Development Centre Seminars

Towards Arab and Euro-Med Regional Integration

INTERNATIONAL DEVELOPMENT

OECD

Edited by
Sébastien Dessus, Julia Devlin,
Raed Safadi

منتدى البحوث الاقتصادية
ECONOMIC RESEARCH FORUM
FOR THE ARAB COUNTRIES, IRAN & TURKEY

THE WORLD BANK

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DEVELOPMENT CENTRE OF THE ORGANISATION
FOR ECONOMIC CO-OPERATION AND DEVELOPMENT
ECONOMIC RESEARCH FORUM FOR THE ARAB COUNTRIES, IRAN AND TURKEY
THE WORLD BANK

ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

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- to achieve the highest sustainable economic growth and employment and a rising standard of living in Member countries, while maintaining financial stability, and thus to contribute to the development of the world economy;
- to contribute to sound economic expansion in Member as well as non-member countries in the process of economic development; and
- to contribute to the expansion of world trade on a multilateral, non-discriminatory basis in accordance with international obligations.

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The Development Centre of the Organisation for Economic Co-operation and Development was established by decision of the OECD *Council on 23rd October 1962 and comprises twenty-three Member countries of the* OECD: *Austria, Belgium, Canada, the Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Korea, Luxembourg, Mexico, the Netherlands, Norway, Poland, Portugal, Slovak Republic, Spain, Sweden, Switzerland, as well as Argentina and Brazil from March* 1994, *Chile since November* 1998 *and India since February* 2001. *The Commission of the European Communities also takes part in the Centre's Advisory Board.*

The purpose of the Centre is to bring together the knowledge and experience available in Member countries of both economic development and the formulation and execution of general economic policies; to adapt such knowledge and experience to the actual needs of countries or regions in the process of development and to put the results at the disposal of the countries by appropriate means.

The Centre has a special and autonomous position within the OECD *which enables it to enjoy scientific independence in the execution of its task. Nevertheless, the Centre can draw upon the experience and knowledge available in the* OECD *in the development field.*

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Vers une intégration régionale arabe et euro-méditerranéenne

Foreword

Today, the primary challenge facing policymakers in the economies of the Middle East and North Africa is improving the region's growth performance. During the 1990s, real per capita GDP growth was modest at best and growing pressures for employment and improvement in social conditions emanate from a young and rapidly growing labour force.

There is a growing awareness among policymakers at large, that openness to the global economy can be an effective policy instrument for accelerating growth performance. Recent empirical studies suggest that increasing the ratio of trade to GDP by one percentage point raises per capita income by between one-half and 2 per cent through the improved use of domestic resources, imports of goods and services at lower costs, enhanced competitiveness of domestic firms and the spread of ideas and technologies.

However, rising integration with the global economy entails both opportunities and risks. The transformation of employment relationships, divisions between international trade and social norms and the pressures brought to bear on national governments in maintaining domestic cohesion will be inevitable. These emerging realities, together with traditional investor perceptions, place a premium on maintaining a "good" regional neighbourhood characterised by policymaking dynamic that is complementary and forward-looking as well-integrated goods and factor markets. Governments can and should collaborate in designing flexible policies to anticipate these pressures through synergies in policy goals combined with region-wide physical and human capital networks and partnerships for action.

One promising trend in the direction of creating dynamic regional partnerships is due to the proliferation of free trade agreements between states in the Middle East and North Africa and the European Union since 1993, together with renewed efforts to liberalise trade at the intra-regional level through the Greater Arab Free Trade Area initiated in 1997. These agreements represent an important first step towards enhancing integration with the global economy while maximising regional interconnectedness in physical and institutional infrastructure and complementarities in energy, agriculture, manufacturing and human capital.

To improve the understanding of and potential achievement of dynamic gains from these regional trade initiatives, the World Bank, the Economic Research Forum for the Arab Countries, Iran and Turkey (ERF), and the OECD Development Centre jointly sponsored a conference on the dynamic aspects of the Euro Med and Arab regional trade initiatives in Cairo, February 1999. This volume summarises analysis and conclusions presented at the conference from academics, policymakers and practitioners both from within and outside the region. As such, it makes an important contribution to enriching the policy debate on the dynamic benefits of regionalism among developing countries and emerging markets.

