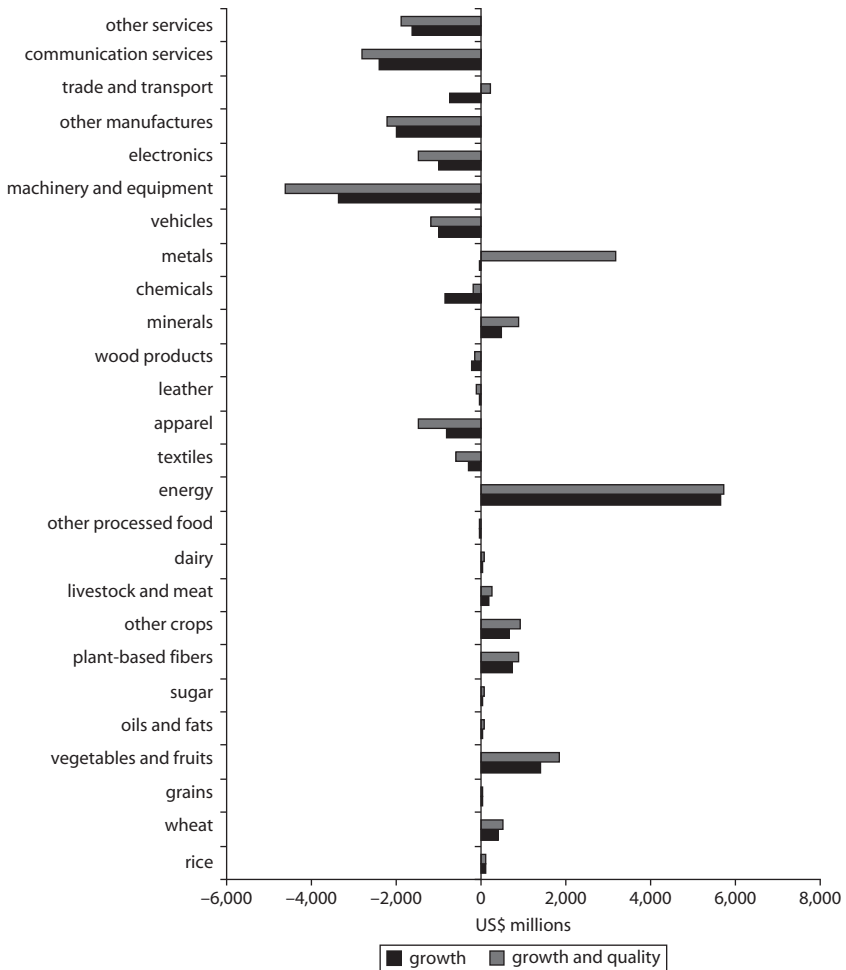
- Increases in opportunities for MENA to export to China and India
- Increases in opportunities for MENA to import from China and India
- Increases in third-market export competition
- Indirect trade impacts.

It shows that the first two effects are unambiguously favorable, the third is unambiguously negative, and the fourth is ambiguous in sign. Thus, the overall impact of high growth in China and India is in general ambiguous in sign.

The MENA region would likely benefit substantially from extra growth by the two Asian giants, with real incomes in the region rising by \$24 billion between 2005 and 2020 (at 2004 prices). With improvements in the quality of exports from China and India, the gains to the MENA region would rise by \$29 billion.

Gains from improvements in the terms of trade are particularly important. The overwhelming majority of the gains (\$21 billion and \$26 billion

Figure 8.4 Projected Changes in Export Volumes Associated with Extra Growth in China and India under Growth and Growth and Quality Scenarios



Source: Authors, based on simulations with the modified GTAP model (Ianchovichina 2004).

Note: Figure shows changes in value between baseline and 2020.

under the two scenarios) accrues through improvements in the terms of trade. These gains are associated with increases in the world prices of energy and some agricultural products. The prices of most agricultural goods increase, partly because of increased demand fueled by increasing incomes in China and India and partly because labor moves out of agriculture in China and India into more capital and skill-intensive activities.

The volume of exports from the MENA region declines slightly. Exports of energy products and a few agricultural products increase, and exports of most manufactures and services decline. These effects reflect increased competition in third markets and increased domestic demand resulting from the terms-of-trade improvements associated with the growth of China and India. Some countries, such as Algeria and Jordan, see relatively large reductions in their manufactured exports; others see increases in their exports of resource-based exports, such as metals and minerals.

Growth in China and India has mixed results for MENA. Improvements in the region's terms of trade increase income, especially when likely improvements in the quality and variety of exports from China and India are factored in. But increased competition in third markets reduces the opportunities for MENA countries to expand their exports of manufactures, causing exports of manufactures to decline in some cases. Finally, the expansion of the energy sector and the contraction of manufacturing and services are signs of Dutch disease. All MENA countries will face increasing pressures to adjust their domestic and trade policies to increase competitiveness, cushion the effects on their nonenergy sectors, and accommodate the large number of young people expected to join the labor force in China and India in the next two decades.

The following caveats are important to keep in mind. The results in this chapter are based on thought experiments; they offer only the broadest indications of likely effects rather than precise predictions. They strongly suggest that benefits will depend on adapting to the new opportunities and challenges. The substantial adjustment costs of this economic transformation are not factored into the analysis. Finally, because the focus is on the static trade aspects of growth in China and India, the analysis ignores important link between investment and growth that may amplify the effects discussed here and affect the welfare results.

Annex

Table 8.A.1 Annual Baseline Growth Rates in Selected Economies, 2005–20
(annual percentage change)

<i>Region/economy</i>	<i>Population</i>	<i>Unskilled labor</i>	<i>Skilled labor</i>	<i>Physical capital</i>	<i>GDP</i>
<i>Middle East and North Africa</i>					
Algeria	1.5	2.2	4.2	2.5	2.7
Egypt, Arab Rep. of	1.4	1.7	2.2	3.6	4.7
Iran, Islamic Rep. of	1.4	1.5	4.2	6.7	5.0
Israel	1.2	0.8	1.3	3.5	3.7
Jordan	2.0	2.6	3.1	4.5	4.5
Lebanon	1.0	1.4	1.9	2.8	3.1
Morocco	1.3	2.0	2.5	4.4	3.9
Syrian Arab Rep.	1.8	2.8	4.4	2.6	4.4
Tunisia	1.2	1.9	4.5	4.6	4.6
Other MENA	1.9	2.0	3.1	3.6	3.7
<i>East and Southeast Asia</i>					
China	0.6	0.8	3.9	8.5	6.6
Hong Kong, China; and Taiwan, China	0.3	0.6	2.9	4.9	4.3
Indonesia	1.1	2.7	6.5	4.7	5.2
Japan	-0.2	0.2	-0.7	2.5	1.6
Korea, Rep. of	0.3	2.0	5.8	4.9	4.7
Malaysia	1.4	-1.4	3.9	5.8	5.6
Philippines	1.5	1.8	4.5	3.4	3.5
Singapore	0.8	0.6	1.1	5.3	4.9
Thailand	0.5	0.1	3.2	3.9	4.6
Vietnam	1.1	1.4	1.9	6.0	5.4
Other Southeast Asia	1.0	1.3	4.2	3.7	3.1
<i>South Asia</i>					
India	1.1	1.6	4.0	6.1	5.5
Other South Asia	1.7	2.1	3.6	5.1	5.0
<i>North America</i>					
Canada	0.4	1.6	0.9	3.2	2.6
Mexico	1.4	2.7	4.6	3.3	3.8
United States	0.7	1.5	0.8	3.9	3.2
<i>Latin America</i>					
Argentina and Brazil	1.0	0.9	3.6	3.1	3.6
Other Latin America	1.4	1.6	3.9	3.4	3.3
<i>Europe and the former Soviet Union</i>					
European Union	0.0	0.4	0.1	2.6	2.3
Former Soviet Union	-0.1	0.3	0.7	3.6	3.2
<i>Other</i>					
Australia and New Zealand	0.7	1.6	0.6	3.8	3.4
Sub Saharan Africa	1.9	2.6	3.3	3.1	3.5
Rest of world	0.8	0.8	2.5	3.0	4.1

Source: World Bank and Center for Global Trade Analysis (GTAP).

Table 8.A.2 Changes in Exports Caused by Extra Growth in China and India, 2005–20
(percentage change by 2020 relative to baseline)

<i>Good or service</i>	<i>Egypt, Arab</i>		<i>Iran, Islamic</i>		<i>Jordan</i>	<i>Lebanon</i>	<i>Morocco</i>	<i>Syrian</i>		<i>Other MENA</i>
	<i>Algeria</i>	<i>Rep. of</i>	<i>Rep. of</i>	<i>Arab Rep.</i>				<i>Tunisia</i>		
Rice	8.0	10.0	10.2	-20.0	1.6	21.5	1.8	25.8	10.3	
Wheat	26.3	36.7	58.0	6.3	28.1	65.5	31.7	82.3	33.8	
Grains	22.2	18.2	19.4	-14.2	6.6	26.6	10.7	16.0	0.6	
Vegetables and fruits	-21.6	7.4	39.4	-13.3	12.0	9.9	6.8	22.8	23.9	
Oils and fats	-39.5	-0.2	1.6	-22.8	-9.1	0.1	-6.8	1.8	3.4	
Sugar	-45.2	-2.0	47.8	-25.6	-9.6	1.2	-6.8	11.2	0.3	
Plant-based fibers	2.9	43.8	18.9	-12.0	20.7	31.7	44.7	13.8	24.9	
Other crops	-32.1	5.0	25.8	10.8	17.0	24.7	5.5	9.6	25.9	
Livestock and meat	-45.6	16.7	6.9	-6.4	2.9	21.1	0.0	37.0	9.8	
Dairy	-40.1	15.1	6.0	-19.3	-3.7	8.6	-2.3	18.0	1.5	
Other processed food	-33.9	-0.5	-2.2	-17.0	-4.3	-0.7	0.2	3.7	-0.3	
Textiles	-54.0	-5.8	-10.4	-23.8	-16.0	-1.4	-15.1	1.2	-1.4	
Apparel	-54.1	-4.9	-17.3	-38.4	-25.6	-6.2	-22.0	-3.1	-10.2	
Leather	-61.9	5.3	-26.3	-38.2	-19.2	-0.8	-18.3	0.8	-3.2	
Wood products	-45.4	-1.6	-6.2	-31.7	-15.6	-3.3	-9.5	-0.5	-3.9	
Energy	0.7	14.7	5.6	7.4	26.1	31.2	4.4	6.9	1.0	
Minerals	-16.5	4.5	12.6	-11.6	-8.2	1.5	-13.9	1.3	3.5	
Chemicals	-53.2	-7.8	-9.9	-30.9	-51.1	5.8	-25.4	5.4	-0.9	
Metals	-57.6	-10.6	-3.6	-35.4	-36.5	-4.7	-18.6	-4.4	4.2	
Vehicles	-44.9	6.2	-3.3	-32.3	-27.0	-3.6	-6.4	-2.3	-13.5	
Machinery and equipment	-55.9	-4.8	-20.2	-26.5	-31.8	-11.1	-23.2	-8.8	-19.4	
Electronics	-62.9	-13.9	-26.5	-40.7	-39.7	-8.8	-20.7	-15.2	-14.6	
Other manufactures	-60.4	-31.9	-32.7	-51.3	-54.7	-22.3	-35.3	-17.6	-26.7	
Trade and transport	-37.0	-0.9	-5.8	-20.8	-9.2	2.0	-4.3	2.0	-1.3	
Communication services	-39.8	-2.5	-7.0	-19.5	-7.7	-4.9	-5.4	-1.5	-10.7	
Other services	-31.3	-4.1	-5.3	-17.7	-1.6	-2.8	0.6	-0.1	-11.4	

Source: Authors' simulations of modified GTAP model (Ianchovichina 2004).

Table 8.A.3 Changes in Output Caused by Extra Growth in China and India, 2005–20
(percentage change by 2020 relative to baseline)

Good or service	Egypt, Arab		Iran, Islamic		Jordan	Lebanon	Morocco	Syrian		Tunisia	Other MENA
	Algeria	Rep. of	Rep. of	Arab Rep.							
Rice	1.5	2.0	0.5	0.6	-1.2	-0.3	0.2	4.1	6.6		
Wheat	-5.7	4.6	1.0	0.6	-0.5	3.9	0.6	4.6	10.0		
Grains	1.9	0.9	0.5	1.1	-0.7	1.0	0.7	3.6	1.3		
Vegetables and fruits	0.2	0.7	2.8	0.5	-0.1	3.0	0.3	1.4	10.0		
Oils and fats	0.8	-0.1	-0.9	-1.5	-0.8	0.4	0.0	1.8	3.2		
Sugar	-9.6	-0.4	4.1	0.8	-1.2	-0.2	-0.7	0.7	0.3		
Plant-based fibers	-2.0	10.5	0.4	-0.4	1.2	2.0	43.7	3.1	24.4		
Other crops	-9.7	2.6	1.6	-0.3	0.1	6.7	0.3	3.9	25.4		
Livestock and meat	-4.1	0.8	0.1	1.9	-0.4	-0.2	0.4	0.0	0.4		
Dairy	-14.0	0.5	0.5	-0.7	-0.8	0.0	0.3	0.0	0.5		
Other processed food	-0.5	-0.2	0.2	-1.2	-0.9	-0.3	0.2	0.5	0.4		
Textiles	-20.4	-1.8	-6.4	-22.9	-2.5	-2.4	-2.2	-0.3	0.5		
Apparel	1.0	-1.2	-3.8	-23.2	-3.1	-4.7	-0.6	-2.9	-7.7		
Leather	-10.5	0.9	-9.1	-1.5	-0.1	-0.6	-1.1	0.4	-2.4		
Wood products	-2.7	-0.4	-2.8	-0.4	0.1	-1.1	-0.1	-0.3	0.0		
Energy	0.6	2.0	1.7	2.2	2.9	14.6	0.2	1.9	0.8		
Minerals	-1.8	0.9	1.2	-0.2	-1.2	0.3	-0.6	0.4	2.9		
Chemicals	-15.9	-3.6	-7.7	-10.8	-5.7	1.5	-3.2	2.8	-1.2		
Metals	-12.4	-5.1	-4.5	-4.1	-9.2	-4.5	-2.7	-2.9	2.3		
Vehicles	-23.0	0.8	-2.1	-0.1	-5.7	-1.4	0.2	-1.8	-13.5		
Machinery and equipment	-26.8	-5.0	-8.8	-5.2	-8.7	-7.6	-14.2	-8.3	-16.3		
Electronics	-2.4	-3.2	-5.4	-11.1	-0.1	-8.5	-1.6	-8.8	-13.8		
Other manufactures	-0.2	-9.0	-5.0	-0.8	-2.8	-5.6	-0.7	-10.5	-21.4		
Trade and transport	0.3	-0.3	-0.5	0.6	-1.2	0.0	0.1	-0.3	-0.2		
Communication services	0.7	-1.0	-0.1	0.4	0.4	-2.0	0.4	-0.4	-4.8		
Other services	1.2	-0.3	0.4	1.3	0.1	-0.1	0.2	0.0	1.6		

Source: Authors' simulations of modified GTAP model (Ianchovichina 2004).

Table 8.A.4 Changes in Exports Caused by Extra Growth in China and India with the Assumption of Improvements in Quality and Variety
(percentage change by 2020 relative to baseline)

Good or service	Egypt, Arab		Iran, Islamic		Lebanon	Morocco	Syrian		Tunisia	Other MENA
	Algeria	Rep. of	Rep. of	Jordan			Arab Rep.			
Rice	13.0	9.0	14.8	-22.2	3.3	39.0	1.9	42.9	11.9	
Wheat	37.0	49.9	73.7	17.0	46.8	86.3	43.4	112.4	42.0	
Grains	25.9	23.1	24.8	-15.5	9.5	34.3	5.3	20.7	0.6	
Vegetables and fruits	-18.9	9.8	52.4	-14.2	16.1	12.8	9.3	30.6	31.1	
Oils and fats	-38.2	0.1	1.6	-23.7	-4.5	0.5	-6.3	3.1	4.4	
Sugar	-46.1	-1.7	86.4	-27.0	-5.7	2.8	-4.5	17.8	-0.6	
Plant-based fibers	6.9	49.7	19.0	-15.8	27.7	37.0	59.7	15.1	29.1	
Other crops	-28.1	7.4	36.5	27.3	29.5	34.7	9.8	11.8	35.8	
Livestock and meat	-45.0	25.5	8.8	0.6	16.0	33.5	3.5	57.6	13.2	
Dairy	-39.8	24.6	11.3	-19.4	2.4	14.3	2.1	30.7	1.9	
Other processed food	-34.8	-0.5	-2.9	-19.2	-2.3	-0.6	1.7	5.3	-1.6	
Textiles	-57.8	-10.2	-18.2	-27.7	-22.3	-4.2	-21.7	-2.3	-2.2	
Apparel	-59.3	-11.4	-31.6	-45.9	-33.3	-12.0	-32.0	-9.1	-11.6	
Leather	-65.5	12.6	-32.5	-44.4	-23.7	-8.2	-29.8	-3.4	-3.5	
Wood products	-46.5	1.9	-2.4	-35.6	-14.9	-3.3	-10.7	0.6	-2.4	
Energy	0.7	15.0	5.7	7.1	27.8	31.8	4.9	7.0	1.0	
Minerals	-15.1	8.2	22.5	-8.7	-7.6	1.8	-16.5	0.8	6.0	
Chemicals	-56.5	-9.0	-6.5	-35.6	-54.3	8.6	-28.9	7.2	0.5	
Metals	-59.6	-11.9	5.4	-38.4	-38.2	-3.8	-22.7	-5.6	19.8	
Vehicles	-47.0	17.6	-1.2	-37.0	-28.3	-4.8	-3.1	-2.2	-17.3	
Machinery and equipment	-60.7	-8.0	-29.4	-33.4	-38.9	-16.9	-31.0	-12.9	-26.3	
Electronics	-71.4	-29.7	-45.4	-55.4	-53.7	-11.9	-35.8	-31.1	-21.7	
Other manufactures	-65.1	-38.9	-42.9	-60.0	-60.4	-29.3	-44.6	-22.4	-29.1	
Trade and transport	-37.3	0.6	-5.0	-22.8	-8.1	5.1	-4.5	5.7	0.1	
Communication services	-40.7	-1.8	-7.2	-21.8	-6.8	-3.6	-6.1	1.2	-13.3	
Other services	-32.0	-2.8	-5.9	-20.6	-0.9	-1.5	-0.2	2.8	-14.5	

Source: Authors' simulations of modified GTAP model (Ianchovichina 2004).

Notes

1. In the exporting country, the terms of trade should be measured in actual units. In the importing country, the terms of trade should be measured in effective units.
2. Lederman, Olarreaga, and Perry (2009) report that aggregate gains have been accompanied by some pain, as some industries, firms, and subregions have been negatively affected by the rapid growth of the two Asian economies. Some of their background studies (in industrial and electrical machinery, electronics, furniture, textiles, and transport equipment, for example, mainly in Mexico and to some extent Central America) find this to be the case. But most of the deterioration in the position of exports from Latin America and the Caribbean to third markets relative to China and India has more to do with domestic supply-side conditions than with lower demand for the region's products because of China and India's increase in market shares.
3. In 2004, petroleum accounted for 58.4 percent of India's merchandise exports and 38.4 percent of China's.
4. The findings of McDonald, Robinson, and Thierfelder (2008) are consistent with these conclusions.
5. According to Yeats and Ng (2000), many Arab countries lost international competitiveness in the mid- to late 1990s.
6. This applied general equilibrium model is documented comprehensively in Hertel (1997) and in the GTAP database documentation (Dimaranan 2006).
7. See annex table 8.A.1 for the full set of macroeconomic projections by country.
8. Because we are interested in the link between growth in exports and improvements in the quality and variety of exports, the increase in variety and quality affects exports from only China and India, the two economies in which growth takes place relative to the baseline.
9. The model results in an effective price, P^* , given by $P^* = [N \cdot (P/\lambda)^{(1-\sigma)}]^{1/(1-\sigma)}$, where P is the actual price of individual commodity exports; N is the number of varieties; λ is product quality; and σ , which is assumed to equal 7.5 (the midrange value in Hummels and Klenow 2005), is the elasticity of substitution between varieties.
10. Second-best welfare impacts arise when a change in an exogenous variable leads to a change in the quantity of a good traded in the presence of a distortion. If, for instance, an increase in exports from China and India raises the volume of imports imported despite an import duty, it may generate a second-best welfare gain through increases in tariff revenue collections, as well as a direct terms-of-trade gain.

11. In the model with product quality–augmenting technical change, because the price of relevance to the importer is the effective price, which may fall when quality and variety increase, and the price relevant to the producer is the actual price, which rises when quality and variety increase, it is possible for the terms of trade to improve for both importer and exporter.
12. Accounting for a quarter of its GDP, Tunisia’s industrial sector is large compared with the industrial sector of its neighbor Algeria. The sector produces mainly clothing and footwear, car parts, and electric machinery. All these products are likely to face increased competition from China and India in third markets, including in Tunisia’s main export market, the European Union. As a result, the third-market competition effect is likely to dominate the other likely effects discussed in this chapter. By contrast, the backbone of Algeria’s economy is the fossil fuel energy sector, which accounts for roughly a third of GDP and more than 90 percent of export earnings. As a result of the importance of this sector, the welfare gain is large, despite sizable contraction in manufactured exports. The welfare gain is dominated by the improvement in the terms of trade associated with increases in energy prices.
13. Detailed results by commodity and country for export and output changes because of high growth in China and India are available in annex tables 8.A.2 and 8.A.3.
14. Detailed results by commodity and country for export changes because of improvements in variety and quality in China and India are shown in annex tables 8.A.4.

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CHAPTER 9

Globalization and Competition from China and India: Policy Responses in the Middle East and North Africa

Paul Brenton, Lulu Shui, and Peter Walkenhorst

The countries of the Middle East and North Africa (MENA) face growing competition—and opportunities—from the rise of China and India and changes in the structure of global trade. The share of China and India in global exports increased from about 2 percent in 1985 to more than 5 percent in 1995 and 11.5 percent in 2005. Although China and India have intensified competition in global markets, they also provide additional sources of demand. This increased demand provides new opportunities for MENA country exports and a chance to reduce reliance on traditional but slow-growing markets in the European Union (EU) and the United States.

The rise of China and India has occurred in tandem with the growing importance of global production chains and the growth of trade in services, fueled by technological change and declining transport and telecommunication costs. Although they offer new routes to export and growth, these developments have increased the premium on access to low-cost inputs. Firms that have to pay more for their key inputs, including

those related to backbone services, will find it increasingly difficult to integrate into production chains or compete in global markets.

The international policy framework in which MENA countries are competing is evolving, with long-standing preferences in major markets eroding. At the same time, possibilities are arising from new agreements and the opportunity to deepen existing arrangements.

This chapter examines whether the increase in competition from two massive economic entities and changes to the nature of the global economy call for radical changes in MENA countries' trade policies or whether these changes reinforce existing trade policy imperatives. A key issue in coming to a judgment on appropriate policy responses to these new challenges and opportunities is the size and nature of the adjustment that is required. Is competition from China and India leading to substantial displacement of resources that incur significant costs while moving to new activities, or are there opportunities to exploit finer patterns of specialization that entail less disruption? Will policies that mitigate the impact of competition from China and India limit the longer-term capacity to exploit new opportunities in the global market?

Globalization and the Export Performance of Countries in the Middle East and North Africa

Some countries in the region have been successful in expanding exports and increasing global market share in the face of increasing competition from China and India; others have seen their global market share stagnate or decline (table 9.1). Between 1995 and 2006, when competition in global markets from India and especially China intensified, the Arab Republic of Egypt, the Islamic Republic of Iran, and Jordan increased their share of a growing market. In contrast, Morocco saw its share of the global market decline.

The importance of the European Union as a destination for MENA exports has diminished. In 1995, the European Union was the dominant market for exports by the Maghreb countries, accounting for at least three-quarters of exports. The EU market accounted for about half of exports by Egypt, Iran, and the Syrian Arab Republic (table 9.2). By 2006, the European Union's share had fallen in every country except the Republic of Yemen and exceeded 50 percent in only three countries (Algeria, Morocco, and Tunisia).

MENA countries' performance in exporting to the European Union has been mixed. Members of the Gulf Cooperation Council (GCC) saw

Table 9.1 Rate of Export Growth and Change in Global Market Share in the Middle East and North Africa, by Country, 1995–2006

<i>Country</i>	<i>Average export growth rate (%)</i>	<i>Change in share of world export (percentage points)</i>
Algeria	10.8	0.00
Egypt, Arab Rep. of	13.5	0.05
Iran, Islamic Rep. of	11.6	0.03
Jordan	16.1	0.02
Lebanon	12.4	0.01
Morocco	6.4	–0.02
Syrian Arab Republic	8.3	0.00
Tunisia	7.4	0.00
Yemen, Rep. of	19.1	0.00
Gulf Cooperation Council	15.0	0.31
China	16.8	7.13
India	14.2	0.37

Source: Authors' calculations, based on UN Comtrade data.

Note: Data exclude mineral fuels, ships, and planes.

Table 9.2 Growth in Exports to and Change in Market Share of European Union, by Country, 1995–2006

<i>Country</i>	<i>Average export growth rate (%)</i>	<i>Change in share of EU market (percentage points)</i>	<i>EU share of total exports, 1995 (%)</i>	<i>EU share of total exports, 2006 (%)</i>
Algeria	8.5	0.0	78.9	66.1
Egypt, Arab Rep. of	9.7	—	52.8	39.5
Iran, Islamic Rep. of	3.8	—	56.0	29.4
Jordan	4.4	0.0	19.8	6.7
Lebanon	5.5	0.0	25.7	16.0
Morocco	5.0	—	76.0	66.9
Syrian Arab Republic	2.4	0.0	44.6	26.2
Tunisia	7.0	—	87.3	84.6
Yemen, Rep. of	19.1	0.0	11.6	18.5
Gulf Cooperation Council	12.8	0.1	20.1	18.2
China	20.1	5.1	14.8	20.5
India	9.2	0.2	34.9	27.1
Turkey	13.0	0.6	66.3	60.8

Source: Authors' calculations, based on UN Comtrade data.

Note: Data exclude mineral fuels, ships, and planes. — = Negligible.

their share of the EU market substantially increase; Egypt and Tunisia saw a more modest increase; and Iran, Morocco, and Syria experienced declines. Egypt, Tunisia, and the GCC, together with Turkey, increased their share of the EU market while reducing the proportion of their exports to the European Union, demonstrating strong export performance in the European Union together with export market diversification. In contrast, most countries saw their share of the EU market fall or remain unchanged and the importance of the European Union as a market for exports decline.

The decline in the importance of the European Union as a market for MENA's exports has coincided with increasing competition from China and India. The following discussion takes a deeper look at the drivers of export growth, with a focus on the EU market.

Export growth in MENA countries has tended to be driven by the extensive margin (that is, changes that are the result of new export flows, where an export flow measures exports of a particular product to a particular market). Only in Jordan and Tunisia is the contribution of the intensive margin (that is, growth related to changes in export flows that existed in 1995) greater than that of the extensive margin (table 9.3).

The importance of the extensive margin for these countries contrasts with that of other countries of similar income levels, where the intensive margin has been more dominant in driving export growth (Brenton and Newfarmer 2007; Amurgo-Pacheco and Pierola 2008). On average for the period 1995–2004, the extensive margin contributed just 17 percent of the export growth of lower-middle-income countries (32 percent if China is excluded) and 24 percent of the growth of higher-middle-income countries.

Declining flows of existing goods to existing markets have been a drag on export growth. Had countries been able to maintain the level of existing export flows that actually declined or disappeared, export growth would have been more than 30 percent higher for Egypt, 40 percent higher for Tunisia, and 60 percent higher for Morocco. For the average upper-middle-income country, the decline and disappearance of existing exports reduced export growth by 27 percent. Thus, an important factor behind the dominance of the extensive margin in MENA appears to be the magnitude of decline in existing flows.

A more detailed analysis of the key products and markets that have driven changes in the intensive and extensive margins—and comparison of those data with data on the change in China's share of the world market for each product (see annex tables 9.A.1 and 9.A.2)—suggests a

Table 9.3 Intensive and Extensive Margins of Export Growth of Countries in the Middle East and North Africa, 1995–2005
(current dollars)

<i>Country</i>	<i>Increase in existing products to existing markets</i>	<i>Decrease in existing products to existing markets</i>	<i>Extinction of existing products to existing markets</i>	<i>Total intensive margin</i>	<i>New products to existing markets</i>	<i>Existing products to new markets</i>	<i>New products to new markets</i>	<i>Total extensive margin</i>
Algeria	57.0	–17.9	–34.5	4.6	28.3	67.1	0.1	95.4
Egypt, Arab Rep. of	57.2	–19.1	–12.1	26.0	10.1	63.9	0.0	74
Iran, Islamic Rep. of	61.1	–39.7	–26.0	–4.5	26.4	77.8	0.3	104.5
Jordan	78.1	–9.0	–6.9	62.2	12.7	25.0	0.1	37.8
Lebanon	81.8	–21.8	–22.1	37.9	14.9	47.0	0.1	62.1
Morocco	110.6	–47.2	–13.4	50.0	4.5	45.6	0.0	50.0
Syrian Arab Republic	99.6	–38.5	–21.0	40.1	19.3	40.6	0.0	59.9
Tunisia	101.6	–25.0	–14.2	62.5	8.4	29.2	21.4	37.5
Yemen, Rep. of	61.1	–9.3	–14.5	37.2	31.7	30.0	21.4	62.8

Source: Authors' calculations, based on UN Comtrade data.

rather nuanced view of export performance and the impact of China. First, for a number of countries, the key products that have driven growth at the intensive margin have also been responsible for declining exports. In Tunisia, for example, the same product group—men’s and boy’s cotton trousers—is at the top of both the list of existing products that have increased exports to existing markets and the list of declining products to existing markets. This suggests considerable change in the structure of markets to which Tunisia exports this product. In Iran, pistachios have been a main source of increased exports to certain markets and declining exports to other markets. The structure is similar for ammonia in Algeria, potassium chloride in Jordan, and phosphoric acid in Morocco. This pattern suggests that shifts in demand between markets are significant or that competitive conditions differ by market.

Second, for many countries the products that have driven growth and those that have led to export declines are from similar industries. This is most pronounced for the clothing sector. For example, men’s and boy’s cotton trousers have been an important source of declining exports, while women’s and girls’ cotton trousers have been driving higher exports. This suggests that in sectors with differentiated products, within-industry adjustment is an important aspect of the response to increased global competition. From a policy perspective, this raises the question of whether there are measures available to governments to support this type of adjustment.

Third, products that have led to declining exports for some countries appear in the list of products that have been driving export growth for other countries (for example, unwrought, unalloyed aluminum in Egypt, where exports declined, and Iran, where exports increased). The main markets that have been at the forefront of both increases and decreases in exports at the intensive margin are often similar. This suggests that sweeping statements about the impact of global competition, especially from China and India, on the MENA region find little support in the data and that trade opportunities and adjustment are taking place at fairly fine levels within industries.

Fourth, it is not possible to identify an obvious link between competition from China, as measured by the increase in global market share, and export outcomes at the intensive margin. In many cases, the products that are driving export growth in MENA have seen strong increases in the global share of China (examples include women’s and girls’ cotton trousers in Egypt, Jordan, Morocco, and Tunisia and ignition wiring sets in Tunisia).

Growth at the extensive margin shows the increasing importance of integration into global production chains for electrical and motor vehicle products for Morocco, Tunisia, and to a lesser extent Egypt; the dominance of agricultural and fisheries products for Yemen; the increasing importance of chemical and chemical products for a number of countries; and the importance of steel products in the extensive margin for many countries in the region (see annex table 9.A.2). For a number of products that have driven growth at the extensive margin, the share of China in the global market has increased significantly.