It is our fervent hope that prosperity and a better quality of life become pervasive in a region of the world which is integral to our global cultural heritage and human development. This volume represents our continuing efforts to promote policy dialogue and to build local research capacity on issues of vital importance to the future of the economies in the Middle East and North Africa region. Our sincerest thanks to all who participated in this successful effort.

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Preface

Multilateral trade initiatives in parallel with "open" regional integration around the European Union and in the Americas have the potential to lead to higher economic growth due to freer trade in goods, services and assets between developed and developing countries. The Euro-Mediterranean arrangements, which include Turkey, a founding OECD Member, should allow for "deeper" forms of integration, such as the harmonisation of customs procedures. To that extent, competitiveness may improve, dampening potential hub-and-spoke effects. Greater overall cohesion may also occur as a result of shared political, economic and social values.

Moreover, the Euro-Mediterranean Partnership Agreements also have implications for Arab regional trade integration, raising new issues in the political economy of venues for co-operation and development. To this end, the dynamics of open regionalism, the expansion of domestic markets due to increased foreign direct investment and monetary stability, and the optimal mix of regional trade agreements for the Middle East and North Africa countries are the new issues examined in this volume.

The North African countries included in the present study are also individually reviewed in the *African Economic Outlook*, a comprehensive analysis of African economic prospects to be published early in 2002 by the African Development Bank and the OECD Development Centre. Other work at the Centre has suggested that the European experience with multilateral surveillance could be adapted to developing countries. For example, European monetary integration can provide additional choices for exchange-rate regimes beyond the "fast fix" and the "pure float", as argued in our recent study, *Don't Fix, Don't Float*. The present book thus well fits into the overarching theme of globalisation and governance, which has guided Development Centre activities over the last two years.

Several people contributed to the successful preparation of this book but I would particularly like to thank Akiko Suwa-Eisenmann and Hana' Al-Sagban for their invaluable work on the design and organisation of the 1999 Cairo conference.

As this book goes to press, the international order based on negotiation is under threat. Poverty reduction through economic growth is now a more urgent shared objective: in negotiating free trade agreements the EU must strive to make them as equitable as possible; in implementing them, partner countries must guide reform efforts to ensure their efficiency.

In the period since he signed the *Foreword*, Kemal Dervis has become the Turkish Minister of the Economy. The reforms he is carrying out will provide valuable lessons for integration policies and options discussed in this volume.

I presented the new issues addressed in this volume to the annual conference of the Mediterranean Commission of the European League for Economic Cooperation, held in Palma de Mallorca on 20th October 2001. What started on the Nile travelled well to the northwestern isles. This successful Mediterranean journey demonstrates flexibility and responsiveness to new challenges, which have, after all, been the *raison d'être* of the OECD and its Development Centre.

Jorge Braga de Macedo
President
OECD Development Centre
22 October 2001

Chapter 1

Introduction and Overview

Sébastien Dessus, Julia Devlin and Raed Safadi

Introduction

Fuelled by the power of the idea that markets create freedom and expand individual and collective choice, an overwhelming majority of countries have come to recognise the critical importance of market-oriented policies and open trade and investment regimes for achieving economic growth and improving the material well-being of citizens. More than five billion people live in market economies today, compared with one billion a mere decade ago. The size of world GDP and the opportunities it affords to firms and consumers alike have increased significantly.

Market integration induced by trade and investment has led to deeper forms of economic interdependence among nations. Open economies give rise to more open societies. Trends towards democratisation are emerging in a growing number of Middle East and North African (MENA) countries and other highly centralised economies, as economic, political and ideological linkages with the global economy flourish. Trade and investment linkages between industrial economies remain predominant, but the bonds that connect developed and developing countries are tightening. Industrial countries now depend on developing countries for one-quarter of export sales — a 40 per cent increase from two decades ago — one-fifth of their primary commodity imports and almost half of petroleum consumption. One-third of foreign direct investment (FDI) flows originating in industrial countries now seeks out developing-country markets, a three-fold increase over less than a decade ago.

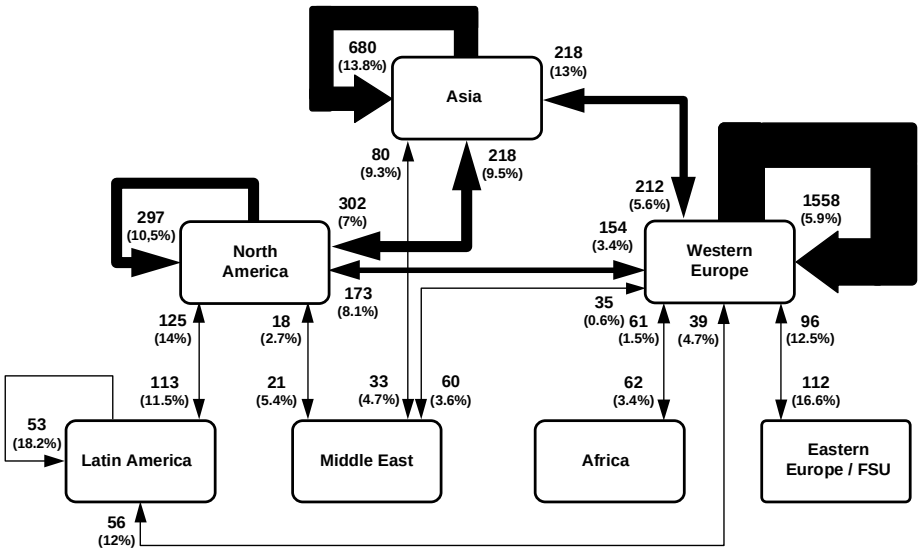
Developing countries rely on industrial countries for more than 60 per cent of their trade and 47 per cent of primary commodity imports. Inflows of FDI, the bulk of which originates in industrial countries, represent the single largest source of external funding for developing countries, accounting for nearly 40 per cent of net long-term

flows. Trade and investment ties *between* developing countries are also on the rise, with nearly a third of their exports destined for other developing-country markets in 1996, as against less than a quarter a decade ago. Developing countries also have greatly diversified trade linkages with each other and with industrial countries. For three decades from 1950 to 1980, the share of manufactured products in developing countries' total exports remained at between 30 per cent and 40 per cent. After 1981, it began to rise dramatically, to nearly 84 per cent in 1998.

These remarkable structural transformations in the extent and depth of countries' participation in the global economy reflect a sea-change in attitudes and policy approaches towards trade and investment, marked by the abandonment of inward-looking policies of protectionism and industrialisation in favour of more outward-oriented policies. Since the launching of the Uruguay Round, over sixty developing nations have unilaterally lowered their barriers to imports, often in the context of far-reaching reorientations of domestic economic policies. A growing number of countries, developed and developing, are liberalising imports, promoting exports, extending welcome mats to foreign investors and loosening restrictions on capital flows. Such strategies have provided the bedrock for rising prosperity in many countries and propelled a number of emerging economies into the forefront of global trade and capital flows.

The list of developing-country participants in the WTO/GATT process is growing rapidly. Nearly 30 developing countries, including MENA countries such as Algeria, Oman, Saudi Arabia and Sudan, today seek admission to the WTO. (Bahrain, Egypt, Israel, Jordan, Kuwait, Morocco, Qatar, Tunisia, Turkey and the UAE already are WTO members). At the same time, the recent proliferation of regional trading arrangements (RTAs) responds to and reflects expanding regional trade and investment ties (Figure 1.1). The formation of NAFTA, CEFTA and MERCOSUR, as well as continuous expansion and deepening of the European Community[1], major developments in APEC, preparatory work on a Free Trade Area of the Americas and a New Trans-Atlantic Agenda all demonstrate this trend.

Figure 1.1. **Network of World Merchandise Trade in 1996, Billions of US Dollars**
Average annual growth rates for 1991-96 in parentheses



This rising trend toward regionalism in the 1990s, unlike in the 1960s, runs parallel with rather than tangential to multilateral trade initiatives. In the 1990s, the trend towards "new" and "open" regional integration has emerged in an environment of outward-oriented policies, and between developing and developed countries. The principal rationales underlying "open" regionalism include:

— enhanced market access;

— the prospect of enhanced economic growth originating from the opportunity to exploit scale economies, regional specialisation, learning by doing and attracting foreign investment;

— locking-in domestic policy reforms at a regional level, and thus enhancing the credibility and sustainability of economic reforms including trade liberalisation; and

— attempts by governments to pursue deeper economic interdependence through harmonisation of standards, competition policy regimes and institutional frameworks.