Hence, this analysis suggests a complicated picture of export growth at both the intensive and extensive margins. In the following sections, we try to distill the key policy messages that emerge from recent trade performance in the face of increasing competition from China. It is clear from this investigation that sweeping assertions about the impact of China on MENA countries' exports should not be trusted and that intrasectoral movements in resources are an important aspect of adjustment to globalization. What, then, is an appropriate policy stance to support viable firms in adjusting to new competition by flexibly adjusting their product lines and by exploiting emerging market niches?

Drivers of Market Share Changes in the European Union

To take the analysis further, we look at the EU market. Exports of a number of MENA countries stagnated and their share of the market fell between 1995 and 2006, but some countries, such as Egypt, performed well and managed to raise their EU market share. In this section, we try to identify the main drivers of changes in exports to the European Union, using constant market share analysis.

Annex table 9.A.3 shows the decomposition of export growth at the eight-digit level of the Combined Nomenclature into the impact of the overall growth of the EU market, the change caused by the commodity structure of each country's exports (a bias toward commodities for which demand is growing rapidly will tend to raise the overall export growth rate), the change caused by the market structure (reliance on individual EU markets that grow more slowly than others will tend to reduce overall growth rates), and a competitiveness term that catches the impact of increases in market shares of individual product categories.

For the sectors identified, the growth of exports to the European Union by China exceeded the overall increase in the size of the EU market, with the difference driven mainly by improvements in competitiveness. In a

number of cases, the commodity and market composition tended to be a drag on export growth.

For the MENA countries represented, the picture has been more mixed. In the more traditional export products of MENA countries, such as clothing, export growth was slower than the increase in the size of the EU market, thanks largely to declining competitiveness. In a number of cases, declining competitiveness was offset, to some extent, by a favorable commodity and market composition of exports. Hence, reallocations toward faster-growing products within sectors and toward expanding markets have been important factors in export growth. In a small number of cases, a favorable composition of exports was bolstered by strong competitiveness performance (for example, machinery [mainly car parts] in Tunisia). This pattern suggests that in general, MENA's ability to export to the European Union has been impaired by inability to compete with dynamic exporters, such as China, but that this tendency has been offset somewhat by reallocation toward more rapidly growing product and market segments of the European Union.

Border Trade Policies in the New Global Economy

Globalization, in particular the integration of China and India into the global economy, creates opportunities. The ability of MENA countries to take advantage of them hinges on enhancing competitiveness through improvements in productivity, quality, and design; identifying and exploiting niche markets; and moving resources from low- to higher-productivity activities and toward more efficient firms both within and between sectors. Trade policies play a key role in crafting a competitiveness strategy based on these elements.

A growing body of research indicates that within sectors, exporters tend to be more productive than nonexporters (Wagner 2007). Thus, policy changes, such as a reduction in external protection, that encourage resources to move to exporting firms tend to raise overall productivity within both the sector concerned and the economy as a whole. Indeed, trade protection may limit investments that particular firms and workers would otherwise make to restructure and raise productivity and hence improve the long-term capacity to compete in global markets. If protection varies significantly across sectors, the pattern of sectoral investment and output will be distorted away from sectors that on average have higher productivity and stronger growth opportunities toward lower-productivity, protected activities. Trade protection that raises the price of intermediate inputs will hamper the ability of firms to compete with firms from other

countries that can obtain these inputs at global prices. Finally, the presence of complex protection increases the burden on customs and can hamper its role in facilitating trade. Lower and more uniform tariffs can allow customs to concentrate on border control functions and, in collaboration with other agencies, address nontariff barriers.

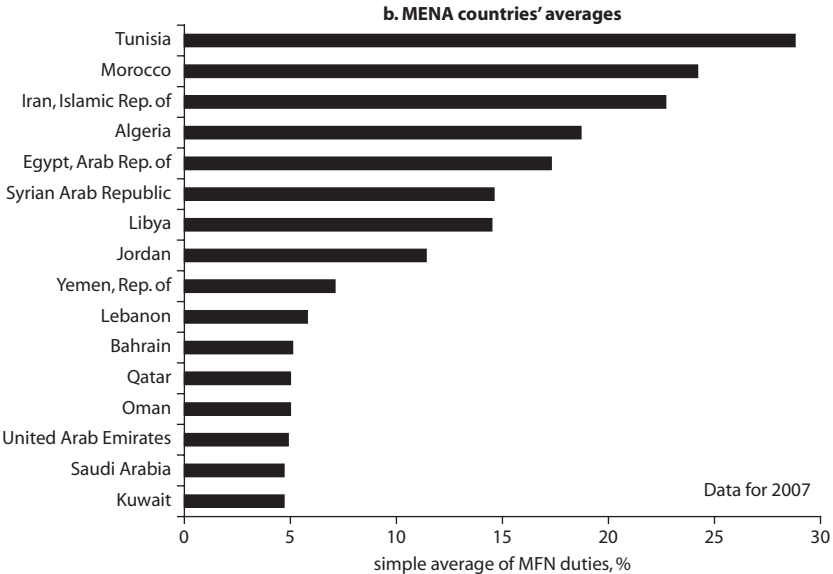
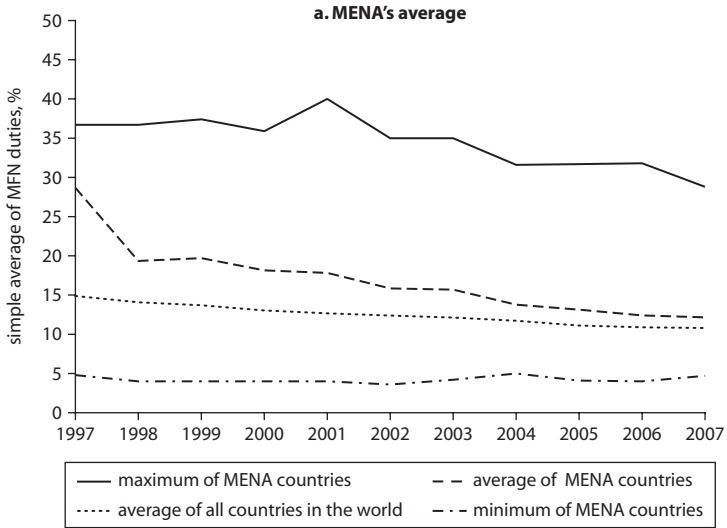
This policy objective of ensuring that trade protection is consistent with a strategy of global competitiveness has become more, rather than less, imperative in the face of globalization and increasing competition from China and India. Globalization has increased the penalty firms face in global markets for being unable to source inputs competitively at world prices. It has also raised the opportunity costs to countries of bottling up resources in low-productivity activities and forgoing the opportunities from expanding higher-productivity activities both within and between sectors.

The importance of maintaining low rates of protection is not a reason for eliminating government interventions in trade: countries may be afflicted by market and government failures that tend to constrain the sustained expansion of exports and growth. In many cases, these constraints to competitiveness require specific interventions and institutions. These are likely to include export and investment promotion agencies (to remedy problems arising from lack of information for exporters and investors), standards bodies, and interventions to improve transport logistics performance. Trade restrictions in overseas markets can be a constraint on reforming countries by limiting export opportunities; effective trade preferences (those that are comprehensive in product coverage and have nonrestrictive rules of origin) can provide a window of opportunity to establish an export beachhead while key domestic barriers to trade are addressed. Long-term competitiveness, however, requires eliminating barriers to trade.

Virtually all MENA countries participated in the global trend toward reduced trade barriers that saw the world average of import duties drop from 14.9 percent in 1997 to 10.8 percent in 2007. Indeed, the reduction in import duties has on average been more pronounced in the region than in the world overall, and the MENA average has been converging toward the world mean (figure 9.1). There is substantial diversity within the region, however, with tariff averages ranging from about 5 percent in the GCC countries and Lebanon to more than 20 percent in Iran, Morocco, and Tunisia (figure 9.2).

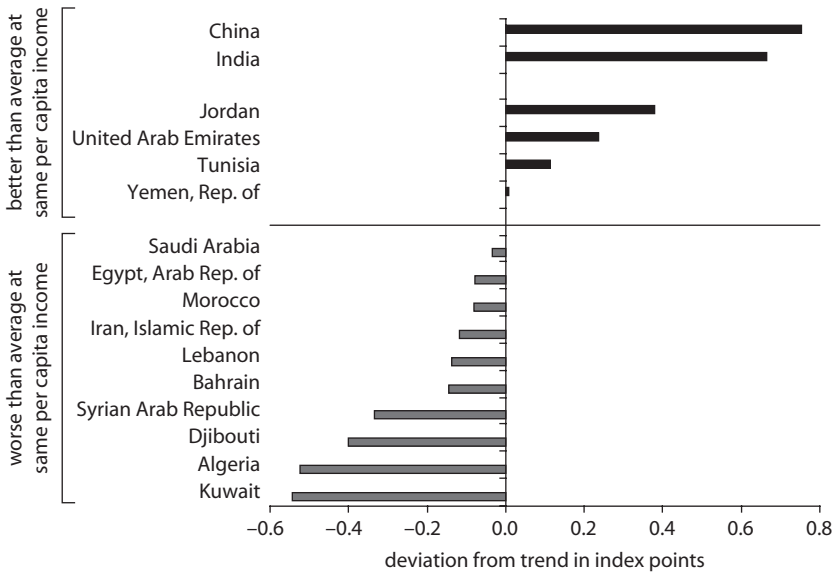
The average tariff rates provide only an approximate measure of the level of protection. Some imports into MENA countries benefit from

Figure 9.1 Average Tariffs in the Middle East and North Africa, 1997–2007



Source: World Bank staff based on IMF Trade Restrictiveness database.
Note: MFN = most favored nation. MFN duties include customs duties or surcharges.

preferential treatment and are subject to lower applied duty rates. Moreover, as high tariffs discourage imports, the trade-weighted tariff averages tend to be lower than simple averages that give equal weight to each tariff line. Nevertheless, about a third of MENA countries have

Figure 9.2 Average Tariffs in the Middle East and North Africa, by Country, 2007

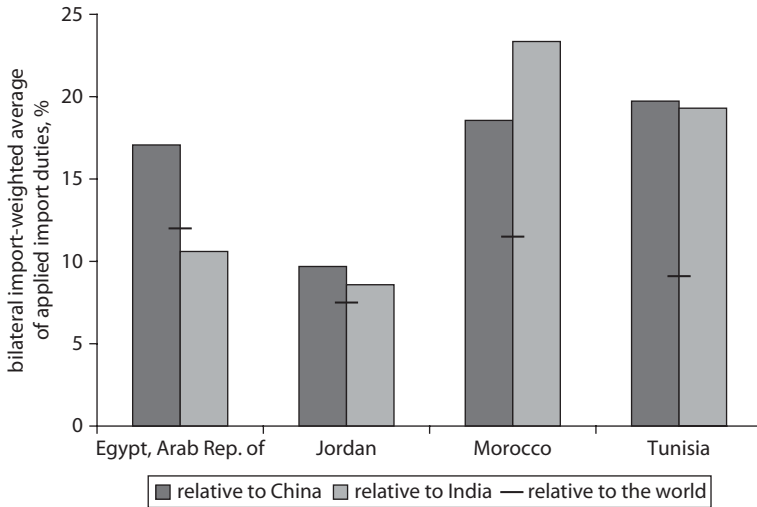
Source: World Bank staff, based on World Bank (2007).

weighted tariff averages above 10 percent, which is high by international standards.

In addition to tariff barriers, imports also face nontariff impediments, which are significant in many MENA countries. One of the major factors causing high trade transactions costs are relatively poor trade and transport logistics. The logistics performance index (World Bank 2007), which is based on a worldwide survey of global freight forwarders and express carriers, makes it possible to compare the performance of countries across a broad set of transport and trade facilitation dimensions. Richer economies are in a position to devote more resources to investments in transport infrastructure, interagency coordination, and staff training and, hence, in general enjoy lower trade transactions costs than poorer economies. The vast majority of MENA countries, however, score below the level of logistics performance that would be expected given their level of income (figure 9.3). Only Jordan, the United Arab Emirates, Tunisia, and Yemen meet or exceed the worldwide average of countries in their income class. All other MENA countries fall short of expectations, in some cases considerably so. In contrast, both China and India perform better than their income peers on trade logistics, which lowers their trade transactions costs, including with MENA countries.

Figure 9.3 Overall Logistics Performance Index of Countries in the Middle East and North Africa

(higher is better)



Source: World Bank staff based on UNCTAD Trains and UN comtrade databases.

Note: Data are from 2006, except for Egypt. Data from 2005 (latest available) are used for Egypt.

Policy makers in MENA are aware of the adverse effects of high trade transactions costs and are starting to take corrective action in the areas of tariff reductions and trade facilitation. The Euro-Mediterranean Agreements envisage phasing in bilateral free trade for industrial goods over several years. In some countries (for example, Tunisia), the process of removing tariffs on imports from the European Union has already been completed; in others (for example, Morocco), it is well under way. High external trade barriers increase the risk that trade will be diverted from low-cost third-country producers to high-cost EU producers (from Indian suppliers of pharmaceutical generics to European suppliers of branded pharmaceuticals, for example). To avoid or contain the ensuing fiscal and economic loss, countries have started to reduce their most favored nation (MFN) tariffs, thereby limiting the preference margin they grant to their EU partners. This process will have to continue in order to have the desired effect of reducing and eliminating adverse impacts of trade diversion and to take advantage of the full cost advantages of international sourcing, including from China and India.

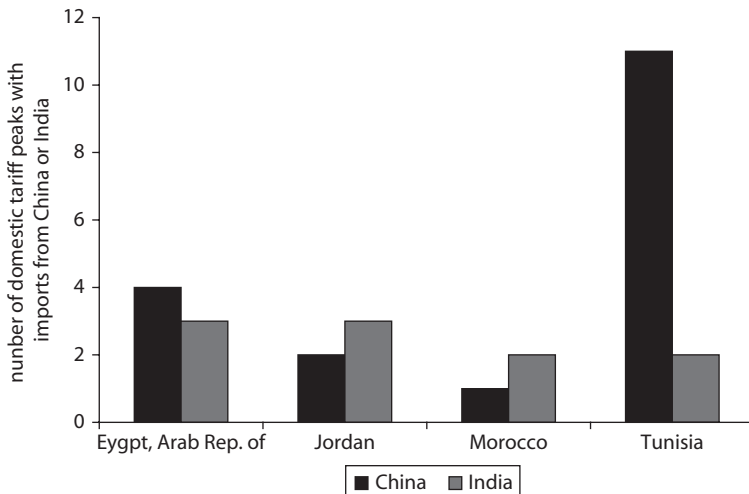
Imports from China and India

Tariffs on imports from China and India are high in MENA countries: both countries export products to MENA that are subject to above-average import protection (figure 9.4). In Morocco and Tunisia, the difference between average tariffs and those applied to China and India is substantial. Indeed, among the signatories of the Agadir Agreement (Egypt, Jordan, Morocco, and Tunisia), only Egypt has bilateral tariffs on imports from India that are below the national mean.

China and India also export products to MENA countries that are subject to tariff peaks (that is, very high tariffs on individual products). The tariff schedules of the Agadir countries show a considerable number of such peaks (defined as three times the tariff average). At the Harmonized System six-digit level of aggregation, the national tariff schedules for 2006 show 214 domestic tariff peaks in Tunisia, 58 in Morocco, 23 in Jordan, and 21 in Egypt. In Morocco and Tunisia all of the tariff peaks apply to imports of agricultural products. Many tariff peaks are prohibitively high, but in some of the concerned product categories, there have been imports from China or India (figure 9.5). Unless the transactions benefited from temporary concessions or exemptions, these findings suggest that there are

Figure 9.4 Tariffs in China, India, and Selected Countries in the Middle East and North Africa, 2006

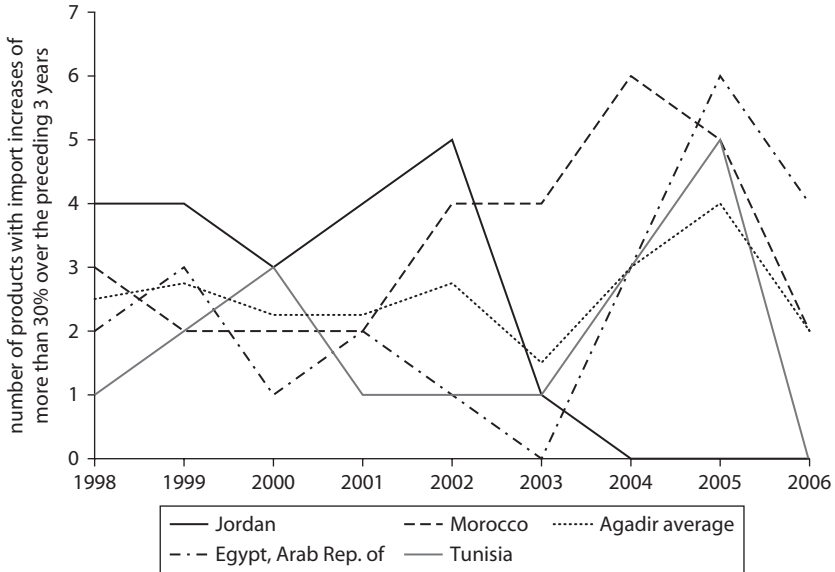
(bilateral import-weighted average of applied import duties in percent)



Source: World Bank staff based on UNCTAD Trains and UN Comtrade databases.

Note: Data are from 2006 or latest data available.

Figure 9.5 Number of Domestic Tariff Peaks on Imports from China and India in Agadir Agreement Countries, 2006



Source: World Bank staff based on UN Comtrade database.

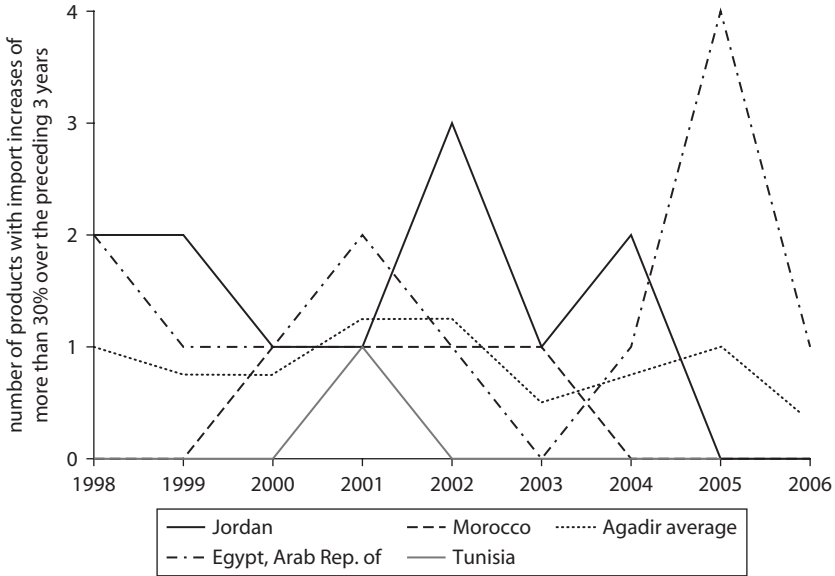
Note: Only products that account for at least 0.3 percent of total imports are considered.

large differences in production costs and hence large untapped opportunities from further trade integration.

Imports from China and India have increased in recent years, for some products considerably so. A common definition of an import surge is an increase in import value of more than 30 percent over the average of the three preceding years. According to this definition, during the recent past, imports from China (and to a lesser extent India) surged on a large number of products. For example, in Egypt's trade with China, 37 products in 2006 satisfied the above-mentioned definition. However, in the overwhelming number of cases, the imports replaced imports from other countries. In fact, in 2006 both total imports and imports from China surged for only four Egyptian products, so that it seems likely that the import increase from China came at the extent of domestic sources of production.

Over time, the number of import surges from China has increased slightly in Egypt, Morocco, and Tunisia. In contrast, the frequency of import surges from India exhibits a declining trend around strong fluctuations (figure 9.6). The trade data do not make it possible to assess whether import surges are caused by the greater efficiency of Asian suppliers or

Figure 9.6 Number of Agadir Country Exports Experiencing Import Surges from China and India, by Country, 1998–2006



Source: World Bank staff based on UN Comtrade database.

Note: Only products that account for at least 0.3 percent of total imports are considered.

illegal dumping. The slight increase in surges from China and strong volatility in surges from India are consistent with the pattern of Asian imports into the European Union and United States.

Gaining Access to Overseas Markets

Breaking into overseas markets often presents a major challenge. Exporters face additional trade transactions costs in the form of border tariffs, transport expenses, and regulatory compliance costs. Many developing countries benefit from preferential market access in high-income countries, but meeting rules-of-origin requirements and other import regulations can still limit the benefits of the preferences and shape the structure of trade flows.

Access to the Markets of the European Union and the United States

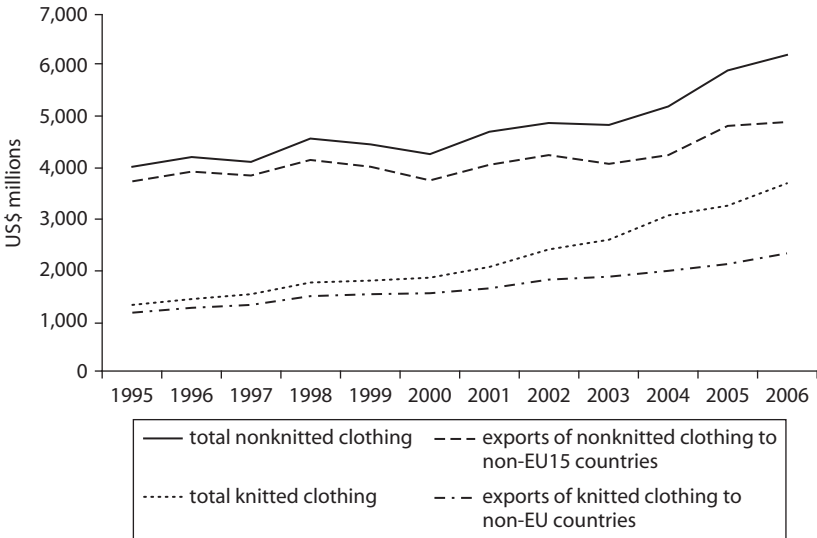
Firms that face increasing competition must be able to exploit opportunities for sales in overseas markets as part of the adjustment process. The clothing sector is a key source of exports for countries in the MENA region, primarily Egypt, Jordan, Morocco, and Tunisia. The sector was subject to very gloomy predictions concerning the impact of China on

MENA countries. It is one in which trade policies in overseas markets have influenced export outcomes.

The European Union and the United States removed remaining quotas against China and India at the end of 2004, supposedly heralding unfettered competition in the global clothing market (some restrictions were reimposed during 2005 for a limited period). Although the European Union’s imports of clothing from China and India are still subject to tariffs, many MENA countries enjoy duty-free access to the European Union under the association agreements. In addition, Jordan and Morocco have signed free trade agreements with the United States, and clothing exports from both Egypt and Jordan have increased as a result of the qualifying industrial zones scheme linked to the free trade agreement between the United States and Israel.¹

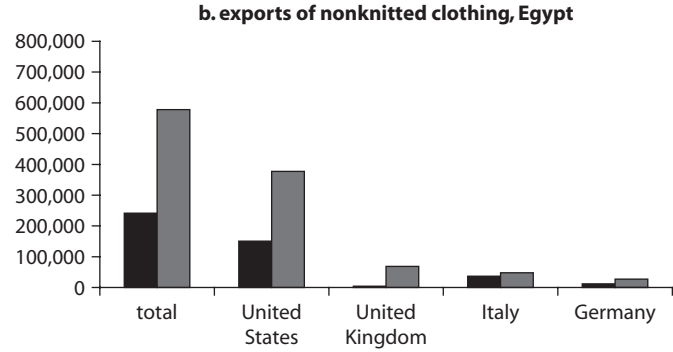
Egypt, Jordan, Morocco, and Tunisia achieved significant increases in exports of clothing between 1995 and 2006. Exports of knitted clothing grew faster than exports of nonknitted clothing,² with most of the growth in exports in both categories driven by exports to non-EU15 countries (figure 9.7). The growth of clothing exports from Jordan was driven almost entirely by sales in the United States (figure 9.8), reflecting

Figure 9.7 Clothing Exports by Countries in the Middle East and North Africa, 1995–2006



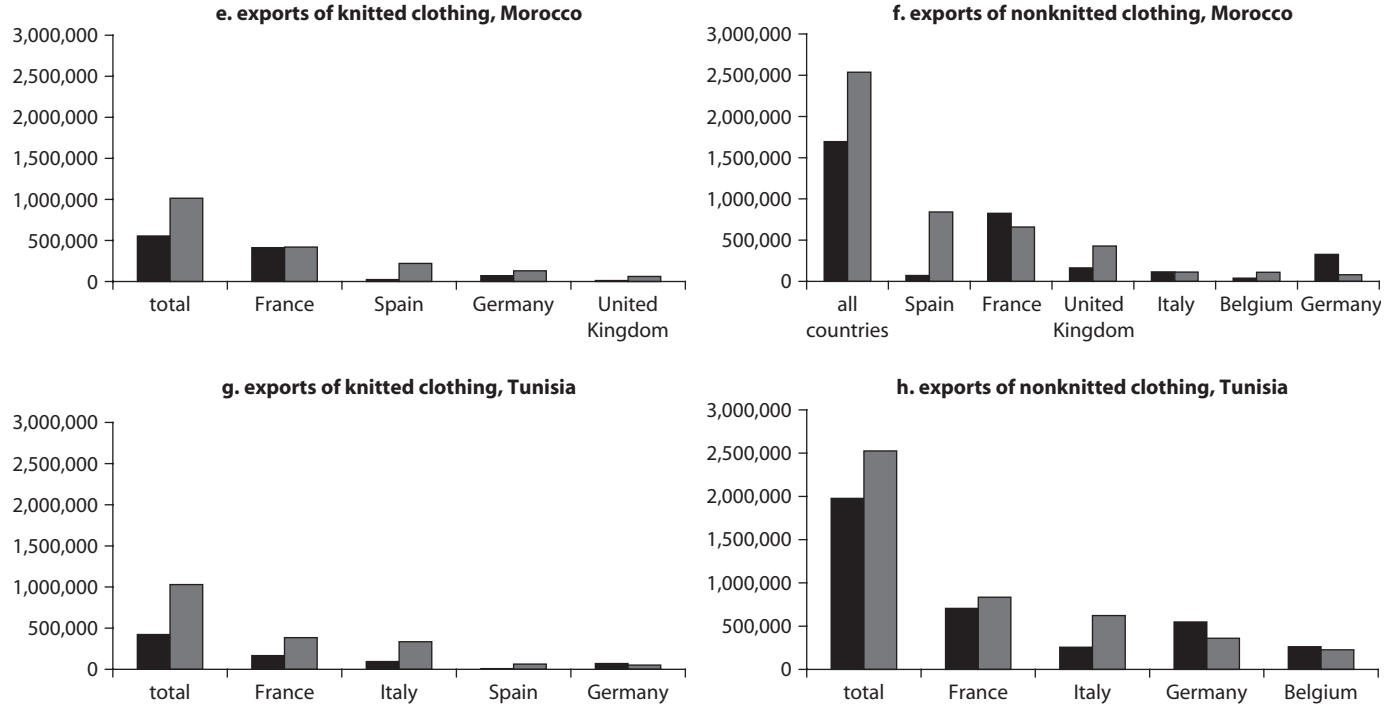
Source: Authors’ calculations based on UN Comtrade data.

Figure 9.8 Exports of Knitted and Nonknitted Clothing by Egypt, Jordan, Morocco, and Tunisia, by Importing Country, 1995 and 2006
(thousands of U.S. dollars)



(continued)

Figure 9.8 Exports of Knitted and Nonknitted Clothing by Egypt, Jordan, Morocco, and Tunisia, by Importing Country, 1995 and 2006 (continued)
(thousands of U.S. dollars)



Source: Authors' calculations based on UN Comtrade data.

primarily the impact of the qualified industrial zone scheme rather than the free trade zone. Rapid growth in exports from Egypt to the United States also followed implementation of a qualified industrial zone scheme.³ By contrast, Morocco and Tunisia remained heavily focused on the EU market for exports of clothing, with very little penetration of the U.S. market. Exports grew, but at a sluggish pace, with significant reorientation away from France and Germany toward Spain and the United Kingdom by Morocco and toward Italy by Tunisia.

The rules of origin under the four countries' association agreements with the European Union have important implications for the structure of exports and the prospects for growth. Egypt, Morocco, and Tunisia take up about 90 percent of the preferences provided under the association agreements; Jordan's use of the preferences is much lower. The EU rules of origin for clothing are strict, requiring a double transformation, meaning that both the weaving and making up stages must be undertaken in qualifying countries. Under the association agreements with bilateral cumulation, clothing manufacturers in MENA countries can use woven fabrics produced in the European Union and qualify for EU preferences on the final product.⁴ Indeed, the majority of imports of fabrics come from France, Italy, and Spain.

These rules tend to impinge more on nonknitted products than on knitwear, where technologies typically knit to shape from yarn. For nonknitted products, the weaving stage is distinct, and there are substantial economies of scale in the production of woven fabrics, which are then cut to shape. Morocco and Tunisia have specialized more in the production of nonknitted products (the value of exports was about 2.5 times that of knit products in 2006). Morocco and Tunisia accounted for one-quarter of EU imports of nonknitted clothing recorded as entering the European Union under a trade preference program in 2005 and about 30 percent of EU imports from partners that had duty-free access. For knitwear, Morocco's and Tunisia's share of EU preferential imports was less than 12 percent.

The association agreements and the related rules of origin have enabled clothing manufacturers, particularly in Morocco and Tunisia, to integrate into European production chains. Although this has facilitated a substantial rise in exports, it also raises the issue of whether these agreements have locked Morocco and Tunisia, and to a more limited extent Egypt, into production structures that shelter MENA producers from greater competition from China in the EU market or handcuffed producers in their ability to source inputs from new locations as a competitive response. An important feature of the global clothing market is

the growing demand by large buyers that clothing producers take on more activities in the value chain, especially sourcing decisions regarding inputs. Restrictive rules of origin limit the opportunities for global sourcing. Compliance with these rules may leave MENA producers ill equipped to compete if preference margins in the European Union decline on signing of a multilateral trade agreement.

In summary, preferential access to EU and U.S. markets under free trade agreements has played a critical role in stimulating new exports of clothing from Egypt, Jordan, Morocco, and Tunisia. These sectors now need to build on their success by developing strategies to boost long-term competitiveness, both to benefit from more diversified access to inputs and to prepare for a general reduction in tariffs that would reduce the protection accorded by preferences.

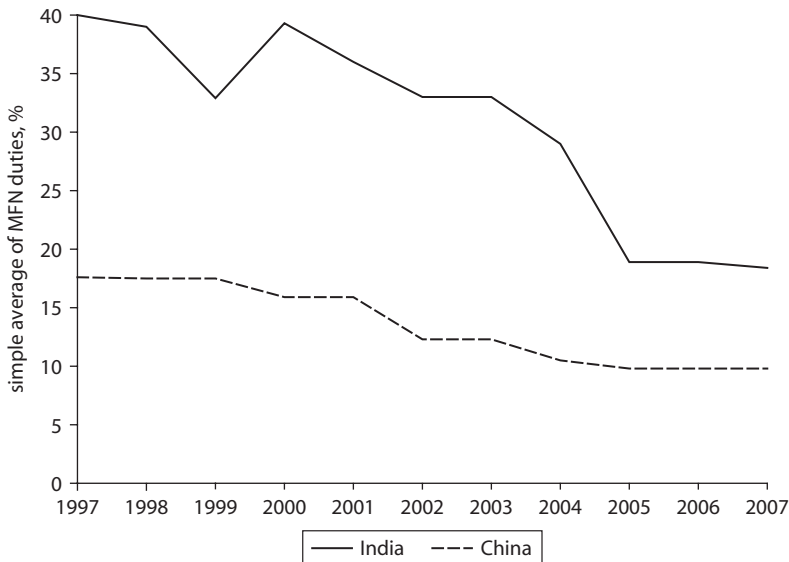
Access to the Markets of China and India

The dynamic markets of China and India present potentially important export destinations for products from MENA countries. However, non-fuel shipments to both countries, especially India, face substantial trade barriers. The two giants have opened up significantly over the past decade, but simple averages of MFN duties remain about 10 percent in China and more than 18 percent in India (figure 9.9).