Regional integration arrangements may take different forms depending on the different intensities of integration and coverage between countries. The four main types of such arrangements involve different trade, welfare and political effects for participants as well as third countries:

— In a free trade area (FTA), member countries fully remove trade restrictions among themselves, thereby granting members preferential access to each other's markets, while retaining their own trade policies *vis-à-vis* third countries. Rules of origin then become necessary in order to establish the conditions under which an item qualifies for preferential access within the area. Some recent FTAs include provisions to liberalise investment rules, trade in services and government procurement.

— A customs union (CU) goes one step further, to adopt a common external tariff against third countries.

— A common market is a CU that also allows free movement of factors of production among member countries.

— An economic union extends the integration process still further by including some policy harmonisation among member countries, particularly macroeconomic and regulatory policies.

The Dynamics of Open Regionalism in MENA

The proliferation of "open" regional agreements among MENA economies in the 1990s signalled an important shift in trade policy. Since 1993, Tunisia, Morocco, Israel, Jordan, and the Palestinian Authority all have signed bilateral Free Trade Agreements with the EU in the form of Euro-Med Partnership Agreements (EMAs). Algeria, Egypt, Lebanon and Syria are involved in similar negotiations. In addition to removing trade barriers on industrial goods, these agreements will ultimately grant preferential and reciprocal access for agricultural products and establish conditions for the gradual liberalisation of trade in services and capital. At the intra-regional level, Arab states revived in 1997 the 1981 Executive Programme for Arab Free Trade for the creation of a Greater Arab Free Trade Area (GAFTA). This provides for an across-the-board reduction or elimination of tariffs, tariff-like charges and non-tariff barriers on industrial goods over a period of ten years.

This "open", more export-oriented regionalism in MENA is in part a by-product of stabilisation and structural adjustment programmes as well as commitments to unilateral trade liberalisation under GATT/WTO. Its characteristics — as represented by the EMAs and GAFTA — include a negative-list approach, incorporation of liberalisation in agriculture and services to a limited extent, a greater emphasis on inclusiveness rather than exclusion and greater participation from private and business interests. Traditionally, RTAs among MENA economies, as exemplified by the Arab Common Market, were relatively inward-looking, complementing import-substitution

industrialisation strategies and protectionist trade policies. Today, however, policymakers view RTAs increasingly as a necessary but not sufficient condition for export-oriented growth.

The formation of an RTA alters tariffs and creates trade preferences, thereby changing relative prices and patterns of production and consumption. It has two main "static" effects. Trade creation arises from a shift away from high-cost domestically produced goods to lower-cost imports from regional partner countries. Other things equal, this trade-creation effect, combined with greater opportunities to exploit economies of scale, implies an expansion in regional real income. Analogously, trade diversion can result when inefficient regional suppliers take advantage of the tariff preference to replace efficient suppliers in third countries. It tends to reduce regional national income. The real income of the regional grouping rises when trade creation dominates trade diversion.

The relative sizes of trade-creating and trade-diverting effects depend on a number of factors. Opportunities for trade creation appear to be enhanced and those for trade diversion minimised when a regional arrangement includes countries that already are major trading partners[2], or when their MFN barriers are initially low[3]. In both cases, relative price levels are likely to be similar within the countries of a region, so that the introduction of regional preferences should not entail significant distortions and leaves little scope for the displacement of imports from third countries. In contrast, as in MENA, the higher the pre-arrangement MFN tariffs, the greater the pressure for trade diversion following the formation of a regional trading arrangement.

RTAs may also give rise to dynamic effects. They arise from increased competition, enhanced by economies of scale, a stimulus to investment and more efficient use of productive resources. These dynamic gains, which can have an exponential effect on income growth, are usually thought to be much larger than the static gains from net trade creation.

While unilateral liberalisation remains the optimal policy for liberalising trade among MENA economies, an "open" regional trade agreement does offer mechanisms for attaining deeper integration with the harmonisation of standards, customs procedures and regulatory frameworks through the vehicle of reciprocity. Tariff reduction, clearly an important first step in implementing a regional agreement, will tend to result in lower prices for consumers. Yet these static gains from integration tend to be small; in the Euro-Med Agreements they are less than 2 per cent of GDP on average.