Tariffs in China and India on imports from the MENA region are generally below average. Petroleum can enter China duty free, and it is subject to a relatively low duty of 10 percent in India. Nonfuel imports from Egypt and Tunisia face higher trade-weighted average tariffs in both China and India; nonfuel imports from Jordan and Morocco face below-average duties in both countries (figure 9.10). An outlier is Tunisia's exports to China, which encountered very high duties in 2005 because of large shipments of diammonium phosphate fertilizer, which were subject to a 27 percent tariff.

The tariff schedules of both China and India show substantial variation, with more than 100 tariff peaks each. In China, these peaks concern agricultural and industrial products in about equal proportions. In India, four-fifths of all peaks fall on agricultural tariff lines. In 2005, there were imports from the Agadir countries into China in six peak tariff lines and shipments into India in three lines, suggesting that some MENA exporters were able to access the Chinese and Indian markets despite very high tariff barriers.⁵

Thus, although access to the Chinese and Indian markets has been improving for MENA countries, as tariffs have come down, there remains scope for further improvements, which could facilitate higher exports

Figure 9.9 Average Tariffs in China and India, 1997–2007

Source: World Bank staff based on IMF Trade Restrictiveness database.

Note: MFN = most favored nation. MFN duties include customs duties or surcharges.

from MENA countries. Although there has been some discussion about bilateral free trade agreements with China and India, a more accessible and easier route to improved market access is through multilateral negotiations at the World Trade Organization. Hence, it is important that MENA countries pursue their interests in obtaining lower tariffs on the key products they export, and have potential to export, in the Chinese and Indian markets.

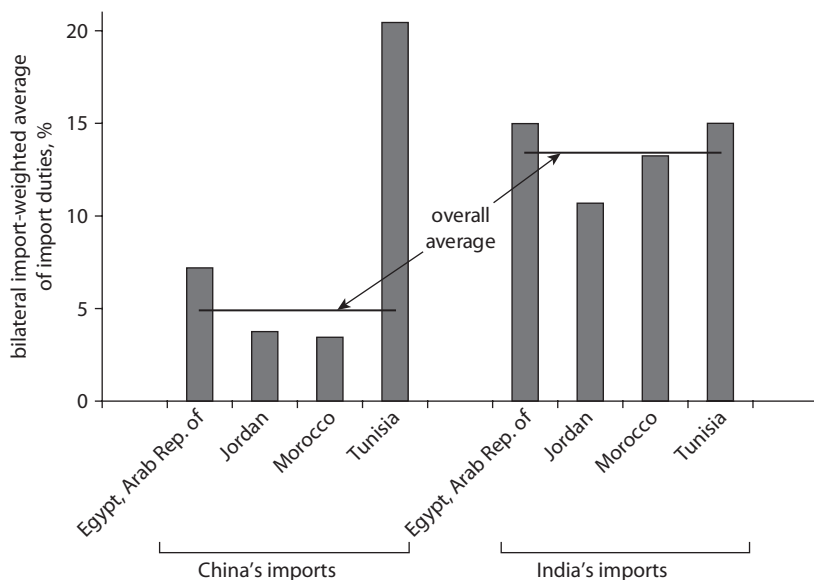
Exploitation of Existing Opportunities for Export Growth

Despite some progress between 1995 and 2005, most MENA countries export their products to less than 10 percent of the markets for their products (table 9.4).⁶ This performance compares poorly with that of Turkey, which reaches more than a quarter of the markets that import the products it exports. Egypt has had the most success in increasing its penetration of overseas market.

The bilateral index of export market penetration reveals the extent to which exporters exploit opportunities in key overseas markets. It is calculated by dividing the number of products a country exports to a particular

Figure 9.10 Bilateral Import-Weighted Average of Import Duties by China and India on Exports from the Middle East and North Africa, 2006

(percent)



Source: World Bank staff based on UNCTAD Trains and UN Comtrade databases.

Note: Data are from 2006 or use the latest tariff and trade data available.

Table 9.4 Index of Export Market Penetration, by Country, 1995 and 2005

(percent)

Country	1995	2005
Algeria	2.05	2.41
Egypt, Arab Rep. of	6.56	11.30
Iran, Islamic Rep. of	4.63	6.94
Jordan	2.85	4.89
Lebanon	4.13	7.57
Morocco	6.03	8.78
Syrian Arab Republic	4.31	7.22
Tunisia	4.42	7.72
Yemen, Rep. of	1.53	1.95
Turkey	13.53	27.07

Source: World Bank staff calculations based on UN Comtrade data.

market by the total number of products exported by that country (to anywhere in the world) that are imported by that particular market. The data suggest many opportunities for increasing exports of existing products by exploiting available market opportunities (table 9.5). Morocco, for

Table 9.5 Bilateral Index of Export Market Penetration for Selected Countries
(percent)

Importer	Exporter									
	Algeria	Egypt, Arab Rep. of	Iran, Islamic Rep. of	Jordan	Lebanon	Morocco	Syrian Arab Republic	Tunisia	Yemen, Rep. of	Turkey
<i>Europe and the United States</i>										
Belgium	9.0	17.3	6.3	4.6	12.9	25.9	9.6	28.1	1.2	52.0
France	32.5	26.6	17.7	6.1	21.8	57.3	18.5	61.3	2.6	57.0
Germany	7.4	33.2	32.9	11.5	16.7	33.5	18.7	36.2	6.6	71.8
Greece	1.0	22.0	3.4	3.6	9.1	7.1	11.8	6.2	0.2	61.7
Italy	18.3	34.0	18.2	9.8	18.8	36.9	17.8	50.4	2.6	62.5
Netherlands	4.2	18.4	13.0	7.5	7.7	20.8	7.1	15.6	1.2	51.4
Portugal	3.4	7.1	3.0	1.6	2.1	19.4	0.7	11.0	—	32.2
Spain	19.9	27.1	15.3	11.2	19.1	57.0	12.9	29.5	0.6	54.3
United Kingdom	8.6	29.4	16.5	13.3	16.0	28.1	14.6	19.7	7.6	64.1
United States	3.8	27.2	5.8	20.6	19.5	26.1	13.1	17.2	4.0	52.0
<i>Middle East and North Africa</i>										
Algeria	—	29.9	4.9	12.5	13.7	17.0	34.2	38.4	0.8	57.2
Egypt, Arab Rep. of	2.6	—	4.2	26.6	18.3	2.9	19.8	4.7	10.2	43.1
Jordan	1.0	38.4	8.7	—	32.5	1.6	40.5	2.9	3.8	51.8
Morocco	15.5	25.2	4.9	4.4	10.7	—	17.8	23.6	—	40.6
Syrian Arab										
Republic	0.8	19.8	6.4	16.2	19.2	1.1	—	1.3	0.9	28.3
Tunisia	11.0	18.3	2.3	4.3	6.9	24.2	14.5	—	0.8	38.2
Yemen, Rep. of	0.4	26.6	7.5	18.7	12.9	1.0	29.3	1.3	—	—
Turkey	9.8	19.6	25.8	10.8	6.5	16.5	12.2	14.5	0.2	—
Saudi Arabia	5.8	69.9	34.2	56.3	56.1	23.2	72.5	18.7	39.0	62.1
<i>Asia</i>										
China	6.3	12.8	15.0	8.0	3.1	11.2	3.5	13.1	4.6	34.7
India	3.5	11.8	19.6	8.9	5.4	9.2	2.7	2.2	6.5	35.6

Source: World Bank staff, based on UNComtrade SITC Rev.2 2005 data.

Note: The Islamic Republic of Iran and Lebanon did not report import data in 2005 and are not therefore included as importers. — = Negligible.

example, takes advantage of 57 percent of the opportunities to sell its export products in Spain but less than 20 percent of export opportunities in Portugal.

MENA countries appear to do poorly in exploiting opportunities to sell their exports in other MENA countries. Tunisia's (unweighted) average export market penetration in other MENA countries is only 13 percent. Turkey does a better job of selling its export products in the MENA region than MENA countries do. It uses almost 40 percent of the opportunities to sell its products in Tunisia—a far higher percentage than that of Egypt (18 percent). This raises the question of why products that have proven to be marketable in some countries are not being exported to other nearby countries. The low values of the index of export market penetration for MENA markets may partly reflect trade policy and logistical constraints to trade between MENA countries. They suggest the need to look at access to export financing and the role and impact of export promotion bodies in assisting exporters in overcoming informational barriers to selling in new markets.

Conclusions and Policy Messages

A number of issues warrant the attention of MENA policy makers. The main findings from the analysis suggest several directions for MENA governments:

- Review the regulatory and incentives environment, including labor market regulations, with a view to facilitating intrasectoral adjustment, which seems to have been more important than intersectoral adjustment in the reaction of MENA firms to increased competition from Asia. Continue the process of tariff reform to reduce trade diversion from preferential agreements and the antiexport bias of the import regime.
- Reduce trade transactions costs by improving trade and transport logistics so that producers can take advantage of their geographical proximity to the large European market.
- Broaden trade promotion efforts to nontraditional markets within MENA and beyond to reap unexploited opportunities in geographical export diversification.
- Consider undertaking analytical work on the nature of import surges and determine whether they warrant the strengthening of antidumping provisions.

Annex Export Growth and Constant Market Share Analysis

Table 9.A.1 Key Contributors to Export Growth and Decline at the Intensive Margin

	<i>Increase of existing products to old markets</i>			<i>Decrease of existing products to old markets</i>		
			<i>Change in China's share of world market (%)</i>			<i>Change in China's share of world market (%)</i>
Algeria	281410	Anhydrous ammonia	0.00	290511	Methanol (methyl alcohol)	-0.75
	280429	Rare gases (excluding argon)	0.01	290121	Ethylene	1.25
	740400	Waste and scrap copper	1.00	720712	Semi-finished products of iron and steel	7.41
	030613	Frozen shrimp and prawns	2.98	720110	Pig iron, nonalloy...	-17.70
	790111	Zinc not alloyed unwrought ...	-6.04	281410	Anhydrous ammonia	0.00
	Top 5 contributions to overall effect: 72.39%			Top 5 contributions to overall effect: 30.18%		
	Main markets: France, Spain, Italy, Tunisia, Morocco (91.83%)			Main markets: Italy, Spain, France, Morocco, Greece (63.49%)		
Egypt, Arab Rep. of	080510	Oranges, fresh or dried	0.72	070190	Other potatoes, fresh or chilled	1.98
	701810	Glass beads, imitation pearls.	5.13	760110	Aluminum unwrought, not alloyed	8.62
	620462	Women's/girls' trousers, of cotton	8.46	520812	Unbleached plain cotton weave...	3.10
	620342	Men's/boys' trousers, cotton	3.65	520100	Cotton, not carded or combed	-0.39
	760120	Aluminum unwrought, alloyed	1.48	620520	Men's or boys' shirts of cotton	8.95
	Top 5 contributions to overall effect: 21.12%			Top 5 contributions to overall effect: 22.20%		
	Main markets: United States, Italy, Saudi Arabia, United Kingdom, Germany (59.75%)			Main markets: United States, United Kingdom, Germany, Italy, France (45.35%)		

(continued)

Table 9.A.1 Key Contributors to Export Growth and Decline at the Intensive Margin (continued)

		<i>Increase of existing products to old markets</i>		<i>Decrease of existing products to old markets</i>		
		<i>Change in China's share of world market (%)</i>		<i>Change in China's share of world market (%)</i>		
Iran, Islamic Rep. of	080250	Pistachio, fresh or dried	0.16	570110	Carpets and other floor coverings	-5.57
	290220	Benzene	-0.42	080250	Pistachios, fresh or dried	0.16
	740311	Copper cathodes	-1.56	720712	Semi-finished products of iron and steel	7.41
	260300	Copper ores and concentrates	0.08	410221	Pickled skins of sheep or lambs ...	-0.03
	760110	Aluminum unwrought, not alloyed	8.62	970600	Antiques	7.17
	Top 5 contributions to overall effect: 47.33%			Top 5 contributions to overall effect: 50.64%		
Main markets: India; Saudi Arabia; Hong Kong, China; Italy (71.66%)			Main markets: Germany, Japan, Italy, Thailand, France (58.29%)			
Jordan	611020	Jerseys, pullovers, etc., cotton,	9.70	251010	Unground natural calcium phosphates	7.00
	620462	Women's/girls' trousers, cotton	8.46	310420	Potassium chloride	-0.03
	310420	Potassium chloride	-0.03	310530	Diammonium hydrogen orthophosphate	6.67
	711319	Articles of jewelry	5.90	310490	Mineral or chemical fertilizers ...	-0.29
	280920	Phosphoric acid ...	2.47	010410	Live sheep	-1.36
	Top 5 contributions to overall effect: 45.11%			Top 5 contributions to overall effect: 45.47%		
Main markets: United States, India, Saudi Arabia, Algeria, China (91.60%)			Main markets: Indonesia, Saudi Arabia, India, Italy, the Netherlands (42.48%)			
Lebanon	720449	Ferrous waste and scrap, iron/steel	-0.32	290122	Propene (propylene)	0.18
	711319	Articles of jewelry	5.90	740400	Waste and scrap, copper	1.00
	710239	Diamonds, nonindustrial	2.09	240110	Tobacco, not stemmed/stripped	1.60

	280920	Phosphoric acid ...	2.47	070190	Other potatoes, fresh or chilled	1.98
	490199	Printed books, brochures, leaflets	11.02	710239	Diamonds, nonindustrial	2.09
	Top 5 contributions to overall effect: 54.73%			Top 5 contributions to overall effect: 20.50%		
	Main markets: Switzerland, Turkey, Saudi Arabia, United States, Jordan (72.05%)			Main markets: Saudi Arabia, France, Thailand, Egypt, United States (50.00%)		
Morocco	620462	Women's/girls' trousers, cotton	8.46	030759	Octopus (excluding live, fresh, or chilled)	9.61
	280920	Phosphoric acid ...	2.47	280920	Phosphoric acid	2.47
	251010	Unground natural calcium phosphates	7.00	620342	Men's/boys' trousers, cotton	3.65
	610910	T-shirts, singlets ... cotton,	4.68	310530	Diammonium hydrogenorthop'hate	6.67
	070820	Beans, fresh or chilled	-1.20	620640	Women's/girls' blouses, shirts of mmf	13.78
	Top 5 contributions to overall effect: 21.34%			Top 5 contributions to overall effect: 21.56%		
	Main markets: Spain, France, United Kingdom, Belgium, Germany (68.15%)			Main markets: France, Germany, Japan, Italy, United Kingdom (69.44%)		
Syrian Arab Republic	010410	Live sheep	-1.36	520100	Cotton, not carded or combed	-0.39
	150910	Virgin olive oil and fractions	0.00	100300	Barley	0.01
	520100	Cotton, not carded or combed	-0.39	410221	Pickled skins of sheep or lambs,	-0.03
	010420	Live goats	-0.42	847193	Storage units ...	12.13
	410512	Sheep, lamb skin leather	-2.22	100110	Durum wheat	0.02
	Top 5 contribution to overall effect: 60.89%			Top 5 contributions to overall effect: 54.90%		
	Main markets: Saudi Arabia, Italy, Jordan, Turkey, Spain (78.27%)			Main markets: Italy, Jordan, Saudi Arabia, Morocco, Spain (52.85%)		
Tunisia	620342	Men's/boys' trousers, cotton	3.65	620342	Men's/boys' trousers of cotton	3.65
	854430	Ignition wiring sets	6.99	620640	Women's/girls' blouses, shirts, mmf	13.78
	620462	Women's/girls' trousers, cotton	8.46	620520	Men's or boys' shirts, cotton	8.95
	853650	Electrical switches ...	6.82	620343	Men's/boys' trousers, synthetic materials	3.30
	621210	Brassieres	16.59	280920	Phosphoric acid	2.47

(continued)

Table 9.A.1 Key Contributors to Export Growth and Decline at the Intensive Margin (continued)

		<i>Increase of existing products to old markets</i>	<i>Decrease of existing products to old markets</i>			
		<i>Change in China's share of world market (%)</i>	<i>Change in China's share of world market (%)</i>			
		Top 5 contributions to overall effect: 27.45%	Top 5 contributions to overall effect: 17.15%			
		Main markets: France, Italy, Germany, Belgium, Spain (83.75%)	Main markets: Germany, France, Luxembourg, Italy, Algeria (67.15%)			
Yemen, Rep. of	030219	Fresh or chilled salmonidae	0.18	090111	Coffee, not roasted or decaffeinated	0.25
	080300	Bananas, including plantains	0.03	010410	Live sheep	-1.36
	030749	Cuttle fish and squid	8.96	760200	Waste and scrap, aluminum	-0.84
	030799	Aquatic invertebrates, nes,	-0.65	010420	Live goats	-0.42
	081090	Other fruit, fresh, nes	0.65	740400	Waste and scrap, copper	1.00
		Top 5 contributions to overall effect: 72.20%	Top 5 contributions to overall effect: 46.27%			
		Main markets: Saudi Arabia; Thailand; Hong Kong, China; Spain; Japan (89.47%)	Main markets: Saudi Arabia, United Kingdom, Jordan, The Gambia, the Republic of Korea (67.84%)			

Source: World Bank staff calculations based on UN Comtrade data.

Table 9.A.2 Key Contributors to Export Growth and Decline at the Extensive Margin

		<i>Product</i>					
		<i>Increase of existing products to new markets</i>			<i>Increase of new products to old markets</i>		
		<i>Change in China's share of world market (%)</i>			<i>Change in China's share of world market (%)</i>		
Algeria	720449	Ferrous waste and scrap, iron, or steel	-0.32	310280	Mixtures of urea and ammonium nitrate	0.07	
	281410	Anhydrous ammonia	0.00	180400	Cocoa butter, fat, and oil	-0.11	
	720824	Flat rlld prod, i/nas, in coil, hr,	2.57	290244	Mixed xylene isomers	1.07	
	251020	Ground natural calcium phosphates	1.89	390110	Polyethylene having a specific grav	0.18	
	390120	Polyethylene having a specific grav	0.18	846694	Parts and accessories nes for use	1.37	
	Top 5 contributions to overall effect: 70.30%			Top 5 contributions to overall effect: 49.84%			
Main markets: Turkey, Morocco, the Netherlands, Germany, India (72.05%)			Main markets: France, Spain, United States, the Netherlands, Italy (67.78%)				
Egypt, Arab Rep. of	720824	Flat rlld prod, i/nas, in coil, hr,	2.57	252329	Portland cement (excluding white)	0.66	
	252310	Cement clinkers	12.62	720241	Ferro-chromium containing by weight	-8.19	
	310210	Urea	5.25	721510	Bars and rods, i/nas,nfw than cold forme	0.49	
	390120	Polyethylene having a specific grav	0.18	841121	Turbo-propellers of a power not exc	0.26	
	854430	Ignition wiring sets and oth wiring set	6.99	722830	Bars and rods, alloy steel, o/t stainless	3.03	
	Top 5 contributions to overall effect: 30.32%			Top 5 contributions to overall effect: 56.20%			
Main markets: Spain, United Kingdom, United States, Saudi Arabia, Italy (38.45%)			Main markets: Sudan, Saudi Arabia, United States, United Kingdom, Italy (73.91%)				

(continued)

Table 9.A.2 Key Contributors to Export Growth and Decline at the Extensive Margin (continued)

		<i>Product</i>				
		<i>Increase of existing products to new markets</i>		<i>Increase of new products to old markets</i>		
		<i>Change in China's share of world market (%)</i>		<i>Change in China's share of world market (%)</i>		
Iran, Islamic Rep. of	290511	Methanol (methyl alcohol)	-0.75	260111	Nonagglomerated iron ores and conc	0.04
	570110	Carpets and other textile floor coverings	-5.57	720610	Ingots, iron or nonalloy steel, of	-4.43
	290243	p-Xylene	-3.53	291736	Terephthalic acid and its salts	-0.12
	720824	Flat rlld prod, i/nas, in coil, hr,	2.57	381710	Mixed alkylbenzenes, nes	4.50
	740919	Plate, sheet, and strip of refined copper	2.47	293361	Melamine	9.19
	Top 5 contributions to overall effect: 31.63%			Top 5 contributions to overall effect: 49.09%		
	Main markets: China, India, United States, Saudi Arabia, the Republic of Korea (55.85%)			Main markets: China, India, Saudi Arabia, Turkey, Italy (78.58%)		
Jordan	310530	Diammonium hydrogen orthophoshate	6.67	290810	Phenol or phenol-alcohol derivative	5.36
	310520	Mineral or chemical fertilizers wit	0.78	283421	Nitrates of potassium	4.81
	610821	Women's/girls' briefs and panties	4.40	610220	Woman's or girls' coats, etc., cotton	15.72
	310540	Ammonium dihydrogen orthophoshate	4.74	280130	Fluorine; bromine	1.86
	610343	Men's or boys' trousers, etc, of sy	-4.41	610822	Women's or girls' briefs, etc., of m	16.98
	Top 5 contributions to overall effect: 29.39%			Top 5 contributions to overall effect: 35.08%		
Main markets: United States, Japan, Saudi Arabia, Ethiopia, Israel (57.63%)			Main markets: United States, Saudi Arabia, Egypt, the Republic of Korea, China (57.24%)			
Lebanon	280920	Phosphoric acid	2.47	290110	Acyclic hydrocarbons, saturated	-0.06
	240110	Tobacco, not stemmed/stripped	1.60	850213	Generating sets, diesel or semi-diesel	1.57
	050400	Guts, bladders, stomachs of animals	5.74	283526	Phosphates of calcium, nes	3.53
	852520	Transmission apparatus, for radiote	14.25	844900	Mach for the mfr or fin of felt or	1.80

	392330	Carboys, bottles, flasks, and similar	3.30	854460	Electric conductors, for a voltage	1.63
	Top 5 contributions to overall effect: 21.91%			Top 5 contributions to overall effect: 28.59%		
	Main markets: Jordan, Egypt, Saudi Arabia, India, United Kingdom (31.18%)			Main markets: Egypt, Saudi Arabia, Jordan, United States, Italy (62.70%)		
Morocco	854441	Electric conductors, for a voltage n	15.38	701990	Glass fibers (including glass wool)	4.51
	854430	Ignition wiring sets	6.99	852692	Radio remote control apparatus	-2.00
	854219	Monolithic integrated circuits, nes	5.14	721420	Bars and rods, i/nas, hr, hd or he, cntg in	6.22
	854129	Transistors ...	8.22	940120	Seats, motor vehicles	14.89
	310540	Ammonium dihydrogen orthophosphate	4.74	930690	Munitions of war and pts thereof and ot	0.10
	Top 5 contributions to overall effect: 41.11%			Top 5 contributions to overall effect: 16.66%		
	Main markets: Spain; Singapore; China; Hong Kong, China; Italy (54.99%)			Main markets: France, Spain, Algeria, Belgium, Italy (65.0%)		
Syrian Arab Republic	100110	Durum wheat	0.02	520515	Uncombed single cotton yarn, with >	-1.95
	520100	Cotton, not carded or combed	-0.39	310210	Urea	5.25
	251010	Unground natural calcium phosphates	7.00	841112	Turbo-jets of a thrust exceeding 25	1.36
	610832	Women's or girls' pyjamas, etc., of	1.97	854459	Electric conductors, for a voltage	2.58
	220210	Waters (including mineral and aerated)	0.51	520842	Colored plain cotton weave, with >	1.36
	Top 5 contributions to overall effect: 31.59%			Top 5 contributions to overall effect: 34.89%		
	Main markets: Jordan, Egypt, Sudan, Algeria, China (55.38%)			Main Markets: Egypt, Italy, Jordan, Saudi Arabia, Turkey (74.3%)		
Tunisia	854430	Ignition wiring sets and other wiring set	6.99	870894	Steering wheels, steering columns a	0.85
	721049	Flat rolled prod, i/nas, plated or	2.61	721039	Flat rolled prod, i/nas, electro pl	-0.29
	870821	Safety seat belts for motor vehicle	1.91	630399	Curtains and interior blinds; curta	25.77
	640340	Footwear, with a metal toe-cap, lea	15.42	630493	Furnishing articles of synthetic fi	43.89
	853710	Boards, panels, including numerical	4.48	030349	Frozen tunas, nes	7.62

(continued)

Table 9.A.2 Key Contributors to Export Growth and Decline at the Extensive Margin (continued)

		<i>Product</i>				
		<i>Increase of existing products to new markets</i>	<i>Increase of new products to old markets</i>			
		<i>Change in China's share of world market (%)</i>	<i>Change in China's share of world market (%)</i>			
		Top 5 contributions to overall effect: 18.56%	Top 5 contributions to overall effect: 33.26%			
		Main markets: France, Italy, United Kingdom, Poland, Spain (55.04%)	Main markets: France, Algeria, Italy, Germany, Belgium (71.08%)			
Yemen, Rep. of	030232	Fresh or chilled yellowfin tuna	-0.12	070310	Onions and shallots, fresh or chill	6.84
	030749	Cuttle fish and squid	8.96	030420	Frozen fish fillets	17.17
	410221	Pickled skins of sheep or lambs	-0.03	160414	Prepared or preserved tuna, skipjack	0.25
	030379	Frozen fish, nes	7.01	151790	Edible preparations of fats and oil	-1.05
	240120	Tobacco, partly or wholly stemmed	2.58	230210	Brans, sharps, and other residues of	0.84
		Top 5 contributions to overall effect: 58.48%	Top 5 contributions to overall effect: 44.45%			
		Main markets: Italy, France, Saudi Arabia, Paraguay, Germany (57.31%)	Main markets: Saudi Arabia, Egypt, Ethiopia, Oman, France (78.7%)			

Source: World Bank staff calculations based on UN Comtrade data.

Table 9.A.3 Constant Market Share Analysis of MENA Countries' Exports to the European Union, 1995–2006

<i>Country</i>	<i>Change in export value (US\$ thousands)</i>	<i>Change in exports (%)</i>	<i>EU growth effect (%)</i>	<i>Commodity composition (%)</i>	<i>Market composition (%)</i>	<i>Competitiveness (%)</i>	<i>Residual (%)</i>
<i>Egypt, Arab Rep. of</i>							
All	1,706,709	163.5	140.6	-30.5	16.4	34.6	2.5
Animal and animal products	3,757	27.8	85.3	-24.4	-24.8	-8.3	0.1
Vegetable products	165,231	117.4	51.9	-3.8	10.6	52.5	6.2
Foodstuffs	20,598	67.9	70.2	-67.7	21.6	34.2	9.6
Mineral products	127,405	1,618.1	552.8	188.3	74.0	788.3	14.7
Chemical and allied industry	219,279	351.8	216.1	-58.1	-42.1	232.7	3.1
Plastics and rubbers	178,647	1,493.6	552.7	10.0	27.5	901.4	1.9
Raw hides, skins, leather, and furs	68,694	958.0	217.8	-122.6	-114.6	977.1	0.3
Wood and wood products	21,995	790.3	184.0	41.4	179.7	383.7	1.6
Textiles	-93,187	-29.9	9.2	-15.4	1.3	-25.7	0.6
Clothes	305,074	166.2	132.8	17.6	38.3	-22.5	0.0
Footwear and headgear	12,200	295.1	191.6	4.6	41.5	57.3	0.1
Stone and glass	51,565	423.2	171.3	229.9	111.6	-90.8	1.2
Metals	427,376	250.0	205.4	-9.1	37.8	11.2	4.6
Machinery and electrical	149,721	289.8	195.6	73.4	21.0	-1.9	1.7
Transportation	27,072	3,200.7	1,278.5	131.8	47.8	1,735.1	7.5
Miscellaneous	21,282	65.2	122.9	-17.9	22.9	-62.7	0.0
<i>Jordan</i>							
All	70,829	59.3	111.0	-26.9	-12.1	-17.1	4.4
Animal and animal products	-452	-88.5	55.5	-52.6	-7.4	-84.1	0.0
Vegetable products	9,874	495.7	106.8	104.5	-81.8	354.8	11.3

(continued)

Table 9.A.3 Constant Market Share Analysis of MENA Countries' Exports to the European Union, 1995–2006 (continued)

<i>Country</i>	<i>Change in export value (US\$ thousands)</i>	<i>Change in exports (%)</i>	<i>EU growth effect (%)</i>	<i>Commodity composition (%)</i>	<i>Market composition (%)</i>	<i>Competitiveness (%)</i>	<i>Residual (%)</i>
Foodstuffs	-6,215	-82.6	39.0	98.6	-93.0	-128.5	1.3
Mineral products	-14,401	-55.0	78.3	-90.6	-19.7	-21.1	-1.8
Chemical and allied industry	35,675	114.6	143.7	-115.8	-21.5	93.3	14.8
Plastics and rubbers	16,719	759.5	332.6	46.1	176.4	200.6	3.7
Raw hides, skins, leather, and furs	-3,160	-79.7	31.6	-57.5	12.3	-63.2	-2.8
Wood and wood products	2,213	1,060.2	231.5	82.9	75.7	670.1	0.0
Textiles	-1,762	-69.5	7.2	-37.2	15.3	-51.1	-3.6
Clothes	-2,823	-24.8	80.6	21.2	199.9	-326.6	0.0
Footwear and headgear	123	1,706.7	612.4	-47.8	58.6	1083.5	0.0
Stone and glass	11,149	4,456.0	1137.4	-166.7	932.9	2,552.4	0.0
Metals	21,558	505.9	288.3	-163.2	38.2	323.5	19.1
Machinery and electrical	7,816	48.7	122.4	168.5	-146.0	-96.3	0.0
Transportation	-221	-18.3	147.1	153.4	-60.2	-258.5	0.0
Miscellaneous	-5,265	-52.5	87.8	-53.6	-14.1	-74.1	1.5
Lebanon							
All	81,615	81.2	117.2	4.4	-3.8	-41.2	4.6
Animal and animal products	-1,797	-20.1	73.0	-40.5	-0.2	-53.5	1.1
Vegetable products	-252	-5.8	34.1	52.7	-4.1	-89.3	0.8
Foodstuffs	17,362	418.7	142.9	258.8	23.2	-17.4	11.2
Mineral products	827	53.6	109.1	1.6	-10.9	-46.8	0.6
Chemical and allied industry	1,847	19.0	114.6	-137.2	13.2	32.9	-4.5
Plastics and rubbers	8,131	1,258.0	482.1	16.3	66.1	693.1	0.4

Raw hides, skins, leather, and furs	-1,234	-45.2	37.8	-56.5	4.5	-29.0	-2.0
Wood and wood products	7,081	292.0	96.2	-17.9	-30.4	243.1	0.9
Textiles	-272	-15.3	10.0	-0.5	14.1	-40.0	1.2
Clothes	-8,311	-43.9	75.4	19.7	11.7	-150.8	0.1
Footwear and headgear	1,487	896.2	370.8	87.8	222.8	214.4	0.4
Stone and glass	-838	-6.3	68.4	6.4	-6.9	-76.5	2.2
Metals	41,156	201.5	189.7	39.9	-51.8	3.9	19.9
Machinery and electrical	10,974	158.5	155.8	22.6	25.5	-47.5	2.1
Transportation	810	99.3	188.4	-71.7	29.5	-46.9	0.0
Miscellaneous	4,643	124.0	140.4	13.7	29.2	-58.5	-0.8
Morocco							
All	2,615,934	71.0	114.3	-26.6	6.7	-25.3	1.9
Animal and animal products	220,139	97.4	103.1	-5.8	-4.6	4.6	0.2
Vegetable products	423,325	123.6	52.8	-1.6	28.9	37.4	6.1
Foodstuffs	179,542	86.4	74.0	20.6	-17.9	0.9	8.7
Mineral products	73,906	42.4	105.9	-34.3	-7.7	-29.3	7.8
Chemical and allied industry	-126,849	-34.5	98.3	-113.5	-1.2	-4.3	-13.7
Plastics and rubbers	3,249	15.0	109.4	5.7	-30.3	-73.8	3.9
Raw hides, skins, leather, and furs	-20,283	-35.5	39.6	12.3	52.8	-143.3	3.3
Wood and wood products	1,433	3.1	45.3	2.2	-12.3	-28.9	-3.2
Textiles	-4,833	-5.4	10.5	4.8	-3.3	-19.2	1.9
Clothes	743,576	45.3	99.8	-5.2	11.5	-63.3	2.5
Footwear and headgear	119,607	112.9	137.3	21.0	-7.0	-44.7	6.2
Stone and glass	31,010	110.7	96.5	36.4	83.3	-128.3	22.7
Metals	141,326	301.5	222.1	16.0	114.1	-53.9	3.2
Machinery and electrical	700,286	242.2	181.2	-6.3	-27.8	93.2	1.9

(continued)

Table 9.A.3 Constant Market Share Analysis of MENA Countries Exports' to the European Union, 1995–2006 (continued)

Country	Change in export value (US\$ thousands)	Change in exports (%)	EU growth effect (%)	Commodity composition (%)	Market composition (%)	Competitiveness (%)	Residual (%)
Transportation	45,859	337.9	272.2	224.3	141.4	-315.3	15.3
Miscellaneous	84,641	350.8	208.0	-52.8	7.6	178.3	9.7
Tunisia							
All	3,310,133	113.2	126.3	4.5	8.9	-27.2	0.8
Animal and animal products	37,003	69.3	95.9	-31.8	11.6	-8.6	2.2
Vegetable products	286,357	99.0	49.3	74.8	0.0	-25.3	0.3
Foodstuffs	23,164	230.4	103.9	69.9	-49.6	40.1	66.1
Mineral products	-4,302	-9.5	91.2	-50.3	404.4	-455.6	0.8
Chemical and allied industry	-126,849	6.8	110.9	-120.1	9.3	4.9	1.9
Plastics and rubbers	73,350	1,091.3	432.1	137.9	7.9	475.5	37.8
Raw hides, skins, leather, and furs	17,929	51.6	55.2	54.0	17.3	-76.0	1.1
Wood and wood products	30,146	224.0	84.2	67.9	27.4	42.4	2.1
Textiles	36,951	42.0	12.9	15.4	18.2	-4.8	0.2
Clothes	811,346	46.3	100.1	14.7	1.3	-69.8	0.0
Footwear and headgear	231,257	141.7	145.9	12.5	-21.1	3.1	1.3
Stone and glass	24,247	143.7	104.4	49.2	24.4	-34.3	0.0
Metals	249,096	910.0	419.2	61.4	37.8	383.4	8.1
Machinery and electrical	1,277,466	460.7	247.5	55.3	13.5	144.3	0.2
Transportation	150,666	869.4	459.0	111.8	11.1	287.4	0.0
Miscellaneous	192,305	399.5	222.5	-35.7	-4.5	210.1	7.1
China							
All	112,991,329	466.1	226.5	-7.0	2.7	241.2	2.7
Animal and animal products	864,983	185.1	125.6	-22.2	-11.8	81.2	12.3

Vegetable products	710,228	174.8	60.2	35.8	-11.2	80.2	9.7
Foodstuffs	601,714	238.6	105.6	5.3	-1.4	122.1	7.0
Mineral products	798,837	316.5	183.7	46.2	6.7	88.0	-8.1
Chemical and allied industry	3,553,712	260.1	188.1	-75.2	3.8	140.8	2.6
Plastics and rubbers	3,781,395	436.3	235.7	-5.5	-0.8	206.3	0.6
Raw hides, skins, leather, and furs	3,097,003	163.0	75.2	43.1	0.2	44.4	0.1
Wood and wood products	2,556,944	461.1	126.0	102.4	3.1	226.9	2.6
Textiles	1,849,023	217.9	21.9	27.8	2.6	163.4	2.3
Clothes	16,263,512	411.0	199.6	-4.5	5.4	210.0	0.5
Footwear and headgear	4,894,495	316.7	198.0	-22.5	-7.8	134.9	14.1
Stone and glass	4,417,982	862.3	276.5	96.7	0.0	484.7	4.4
Metals	9,859,808	647.6	334.2	-19.3	11.9	317.6	3.2
Machinery and electrical	38,333,212	757.8	337.7	-15.3	4.0	428.1	3.2
Transportation	2,225,126	1,791.5	783.1	-20.1	-23.7	1,045.7	6.4
Miscellaneous	19,183,355	416.3	227.5	-19.0	4.3	203.0	0.4

Source: World Bank staff calculations based on Eurostat data.

Note: excluding Harmonized System Codes 27, 88, and 89, and using average share in calculations.

Notes

1. The rules of origin for the qualified industrial zones specify a 35 percent value-added requirement that must be satisfied with inputs from Israel, Jordan, or the West Bank and Gaza, with a minimum of 11.7 percent from Jordan, 8.0 percent from Israel, and the remainder from any of the three economies. The free trade agreement itself has a 35 percent value-added rule, all of which must be satisfied by inputs from Jordan, and a requirement that all of the making up of the product must be undertaken in Jordan.
2. Knitted clothing (HS 61) and nonknitted clothing (HS 62) were separated because of their different production technologies, which have important implications for the impact of rules of origin in trade agreements.
3. Egypt was less successful in increasing exports to Germany and the United Kingdom.
4. Under bilateral cumulation, originating materials (those that satisfy the rule of origin that pertain to the materials) imported from a partner to the trade agreement, in this case textile fabrics from the European Union, can be counted as satisfying the rule of origin for qualifying inputs for the final exported product.
5. Although China had more peaks than India, India's peak tariffs were higher.
6. This index is calculated by dividing the number of export/market bilateral flows by the number of bilateral flows that would occur if the country were to export its products to all the markets that import such products. For details, see Brenton and Newfarmer (2009).

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PART IV

Regional Integration

CHAPTER 10

Regional Integration: Status, Developments, and Challenges

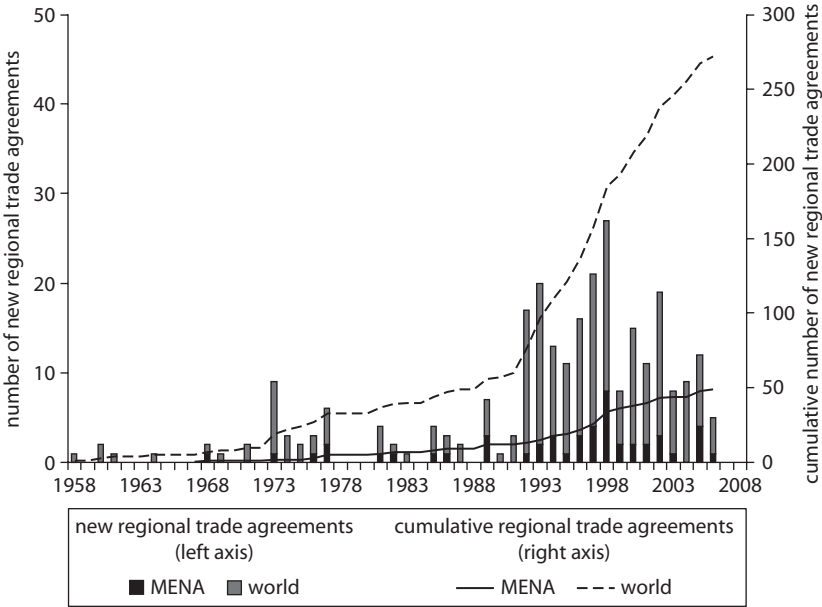
Lulu Shui and Peter Walkenhorst

Regional trade agreements have been proliferating both in the Middle East and North Africa (MENA) region and globally, their number increasing almost sixfold over the past two decades (figure 10.1). Such agreements can create opportunities to expand economic links through joint action to overcome institutional as well as policy barriers to flows of goods, services, capital, and labor. They can help countries reap benefits from international integration while addressing their particular needs and adjustment capacities. If the reduction of intraregional trade barriers fosters partner countries to expand output and exports of products in which they are internationally competitive, the price of final goods or production inputs on the importing country market falls, to the benefit of consumers and input-purchasing producers. In this case, welfare-enhancing trade is created.

Regional trade initiatives can also have beneficial indirect effects. Opening domestic markets to partner countries, for example, can increase competition in sectors with previously highly concentrated industrial structures, reducing the monopolistic pricing power of incumbents. Such procompetitive impacts are particularly important for countries that have only nascent domestic competition policies.

Regional cooperation can also be effective in harmonizing customs procedures and domestic regulations. Adopting common rules on investment,

Figure 10.1 The Number of Regional Agreements Grew Strongly over the Past Two Decades



Source: Authors.

Note: MENA regional trade agreements are agreements that include at least one MENA country participant.

for example, has the potential to encourage increased inflows of foreign direct investment (FDI) by enhancing the credibility of FDI policies and restraining sudden policy reversals.

Some observers justify regional trade agreements in political economy terms by viewing them as laboratories for international integration, training grounds for negotiations at a broader level, and strategic means of making trade policy. By teaming up with regional partners, countries may be able to increase the weight of their positions in international trade negotiations, possibly achieving more favorable negotiation outcomes. Regional trade agreements also make it possible for countries to gain some control over the trade policy of their partner countries.

Pursuing regional integration is not riskless, however. Doing so can divert scarce political and administrative capacities from exploiting more promising opportunities in global markets. Where several regional agreements overlap, differing administrative procedures—with respect to technical standards, customs requirements, and rules of origin—can complicate

transactions and raise costs for both enterprises and governments. Moreover, because regional trade agreements are inherently discriminatory, there is a risk that they cost the economy more in lost trade revenues than they earn in increased trade, depriving local producers and consumers of efficient, low-cost supplies from nonpartner countries.

In dynamic regions, such as East Asia as well as parts of Eastern Europe and Latin America, increased intraregional transactions preceded rather than followed the conclusion of regional integration agreements (World Bank 2005). Low external trade barriers enticed producers to strengthen their competitiveness, and the emergence of global production networks in manufacturing favored specialization and cooperation with neighbors. These commercial relations were later solidified and confirmed through formal integration agreements.

In contrast, there are relatively few economic links across the MENA region, and existing integration arrangements are not always effectively implemented. Moreover, because granting preferences to partner countries implies discriminating against outsiders, more dynamic regional integration activity in regions other than MENA has left MENA exporters at a disadvantage. Thus, the region's policy makers have an incentive to push for more ambitious and effective integration within MENA and multilateral trade reform to "level the playing field."

In fact, regional integration and active participation in global markets do not present exclusive or opposing choices. Many successful countries have built their strategy around a paradigm of "open regionalism," which implies negotiating reciprocal preferences with regional partners while opening up to international markets. Moreover, regional agreements can complement multilateral reforms. They can make a contribution toward harmonization of rule-making. Some arrangements contain provisions in areas such as investment protection or labor migration that go beyond current multilateral trade law in terms of their integrative ambition (so-called WTO-plus arrangements) (OECD 2003).

Reasons for the Failure of Past Integration Attempts

MENA exhibits many economic, geographic, and cultural features that favor cross-country links and regional integration. Indeed, economic and political integration efforts have a long history in the region (box 10.1). The multitude of attempts to promote cross-regional links through institutional arrangements has left a veritable spaghetti bowl of intertwined relationships and overlapping associations (figure 10.2). Every MENA country is a

Box 10.1**The Long History of Integration in the Middle East and North Africa**

Many panregional cooperation attempts have been launched since Arab independence. Efforts have ranged from shallow, bilateral arrangements that were confined to tariff reductions for a small number of goods to comprehensive programs that aimed to create pan-Arab market institutions (Galal and Hoekman 2003). Landmark agreements during a first phase in the 1950s and 1960s include the transit agreement signed by members of the Arab League of 1953; the Arab Economic Unity Agreement of 1957; and the attempt by the Arab Republic of Egypt, Iraq, Jordan, and the Syrian Arab Republic to form an Arab Common Market in 1964.

A second phase of regional integration was launched following the oil boom of the 1970s. Eighteen members of the Arab League signed the Trade Facilitation and Trade Promotion Accord of 1981; the Gulf Cooperation Council (made up of Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates) was also established that year. The short-lived Arab Cooperation Council and the Arab Maghreb Union came into existence in 1989. In 1997, the Agreement on the Greater Arab Free Trade Area was signed. In 2004, Egypt, Jordan, Morocco, and Tunisia signed the Agadir Agreement, which established a free trade area among the four countries.

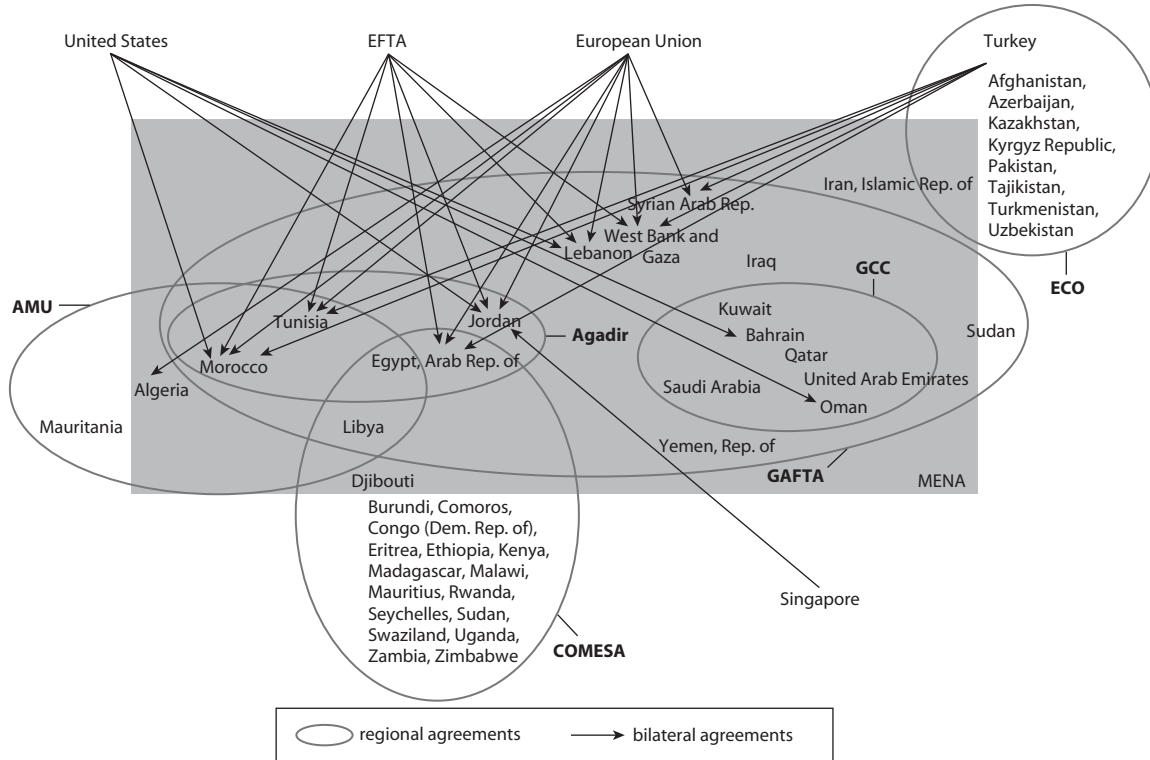
Source: Authors, based on Galal and Hoekman 2003.

partner to at least one regional economic agreement, and many countries are members of five or more such agreements.

For a long time, policy makers focused their integration efforts primarily on intra-MENA arrangements. Recently, agreements with partners from outside the region, notably the European Union and the United States, have assumed a more prominent role. Examples include the Euro-Med Agreements between the European Union and several Mediterranean MENA countries, as well as bilateral agreements between the United States and Bahrain, Jordan, Lebanon, Morocco, and Oman. A large number of bilateral investment and cooperation agreements within MENA further adds to the complicated web of institutional arrangements (table 10.1).

The many integration initiatives and agreements notwithstanding, many observers perceive the outcome as disappointing. Analytical work over the

Figure 10.2 The Network of MENA Regional Agreements Is Dense



Source: Authors.

Note: Only major agreements are depicted. Agadir = Agadir Agreement for the Establishment of a Free Trade Zone between Arabic Mediterranean Nations; AMU = Arab Maghreb Union; COMESA = Common Market for Eastern and Southern Africa; ECO = Economic Cooperation Organization; EFTA = European Free Trade Association (4), includes Iceland, Liechtenstein, Norway, and Switzerland; GAFTA = Great Arab Free Trade Agreement; GCC = Gulf Cooperation Council.

Table 10.1 Bilateral Treaties within the Middle East and North Africa

	Algeria	Bahrain	Djibouti	Egypt, Arab Rep.	Iraq	Iran, Islamic Rep.	Jordan	Kuwait	Lebanon	Libya	Morocco	Oman	Qatar	Saudi Arabia	Syrian Arab Republic	Tunisia	United Arab Emirates	West Bank and Gaza	Yemen, Rep.
Algeria		-	-																
Bahrain	-		-																
Djibouti	-	-																	
Egypt, Arab Rep.	BIT, TA	BIT	BIT ^b																
Iraq	-	BIT ^b	-	FTA		-	-												
Iran, Islamic Rep.	BIT, TA	BIT	-	BIT ^b	-		-	-											
Jordan	BIT, TA	BIT, FTA	-	BIT, FTA	-	-													
Kuwait	BIT, TA	-	-	BIT	BIT, TA	-	BIT ^b , FTA												
Lebanon	TA	FTA ^a , BIT	-	TA, BIT	FTA	BIT	TA, FTA BIT	TA, BIT											
Libya	-	-	-	BIT, TA	-	-	-	-											
Morocco	TA	BIT	-	BIT, FTA	BIT ^b , TA	BIT, FA	BIT, FTA	BIT, TA	FA, BIT	BIT, TA									
Oman	BIT	-	-	BIT	-	BIT	-	-	BIT ^a	-	BIT, FA								
Qatar	TA	-	-	BIT ^b	-	BIT, TA	-	-	FA	-	BIT, FA ^b	-							
Saudi Arabia	-	-	-	BIT	-	-	-	-	TA	-	TA	-							
Syrian Arab Republic	BIT ^b , TA	TA, BIT	-	BIT, TA	BIT ^b , TA ^b	BIT, TA	BIT, FTA	BIT, TA	TA, BIT	BIT, TA	BIT, FA	BIT ^b , FA	BIT ^b , TA	TA					
Tunisia	BIT ^b , TA	-	-	BIT, FTA	-	BIT	BIT, FTA	BIT ^b , TA	BIT	BIT ^b , FTA	BIT ^b , FTA	BIT	-	-	TA				
United Arab Emirates	BIT	-	-	BIT	-	-	FTA	BIT ^b	TA, BIT	-	BIT, FA, FTA	-	-	-	BIT, TA ^a	BIT ^b			
West Bank and Gaza	-	-	-	TA, BIT	-	-	TA	-	-	-	-	-	-	-	-	FA	-		
Yemen, Rep.	BIT ^b , TA	BIT ^b	-	BIT	-	BIT	BIT	BIT ^b	FA, BIT	-	BIT ^b , FA	BIT	-	-	BIT, FA ^a	-	BIT	-	

Source: World Bank staff based on national sources.

Note: Framework Agreements (FA) call for cooperation and exchange of information and expertise. Free Trade Agreements (FTA) involve broad tariff reductions on a preferential basis. Trade Agreements (TA) are less demanding than FTAs but more concrete than FAs (a TA could, for example, include tariff reductions, special exemptions, or creation of a free trade zone). Bilateral Investment Treaties (BIT) provide investor protection. Double Taxation Treaties (DTT) avoid the multiple imposition of taxes by partner countries.

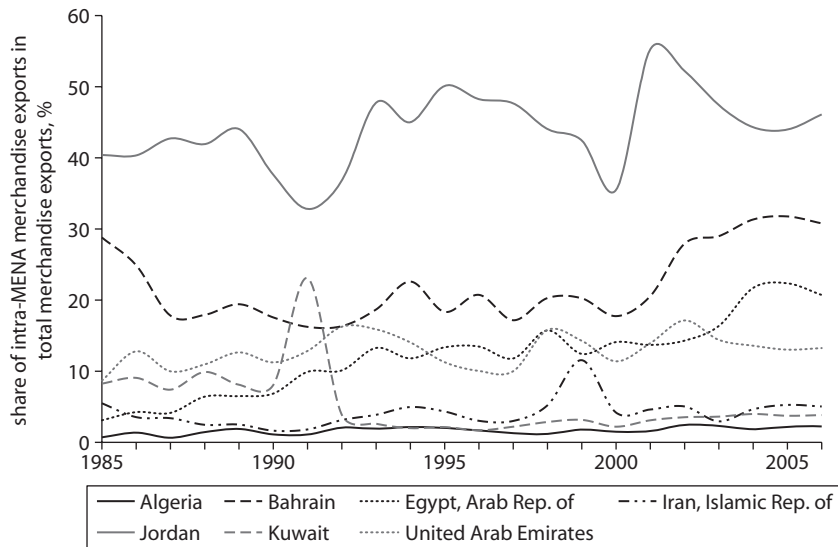
a. = Not ratified ; b. = Not enforced; *italics* = status unknown; - = not applicable; no preferential trade between the two countries under the respective agreement.

past decade indicates that integration has fallen short of expectations and lags developments in other regions. “Gravity models”—which estimate trade potential between countries based on economic size, geographical distance, and other country characteristics—consistently find that trade within MENA is below the level project by the models (see, for example, Miniesy, Nugent, and Yousef 2004; Péridy 2005a; Achy 2006). Explanations for this lackluster integration performance include the low complementarity in production structures; the very uneven level of import protection across the region; the persistence of significant nontariff barriers to trade; and the lack of coverage of services, investment, and labor mobility in past integration efforts. The merit of these different explanations is critically assessed in the following sections.

Low Complementarity and Uneven Import Protection

The share of intraregional trade in total merchandise trade increased over the past two decades in many MENA countries (figure 10.3). Nevertheless, the extent of intraregional trade remains lower than in all other regions of the world except South Asia (World Bank 2005). The ratio of

Figure 10.3 Many MENA Countries Have Increased Their Intraregional Trade over Time

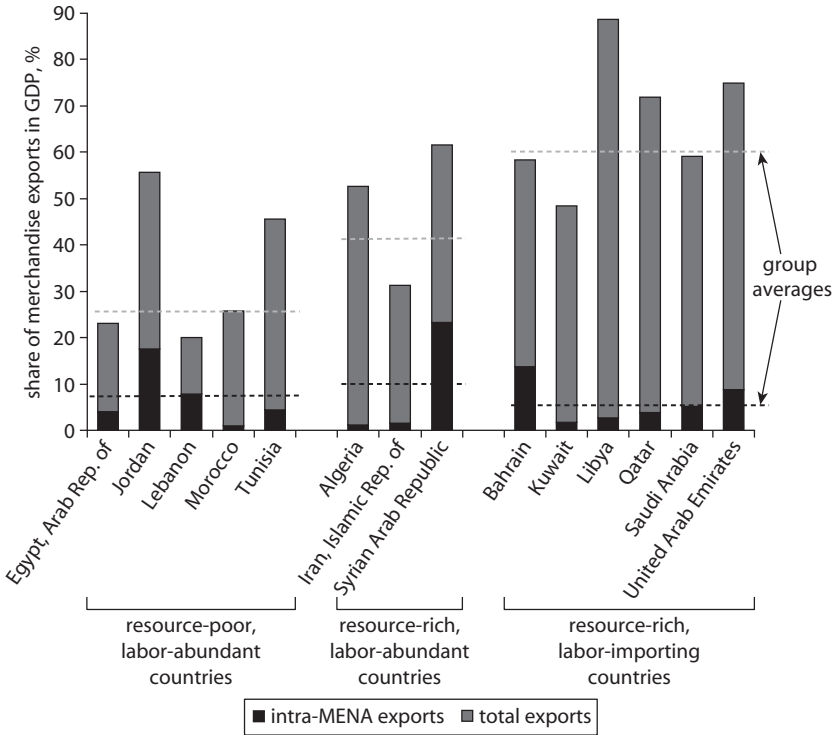


Source: IMF Directions of Trade database.

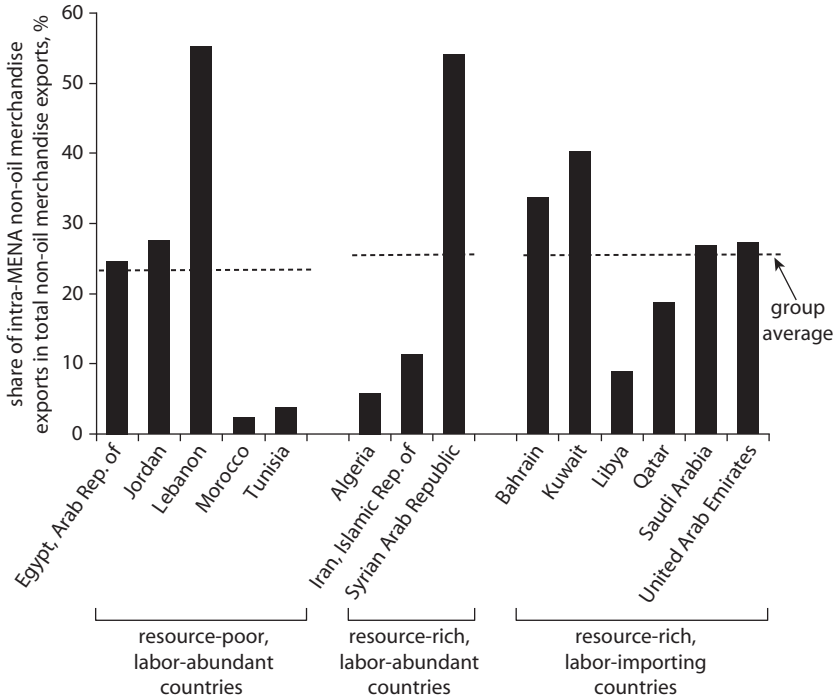
intraregional trade to GDP exceeds 15 percent in Jordan and the Syrian Arab Republic; in most other countries in the region it remains in the low single digits (figure 10.4). It is particularly low in resource-rich, labor-importing countries, where total export to GDP ratios are high.

Low complementarity. To some extent, this low level of intraregional trade reflects the export structure of many countries in the region, particularly the importance of petroleum exports. If only non-oil exports are considered, about one-quarter of total exports are exported within the region (figure 10.5). This average figure conceals substantial differences in the importance of intraregional trade across countries and within country groups, however. In Lebanon and Syria, regional markets account for

Figure 10.4 Exports to the Region Remain Generally of Minor Significance



Source: IMF Directions of Trade and World Development Indicators databases.
 Note: Data are from 2006 or latest year available. Exports are derived from mirror data.

Figure 10.5 MENA Destinations Are of Some Importance for Non-Oil Exports

Source: UN Comtrade database.

Note: Data are from 2006 or latest year available.

more than half of non-oil exports; regional exports remain in single-digit territory in Algeria, Libya, Morocco, and Tunisia.

Examination of subgroups of countries in the major regional trade agreements confirms the shallow links in merchandise trade (table 10.2). None of the four members of the Agadir Agreement trades more than 3 percent of total imports and exports with the other three partners. Trade is also minimal among the five members of the Arab Maghreb Union, within which intraregional trade represents more than 3 percent of total imports and exports only in Tunisia.

Cross-country networks of suppliers can be major drivers of integration. Over the past two decades, such networks have been established in the automobile industry in Eastern Europe and in the electronics industry in East Asia; they have significantly contributed to the international economic success of these regions. Systems of interrelated suppliers take advantage of intercountry wage differentials within the

Table 10.2 Trade with Partners in Regional Agreements, 2006
(percentage of total merchandise imports and exports)

Country	Agadir Agreement	Arab Maghreb Union	Gulf Cooperation Council	Greater Arab Free Trade Area
<i>MENA countries</i>				
Algeria		1.2		
Bahrain			35.0	38.6
Egypt, Arab Rep. of	1.5			13.6
Iraq				14.7
Jordan	3.0			35.7
Kuwait			4.5	7.4
Lebanon				30.6
Libya		2.7		5.1
Morocco	1.2	2.2		7.5
Oman			11.0	12.2
Qatar			6.4	7.5
Saudi Arabia			4.1	9.1
Syrian Arab Republic				46.7
Tunisia	1.4	6.7		7.4
United Arab Emirates			4.8	7.4
Yemen, Rep. of				24.5
<i>Non-MENA countries</i>				
Mauritania		2.8		
Sudan				18.3

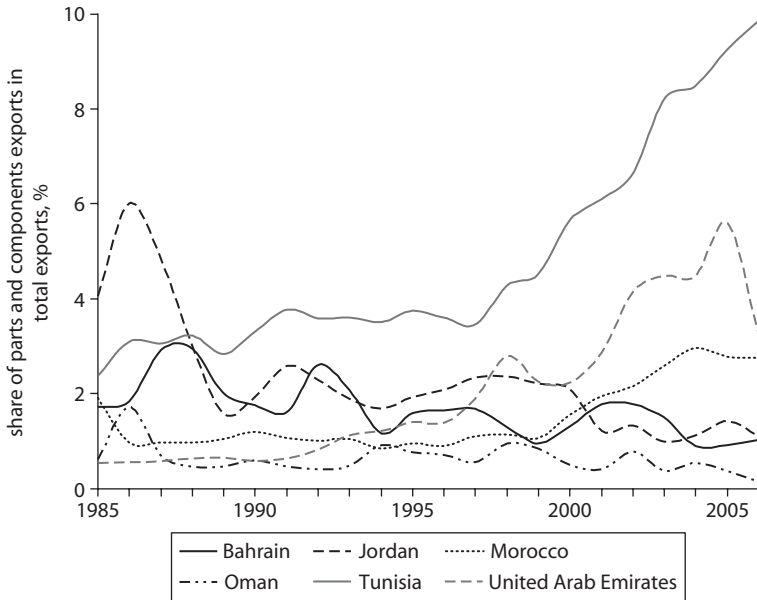
Source: IMF Directions of Trade database.

Note: Empty cells indicate no preferential trade between the two countries under the respective agreement.

region, short transport distances, and economies of scale from specialization (Haddad 2007). The resulting fragmentation of production is intensifying intraregional trade but tends to depend heavily on extraregional demand for final goods. Hence, a two-pronged strategy based on closer integration of factor and product markets to facilitate the emergence of production links within the region and openness toward international markets seems essential for success.

Global trade in parts and components, which can be seen as a proxy for exchanges in production networks, has expanded more dynamically than conventional trade in final goods. MENA countries have long lagged in network trade (Yeats and Ng 2000), although some Maghreb countries have been catching up in recent years (figure 10.6). Tunisia, in particular, has seen its share of parts and components exports almost triple over the past decade, from less than 4 percent to 10 percent of total exports.

Figure 10.6 Exports of Parts and Components Have Increased in Some Maghreb Countries



Source: UN Comtrade database.

Most of this trade is in the context of networks with Europe, however, rather than with partners in the region.

Lack of trade complementarity limits the potential for integration of goods markets. Countries with similar resource endowments, production capabilities, and export structures naturally find it difficult to use regional integration as a means to establish patterns of specialization and diversification.

Similarities between the export basket of one country and the import basket of another can be analyzed by using the bilateral product complementarity index (Yeats 1998; Khandelwal 2004). The value of this index ranges from 0 (no complementarity between exports and imports of two countries) to 100 (a perfect complementarity); the higher the index between two countries, the greater the product complementarity.