To the extent that the EMAs and GAFTA expand liberalisation beyond traditional trade barriers to trade-impeding effects of domestic regulatory structures, which raise export transaction costs and distort competition, the dynamic gains from integration can be substantially larger. Such measures would include the adoption of EU product standards and customs procedures, and the harmonisation of regulatory frameworks among MENA countries. Economic growth may follow the increase in the overall efficiency of production, higher levels of foreign and direct private investment and improvement in trade-related services generally associated with deeper integration among member countries. Co-ordinated liberalisation within MENA, coupled with an

FTA with an industrial country, could be easier politically, because it locks in liberalisation in each country; reversal would compromise the FTA with the industrial country.

MENA Countries, the WTO and A New Round of Multilateral Trade Negotiations

The Third WTO Ministerial Meeting in Seattle ultimately failed to initiate a new round of multilateral trade negotiations. The inability of participating countries to deal with certain provisions under a number of existing WTO agreements scheduled to expire in 2000, as well as to assess continuation of the work of the WTO Working Groups on Trade and Investment, have created some uncertainty regarding the potential achievements of future rounds of negotiations. Attention focuses here on the future direction and position MENA countries could take towards the multilateral trading system, given ongoing progress on regional trade agreements. Specifically, should MENA countries view the Seattle Meeting as a "turning point" or just a "rest stop" (Hufbauer, 1999)?

MENA WTO members had in fact voiced concerns throughout 1999 regarding a new round of negotiations. These concerns can be summarised as follows:

— Progress was incomplete in bringing trade regimes into line with obligations made during the Uruguay Round, particularly requirements under the TRIPS Agreement for legislative changes and effective enforcement to protect intellectual property rights.

— Notification procedures required under some Agreements (e.g. TRIMS) were too complex and unnecessarily burdensome.

— Existing agreements under the Uruguay Round lack implementation due to design flaws and narrow interpretation of their requirements. Examples include the alleged over-use of anti-dumping measures against developing countries in general; the record of both the United States and the EU regarding the integration of quotas under the Agreement on Textiles and Clothing; and the poor performance of special and differential treatment provisions for developing countries under WTO Agreements.

There is a growing gap between developed and developing countries regarding interpretation of existing agreements. Developing countries, including MENA, lobby to improve existing agreements to reflect the purposes intended and facilitate implementation. There is a growing desire to re-examine existing agreements in the light of actual Uruguay-Round outcomes and to learn lessons for future rounds. Moreover, while MENA and other developing countries are the principal demanders here, some industrial countries (including the EU) also seek amendments to specific provisions of some agreements (for example, new rules against anti-circumvention actions in the Anti-Dumping Agreement). More generally, however, industrial countries

have argued that moving away from a very narrow definition of the implementation agenda would potentially unravel the Agreements and upset the delicate horizontal balance established during the Uruguay round.

To their credit, many MENA countries participated actively and constructively in the Seattle deliberations. It is imperative that the momentum of preparing for multilateral negotiations be maintained. A comprehensive strategy for MENA countries could support the following objectives:

— Ensure full and faithful interpretation of obligations under the Uruguay Round Agreements. MENA countries, like many others, may miss implementation deadlines in certain agreements (e.g. the TRIPS, Customs Valuation, TBT and SPS Agreements). This should neither be construed as refusal to discharge obligations nor be subjected to dispute-settlement procedures, but rather calls for a comprehensive review of such agreements to examine their intended objectives. In addition, MENA countries may find it useful to identify and elaborate areas where industrial countries have not implemented their obligations, at least in spirit. This applies most tellingly to the Agreement on Textiles and Clothing where many industrial countries have back-loaded their liberalisation commitments.

— Improve technical assistance to all developing countries. MENA countries could consider joining forces with other developing nations to set up a larger programme of support to help developing countries fulfil their obligations and exploit opportunities from the Uruguay Round Agreements. A desperate need persists for more effective WTO technical co-operation as well as better co-ordination of technical assistance and policy coherence between relevant international organisations.

— Re-examine and improve existing WTO Agreements. This includes:

  - tightening their interpretation, to better reflect intended objectives (e.g. the SPS Agreement);
  - closing loopholes to prevent abuse (e.g. rules on anti-circumvention measures under the Anti-Dumping Agreement);
  - streamlining notification procedures to make them more workable and realistic (e.g. the TBT Agreement could include longer mandatory time periods before changes in technical standards come into force);
  - ensuring that the built-in reviews be satisfactorily completed (e.g. the harmonisation process under the Rules of Origin Agreement); and
  - expanding Special and Differential Treatment provisions for developing countries, either under specific agreements (e.g. larger thresholds for developing countries under the Anti-Dumping Agreement) or more comprehensively.

Such a strategy is consistent with needed reforms in the WTO process itself as well as ongoing efforts at deeper integration among MENA states. The WTO needs:

— a more tailored approach to implementation of future multilateral agreements, with room to take into account different levels of capacity in member countries;

— a more widespread application of built-in review mechanisms for new WTO Agreements;

— in-depth examination of up-front capacity constraints and technical assistance needs of developing countries; and, finally

— enhanced transparency within the WTO as an institution and forum for negotiation.

As an important preparatory step in preparing for the next round of multilateral negotiations, MENA countries should strengthen mechanisms for deeper integration in both the EMAs and GAFTA. Such steps would include establishing identical rules of origin, mutual recognition of standards, a high level of protection of intellectual property rights and provisions concerning rules for competition. The EU has a crucial potential role in new MENA regional initiatives. MENA countries that have concluded FTAs with the EU could (at the very least) extend the preferences they have granted to the EU to other regional partners, through GAFTA, for example. This would go a long way to promote both intra-industry trade among MENA countries through the rationalisation of economic activities, and external and internal investment flows to the region. Greater focus on these mechanisms would not only create a more effective regional bloc for multilateral negotiations but also address deeper constraints on accelerated integration in global trade and capital flows.

Rule-Making at the Regional Level

Rules of Origin

Preferential rules of origin are integral to the operation of any FTA. FTA partners eliminate all trade restrictions among themselves, but retain their individual commercial policies *vis-à-vis* third countries. Because tariff rates generally vary among FTA members, third-country exporters have an incentive to enter the markets of higher-tariff members through the market of the lowest-tariff member. Rules of origin thus become necessary to determine whether a good entering a member country has originated within the area and is thus eligible for preferential treatment. As a general principle, goods wholly produced or obtained in a member country are automatically eligible for "area treatment". Goods incorporating offshore components or materials may also qualify for preferential treatment, subject to certain criteria reflected in rules or "tests".

Highly restrictive preferential rules of origin tend to distort trade and investment patterns. Rules may be meticulously elaborated but loosely or inconsistently applied, depending on the degree of discretion granted to administering authorities. Such

anomalies can create havoc for transparency and predictability in the day-to-day conduct of trade. Overly lax rules will provide third countries with an opportunity to circumvent the system, ultimately defeating the purpose of a regional trading arrangement. Overly restrictive ones tend to distort trade and investment patterns by encouraging trade diversion rather than trade creation. For example, a firm may decide to use a higher-cost "local" input in order to qualify for preferential treatment in an FTA, compromising economic efficiency. Similarly, a firm may opt to locate its entire production process within an FTA if it believes that its product will not meet the origin test, or that efforts to "prove" origin will be too burdensome. Other arguments have also suggested that preferential rules of origin may extend existing levels of protection imposed by high-tariff FTA countries to low-tariff partner countries (Krueger, 1993). This cannot occur in a customs union, which imposes a common external tariff on third countries.

Non-preferential rules of origin are laws, regulations and administrative determinations applied when it is necessary to determine the origin of goods for purposes other than according preferential tariff treatment (rules of origin are superfluous for normal MFN trade). Non-preferential rules have distinct applications in relation to other trade policy instruments. For example, they may be used to determine whether a good is subject to an anti-dumping or countervailing duty, or meets origin requirements specified in a public tender. Rules of origin also are relevant to trade in services, to determine the nationality of a service provider for the purposes of establishment. These policy linkages will come under closer scrutiny as competition intensifies in world markets.