Complementarity indices between partners in successful regional agreements, such as the European Union or the North American Free Trade Agreement (NAFTA), have been reported to exceed 50; moderately successful ones, such as Mercosur, show complementarity indices in

the range of 25–30 (Yeats 1998). In contrast, the bilateral complementarity between pairs of MENA countries is low, rarely exceeding single-digit levels (table 10.3). In most cases, the complementarity of non-oil trade is higher than for total trade, although it still exceeds a value of 20.

One positive outlier in the data is Bahrain, which as an importer shows very strong complementarity with other fuel exporters in the region. This finding is driven by the Bahrain Petroleum Company's refinery, one of the largest processing facilities in the Middle East. The unit's refining capacity is taken up only partly by processing crude petroleum that originates from Bahrain's own oil field; the remaining spare capacity is used for refining imported crude. Hence, Bahrain appears in trade statistics as a large-scale petroleum importer (and large-scale exporter of refined petroleum products) and a complementary trading partner to the crude petroleum exporters in the region.

The findings of overall low trade complementarity in the region are consistent with earlier analysis (see, for example, Havrylyshyn and Kunzel 2000). Some observers note that complementarity is higher with Northern trading partners (for example, EU members and the United States) than with countries within the region (Péridy 2005b). Regional integration policies are thus likely to change the pattern of complementarity only gradually and over the longer term.

Uneven import protection. Another impediment to successful integration is the uneven level of import protection across the region. Differences in tariffs imply that industries in partner countries benefit to a differing extent from policy-generated transfers, so that the costs and benefits of moving to freer trade are unevenly distributed. Under these circumstances, achieving agreement to open markets among regional partners is politically difficult.

Moreover, maintaining high most-favored-nation (MFN) tariffs is associated with a high risk of economically costly trade diversion. In particular, selective opening toward regional partners can divert trade flows from more efficient third-country producers to less efficient partner country producers, resulting in a loss of tariff revenues without the benefits of lower purchasing costs. Hence, high-protection countries can be adversely affected by regional integration. The risk of trade diversion is further increased if the intensity of trade between partners before bilateral liberalization is low, as it is in MENA.

The simple average of MFN duties in MENA countries ranges from about 5 percent in the Gulf Cooperation Council (GCC) countries and

Table 10.3 Bilateral Trade Complementarity within the Middle East and North Africa, 2006*(bilateral complementarity index, 2006)*

<i>Exporter</i>	<i>Importer</i>									
	<i>Algeria</i>	<i>Bahrain</i>	<i>Jordan</i>	<i>Morocco</i>	<i>Oman</i>	<i>Qatar</i>	<i>Saudi Arabia</i>	<i>Syrian Arab Republic</i>	<i>Tunisia</i>	<i>Yemen, Rep. of</i>
<i>All trade</i>										
Algeria	n.a.	55.2	24.9	20.5	4.3	4.9	0.9	11.2	8.4	4.7
Bahrain	1.8	n.a.	3.0	2.0	5.8	6.6	2.7	6.9	2.2	22.8
Jordan	13.0	9.2	n.a.	9.8	14.7	15.4	11.4	9.3	10.2	12.6
Morocco	6.5	6.3	10.1	n.a.	9.9	12.5	9.8	8.5	12.2	6.3
Oman	2.4	57.0	21.6	13.9	n.a.	6.8	2.3	5.7	5.8	4.2
Qatar	2.2	48.9	21.4	16.0	5.0	n.a.	1.5	10.2	6.1	6.9
Saudi Arabia	3.5	57.9	22.4	16.2	7.4	7.9	n.a.	10.6	7.5	17.9
Syrian Arab Republic	3.5	57.9	22.4	16.2	7.4	7.9	10.6	n.a.	7.5	17.9
Tunisia	11.1	19.9	24.7	26.7	14.0	16.6	13.5	13.8	n.a.	10.4
Yemen, Rep. of	1.2	56.1	20.0	13.5	4.8	5.7	1.8	8.2	5.2	n.a.

(continued)

Table 10.3 Bilateral Trade Complementarity within the Middle East and North Africa, 2006 (Continued)
(bilateral complementarity index, 2006)

Exporter	Importer									
	Algeria	Bahrain	Jordan	Morocco	Oman	Qatar	Saudi Arabia	Syrian Arab Republic	Tunisia	Yemen, Rep. of
<i>Non-oil trade</i>										
Algeria	n.a.	4.3	6.8	5.6	6.6	8.0	5.8	5.8	5.9	5.6
Bahrain	4.2	n.a.	5.4	3.5	6.7	9.7	5.0	4.6	2.8	3.7
Jordan	21.8	19.9	n.a.	19.7	20.1	23.2	21.5	17.2	21.2	17.2
Morocco	6.5	9.5	9.7	n.a.	9.5	12.7	9.8	8.2	11.2	6.2
Oman	11.3	13.8	10.4	6.9	n.a.	14.9	8.3	11.9	7.0	12.8
Qatar	11.3	13.8	10.4	6.9	14.9	n.a.	8.3	11.9	7.0	12.8
Saudi Arabia	13.2	19.4	17.2	13.9	18.9	22.3	n.a.	16.6	12.6	15.7
Syrian Arab Republic	16.6	18.2	21.4	17.9	18.0	19.7	18.0	n.a.	17.3	16.3
Tunisia	16.6	18.2	21.4	17.9	18.0	19.7	18.0	17.3	n.a.	16.3
Yemen, Rep. of	6.2	7.4	7.9	5.3	7.8	9.3	6.6	8.4	5.1	n.a.

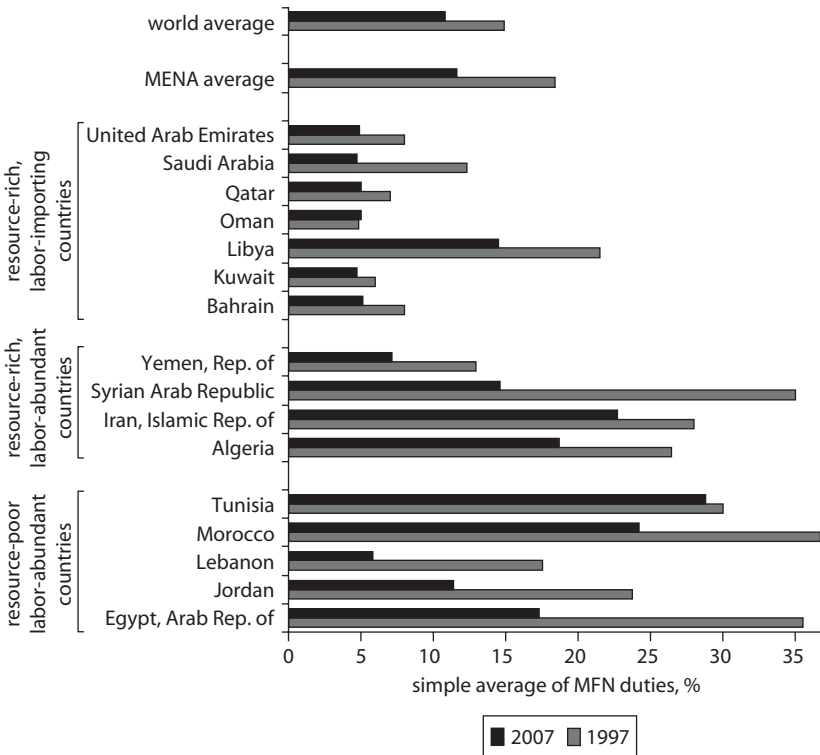
Source: UN Comtrade database.

Note: Figures for 2006 were not available for Bahrain, Kuwait, Qatar, Saudi Arabia, and the United Arab Emirates. Data for these countries are for 2005. Indices are calculated at the Harmonized System six-digit level. The product complementarity index C_{jk} between two countries j and k is defined as $C_{jk} = 100 - \sum i(|M_{ik} - X_{ij}|/2)$, where X_{ij} represents the share of good i in total exports of country j and M_{ik} represents the share of good i in total imports of country k . Indices for Djibouti, the Islamic Republic of Iran, Iraq, Kuwait, Lebanon, Libya, the United Arab Emirates, and the West Bank and Gaza were not computed because of lack of detailed trade data. The Arab Republic of Egypt was not included because it reports trade data using the Standard International Trade Classification (SITC) system. n.a. = not applicable.

Lebanon to more than 20 percent in the Islamic Republic of Iran, Morocco, and Tunisia (figure 10.7). Virtually all countries in the region have reduced their tariffs over the past decade, many of them to a significant extent. As a result, the regional duty average has been converging toward the world average. However, the spread in average tariff rates within the region remains substantial, and countries with relatively high duty averages are vulnerable to suffer trade diversion if preferential integration is pursued.

Aware of the adverse effects of trade diversion, policy makers in the region are starting to take corrective action. For example, the Euro-Med Agreements between Mediterranean countries and the European Union envisage phasing in bilateral free trade for industrial goods over several years. In some countries (such as Tunisia), the transition process has already been completed; in others (such as Morocco), it is well under way. With

Figure 10.7 Import Tariffs Vary Markedly Across MENA



Source: IMF Trade Restrictiveness database.

Note: MFN = most favored nation. MFN duties include customs duties or surcharges.

high external trade barriers, there is a risk that trade is diverted from low-cost third-country producers (such as Indian suppliers of generic pharmaceuticals) to high-cost EU producers (such as European suppliers of branded pharmaceuticals). To avoid or contain the ensuing fiscal and economic loss, countries have started to reduce their MFN tariffs, limiting the preference margin they grant to their EU partners. This process will have to continue if it is to have the desired effect of reducing and eliminating adverse impacts of trade diversion.

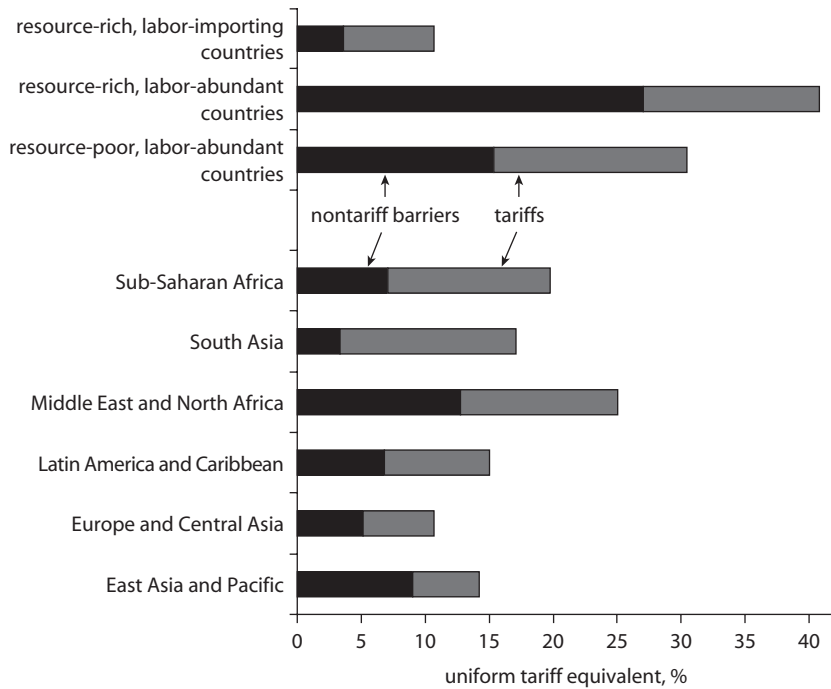
Nontariff Barriers and Poor Trade Logistics

With the worldwide progress made in tariff reduction over the past two decades, policy makers have increasingly turned their attention toward regulatory and logistical impediments to trade, which now are often more costly than tariffs and generate no offsetting revenue. Cooperative efforts by governments to remove discriminatory regulations, improve customs procedures, and reduce transport costs are, therefore, important aspects of modern regional agreements. MENA countries face substantial challenges in this area because of a legacy of restrictive nontariff measures and neglect of trade-facilitating efforts.

The situation is captured in recent analytical work. In particular, a team of analysts in the World Bank's Research Department has estimated an Overall Trade Restrictiveness Index (OTRI). This index corresponds to the uniform tariff that if imposed on all imports from partner countries would leave overall imports unchanged. The measure makes it possible to disaggregate total barriers to trade into tariff and nontariff components. The estimation is based on data for the early 2000s (Kee, Nicita, and Olarreaga 2005).

The analysis reveals that nontariff barriers to trade are more substantial in the MENA than in any other region of the world (figure 10.8). Nontariff barriers contribute more to trade restrictiveness than do tariffs. They are particularly pervasive and restrictive in labor-abundant MENA countries.

In some cases, nontariff barriers can significantly reduce or even nullify the trade preferences in regional agreements. For example, the Greater Arab Free Trade Area (GAFTA) Agreement phased in preferential tariff reductions among members, leading to free intraregional trade by 2005. However, some importing countries asked exporters from partner countries to obtain special import permits that have to be presented to the border agencies to benefit from the preferences (Filali 2007). If an import-competing industry can be harmed by the imports, these permits are

Figure 10.8 Nontariff Measures are Highly Restrictive in MENA Countries

Source: Kee and others 2005.

often refused; importers thus have had to pay the full MFN tariffs. To a large extent, then, the reduced-tariff preferences exist only on paper, not in practice.

Differences in the rules of origin of the various regional agreements can generate additional compliance costs. Although most of the intraregional agreements adhere to a 40 percent value-added rule to confer origin, they differ with respect to cumulation rules. Although GAFTA allows for diagonal cumulation (that is, the use of inputs from other member countries toward the value-added target), the Arab Maghreb Union and the Agadir Agreement do not (Wippel 2005). In addition, the intraregional rules of origin are markedly different from those pertaining in the Euro-Med context, so that companies serving both MENA and European markets may have to run parallel procurement and production processes to satisfy the respective requirements.

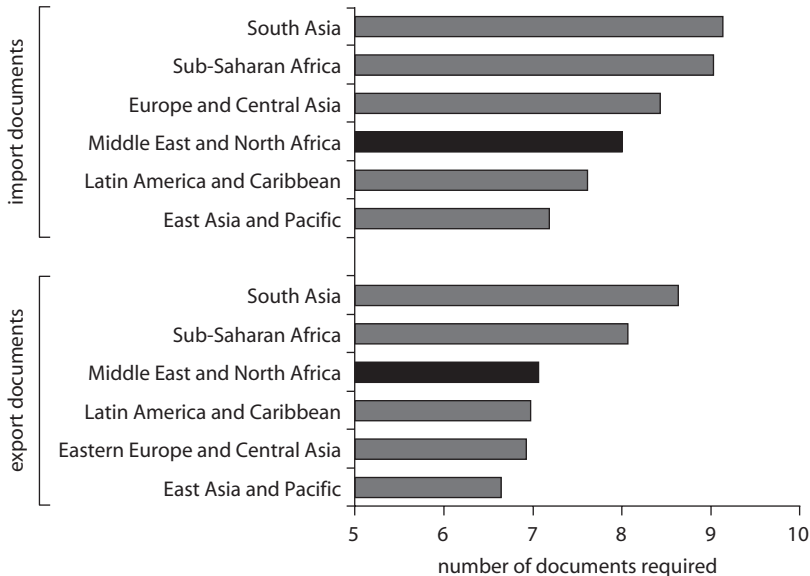
Firm surveys confirm the existence of pervasive and restrictive nontariff barriers in the region. In a study covering eight MENA countries,

Zarrouk (2003) finds that companies put the costs of complying with nontariff measures at more than 10 percent of the value of goods shipped on average. Companies complain about cumbersome regulations and inefficient or inappropriate border procedures.

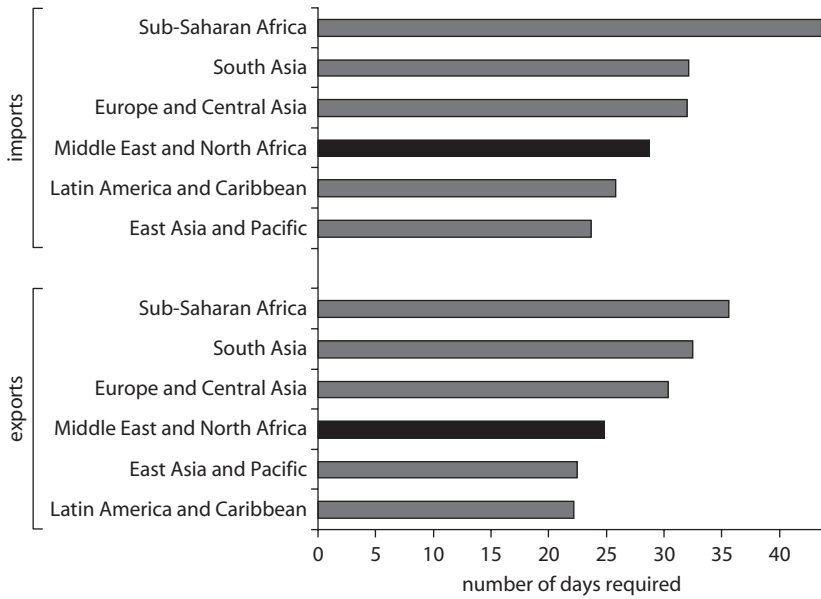
Indeed, importing and exporting activities appear to be more difficult to undertake in MENA countries than in other middle-income economies (figure 10.9). Although on average MENA governments require lighter importing and exporting documentation than their counterparts in low-income Sub-Saharan Africa or in South Asia, the number of documents exceeds the average for middle-income Latin America and East Asia. A similar picture emerges with respect to border delays and the time required to complete the importing or exporting process (figure 10.10).

The World Bank's new Logistics Performance Index (World Bank 2007a), which is based on a worldwide survey of global freight forwarders and express carriers, makes it possible to compare countries across a broad set of transport and trade facilitation dimensions. Richer countries are in a position to devote more resources to investments in transport infrastructure, interagency coordination, and staff training; trade transactions costs in

Figure 10.9 Trade Procedures in MENA Are Cumbersome



Source: World Bank Doing Business 2008 database.

Figure 10.10 Trade Procedures in MENA Are Time Consuming

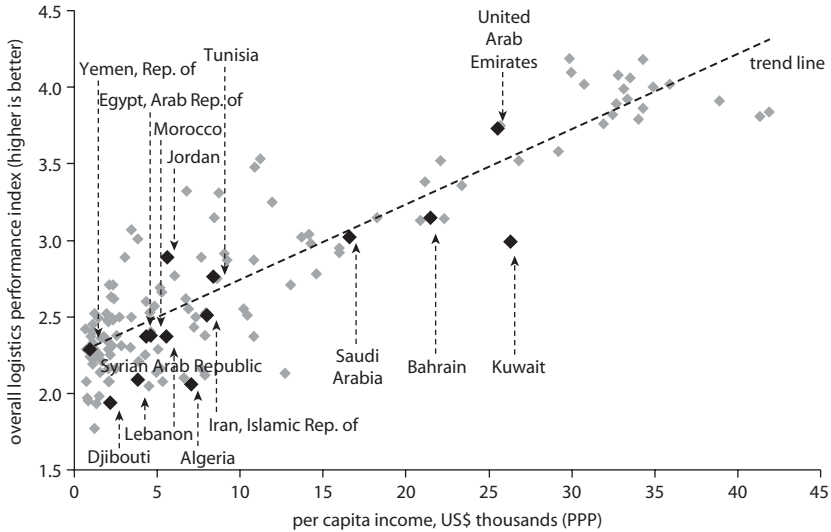
Source: World Bank Doing Business 2008 database.

such countries therefore tend to be lower than in poorer economies. The vast majority of MENA countries score below the level of logistics performance that would be expected given their level of income (figure 10.11). Only Jordan, Tunisia, the United Arab Emirates, and the Republic of Yemen meet or exceed the world average of countries in their income class. All other MENA countries fall short of expectations, in some cases considerably so.

The Logistics Performance Index also provides information on several dimensions of trade and transport logistics (figure 10.12). The observed numerical differences in the indicators are small, but these divergences represent significant differences in logistics performance. On average, having a Logistics Performance Index that is one point lower than a comparator implies six additional days for getting imports from the port to a firm's warehouse, three additional days for clearing exports, and a five-times-greater likelihood that a shipment is subject to physical inspection at entry.

Many MENA countries score below the world average in customs and coordination among border agencies, logistics competence, and timeliness

Figure 10.11 The Logistics Performance of Most MENA Countries Is Below Expectations



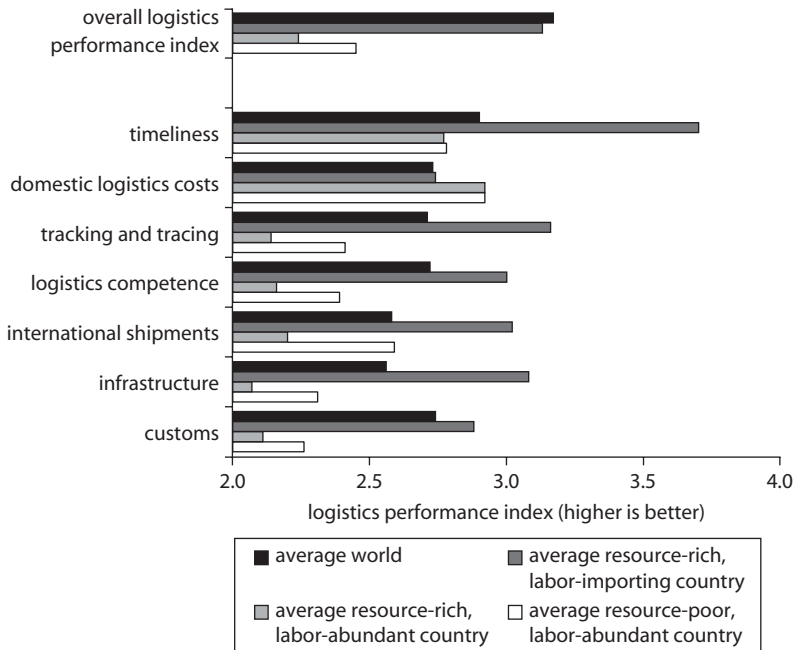
Source: World Bank 2007a.

Note: The small diamonds are non-MENA countries. PPP = purchasing power parity.

of shipments. The most marked logistics challenges are observed among the resource-rich labor-abundant group of countries, with particularly pronounced gaps in logistics competence and cargo tracking and tracing. This poor performance might reflect lack of pressure from the private sector to implement institutional reforms of trade and transport procedures as the result of the dominance of fuel exports.

Logistics impediments affect both global and regional trade. Logistics chain analysis suggests that transport and nontransport logistics costs for export commodities from the MENA region represent 7–25 percent of landed product prices (Devlin and Yee 2005). It would appear that significant gains could be reaped from overhauling the regulatory regime for the trucking sector, increasing competition in port and air freight services, reorienting customs authorities toward trade facilitation, and developing cross-border transit procedures similar to the TIR (transit international routier) *camets* model, which provides authorized operators with the facility to transport sealed containers from a customs office of departure in one country to a customs office of destination in another country. Addressing port congestion, improving transshipment regulation, and building an integrated multimodal transportation system could also yield high dividends

Figure 10.12 Logistics Performance Varies Within Country Groups and Across Components



Source: World Bank 2007a.

Note: The higher the index, the better the performance.

for many MENA countries. Some analysts estimate that the welfare benefits from intraregional trade facilitation would be more than three times as high as those from intraregional tariff elimination (Dennis 2006).

Untapped Opportunities in the Integration of Services and Factor Markets

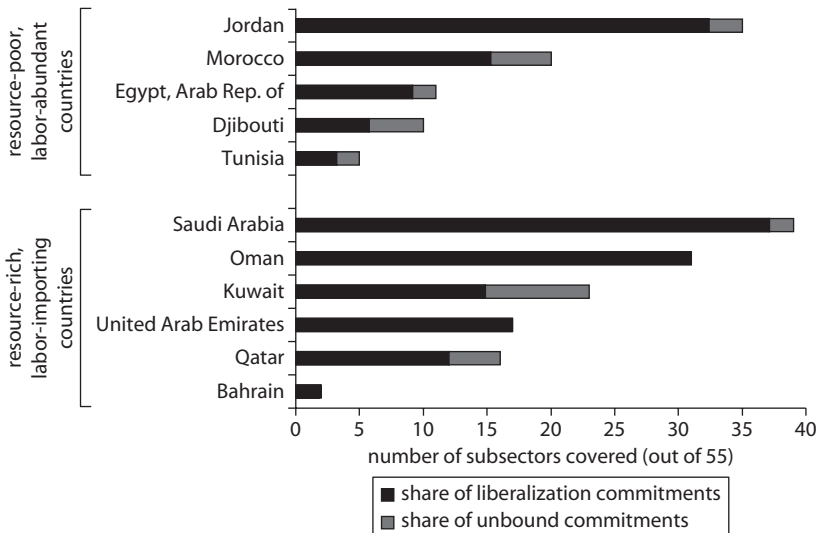
Another policy reform area with large potential benefits from regional integration is the services sector. Services account for a very large share of GDP and are important inputs into the production of most goods; removing barriers to entry for both domestic and foreign firms and increasing the efficiency of services delivery thus promises substantial economic gains, not only for the external sector but for the entire economy. These sizable and broadly spread gains often make it politically more feasible to gather support for reform in services than in agriculture or industry. Moreover, liberalization of services in preferential arrangements

carries fewer risks of income losses than preferential merchandise trade, because lifting most common services restrictions does not cost the government revenues; there are thus no trade diversion effects.

Quantitative analysis using economywide models suggests that in Egypt and Tunisia, comprehensive reforms of services that involve increased competition and regulatory streamlining would yield benefits that are two to three times as great as those achieved through tariff removal alone (Konan 2003). The size of the reform benefits depends, of course, on the extent of prereform openness and the efficiency of the domestic services sector, the capacity of countries to cope with adjustment needs, and the political commitment to modernization. MENA countries have in the past taken very different approaches toward international services integration, as illustrated by the very diverse extent of General Agreement on Trade in Services (GATS) liberalization commitments of the region's World Trade Organization (WTO) members (figure 10.13).

Regional integration agreements in MENA generally do not cover services trade or do so only to a minimal extent (for example, through intentions of cooperation in certain services sectors). Intra-regional differences in regulations, restrictions on currency convertibility, and limits on the

Figure 10.13 GATS Commitments Illustrate Varying Reform Mindedness across the Region



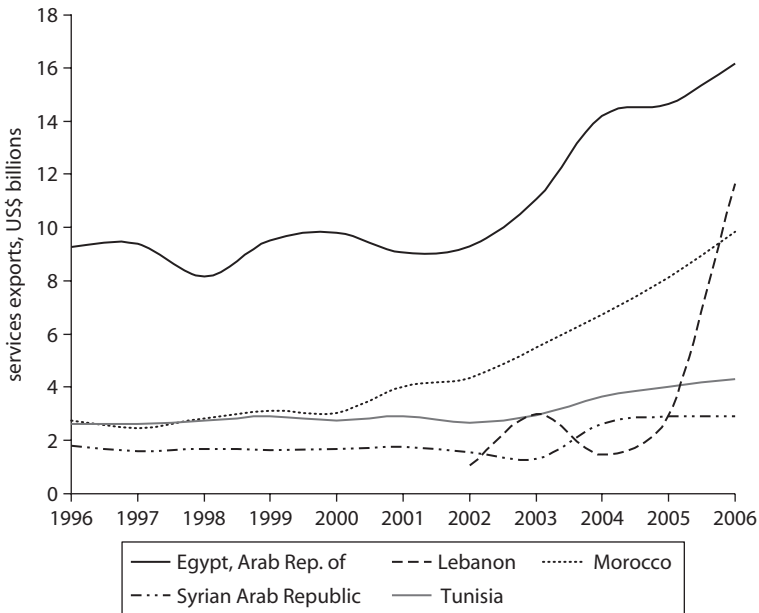
Source: Authors, based on national GATS schedules.

physical movement of people are creating a situation in which it is often easier for MENA services providers to operate in countries outside rather than within the region. Given the dynamic development of services exports (figure 10.14), as well as the complementarity of net exporters of services in labor-abundant countries and net importers in resource-rich countries (figure 10.15), there could be significant opportunities for increased regional exchange.

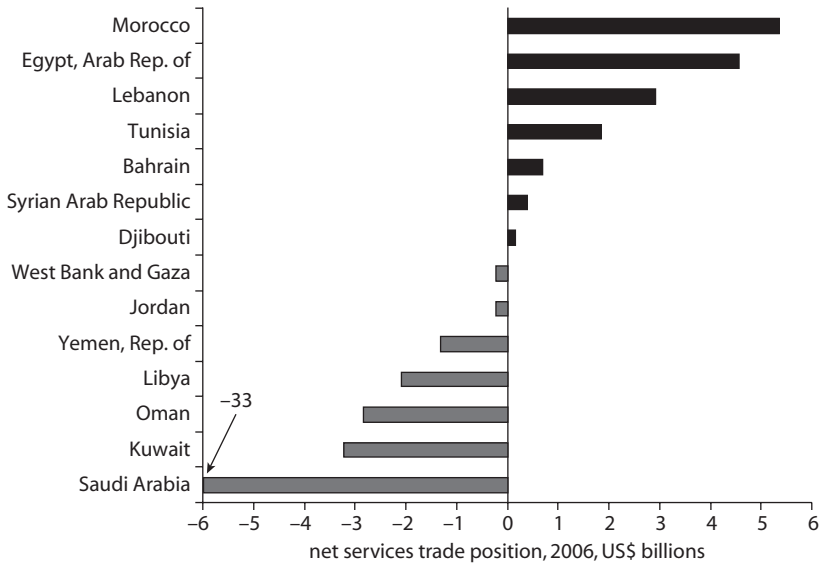
Some countries have been showing the way. Kuwait, for example, has pursued an export strategy for telecommunications services to the regional market, becoming one of the world's largest providers. Its exports almost tripled in one year to reach \$3.4 billion in 2006 (World Bank 2008). Kuwaiti service providers are connecting an estimated 27 million mobile subscribers in the Middle East and Sub-Saharan Africa.

In the medical tourism sector, an agreement between Libya and Tunisia on reimbursement for treatment contributed to the development of competitive health services in Tunisia. Libyans represent 80 percent of Tunisia's health tourism incomes (World Bank 2007b).

Figure 10.14 Major Services Exporters Have Significantly Increased Their Output



Source: IMF Balance of Payment statistics.

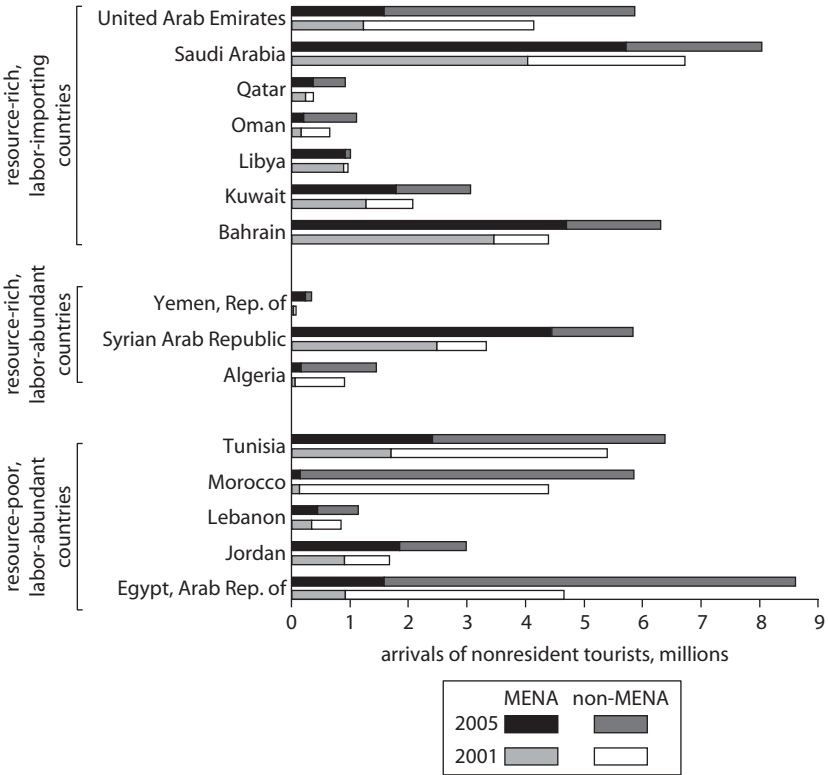
Figure 10.15 MENA Contains Both Net Exporters and Net Importers of Services

Source: IMF Balance of Payment statistics.

Tourism more generally has been a major services export sector for many MENA countries. Tourist arrivals increased in all countries within the region and expanded overall by almost 50 percent between 2001 and 2005, with the growth in arrivals from other MENA countries slightly outpacing the overall average. Tourists from within the region accounted for about 45 percent of total arrivals in 2005. The importance of the regional market for tourism exports ranges widely. In Libya, 92 percent of all nonresident visitors were from other MENA countries in 2005. In contrast, in Morocco the share was a mere 3 percent (figure 10.16).

MENA countries that have concluded free trade agreements with the United States have included services sector provisions, notably concerning banking, insurance, and telecommunications, in these agreements. These arrangements generally lock in prevailing openness; in only some cases, such as the banking sector in Bahrain, do they involve changes in restricted activities. A negative list approach ensures coverage of all activities not explicitly exempted. Most of the treaties contain ratchet mechanisms, meaning that new autonomous liberalization commitments are subsumed under the terms of the agreements. These extraregional integration paradigms might provide useful templates for further intra-MENA services integration.

Figure 10.16 Total and Intra-MENA Tourism Exports Have Grown Strongly



Source: World Tourism Organization, Yearbook of Tourism Statistics 2007.

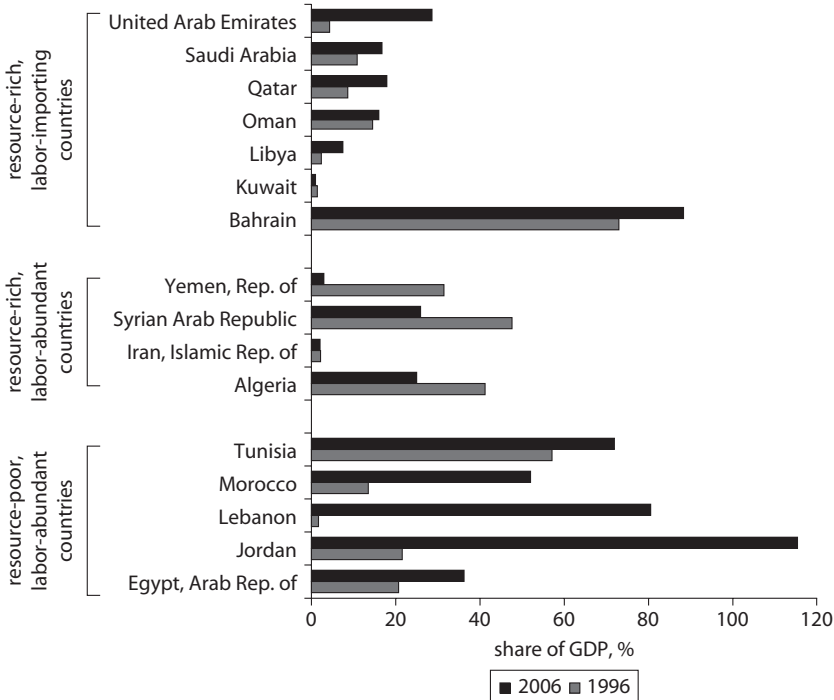
The agreements with the United States provide for treatment of foreign investors on the same basis as domestic investors (“national treatment”) and contain measures banning discrimination among investors from member countries (“nondiscrimination”). Such protections, in combination with appropriate trade rules and liberalized market access, can have positive effects on inflows of foreign investment. Inward FDI stocks have expanded in many MENA countries over the past decade, reaching an average 70 percent of GDP in resource-poor, labor-abundant countries in 2006 (figure 10.17). This growth has been not as dynamic as in other emerging economies, such as those in Eastern Europe (Brenton, Baroncelli, and Malouche 2006).

Inward FDI is much less important in the resource-rich countries in the region: the FDI to GDP ratio has actually fallen in the region’s

resource-rich, labor-abundant countries. Resource-rich MENA countries are exporters of capital; the oil boom of 2007–08 generated significant resources with which to pursue investment opportunities within the region and beyond. MENA capital markets have seen a flurry of activity, with market capitalizations increasing by a factor of more than 10 since 2000. In particular, residential and commercial real estate and private equity had been booming before the global economic and financial crisis cooled market excesses. Countries close to the Gulf region, such as Jordan, receive a large share of their foreign capital inflows from resource-rich MENA countries; in more distant Morocco, MENA investors accounted for about 10 percent of total FDI in 2006.

Some observers have argued that MENA integration has traditionally been driven more by migration than by movement of goods, services, or capital (Fawzy 2003). Indeed, labor movements, in particular from

Figure 10.17 Inward FDI Stocks Have Expanded Substantially in Resource-Poor Countries

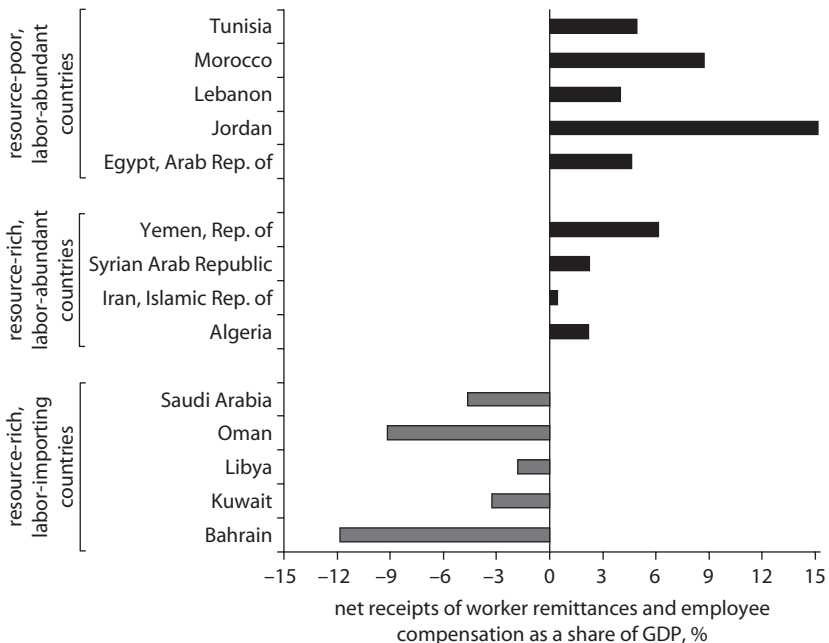


Source: IMF Balance of Payment statistics.

labor-abundant countries to economies in the Gulf region, have been very important (figure 10.18). MENA countries are represented among the top 20 remittances-receiving countries worldwide (World Bank 2006a), in terms of both the amount of remittances received (Egypt, Morocco) and the share of remittances income in GDP (Jordan). The Gulf region alone is home to more than 13 million temporary contractual workers, who remitted about \$60 billion to their home countries in 2007, mostly in MENA and Asia.

Despite the prominent role of intraregional labor mobility, migrants do not enjoy the same rights of establishment and freedom of movement as, for example, Europeans do in the European Union. Labor-receiving countries in MENA retain broad discretion to grant, refuse, and administer residence permits and visas. Once in a country, migrants do not have the right to practice the profession of their choice (and possibly previous experience) but have to comply with national regulations regarding licensing and recognition of qualifications. Hence, there is substantial room for policy makers to improve the regulatory environment for the intraregional movement of workers and professionals.

Figure 10.18 Remittances Flows Are in Line with Labor Endowments



Source: World Bank Global Development Finance database.

Open Regionalism

Regional integration is no panacea. With limited coverage of services and movement of production factors in existing agreements, high MFN tariffs and nontariff barriers in some countries within the region, and shares of intraregional in total trade often in the single digits, even a doubling of imports and exports from and to regional partners—although welcome—would not generate the economic growth rates countries in the region aspire to meet. There are, of course, noneconomic aspects of regional integration, such as security or cultural exchange, that are important in themselves. But it seems advisable for MENA policy makers to focus first on how to maintain and strengthen their countries' competitiveness in the global market and only then to ask what contribution regional integration can make toward achieving this end.

Stronger regional links have a constructive role to play. Preferential opening of markets can help export-oriented firms learn how to enter foreign markets, find foreign suppliers and customers, and create economies of scale that can subsequently be put to good use in global markets as well. Exposing import-competing firms to foreign competition on a limited intraregional basis might force them to upgrade their offer, which in turn might prepare them for the fierce competition in the global market following subsequent, more comprehensive trade policy reforms.

Regional agreements can also provide a training ground for policy makers and senior officials, who can gain experience in negotiating highly technical aspects of the trade policy environment, such as rules of origin, and learn how to engage in common rule-making. Honing these skills before entering into policy reform discussion with major players, such as the European Union or the United States, or in the context of multilateral WTO negotiations is likely to result in outcomes that better reflect domestic interests. Integration with similarly structured economies in the region might also provide an opportunity to harmonize selected rules and regulations across partner countries to a greater extent than would be possible at the multilateral stage and to benefit from the resulting economies of scale for intraregional as well as extraregional trade.

Trade agreements can also help reinforce positive elements in the domestic reform program by anchoring policy in the agreement itself. Such agreements make it more difficult for domestic lobby groups to reverse policy reforms in order to preserve or enhance their economic rents, because changes would require consent by all regional partner countries. This role of enhancing policy credibility seems particularly important

for services and investment reforms, which often aim to attract large-scale, long-term investors.

The best-designed regional agreements are of limited value if they are not implemented. Many regional agreements in MENA look stronger on paper than in practice. One impediment to effective implementation is the proliferation of agreements. If different regional initiatives have different sector and product coverage, liberalization schedules, and rules of origin, then implementation agencies, such as customs, may not have the capacity to put the agreement provisions into practice. Lack of trust and commitment on both the export side (with respect to the credibility of certificates of origin, for example) and the import side (with respect to the discretionary application of administrative rules and requirements, for example) also hamper implementation. Well-functioning monitoring mechanisms and sustained high-level political attention to institutional improvements concerning reductions in tariff and behind the border barriers are essential for the success of regional integration initiatives.

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CHAPTER 11

Economic Gains of Regional Agreements in the Maghreb: Deeper versus Wider Integration

Paloma Anos Casero and Ganesh Kumar Seshan

Studies have shown that regional integration in the Maghreb (Algeria, Morocco, and Tunisia) is low (World Bank 2006) and the potential for integration of product markets is limited, given a variety of economic disincentives relating to the structure of production, endowments, and size of the Maghreb economies. A regional strategy based on market integration of merchandise products is thus unlikely to generate a substantial increase in growth. At the same time, policy barriers constrain the opportunities for enhanced trade and investment in the Maghreb. These countries systematically underperform, particularly in the area of policy reforms of services, the countries of Central and Eastern Europe. This chapter argues that deeper economic integration (focused on service liberalization and investment climate reforms) and wider integration (with the European Union) have the potential to generate more substantial economic gains than would be obtained from regional integration of goods markets.¹

Some Conceptual Issues

What Is “Deep” Integration?

Economic integration can be regarded as a continuum from “shallow” integration (based on the removal of import tariffs and quantitative restrictions) to “deep” integration (based on explicit government actions to reduce the market-segmenting effect of domestic regulatory policies and regulations other than tariffs and formal nontariff barriers). Deep integration involves policies and regulations “at the border,” such as customs clearance and certification that imports satisfy domestic standards of quality control. It also includes “behind-the-border” policies and regulations that impose a burden on business activity and affect market contestability. These deeper domestic policy reforms include horizontal policies (such as trade, exchange rate, and competition policy and other aspects of the overall investment climate) and sector-specific policies affecting trade in services and the efficient provision of key backbone service sectors (such as finance, transport, telecommunications, energy, and water).

Benefits of deeper integration. The case for deeper economic integration has been persuasively made in the trade literature (Hoekman and Konan 1999; Konan and Maskus 2003). The benefits of deep integration are estimated to be far greater than those from shallow integration focused on merchandise trade liberalization. Deeper economic integration can expand trade and opportunities for foreign direct investment (FDI), induce large productivity gains, and enhance the overall competitiveness of Maghreb economies.

Inefficiencies in the provision of key backbone services coupled with high transaction costs caused by regulatory constraints raise production and trading costs. Opening up markets in telecommunications, transport, finance, and other network industries to competition and improving the overall regulatory framework for businesses would both help firms that engage in trade and improve the efficiency of domestic industries that provide services to firms that produce and trade. Service sector and investment climate reforms can reduce the costs of trade-related transport, logistics, and key production inputs, such as finance, telecommunications, distribution, and other services. These services inputs represent 10–20 percent of production costs in the Maghreb (World Bank 2005). Deeper economic integration would also improve the region’s attractiveness to multinational enterprises. The location of multinationals is crucially affected by the scope for effective sourcing of inputs and the ability to move inputs quickly and cheaply across national boundaries.

Rationale for a regional approach to deeper integration. Much of what is needed could be pursued through unilateral action by countries; service sector and investment climate reforms are needed in their own right in the Maghreb countries. Galal and Hoekman (2003) provide two persuasive arguments—a political economy argument and an economic incentive argument—in favor of a regional approach to deeper integration in the Maghreb.

First, service liberalization reforms are likely to result in contraction or elimination of domestic firms that benefit from protection, while firms in sectors in which the country has a comparative advantage are likely to expand. Firms that contract tend to be larger and concentrated; firms that expand tend to be small and dispersed. The political constraints imposed by this disparity could be overcome if the Maghreb countries collectively agreed on a sequence of selected sector reforms. Regional cooperation in selected service sectors could also help define the right policy sequencing and complementary actions needed to increase competition in the selected sectors (for example, implementing downstream privatizations before adopting upstream policy reforms; liberalizing air transport without liberalizing airport slots does not lead very far). This type of regulatory issue tends to be ignored by national sectoral regulators and could be addressed more efficiently in a regionwide approach.

Second, deeper regional integration can lead to regulatory economies of scale or scope. Regional cooperation can help remove national entry barriers and improve market contestability by providing a focal point for reform and mechanisms to monitor progress. Another potential area for regional cooperation is establishment of regional regulatory agencies to oversee network services (telecommunications, electricity, transport). Regional regulatory agencies could facilitate cooperation among Maghreb countries that are investing in and managing the physical networks by issuing regionwide licenses for a market that would be large enough to attract global players. The creation of regional networks of regulators could facilitate the exchange of best regulatory practices (for example, through technical working groups) and ensure the consistent application of technical safety and environmental regulations.

Measuring the Gains from Regional Integration

This chapter estimates the gains from deeper and wider economic integration by assessing the impact of a regional trade agreement (RTA) between the Maghreb and the European Union, drawing on the work of

Dee and Gali (2003). Deeper integration is proxied by a move toward service sector liberalization and its impact on growth, exports, and FDI (this analysis draws on the work of Eschenbach and Hoekman 2005). The gains from integration are measured by the impact on GDP between 2005 and 2015 under five scenarios:

- The *status quo* considers no changes from current integration policies.
- *Shallow integration* examines the situation in which an RTA is formed that eliminates most tariffs on and other barriers to intraregional merchandise trade.
- *Wider integration* examines the situation in which Maghreb countries form a regional merchandise trading bloc with the European Union (this scenario is compared with the gains of each country's unilateral integration with the European Union).
- *Deeper integration* examines the situation in which Maghreb countries move toward service sector liberalization and investment climate reforms.
- *Deeper and wider integration* examines the situation in which Maghreb countries form a regional trading bloc with the European Union and move toward service sector liberalization and investment climate reforms.

Some Methodological Issues

Ideally, this analysis would simulate the impact of each policy scenario on the economic performance for individual Maghreb countries, using a consistent model of the Maghreb economies. Limits on resources, data, and appropriate modeling frameworks force some compromise with this ideal. Instead, we rely on statistical relationships derived from studies of worldwide experience to represent the typical impact of such integration schemes, assuming that these relationships apply on average to the Maghreb as a whole. These scenarios should thus be viewed as illustrations of the gains that could be expected from regional integration, not predictions of the likely impact. (Details on methodology, data, and econometric results are presented in the annex to this chapter.)

This approach implies that we do not assess the marginal gains of regional cooperation in the service sectors. This analysis is hampered by the absence of detailed data on trade and investment in services by sector, the absence of regionally comparable computable general equilibrium

(CGE) models, and the lack of updated and disaggregated input-output tables for the three Maghreb countries. Much work still needs to be done on identifying where regional cooperation can promote national service sector reforms or generate “scale” effects for the countries concerned. Indeed, policy reforms in services are likely to positively affect trade with all partners (not just with other Maghreb countries).

Scenarios

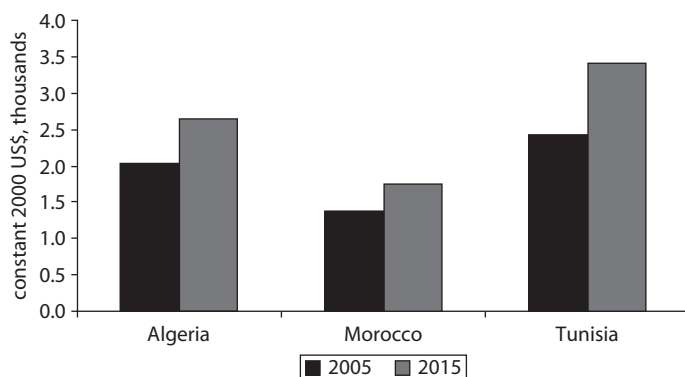
Scenario 1: The Status Quo

In the absence of further efforts to integrate the Maghreb economies, GDP per capita (in constant 2000 dollars) would increase 30 percent in Algeria, 27 percent in Morocco, and 41 percent in Tunisia between 2005 and 2015 (figure 11.1). These projections are based on the assumption that the countries would continue to grow at the average annual per capita real growth rates experienced between 2000 and 2004.

Scenarios 2 and 3: Merchandise Trade Liberalization: Shallow versus Wider Integration

In scenarios 2 and 3, we try to assess the economic gains from a regional integration scheme focused on merchandise trade liberalization in the Maghreb. We assume that members of the RTA reduce to zero most tariffs

Figure 11.1 Projected Real per Capita Income in Maghreb Countries, 2005 and 2015



Source: Authors' calculations based on data from World Bank 2005b.

Note: Projections are based on the assumption that countries continue to grow at the average annual per capita real growth rates experienced between 2000 and 2004.

and other barriers to trade among themselves while keeping unchanged their barriers to trade with countries outside the group. Members of the RTA also adopt rules of origin to determine which goods are eligible to cross the RTA's internal borders free of tariff. The RTA does not entail further integration of the markets of the participating countries, such as free movement of capital, labor, and technology, or the harmonization of domestic policies and regulation. Because typical RTAs focus on merchandise trade, the quantitative models and proxies we use to assess the impact of a RTA capture primarily the effects of merchandise trade integration.

An RTA can foster growth through a number of channels. First, by granting access to cheaper capital goods imports, the RTA can make savings and investment more effective in expanding the capital stock, thereby enhancing long-term growth. Second, the RTA can encourage the spillover of technology through trade between advanced and less advanced countries, as entrepreneurs in less advanced countries learn from and imitate entrepreneurs in more advanced countries by observing the products they produce. Third, to the extent that an RTA increases FDI, it contributes directly to the expansion of capital stock. FDI may also cause greater spillovers of technology than would be possible with arms-length trade only. Our analysis, building on work by Jaumotte (2004) and detailed in the annex, suggests that a larger regional market can raise the level of FDI stock in the Maghreb countries. Finally, there may be dynamic effects, as an initial increase in the level of real income facilitates greater savings and investment, promoting long-run growth. However, an RTA can also cause efficiency losses from trade diversion, which occurs when local firms import higher-cost (but zero-tariff) goods from producers within the RTA rather than lower-cost (but subject to tariff) goods from outside the RTA.

Scenario 2: Shallow integration—Maghreb RTA. We first consider the impact on per capita GDP of scenario 2 (shallow integration). In this scenario, the Maghreb countries join an RTA focused on merchandise trade liberalization. This empirical exercise draws on estimates from a panel regression analysis following Berhelon (2004), in which per capita income growth depends on the market size of existing RTAs between 1980 and 2004 (measured by the sum of the share of the partner countries GDP to world GDP)² and a set of control variables, including initial per capita GDP, the ratio of government consumption to GDP, the investment rate, FDI as a percentage of GDP, human capital, the share of manufactured exports in total exports, the ratio of total trade to GDP, an index

of financial risk, and a measure of investment climate sourced from the International Conflict Research Group. The regional agreements included in Berhelon's analysis are bilateral agreements (such as that between the United States and Israel), agreements between associations and countries (such as that between the European Union and Tunisia), and association agreements (such as the North American Free Trade Agreement, the Association of Southeast Asian Nations, and the Gulf Cooperation Council). The model and results are described further in the annex.

Given the limited prospects for intraregional merchandise trade in the Maghreb, it is not surprising that the impact on per capita income from integrating merchandise goods markets is very small: 0.01 percentage points of per capita annual growth on average in each Maghreb country. Real GDP per capita in 2015 would be very similar to that shown for the status quo in Scenario 1.

Scenario 3: Wider integration—Maghreb RTA with the European Union.

There are a number of reasons to think of the European Union as a well-suited partner for regional integration for the Maghreb. The European Union accounts for a quarter of world GDP; it is already the main source of exports and import destination for the Maghreb countries, accounting for more than 65 percent of total Maghreb trade in 2004; it is very open to the world; and regional integration could increase European FDI flows into the Maghreb. All these features reduce the risk of trade diversion (Muller-Jentsch 2005). In this scenario, we compare the gains stemming from Maghreb countries joining the European Union individually with the gains stemming from Maghreb countries forming a regional trading bloc and then joining the European Union as a group.

Maghreb countries unilaterally forming a bilateral trade agreement with the European Union (reflecting merchandise trade liberalization) would yield economic gains through access to the EU market. If each Maghreb country formed an RTA with the European Union, it would raise per capita growth by 1 percentage point per year compared with the growth rate in Scenario 1 (the status quo); by 2015, real per capita GDP would increase by an additional 15 percent in Algeria, 16 percent in Morocco, and 14 percent in Tunisia. On average, the Maghreb countries' per capita real GDP would rise an additional 15 percent over the same period compared with the status quo (figure 11.2, panel a).

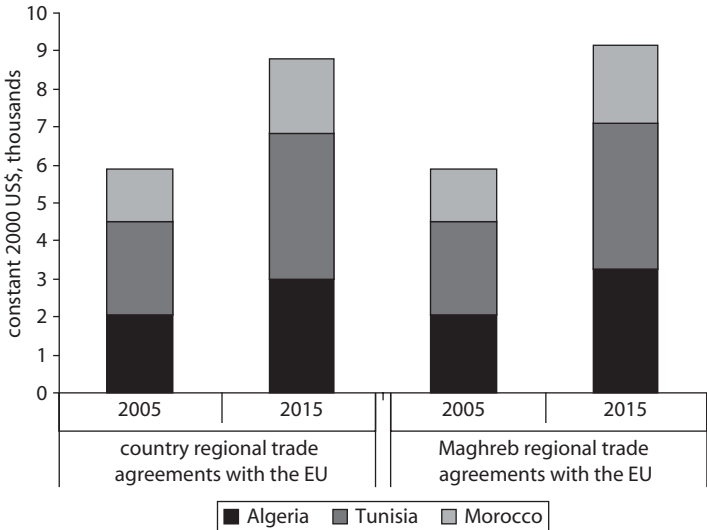
Maghreb countries forming a joint regional trading bloc with the European Union (reflecting merchandise trade liberalization) would raise real per capita GDP of the three Maghreb countries by an additional

22 percent between 2005 and 2015 relative to the status quo—7 percentage points more than if the three countries join the European Union unilaterally (figure 11.2, panel b). Allocating the gains to the individual Maghreb countries using income weights from 2004, an RTA with the European Union is expected to increase per capita income by an additional 27 percent in Algeria, 22 percent in Morocco, and 16 percent in Tunisia between 2005 and 2015.

We also consider how the two scenarios would affect the Maghreb countries’ non-oil exports, using a model similar to that used to estimate the impact on per capita income. The empirical estimates appear in the annex.

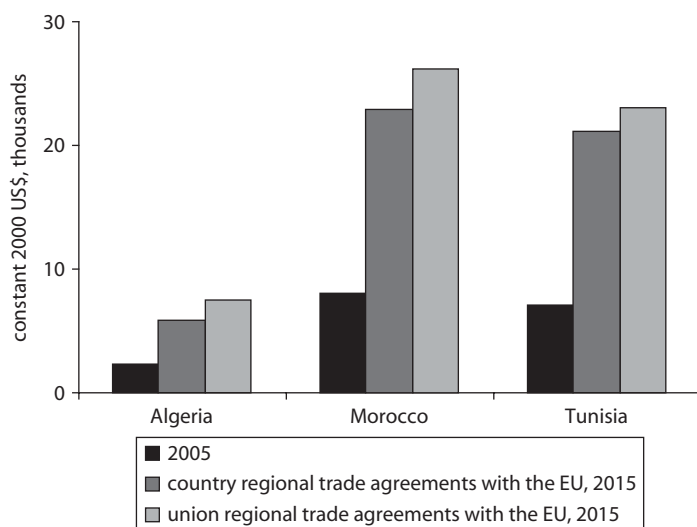
Integrating the goods market of Maghreb countries would have a marginal impact on real non-oil exports. Between 2005 and 2015, the value of real non-oil exports in the Maghreb countries would increase by a total of 3.5 percent on average compared with the status quo. If each Maghreb country separately forms an RTA with the European Union, the market for Maghreb countries’ exports would expand considerably. Between 2005 and 2015, real non-oil exports would nearly double on average relative to the status quo (figure 11.3).

Figure 11.2 Projected Real per Capita Income under Regional Trade Agreement with European Union, 2005 and 2015



Source: Authors.

Figure 11.3 Projected Non-Oil Exports in Maghreb Countries under Regional Trade Agreement with European Union, 2005 and 2015



Source: Authors' calculations.

Finally, if the Maghreb countries join the European Union trading bloc as a group, the total export value in real terms would rise by a factor of 2.5 on average between 2005 and 2015 relative to the status quo.

Scenario 4: Deeper Integration: Service Liberalization and Investment Climate Reforms

Given the limited magnitude and potential for intra-Maghreb merchandise trade, it is desirable to consider deeper integration, with a focus on the service sectors. Inconsistencies across countries in the domestic regulations governing, for example, banking, telecommunications, and insurance can complicate and interfere with international transactions. It was the removal of such discrepancies that constituted much of the European Union's move toward the single market that was completed in 1992.

The case for deeper integration has been made by Hoekman and Konan (1999) in the context of Euro-Mediterranean free trade. By coordinating standards, regulations, and procedures along an EU model, the Maghreb countries would make it significantly easier for both local and foreign firms to operate in both markets. This would not only benefit firms that engage in trade per se, but also help modernize and make more efficient domestic industries in the Maghreb that provide services to firms

that produce and trade. As we will see, regional integration efforts that focus on services can potentially generate gains many times greater than those from preferential merchandise trade liberalization.

Data show that the Maghreb countries are not significant exporters or importers of commercial services in world trade. Barriers to trade in services are clearly important in these countries. Several studies show that inefficient regulation and a lack of competition generate costly and low-quality services in the Maghreb countries. These problems result in higher insurance premiums and high port service costs as well as poor transport and lack of storage facilities, thus inhibiting export expansion. A regional agreement that allows free entry into service activities would help domestic service companies expand to regional markets before venturing into the more competitive world markets.

It is difficult to separate domestic liberalization from cross-border liberalization of services. The measurement of services tends to lump them together. This scenario therefore examines together the impact of liberalizing cross-border services and reforming the domestic policies and regulations for services.

As a first approach, we consider the impact of a small improvement in the regulatory regime governing services. Results from a panel growth regression reveal that a one-point increase in the progress reform index in the infrastructure sector, financial sector, or investment climate is associated with an increase of about 2 percentage points in the rate of growth of per capita income, holding inflation and the change in the investment-to-GDP ratio constant (table 11.1). The growth impact of service policy

Table 11.1 Projected Impact of Unit Increase in Service Reform Index on Annual per Capita Real GDP Growth in Maghreb Countries
(percent)

	<i>Infrastructure</i>	<i>Financial services</i>	<i>Investment climate</i>
Maghreb	2.08	2.20	2.06
South-East Europe	3.77	5.84	7.35
Central and Eastern Europe	2.90	4.00	5.87
Former Soviet Union	11.04	11.08	9.66

Source: Authors' calculations.

Note: Maghreb = Algeria, Morocco, and Tunisia; South-East Europe = Albania; Bosnia and Herzegovina; Bulgaria; Croatia; Macedonia, FYR; Romania; and Serbia and Montenegro; Central and Eastern Europe = Czech Republic, Hungary, Poland, Slovak Republic, and Slovenia; Former Soviet Union = Armenia, Azerbaijan, Belarus, Estonia, Georgia, Kazakhstan, Kyrgyz Republic, Latvia, Lithuania, Moldova, Russian Federation, Tajikistan, Turkmenistan, Ukraine, Uzbekistan.

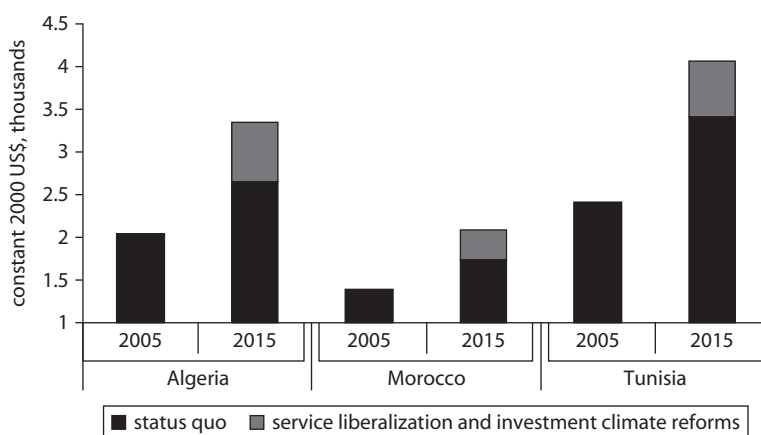
reforms in the Maghreb is low compared with the potential gains for countries in Eastern Europe and the former Soviet Union.

We then use these results to evaluate the impact of a more dramatic improvement in services policies. Assume that each Maghreb country gradually reforms its service sectors and its regulatory framework by 2015 to achieve complete service liberalization and an investment climate that is in line with international best practice (in other words, assume that the reform index rises from an average of 2.4 in 2005 to a maximum value of 4.3 by 2015). Under this assumption, real per capita GDP would rise an additional 34 percent in Algeria, 27 percent in Morocco, and 24 percent in Tunisia between 2005 and 2015. Figure 11.4 compares this growth scenario with the status quo growth scenario described in Scenario 1.

Impact on exports. Service sector reform would help boost exports by reducing the cost and improving the quality of services exporters require. With gradual service liberalization completed by 2015, real non-oil exports value would increase 137 percent in Algeria, 74 percent in Morocco, and 68 percent in Tunisia relative to the status quo (figure 11.5).

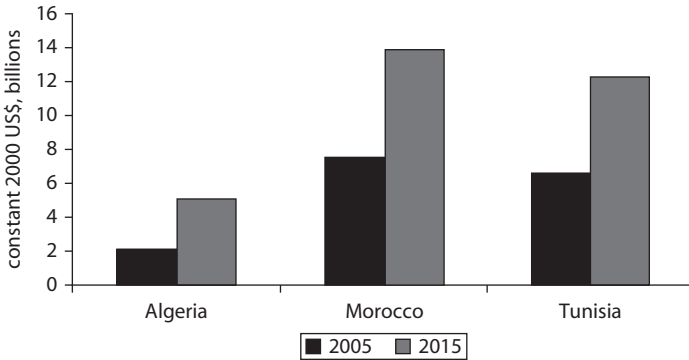
Impact on FDI. Service sector reforms would also improve the attractiveness of Maghreb countries for foreign investors. A one-unit increase in the progress reform index for infrastructure, the financial service sector, and

Figure 11.4 Projected Real per Capita Income in Maghreb Countries Given Service Liberalization and Investment Climate Reforms, 2005 and 2015



Source: Authors.

Figure 11.5 Projected Value of Non-Oil Exports in Maghreb Countries Given Service Sector Reforms, 2005 and 2015



Source: Authors.

the investment climate would raise the stock of FDI by 8.8 percent of GDP in Algeria, 8.5 percent in Morocco, and 9.2 percent in Tunisia. The estimated increase in FDI for a one-unit rise in the progress reform index is smaller for the Maghreb countries than for the transition economies of South-East Europe, the former Soviet Union, or Central-East Europe (table 11.2). On average, a one-unit increase in the progress reform index raises the FDI stock into the Maghreb countries by 9.2 percentage points on the financial service sector index and 8.5 percentage points on the investment climate index.

To illustrate the potential impact of service sector reform on FDI, we first establish a baseline projection for growth in the stock of FDI in the Maghreb countries in the absence of reform. This baseline is equal to the average growth rate observed between 1994 and 2004 (301 percent for Algeria, 96 percent for Morocco, and 248 for Tunisia). Assuming the progressive implementation of service reforms completed by 2015, the level of FDI stock is anticipated to rise by an additional 342 percent in Algeria, 128 percent in Morocco, and 211 percent in Tunisia compared with the growth predicted without further reforms (figure 11.6).

Scenario 5: Deeper and Wider Integration

The fifth scenario assumes that the Maghreb countries both form a trading bloc with the European Union and deepen integration efforts by gradually liberalizing services and furthering investment climate reforms to achieve international best practice by 2015. Under this scenario, expected

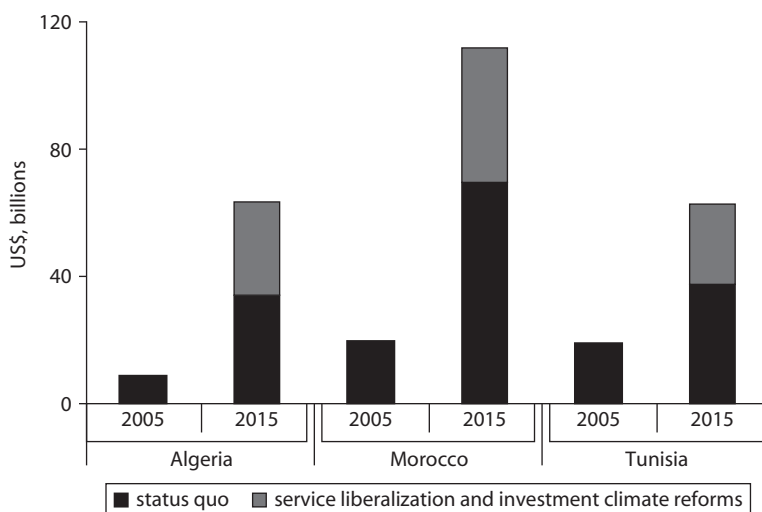
Table 11.2 Projected Impact of Unit Increase in Service Reform Index on FDI Stock in Maghreb Countries
(percentage of GDP)

	<i>Infrastructure reforms</i>	<i>Financial sector services</i>	<i>Investment climate reforms</i>
Maghreb	8.83	9.21	8.53
South-East Europe	12.55	13.57	12.93
Former Soviet Union	19.13	18.35	15.02
Average	17.37	17.38	14.64

Source: Authors. See annex.

Note: Maghreb = Algeria, Morocco, and Tunisia; South-East Europe = Albania; Bosnia and Herzegovina; Bulgaria; Croatia; Macedonia, FYR; Romania; and Serbia and Montenegro; Former Soviet Union = Armenia, Azerbaijan, Belarus, Estonia, Georgia, Kazakhstan, Kyrgyz Republic, Latvia, Lithuania, Moldova, Russian Federation, Tajikistan, Turkmenistan, Ukraine, Uzbekistan.

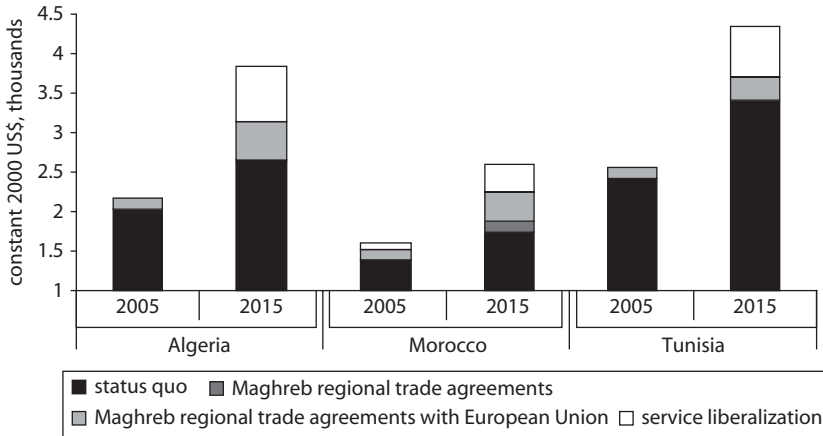
Figure 11.6 Projected FDI Stock in Maghreb Countries Given Service Liberalization and Investment Climate Reforms, 2005 and 2015



Source: Authors.

average annual per capita growth between 2005 and 2015 is 6.2 percent in Algeria, 5.7 percent in Morocco, and 5.8 percent in Tunisia (figure 11.7). Per capita real GDP between 2005 and 2015 would rise an additional 57 percent in Algeria, 51 percent in Morocco, and 38 percent in Tunisia compared with the growth rate reported in the status quo of Scenario 1.

Figure 11.7 Projected per Capita Income in Maghreb Countries Given Maghreb Regional Trade Agreement, EU Regional Trade Agreement, and Service Sector Reforms, 2005 and 2015



Source: Authors.

This projected additional growth may overstate potential gains, because we assume that the benefits from Scenario 2 (integration with the European Union) and Scenario 3 are additive. In fact, some of the channels that produce the gains are the same in the two scenarios.

Conclusions

This chapter provides some evidence that the strategy that offers the greatest economic gains for Maghreb countries is one that focuses on deeper integration (through service sectors and investment climate reforms aimed at improving competition and market contestability) and wider integration (particularly if the Maghreb were to form a trading bloc with the European Union).

Achieving these gains is not automatic. Reaping the full benefits from deeper integration will require the effective adoption of regulatory reforms to achieve economic efficiency at the national level, as well as a high degree of regulatory cooperation at the cross-border level. At the same time, geographical and cultural proximity to EU markets is an important comparative advantage for the Maghreb countries. Removing nontariff barriers to these markets—including inefficiencies in the back-bone service sectors—is critical to exploiting these advantages.

Annex: Methodology

This annex describes the methodological approach and data sources that were used to estimate the economic gains of wider regional integration in the Maghreb.

Impact of Maghreb RTA on FDI

Would a larger Maghreb regional trade agreement (RTA) affect the foreign direct investment (FDI) received by the three member countries? Does progress on key policy areas (such as education and financial stability) affect the net impact of FDI?

To determine if FDI would increase if the Maghreb countries created a regional market, we estimated an empirical model, based on the work of Jaumotte (2004). Jaumotte focused on RTAs involving 80 developing countries between 1980 and 1999. The data set used here covers 80 developing countries and extends the period observed to 2004.

The determinants of the econometric model include the following factors:³

1. *Size of the host market.* In addition to including the size of the domestic market proxied by real gross domestic product (GDP), the model includes an alternative measure of market size that takes the value of the regional market size for countries belonging to a RTA and the value of the domestic size for stand-alone countries. The regional market size is the sum of the domestic market size and the market size of all countries sharing a RTA with the country considered. Real GDP data are from the World Development Indicators database.
2. *Agglomeration effects.* There may be incentives to locate new FDI close to existing FDI because of links between projects, the availability of support services, or favorable national conditions signaled by the presence of other firms. This is captured using lagged values of the FDI stock, which can also be interpreted as the rate at which the stock of FDI adjusts to its optimal level. The quality of infrastructure is another agglomeration variable, proxied using the number of television sets per capita, as reported in the WDI. This variable is not statistically significant in either Jaumotte's (2004) analysis or this study.
3. *Labor cost and quality.* Some FDI in developing countries is motivated by low labor cost; some is drawn by the quality of labor. The model includes the average schooling years for the population over the age of

15 from Barro and Lee (2000) as a proxy for labor quality and to some extent an inverse proxy for labor cost.

4. *Business/investment climate.* The climate for business/investment affects the cost of doing business in a foreign country. We follow Jaumotte (2004) in using the financial risk index constructed by the Political Risk Services Group (PRSG), which measures the current account and foreign debt position, net liquidity, and exchange rate stability.
5. *Openness.* Trade openness can affect FDI in a variety of ways. Lower import barriers can reduce tariff-jumping FDI, but may increase vertical FDI by facilitating the imports of inputs and machinery. Lower export barriers attract vertical FDI by facilitating the reexport of processed goods; they attract horizontal FDI by expanding the market size. Openness is measured using the export-to-GDP ratio, corrected for population and country size with data taken from the WDI.
6. *Locational advantage.* In addition to the above variables, measures that quantify the gap between domestic and RTA education levels, financial stability, and infrastructure are included. These measures aim at assessing the locational advantage of a country relative to other countries in the RTA. The higher the education level, financial stability, and infrastructure quality in a country compared with other RTA members, the higher its locational advantage for FDI within the RTA.

In its most complete form, the empirical model takes the following form:

$$\begin{aligned} \ln FDI_{i,t+1} = & \lambda \ln FDI_{it} + \alpha_1 \ln Y_{it} + \alpha_2 \ln REGY_{it} + \beta_1 g_{Yit} + \beta_2 REGg_{Y,it} \\ & + \gamma_1 \ln educ_{it} + \gamma_2 \ln GAPeduc_{it} + \delta_1 \ln fin_{it} + \delta_2 \ln GAPfin_{it} \\ & + \phi_1 \ln tv_{it} + \phi_2 \ln GAPtv_{it} + \theta res(X/GDP)_{it} + \mu_i + \omega_{t+1} + \varepsilon_{i,t+1}, \end{aligned}$$

where FDI denotes the stock of FDI (in 2000 dollars) in country i ; Y denotes real GDP (in 2000 dollars); $REGY$ denotes market size, extended to include RTA market size for countries belonging to a RTA; g_Y denotes real GDP growth; $REGg_Y$ denotes the average real growth rate in an RTA to which the country belongs; $educ$ denotes the average years of education of people over age 15; fin is the PRSG financial risk index; tv is the number of television per capita; $res(X/GDP)$ is the measure of trade openness (the prefix GAP denotes the ratio between the domestic value of the variable and the average value for all countries sharing an RTA which country i); μ denotes the country's fixed effects; and ω denotes

the time effect. In order to minimize endogeneity concerns and account for the slow adjustment of the FDI stock, the model uses lagged values of the explanatory variables. Real GDP growth for a country and the RTA's average refer to growth between $t - 1$ and t .

The sample covers 80 developing countries during the period 1980–2004 (table 11.A.1). In order to focus on the medium term, we chose a time interval of five years, dividing the sample period into five sub-periods 1980–84, 1985–89, 1990–94, 1995–99, and 2000–04. The regression relates the end-of-period FDI stock (for example, 1984) to the beginning-of-period values of the explanatory variables (for example, 1980) (table 11.A.2).

Tables 11.A.3 and 11.A.4 estimate the growth in FDI stock in each country in the Maghreb that would result from the creation of a regional market. The simulation uses estimated elasticities from the empirical model in table 11.A.2 and 2004 data. The increase in market size caused by the creation of a RTA would lead to an estimated increase in FDI stock of 6 percent in Algeria, 11 percent in Morocco, and 16 percent in Tunisia. In Morocco, the total FDI gain suffers from the lower education level of its population relative to that of the region, which highlights the value of increasing educational attainment there.

Table 11.A.1 Economies Used in FDI Regression

<i>Region</i>	<i>Economies</i>
Asia	Bangladesh; China; Hong Kong, China; India; Indonesia ^a ; Republic of Korea; Malaysia ^a ; Myanmar; Pakistan; Papua New Guinea; Philippines ^a ; Singapore ^a ; Sri Lanka; Thailand ^a
Europe	Bulgaria, Hungary, Poland, Romania
Latin America and the Caribbean	Argentina ^a , Bolivia ^a , Brazil ^a , Chile ^a , Colombia ^a , Costa Rica ^a , Dominican Republic, Ecuador ^a , El Salvador ^a , Guatemala ^a , Haiti, Honduras ^a , Jamaica ^a , Mexico ^a , Nicaragua ^a , Panama ^{a, b} , Paraguay ^a , Peru ^a , Trinidad and Tobago ^a , Uruguay ^a , República Bolivariana de Venezuela ^a
Middle East and North Africa	Algeria, Bahrain ^a , Cyprus, Arab Republic of Egypt, Islamic Republic of Iran, Israel, Jordan, Kuwait ^a , Morocco, Syrian Arab Republic, Tunisia, Turkey
Sub-Saharan Africa	Botswana ^a , Cameroon ^a , Democratic Republic of Congo (formerly Zaire) ^a , Ghana ^a , Kenya ^a , Liberia ^a , Malawi ^a , Mali, Mozambique ^a , Niger ^a , Senegal ^a , Sierra Leone ^a , South Africa ^a , Sudan ^a , Tanzania ^a , Togo ^a , Uganda ^a , Zambia ^a , Zimbabwe ^a

Source: Authors.

a. This economy belonged to a South-South RTA in 1995.

b. Panama is not formally a member but has limited preferential agreements with individual members of the Central American Common Market (CACM).

Table 11.A.2 Regional Model of the Level of FDI Stock

<i>Dependent variables: $\log(FDI_{+1})$</i>	<i>Coefficients</i>	<i>Standard error</i>
Log FDI	0.40	(0.02)***
Log Y	0.03	(0.07)
Log REGY	0.09	(0.03)***
g_y	0.53	(0.48)
REG g_y	1.40	(0.78)*
Log (educ)	0.02	(0.15)
Log (GAPeduc)	0.49	(0.22)**
Log (finance)	0.19	(0.11)*
Log (GAPfin)	-0.04	(0.14)
Residual (Exports/GDP)	0.15	(0.04)***
Year 1985	0.25	(0.05)***
Year 1990	0.58	(0.05)***
Year 1995	0.91	(0.07)***
Year 2000	0.94	(0.08)***
Number of observations		332
		80

Note: Regression uses a feasible Generalized Linear Square Regression with correction for panel heteroskedasticity. It includes country fixed effects and $\log(tv)$ and $\log GAPtv$.

*** Significant at the 1% level; ** significant at the 5% level; * significant at the 10% level.

These results should be interpreted with caution. Although useful for estimating correlations on a broad sample of observations, the empirical FDI model may not be adequate to forecast FDI for individual countries. Other variables, such as relative wage costs, a better proxy for infrastructure, and other liberalization aspects, would help refine the projections. These problems notwithstanding, this exercise illustrates the need for member countries in a RTA to align domestic business conditions with the region's best performer in order to secure their share of the FDI benefits. Hence, the creation of a regional market may encourage competition between partner countries.

Impact of Service Policy Reforms on Growth, Trade, and FDI

This section uses the service reform indicators constructed for Maghreb countries based on the European Bank for Reconstruction and Development (EBRD) methodology together with 24 transition economies in Eastern Europe between 1990 and 2004 to examine the relationship between service sector reforms and FDI stock levels, merchandise exports, and growth. The empirical specification builds on work by Eschenbach and Hoekman (2005). The EBRD indicators are

Table 11.A.3 Actual and Predicted FDI Stock to GDP in Algeria, Morocco, and Tunisia
(percent)

	<i>Actual FDI/GDP</i>	<i>Predicted FDI/GDP</i>
<i>Algeria</i>		
1985	3.9	3.8
1990	3.9	4.3
1995	4.1	5.6
2000	7.3	6.8
2004	11.4	8.6
Average	6.1	5.8
<i>Morocco</i>		
1985	18.3	15.8
1990	16.8	16.5
1995	23.4	24.2
2000	28.2	32.2
Average	21.7	22.2
<i>Tunisia</i>		
1985	55.5	45.6
1990	72.2	55.3
1995	80.3	75.6
2000	64.3	96.7
2004	77.8	87.4
Average	70.0	72.1

Source: Authors.

Note: Based on regression in table 11.A.2.

Table 11.A.4 Growth in FDI Stock to GDP Implied by Creation of a Maghreb Regional Market
(percent)

	<i>Total effect</i>	<i>Market size effect</i>	<i>Relative education effect</i>
Algeria	13.6	6.1	7.1
Morocco	-2.4	10.5	-11.7
Tunisia	19.9	15.8	3.6

Source: Authors.

Note: Predictions are based on FDI stock regression in table 11.A.1. The simulation of a regional market is based on data for 2000.

summarized later in table 11.A.12. The variables and countries examined are listed in table 11.A.6.

The results for the FDI stock regression using a fixed-effect panel structure with interactive dummies for the Maghreb and South-East Europe are found in table 11.A.7; the coefficients relevant to service

Table 11.A.5 South-South Regional Trade Agreements

<i>Region/agreement</i>	<i>Member countries/economies</i>
Asia	
Association of South East Asian Nations (ASEAN)	Brunei, Cambodia (since 1999), Indonesia, Lao People's Democratic Republic (since 1997), Malaysia, Myanmar (since 1997), the Philippines, Singapore, Thailand, Vietnam (since 1995)
Middle East and North Africa	
Gulf Cooperation Council (GCC) (since 1981)	Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, United Arab Emirates
Latin America and the Caribbean	
Andean Pact (free trade zone since 1993)	Bolivia, Colombia, Ecuador, Peru (since 1997), República Bolivariana de Venezuela
Caribbean Community and Common Market (CARICOM)	Antigua and Barbuda, Bahamas, Barbados, Belize, Dominica, Grenada, Guyana, Jamaica, Montserrat, St. Kitts-Nevis, St. Lucia, St. Vincent and the Grenadines, Suriname (since 1995), Trinidad and Tobago
Central American Common Market (CACM)	Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama
Common Market of the South (MERCOSUR) (since 1991)	Argentina, Bolivia (since 1996), Brazil, Chile (since 1996), Paraguay, Uruguay
Group of Three (G3) (since 1995)	Colombia, Mexico, República Bolivariana de Venezuela
Latin American Integration Association (LAIA) (since 1981)	Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Mexico, Paraguay, Peru, Uruguay, República Bolivariana de Venezuela
Sub-Saharan Africa	
Common Market for Eastern and Southern Africa (COMESA) (common market since 1994)	Angola, Burundi, Comoros, Democratic Republic of Congo, Djibouti, Arab Republic of Egypt, Eritrea, Ethiopia, Kenya, Madagascar, Malawi, Mauritius, Namibia, Rwanda, Seychelles, Sudan, Swaziland, Uganda, Tanzania, Zambia, Zimbabwe
Communauté Economique et Monétaire d'Afrique Centrale (CEMAC)	Cameroon, Central African Republic, Chad, Republic of Congo, Equatorial Guinea, Gabon
Cross Border Initiative (CBI) (since 1993)	Burundi, Comoros, Kenya, Madagascar, Malawi, Mauritius, Namibia, Rwanda, Seychelles, Swaziland, Tanzania, Uganda, Zambia, Zimbabwe
Economic Community of Western African States (ECOWAS)	Benin, Burkina Faso, Cape Verde, Côte d'Ivoire, The Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone, Togo (Mauritania left in 2002)
Southern African Customs Union (SACU)	Botswana, Lesotho, Namibia, South Africa, Swaziland

(continued)

Table 11.A.5 South-South Regional Trade Agreements (*continued*)

<i>Region/agreement</i>	<i>Member countries/economies</i>
Southern African Development Community (SADC)	Angola, Botswana, Democratic Republic of Congo (since 1992), Lesotho, Malawi, Mauritius (since 1995), Mozambique, Namibia (since 1992), Seychelles (1992), South Africa (since 1994), Swaziland, Tanzania, Zambia, Zimbabwe
Union Economique et Monétaire (UEMOA)	Benin, Burkina Faso, Côte d'Ivoire, Guinea-Bissau (since 1997), Mali, Niger, Senegal, Togo

Source: Authors, based on updated information from Jaumotte 2004.

Note: Unless mentioned otherwise, the RTAs were in effect during the entire 1980–2004 period.

Table 11.A.6 Documentation of Data Used in Panel Analysis for Service Reforms

<i>Variable (definition)</i>	<i>Source of data</i>
Growth (per capita GDP growth)	World Bank, World Development Indicators database
Investment/GDP (gross fixed capital formation/GDP)	IMF, World Economic Outlook database
Chg Investment/GDP (change in investment/GDP)	IMF, World Economic Outlook database
Inflation (consumer price inflation)	IMF, World Economic Outlook database
Crisis (dummy for financial crisis/armed conflict)	n.a.
FDI/GDP (sock of FDI/GDP)	UNCTAD
Finance (average of EBRD reform indexes on banking and nonbanking financial sector)	EBRD <i>Transition Report 2004</i>
Infrastructure (average of EBRD reform indexes on infrastructure [telecom, rail, road, water, power])	EBRD <i>Transition Report 2004</i>
Invclim (average of EBRD reform indexes on privatization and liberalization)	EBRD <i>Transition Report 2004</i>
Service (average of Invclim and infrastructure)	EBRD <i>Transition Report 2004</i>

Source: Authors.

Note: Country sample: Albania, Algeria, Armenia, Azerbaijan, Belarus, Bulgaria, Croatia, Czech Republic, Estonia, Georgia, Hungary, Kazakhstan, Kyrgyz Republic, Latvia, Lithuania, FYR Macedonia, Moldova, Morocco, Poland, Romania, Russian Federation, Slovak Republic, Slovenia, Tajikistan, Tunisia, Ukraine, Uzbekistan.

UNCTAD = United Nations Conference on Trade and Development. n.a. = not applicable.

reforms impact are displayed in table 11.A.8. The stock of FDI to GDP in the Maghreb rises by 8.8 percentage points for every unit increase in the infrastructure index, 9.2 percentage points for every unit increase in the financial services sector index, and 8.5 percentage points for every

Table 11.A.7 Fixed-Effects Panel Estimates of FDI Stock to GDP on Service Sector Reforms, 1990–2004
(percent)

Model number	(1)	(2)	(3)	(4)	(5)	(6)
<i>Independent variables</i>						
Infrastructure reform index	17.37 (0.99)***	19.13 (3.27)***				
MGB*infrastructure index		-10.30 (3.27)***				
SEE*infrastructure index		-6.58 (2.10)***				
Finance reform index			17.38 (1.11)***	18.35 (1.18)***		
MGB*finance				-9.14 (4.16)***		
SEE*finance				-4.777 (2.62)***		
Investment climate index					14.64 (1.02)***	15.02 (1.07)***
MGB*investment climate index						-6.49 (3.75)*
SEE*investment climate index						-2.09 (2.50)
R ²	0.51	0.52	0.45	0.45	0.41	0.41
No. of observations	370	370	370	370	370	370

Source: Authors.

Note: Country sample: MGB = Algeria, Morocco, and Tunisia; SEE = Albania, Bosnia and Herzegovina, Bulgaria, Croatia, FYR Macedonia, Romania, and Serbia and Montenegro. Standard errors are in parentheses. R² values are for within regressions.

*** Significant at the 1% level; ** significant at the 5% level; * significant at the 10% level.

Table 11.A.8 Impact of Unit Increase in Reform Index on Stock of FDI-to-GDP Ratio, 1990–2004
(percent)

	<i>Infrastructure</i>	<i>Financial services</i>	<i>Investment climate</i>
Maghreb (MGB)	8.83	9.21	8.53
South-East Europe (SEE)	12.55	13.57	12.93
Former Soviet Union (FSU)			
and Central and Eastern Europe	19.13	18.35	15.02
Average	17.37	17.38	14.64

Source: Derived from FDI regression in table 11.A.7.

Note: Maghreb = Algeria, Morocco, Tunisia. Former Soviet Union = Armenia, Azerbaijan, Belarus, Estonia, Georgia, Latvia, Lithuania, Kazakhstan, Kyrgyz Republic, Moldova, Russian Federation, Ukraine, Tajikistan, Turkmenistan, Uzbekistan. Central and Eastern Europe = Czech Republic, Hungary, Poland, Slovak Republic, Slovenia. South-East Europe = Albania, Bosnia and Herzegovina, Bulgaria, Croatia, FYR Macedonia, Romania, Serbia and Montenegro.

unit increase in the investment climate index. These increases are smaller than in other transition economies (table 11.A.8).

The relationship between merchandise exports (in constant 2000 dollars) and service reforms is also examined using a similar specification with the additional inclusion of an economic risk indicator available from the International Country Risk Group (ICRG) (table 11.A.9). On average, a unit increase in the infrastructure, financial services sector, and investment climate index is expected to raise real exports by 0.11 percent a year.

Turning to the impact of service reforms in the Maghreb on real per capita GDP, the growth regression relates per capita GDP growth to change in the ratio of investment to GDP, inflation, and each reform indicator in turn—namely, finance, infrastructure, and investment climate and their interactions with the Maghreb, South-East Europe, and Central and Eastern Europe groupings (tables 11.A.10 and 11.A.11). A unit increase in infrastructure, financial sector, and investment climate is associated with an increase in per capita growth rate of 2 percent, holding inflation and the change in the investment-to-GDP ratio constant. This impact is weaker than the impact in Eastern European countries, which appear to gain the most from reform.

The EBRD Services Reform Indices

The EBRD Service Reform index measures reform progress in finance, infrastructure and the investment climate. The index ranges from 1 (little reform progress) to 4.3 (completed implementation of a full service reform agenda) (table 11.A.12). Data were compiled annually for 1990–2004.

Table 11.A.9 Impact of Unit Increase in Reform Index on Real Export Growth, 1990–2004
(percent)

<i>Dependent variable: log export value (constant 2000 US\$)</i>	<i>Coefficients</i>	<i>Standard error</i>
Finance	0.112	(0.05)**
Infrastructure	0.111	(0.05)**
Investment climate	0.109	(0.06)*

Note: Results are derived from separate regression containing lagged per capita real GDP, a ICRG economic risk index, and one service reform index.

** Significant at the 5% level; * significant at the 10% level.

Growth Impact of Regional Trade Agreements

Regional integration may have positive growth effects in the presence of economies of scale. An earlier section examined the market-size impact of RTA membership on FDI. This section examines the effect of integration on per capita growth. Regional integration is measured by inclusion of an RTA variable, following Berthelon (2004), that not only considers whether a group of countries has an RTA but also captures the share of the partner countries' GDP to world GDP.

The basic estimation strategy uses a scaled-down panel growth regression consisting of 94 countries (see table 11.A.5) between 1980 and 2004. Five-year averages span 1980–84, 1985–89, 1990–94, 1995–99, and 2004–04. The regional agreements incorporated in the RTA variable cover bilateral agreements, country-association agreements, and association agreements. Per capita GDP growth is measured using constant 2000 dollars.⁴ The control variables include initial GDP per capita, the ratio of government consumption to GDP, the investment rate, FDI as a percentage of GDP, human capital (proxied by the average year of schooling for the population below 15 years of age), the share of manufactured exports in total exports, the ratio of total trade to GDP,⁵ and an index of financial risk and a measure of investment climate sourced from the ICRG.

The estimates suggest that joining an agreement with countries with a share of world GDP of 1 percent increases the per capita growth rate 0.028 percentage points (table 11.A.13). The implication of this result is that countries or regions would gain more by signing agreements with larger partners. In 2004, annual per capita growth (in constant dollar terms) was 3.6 percent in Algeria, 0.72 in Morocco, and 4.9 percent in Tunisia. Forming a Maghreb regional arrangement would have a limited impact on the growth rates of the three countries given the small size of the region's market.

Table 11.A.10 Fixed Effects Panel Estimates of per capita GDP growth and Service Sector Policies, 1990–2004
(percent)

<i>Model number</i>	<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
<i>Independent variables</i>						
Change in Investment/GDP	0.371 (0.06)***	0.352 (0.06)***	0.424 (0.07)***	0.384 (0.06)***	0.286 (0.06)***	0.269 (0.06)
Inflation	-0.002 (0.00)***	-0.001 (0.00)***	-0.002 (0.00)***	-0.001 (0.00)***	-0.001 (0.00)***	-0.001 (0.00)***
Finance reform index	8.024 (0.65)**	11.083 (0.89)***				
MGB*finance		-9.08752 (2.37)***				
SEE*finance		-4.61539 (1.49)***				
CEE*finance		-6.3899 (1.69)***				
Infrastructure reform index			6.184 (0.65)***	11.042 (0.98)***		
MGB*infrastructure index				-8.964 (2.14)***		
SEE*infrastructure index				-7.257 (1.47)***		
CEE*infrastructure index				-8.150 (1.60)***		

(continued)

Table 11.A.10 Fixed Effects Panel Estimates of per capita GDP growth and Service Sector Policies, 1990–2004 (continued)
(percent)

<i>Model number</i>	<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>
Investment climate index					8.199 (0.54)***	9.663 (0.64)***
MGB*investment climate index						-7.607 (1.90)***
SEE*investment climate index						-2.350 (1.29)*
CEE*investment climate index						-3.800 (1.73)**
R ²	0.46	0.50	0.39	0.46	0.54	0.57
No. of observations	370	370	370	370	370	370

Note: Standard errors are in parentheses. R squares are for within regressions. Sample includes 27 countries. MGB = Morocco, Algeria, Tunisia; SEE = Albania, Bosnia and Herzegovina, Bulgaria, Croatia, FYR Macedonia, Romania, Serbia and Montenegro; CEE = Czech Republic, Hungary, Poland, Slovak Republic, Slovenia.

***Significant at the 1% level; **significant at the 5% level; *significant at the 10% level.

Table 11.A.11 Impact of Unit Increase in Service Reform Index on Annual per Capita Real GDP Growth, 1990–2004
(percent)

	<i>Infrastructure</i>	<i>Financial services</i>	<i>Investment climate</i>
Maghreb (MGB)	2.08	2.20	2.06
South-East			
Europe (SEE)	3.77	5.84	7.35
Central and Eastern			
Europe (CEE)	2.90	4.00	5.87
Former Soviet			
Union (FSU)	11.04	11.08	9.66

Source: Derived from growth regression in table 11.A.10.

Note: MGB = Algeria, Morocco, Tunisia; SEE = Albania, Bosnia and Herzegovina, Bulgaria, Croatia, FYR Macedonia, Romania, Serbia and Montenegro; CEE = Czech Republic, Hungary, Poland, Slovak Republic, Slovenia; FSU = Armenia, Azerbaijan, Belarus, Estonia, Georgia, Latvia, Lithuania, Kazakhstan, Kyrgyz Republic, Moldova, Russian Federation, Ukraine, Tajikistan, Turkmenistan, Uzbekistan.

Table 11.A.12 Definition of 4.3 Ranking on Reform Indices

<i>Index</i>	<i>Components</i>
Finance	<ul style="list-style-type: none"> • <i>Banking and interest rate liberalization:</i> Full convergence of banking laws and regulations with the Bank for International Settlements (BIS) standards; provision of full set of competitive banking services • <i>Securities markets and nonbank financial institutions:</i> Full convergence of securities laws and regulations with the International Organization for Governmental Securities Commissions (IOSCO) standards; fully developed nonbank intermediation
Infrastructure	<ul style="list-style-type: none"> • <i>Electric power:</i> Cost-reflective tariffs that provide adequate incentive for efficiency improvements; private sector that is heavily involved in the unbundled and well-regulated sector; fully liberalized sector, with well-functioning arrangements for network access and full competition in generation • <i>Railways:</i> Separation of infrastructure from operations and freight from passenger operations; full divestment and transfer of asset ownership implemented or planned, including infrastructure and rolling stock; establishment of rail regulator and implementation of access pricing • <i>Roads:</i> Fully decentralized road administration; commercialized road maintenance operations competitively awarded to private companies; road user charges that reflect full costs of road use and associated factors, such as congestion, accidents, and pollution; widespread private sector participation in all aspects of road provision; full public consultation on new road projects. • <i>Telecommunications:</i> Effective regulation through independent entity; coherent regulatory and institutional framework to deal with tariffs, interconnection rules, licensing, concession fees, and spectrum allocation; presence of consumer ombudsman

(continued)

Table 11.A.12 Definition of 4.3 Ranking on Reform Indices (continued)

<i>Index</i>	<i>Components</i>
	<ul style="list-style-type: none"> • <i>Water and wastewater</i>: Fully decentralized and commercialized utilities; fully autonomous regulator with complete authority to review and enforce tariff levels and quality standards; widespread private sector participation through service/management/lease contracts; high-powered incentives, full concessions, or divestiture of water and wastewater services in major urban areas
Services	<ul style="list-style-type: none"> • Average of infrastructure and finance
Investment climate	<ul style="list-style-type: none"> • <i>Large-scale privatization</i>: More than 75 percent of enterprise assets in private ownership; significant progress on corporate governance of these enterprises • <i>Small-scale privatization</i>: No state ownership of small enterprises; effective tradability of land • <i>Governance and enterprise restructuring</i>: Effective corporate control exercised through domestic financial institutions and markets, fostering market-driven restructuring • <i>Price liberalization</i>: Complete price liberalization, with no price control outside housing, transport, and natural monopolies • <i>Trade and foreign exchange system</i>: Removal of most tariff barriers; membership in World Trade Organization • <i>Competition policy</i>: Effective enforcement of competition; unrestricted entry to most markets

Source: Authors, based on EBRD 2004.

Table 11.A.13 Country Fixed-Effects Growth Regression, 1980–2004 (five-year averages)

<i>Dependent variable: per-capita GDP growth</i>	
Log initial per-capita GDP	–6.971***
Government consumption to GDP (%)	–0.067*
Investment to GDP (%)	0.102***
FDI to GDP (%)	0.053
Manufacturing exports to merchandise exports (%)	0.001
Human capital (average year of schooling for population >15 years of age)	0.110
Trade to GDP (%)	0.029***
Financial risk index	0.049**
Investment climate index	0.341***
Absolute RTA	0.028***
Number of country groups	94
R ² (within)	0.51

Source: Authors.

Note: Period dummies are not shown.

*** Significant at the 1% level; ** significant at the 5% level; * significant at the 10% level.

Table 11.A.14 Fixed-Effects Panel Estimates of (Log) Real Export Value on RTA Market

<i>Dependent Variable: Log export value (constant 2000 US\$)</i>	
Initial per-capita Real GDP	0.813 (0.09)***
FDI inflows to GDP	0.014 (0.01)**
Exchange rate risk	0.042 (0.01)***
Inflation	0.000 (0.00)*
Investment climate index	0.022 (0.01)**
Absolute RTA	0.004 (0.00)***
R ² (within)	0.77
Number of observations/groups	387/112

Source: Authors.

Note: Standards errors are shown in parentheses.

*** Significant at the 1% level; ** significant at the 5% level; * significant at the 10% level.

A more promising scenario considers the formation of a Maghreb union and its entrance into an RTA with the United States or the European Union. This would generate additional per capita growth for members of the Maghreb Union of almost 1.0 percentage point for an agreement with the United States and 0.7 percentage point for an arrangement with the European Union.

Notes

1. Investment climate reforms refer to reforms that aim at enhancing market contestability and openness (such as privatization, liberalization, competition). Because of data limitations, the impact of labor mobility is not assessed in this analysis.
2. Typically, CGE models are used to evaluate the trade effects of an RTA. These models combine standard microeconomic assumptions with data from a single period to simulate the response to policy changes of an entire economy or group of economies. CGE models have a weaker empirical foundation than models used for macroeconomic forecasting, because their equations are not estimated empirically from time series data. However, CGE models are able to account for more complex general equilibrium interactions among a larger number of sectors and markets than econometric models can. The results from the CGE models should be read with caution, given the range of estimates, varying their assumptions about elasticities of response and mobility factors that affect the model calibration.
3. For a more detailed discussion of the model, including the data source, see Jaumotte (2004).

4. The growth impact of a RTA is similar when per capita growth is measured using purchasing price parity prices.
5. Additional control variables that were initially included but later discarded because of the lack of statistical significance arising from limited variation across time in a fixed-effect specification were trading partner's growth and bordering countries' share of world GDP.

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Index

Note: *b*, *f*, and *t* indicate boxes, figures, and tables, respectively.

A

- Agadir Agreement, 8, 240*f*, 270*b*, 275, 276*t*, 283
- air transportation
 - services reform in Morocco, 136, 137, 144–47, 154*t*
- Algeria
 - distance metrics and, 98–100
 - EXPY metric, 96–98
 - See also* export diversification in Algeria; services trade development in Algeria
- antiexport bias, 5, 57, 250
- Arab League, 270*b*
- Arab Maghreb Union, 8, 270*b*, 275–77, 276*t*, 283
 - See also* deep versus wide integration in Maghreb countries
- Asian Giants. *See* China and India

B

- backbone services reform in Morocco, 5–6, 135–36
 - implementing competition policies, 155–57
 - liberalization reforms and service sector openness, 137, 138–39*f*

- locking in reforms, 153–55
 - options for regulatory convergence with EU, 140–55
 - regulatory reform options, 153–54*t*
 - strengthening regulatory framework, 137, 140
- banking and other financial services
 - services reform in Morocco, 136, 147–50, 153*t*
- Breush-Pagan test, 29

C

- case studies in new export products, 4, 47–48
 - diffusion and fear of imitation, 55–57
 - entrepreneurs, 52, 53–54*b*, 54–55
 - factors constraining development, 54–55
 - methodology, 51
 - overview, 48–49, 50*t*
 - triggers for new export activities, 51–54
- China and India
 - rise of, 1, 2, 3, 7, 227–28
 - See also* competition from China and India; economic growth in China and India

- clothing exports
 - overseas market access, 242–44*f*, 242–46
- competition from China and India, 2, 7, 227–28
 - antiexport bias, 5
 - average tariffs in China and India, 246*f*, 247*f*
 - average tariffs in MENA countries and, 235, 236*f*, 237, 237*f*
 - conclusions and policy messages for MENA countries, 250
 - EU market share changes, 233–34
 - import duties and, 235–38
 - import surges from India, 240–41, 241*f*
 - logistics performance index and, 237, 238*f*
 - MENA export growth and global market share, 228, 229*t*
 - MENA exports to EU countries, 228, 229*t*, 230, 258–63*t*. *See also* overseas market access
 - MENA intensive and extensive margins of export growth, 230, 231*t*, 251–58*t*
 - MENA performance and, 228–39
 - nontariff impediments in MENA countries and, 237–38
 - tariff rates and, 235–38, 239–41, 239*f*
 - trade barriers and, 235–38
 - trade preferences, 7, 238
 - trade protection and, 234–38
 - trade transaction costs, 7, 237–38
- competitiveness
 - meaning of, 1–2, 3
- concentration indexes
 - Gini, 13, 15, 18, 19*f*, 27, 29–30, 33, 38, 42–43*t*
 - Herfindahl, 13, 15, 17*f*, 18, 27, 29–30, 33, 36–37, 40–41*t*
 - Theil, 13, 15, 16*f*, 18, 20*f*, 21*f*, 36–37, 38–39, 40–41*t*
- D**
- deep versus wide integration in Maghreb countries, 8, 299
 - conceptual issues, 300–302
 - conclusions, 312
 - measuring gains from, 301–2
 - methodological issues, 302–3
 - methodology for estimating gains, 313–27
 - scenarios, 302–12
 - South-South regional trade agreements, 318–19*t*
- distance metrics
 - Algeria and, 98–100
 - Dutch disease, 68–69, 194, 214, 216
- E**
- economic growth in China and India
 - annual baseline growth rates in selected economies, 217*t*
 - changes in exports caused by extra growth, 218*t*, 220*t*
 - changes in output caused by extra growth, 219*t*
 - conclusions, 6–7, 214–16
 - exporting to China and India and, 195
 - four channels of growth, 194–203
 - importing from China and India and, 195–96
 - indirect trade impacts and, 199–200
 - key features, 193–94
 - literature review, 194–203
 - studies, 200–203
 - study methodology, data, and simulation design, 203–6
 - study results, 6–7, 206–14
 - third-market competition and, 197–99
- Egypt, Arab Republic of
 - export diversification. *See* case studies in new export products
- ENP. *See* European Neighborhood Policy
- entrepreneurs
 - new export products and, 52, 53–54*b*, 54–55
- Estonia
 - liberalization of telecommunications sector, 145*b*
- EU. *See* European Union
- Euro-Mediterranean Agreement, 238, 270, 281, 283
- European Bank for Reconstruction and Development methodology, 316–21
- Service Reform index, 321, 325–26*t*
- European Neighborhood Policy (ENP), 6, 136, 137, 140
 - options for Morocco's regulatory convergence with EU, 140–55
 - strengthening regulatory framework, 137, 140

- European Union (EU)
- access to EU markets, 241–46
 - acquis communautaire*, 140, 147, 150–51
 - directives governing
 - telecommunications, 141–43*b*
 - EU market share changes, China and India, 233–34
 - financial services provisions for
 - European and accession partnerships, 148, 149*t*, 150
 - MENA exports to EU countries, 228, 229*t*, 230, 258–63*t*. *See also* overseas market access
 - Morocco's options for regulatory convergence with, 140–55
 - regulatory convergence with the. *See* European Neighborhood Policy (ENP)
- export concentration, 3–4, 13–14
- concentration ratios, 15, 18. *See also* concentration indexes
 - conclusions, 35–36
 - Herfindahl index, 49*f*
 - indicators of export
 - diversification, 36–43
 - random-effects estimation, 29
- export concentration model, 26–35
- empirical results, 29–33, 34*f*
 - robustness, 33, 35
- export diversification, 3–5, 13, 14–21
- in Algeria. *See* export diversification in Algeria
 - case studies, 47–48, 51–57
 - conclusion, 60–61
 - experimentation and imitation, 57–60
 - impact of FDI on, 13, 14, 22–26
 - indicators of, 36–43
 - new product lines and markets, 14, 18, 19*f*, 20*f*, 21*f*, 47–48, 51–57
 - policy design, 57–60
 - in “resource-poor” countries, 48–49, 50*t*
 - traditional, 14, 18
 - trends in, 15, 16*f*, 17*f*, 18
- export diversification in Algeria, 4, 63–64
- current industrial policy strategy, 88–92
 - dependence on hydrocarbons and, 68–74
 - distance metrics, 98–100
 - Dutch disease and, 68–69, 194, 214, 216
 - EXPY metric, 96–98
 - lack of diversification
 - explanations, 68–74
 - metrics technical detail, 96–100
 - new methodology to, 74–80
 - policy implications, 88–96
 - possibility space and, 81–88, 89*f*
 - private sector development constraints and, 70–72
 - product space and, 75–80
 - product space to scan possibility space, 81–88, 89*f*
 - protectionism and, 72–73
 - real exchange rate volatility and, 69–70
 - rent seeking and, 73–74
 - specialization and, 74–75
 - structural transformation
 - considerations, 92–96
 - structure of Algerian economy, 64–68
- export growth and constant market share analysis, MENA countries, 251–65*t*
- Export Market Access Fund (FAMEX)
- Tunisia, 59, 59*b*
- export services in Morocco. *See* backbone services reform in Morocco
- export services in Tunisia
- access to credit and, 131
 - accounting, 112–13, 127–28*t*, 129, 131
 - administrative and financial constraints and, 131–32, 132*f*
 - competitive compensation costs, 119–22
 - considerations for growth and poverty reduction, 5, 105–10
 - engineering and architecture, 111–12, 118–19, 118*f*, 126, 127–28*t*, 128, 131
 - francophone markets, 107–9
 - human resource base and, 118–19
 - ICT-enabled services, 5, 105–6, 107*f*, 113–18, 120*f*, 122–24, 123*f*, 130, 130*b*
 - impediments to exports, 5, 122–24
 - insufficient telecom
 - infrastructure, 123–24
 - international competitiveness in, 117–24
 - lack of export orientation, 123
 - lack of sufficient scale, 122
 - legal services, 113, 127–28*t*, 129, 131
 - market access restrictions, 125–29
 - medical services and medical tourism, 5, 110–11, 111*t*, 121–22, 121*t*, 126, 127–28*t*, 131
 - offshoring, 5, 105–6, 107–9, 107*f*, 117–18, 117*f*
 - performance in emerging services, 110–17
 - policy considerations, 109–10

professional education and training
and, 124–25
professional reputation and
standards in, 118–19
public tenders and, 131
regulatory obstacles to professional
services trade, 125–29, 131
structural consolidation and, 130–31
tasks to strengthen
competitiveness, 124–32
technology parks and, 130*b*
export sophistication (EXPY) metric
Algeria, 96–98
extensive margin
changes in, 18
MENA countries, 230, 231*t*, 251–58*t*

F

FAMEX (Export Market Access Fund)
Tunisia, 59, 59*b*
foreign direct investment (FDI)
impact of Maghreb regional
market on, 313–16
impact on export diversification, 13,
14, 23–26
inward FDI stocks, 291–92, 292*f*
service liberalization and, 309–10, 311*f*,
311*t*, 316–21
trends in FDI flows, 22–23
France
French entry into Algerian supermarket
sector, 181*b*

G

General Agreement on Trade in Services
(GATS), 137, 152, 163, 185,
288, 288*f*
Gini index, 13, 15, 18, 19*f*, 27, 29–30, 33,
38, 42–43*t*
globalization
China and India and, 234–38. *See also*
competition from China and India
conclusions and policy messages for
MENA countries, 250
export growth and constant market
share analysis, 251–65*t*
MENA countries and, 241–50
MENA import duties by China and
India, 246, 248*f*
MENA index of export market
penetration, 247, 248, 248*t*, 249*t*, 250

MENA opportunities for export
growth, 247–50
open regionalism, 269, 294–95
WTO-plus arrangements, 269
global supply chains or production
networks, 1, 8, 203, 269
Greater Arab Free Trade Area (GAFTA)
Agreement, 270*b*, 276*t*, 282, 283
Gulf Cooperation Council, 15, 204, 228,
230, 270*b*, 276*t*, 278, 305

H

Hausmann-Taylor estimator, 29
Hausmann test, 29
Herfindahl index, 13, 15, 17*f*, 18, 27,
29–30, 33, 36–37, 40–41*t*

I

ICT services. *See* information and
communication technologies services
imports from China and India, 239–41
See also competition from China
and India
India. *See* China and India
information and communication
technologies (ICT) services
Tunisia, 5, 105–6, 107*f*, 113–18, 120*f*,
122–24, 130, 130*b*
intensive margin, 44*n*
changes in, 18
MENA countries, 230, 231*t*, 251–58*t*
investment climate reforms, 307–10

J

Jordan
export diversification. *See* case studies in
new export products

L

Lebanon
export diversification. *See* case studies in
new export products
liberalization reforms and service sector
openness, 307–10
Estonia, 145*b*
Estonia's telecommunications
sector, 145*b*
foreign direct investment and, 309–10,
311*f*, 311*t*, 316–21
merchandise trade, 303–7

Morocco, 137, 138–39*f*
 services trade in Algeria, 186*b*
 Logistics Performance Index, 284–86,
 284*f*, 285*f*

M

Maghreb countries. *See* deep versus wide
 integration in Maghreb countries
 maritime transportation
 services reform in Morocco, 136, 137,
 150–51, 154*t*
 medical services and medical tourism, 289
 Tunisia, 5, 110–11, 111*t*, 121–22, 121*t*,
 126, 127–28*t*, 131
 MENA (Middle East and North Africa)
 general information and considerations,
 2–3
 merchandise trade
 liberalization, 303–7
 Middle East and North Africa (MENA)
 general information and considerations,
 2–3
See also specific countries
 Morocco
 export diversification. *See* case studies in
 new export products
 services reforms. *See* backbone services
 reform in Morocco
 most-favored nation tariffs and duties
 regional integration and, 236, 238, 246,
 278, 281, 282, 283, 294

N

nontariff barriers and impediments,
 237–38, 282–84
 North Africa. *See* Middle East and North
 Africa (MENA); *specific countries*

O

offshoring, 2, 5, 117*f*
 export services in Tunisia, 5, 105–6,
 107–9, 107*f*, 117–18
 open forest calculations of distance,
 99–100
 open regionalism, 269
 Overall Trade Restrictiveness Index
 (OTRI), 282
 overseas market access
 access to Chinese and Indian markets,
 246–47, 248*f*

access to EU and US markets, 241–46
 clothing exports, 242–44*f*, 242–46

P

Pan-Arab Free Trade Area, 8
See also Greater Arab Free Trade Area
 (GAFTA) Agreement
 port services
 services reform in Morocco, 136,
 137, 150–51
 services reform in Romania, 151, 152*b*
 private sector development
 World Bank report, 3
 product space, 75–80
 to scan possibility space, 81–88, 89*f*
 professional services
 reform in Morocco, 136, 137, 151–53,
 153–54*t*, 155
 protectionism, 72–73
 proximity calculations of distance, 98–99

R

real exchange rate volatility, 69–70
 reforms
 pace of, 3
 regional integration, 1, 2, 3, 8
 bilateral agreements, 8, 270, 272*t*.
See also specific agreements
 gravity models, 273
 history of integration in MENA
 countries, 269, 270*b*
 intraregional trade, 270, 273–82
 in Maghreb countries. *See* deep versus
 wide integration in Maghreb countries
 most-favored nation tariffs and
 duties, 236, 238, 246, 278, 281,
 282, 283, 294
 open regionalism, 269, 294–95
 partners from outside the region, 270
 preferential opening of markets, 294
 regional and preferential trade
 agreements, 2, 8, 267–69,
 268*f*, 294–95
 remittances, 293, 293*f*
 telecommunications services, 289
 trade diversion, 278
 trade preferences, 282
 WTO-plus arrangements, 269
 regional integration failures, 269–73
 bilateral complementarity, 278, 279–80*t*
 low complementarity, 274–78

nontariff barriers, 282–84
 poor trade and transport logistics,
 284–86, 284*f*, 285*f*
 in services and factor markets
 integration, 287–93
 uneven import protection, 273,
 278, 281–82
 regulatory convergence with the European
 Union. *See* European Neighborhood
 Policy (ENP)
 rent seeking, 73–74

S

services trade
 growth in, 1, 2, 3, 316–21
 liberalization, 307–10
 regional integration, 287–93
 world services exports, by type, 106*f*
 services trade in Algeria, 6, 163
 domestic production efficiency, 6, 175–85
 international trade agreements, 6, 183–85
 liberalization considerations, 186*b*
 openness, 6, 175
 policy considerations, 185–87
 privatization program, 6, 175–78, 180–81
 promoting economic diversification and
 export growth, 181–83
 quantifying the importance of, 163–69
 regulatory regime, 6, 178, 179*b*
 tourism development strategy, 6, 182
 understanding the importance of, 169–75

T

telecommunications
 EU directives governing, 141–43*b*
 liberalization in Estonia, 145*b*
 regional integration, 289
 services reform in Morocco, 136,
 137, 141–44
 Theil index, 13, 15, 16*f*, 18, 20*f*, 21*f*,
 36–37, 38–39, 40–41*t*
 tourism
 regional integration, 289–90, 291*f*
See also medical services and medical
 tourism
 trade effects of rise of China and India. *See*
 economic growth in China and India
 Trade Facilitation and Trade Promotion
 Accord of 1981, 270*b*
 transport services reform in Morocco, 136,
 137, 144–47, 150–51, 154*t*
 Tunisia
 export diversification. *See* case studies in
 new export products
 FAMEX, 59, 59*b*
 services trade. *See* export services in
 Tunisia
 United States
 free trade agreements with MENA
 countries, 290–91

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ECO-AUDIT

Environmental Benefits Statement

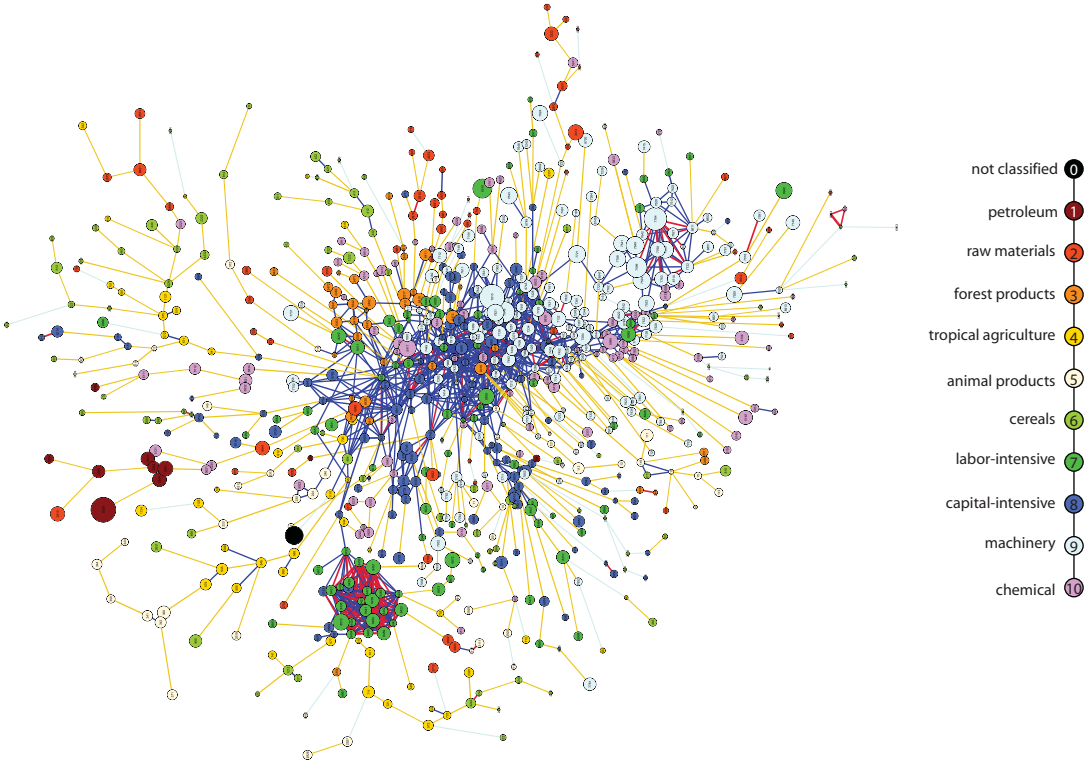
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Saved:

- 16 trees
- 5 million BTUs of total energy
- 1,476 pounds of net greenhouse gases
- 7,108 gallons of waste water
- 432 pounds of solid waste

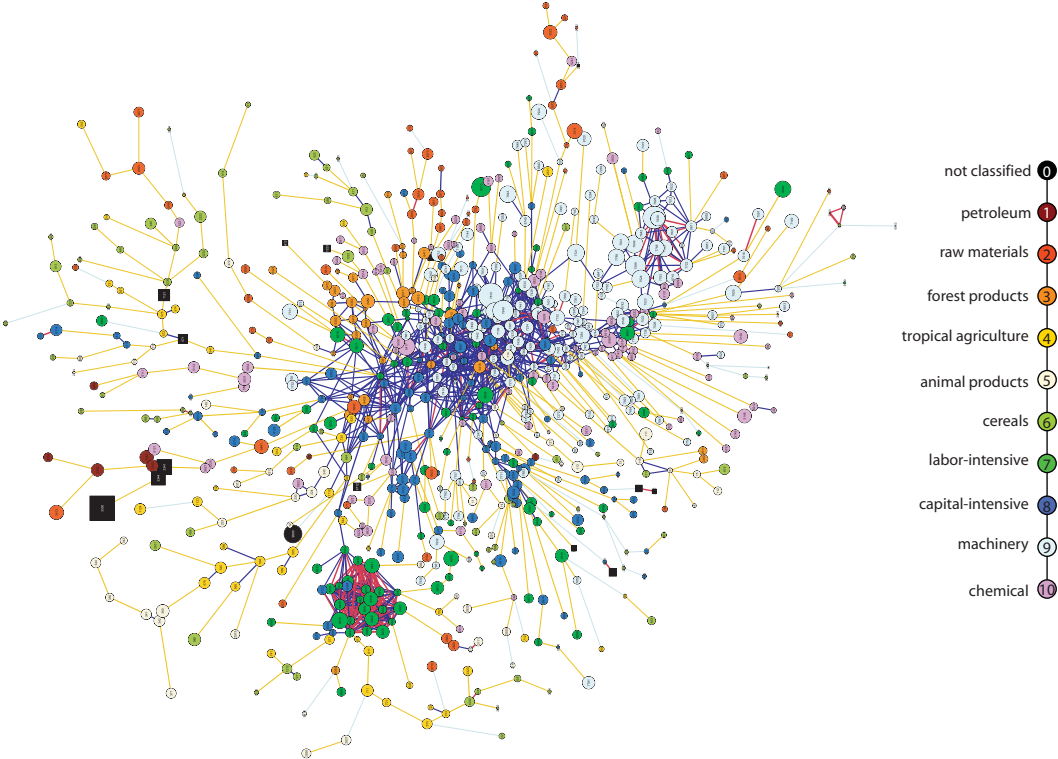


Figure 4.7 A Visual Representation of the Product Space



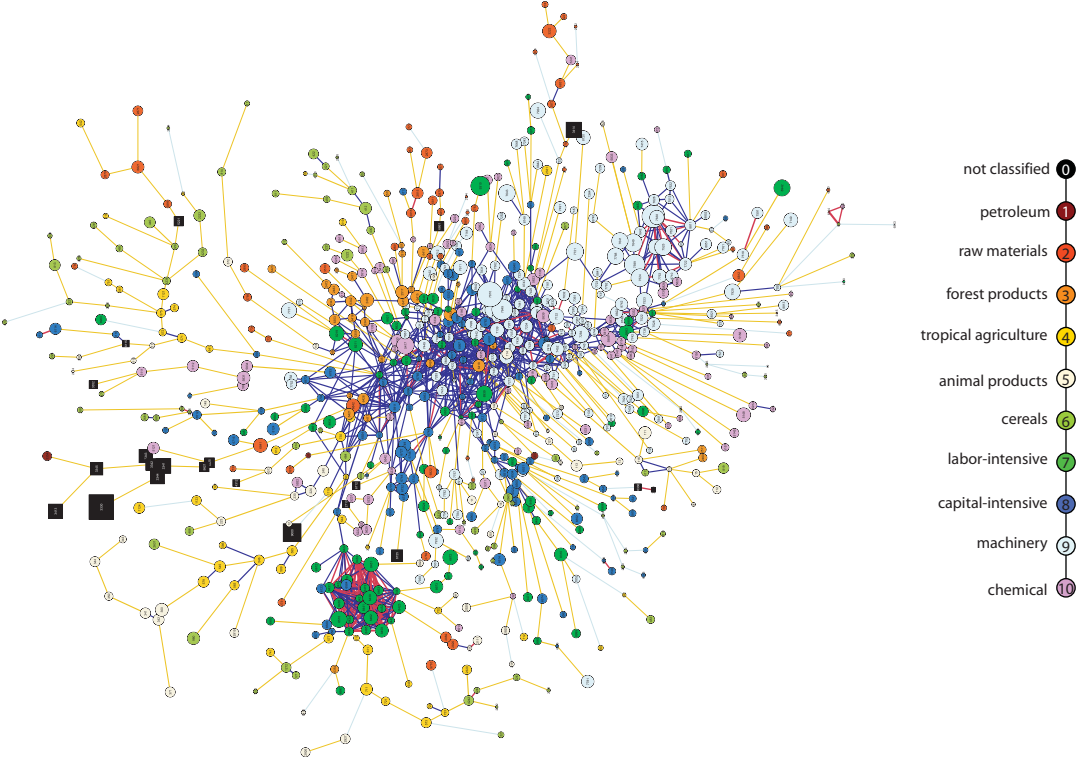
Source: Hidalgo and others 2007.

Figure 4.8a Algeria in the Product Space, 1975



Source: Authors' calculations, using data from UN COMTRADE.

Figure 4.8b Algeria in the Product Space, 2000



Source: Authors' calculations, using data from UN COMTRADE.

Figure 4.11 Proximity vs. Sophistication

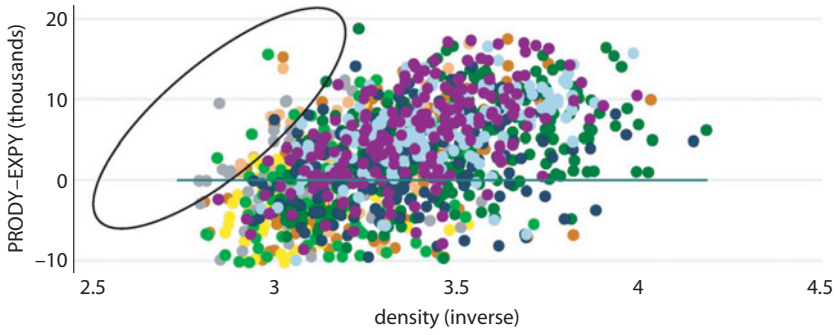
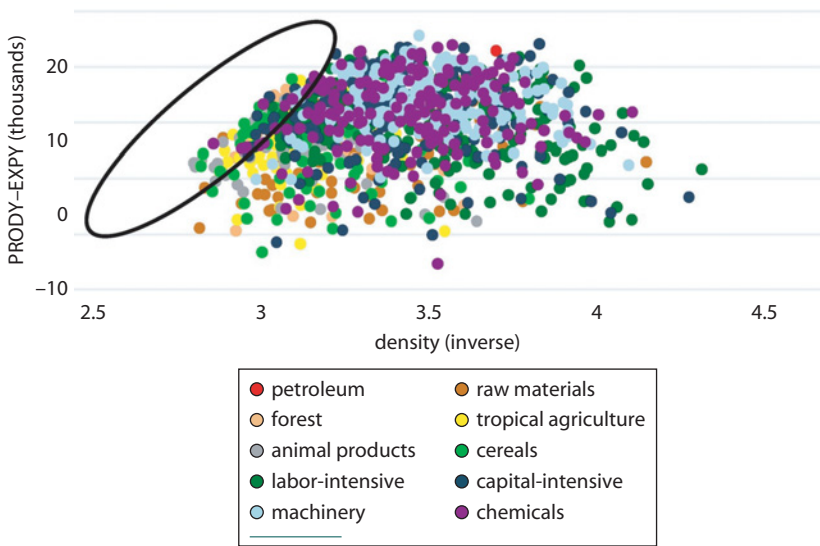


Figure 4.12 Proximity vs. Strategic Value



Source: Author's calculations using UN COMTRADE & Ministry of External Trade.

Over the past decade, four major developments in global economic integration have shaped trade policy and the economic performance of countries within the Middle East and North Africa region: the emergence of global supply chains, the growth of trade in services, the rise of China and India as major international trading powers, and regional integration. These developments, along with the labor and natural resource endowments of particular countries (some are resource-poor but labor-abundant, some resource-rich and labor-abundant, and some resource-rich and labor-importing), have influenced export diversification outcomes across the region. Yet these countries may not be taking full advantage of all of the opportunities the four new trends offer to them.

Trade Competitiveness of the Middle East and North Africa: Policies for Export Diversification examines the region's trade policy agendas and their results by focusing on the countries' response to these four key developments in international trade. As the region recovers from the global financial and economic crises, the book identifies reforms that could allow countries to further strengthen global production networks, benefit more from trade in services, better compete in external markets to face the rise of China and India, and reach the full potential of regional integration. If thoroughly implemented, especially by oil exporters, all of these reforms could help boost growth and job creation in the region.



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