The risk that rules of origin may be applied arbitrarily, inconsistently or non-transparently should not be under-estimated and should be addressed up-front. Their inherent complexity, the need to adapt them to evolving technologies and production methods, and scope for discretion at the point of implementation can act as trade barriers in their own right. Concerns are currently being voiced in the MENA region that rules of origin may be deliberately formulated and applied as instruments of (non-liberal) trade policy, alone or in concert with other commercial policy instruments or measures.

Technical Barriers to Trade

Steady reductions in tariffs over successive rounds of multilateral trade negotiations have helped clear the global trade agenda for consideration of a wide range of persistent non-tariff barriers to trade. Concern over the possible trade-restrictive effects of technical barriers to trade (TBTs) first emerged during the Tokyo Round (1973-79) in the Agreement on Technical Barriers to Trade. In the TBT Agreement, governments agreed not to prepare, adopt or apply technical regulations and standards intended as unnecessary obstacles to international trade. The Uruguay

Round subsequently revised the Agreement to preserve and clarify this and other key obligations. Sanitary and phytosanitary measures are becoming the subject of a new, separate Agreement (the "SPS" Agreement).

Both the TBT and SPS Agreements adopt a basic premise that countries should, where appropriate, use international standards as a basis for national technical regulations or standards. Both also call on WTO members to harmonise technical regulations, standards and sanitary or phytosanitary measures on "as wide a basis as possible". While it is too soon to gauge progress towards the achievement of these objectives in the SPS, these aims were not vigorously pursued before the Uruguay Round. In practice, national and regional standards have proliferated and the development of international standards has advanced more slowly. This has itself generated new sensitivities. The rapid growth of regional standards in the European Union, for example, has fed concerns on the part of non-EU countries about emerging EU dominance in standard setting.

Virtually all regional integration arrangements, including the EMAs and initiatives currently under consideration in GAFTA, contain specific standards-related disciplines. These need scrutiny for their possible effects on trade and their overall consistency with parallel multilateral rules. Technical regulations and standards should receive further work to enhance the quality of market access in bilateral and plurilateral MENA trading relationships.

Policymakers have two main policy approaches available to minimise or eliminate TBTs. Harmonisation and mutual recognition — both forms of regulatory rapprochement — have been used with varying degrees of success in regional arrangements. Harmonisation of technical regulations and standards involves a high degree of policy approximation across "harmonising" countries. Mutual recognition allows for greater diversity in the means (technical regulations and standards) to achieve the end (shared policy objectives), taking account of different local situations. Variants of both broad approaches (e.g. recognition of test results, partial harmonisation in some sectors or harmonisation of minimum essential health and safety requirements) are possible.

Cross-country experience with these two approaches suggests that policymakers need not adopt an "either-or" procedure to address TBTs effectively; a combined method may be all that is required. Harmonisation frequently requires surmounting formidable political, legal and administrative hurdles, may carry the additional risk of "locking" participating countries into what may later prove to be a sub-optimal regime and discourages innovation (particularly if harmonised rules focus on design or descriptive product characteristics as opposed to performance criteria). Harmonised rules may thus be best suited to "core" issues such as health and safety concerns. Mutual recognition, through its intrinsic tolerance of regulatory diversity, may be adequate in other areas. It may also be better suited to correcting market imperfections (e.g. a lack of consumer information) and to promoting regulatory competition.

Government Procurement

Government procurement holds an important share of domestic economic activity in MENA. In some parts of the region, the public sector accounts for more than half of gross domestic product (Hoekman and Djankov, 1998). A precise definition of the term can vary, depending on the coverage and scope of national or sub-national purchasing practices. Rules-based approaches to opening procurement markets show broad similarity across the plethora of regional arrangements outside the MENA region. "Covered" entities include one or more levels of governments as well as public enterprises, and the scope of competition extends to both goods and services. Key disciplines generally include national treatment, non-discrimination and transparency; other rules typically address such issues as tendering and contract award procedures.

The WTO Agreement on Government Procurement (GPA), negotiated as part of the Tokyo Round, represented a first step towards increasing competition in public procurement markets by opening tenders for goods to foreign suppliers. The successor Agreement, concluded under the auspices of the Uruguay Round and in force since 1 January 1996, expands existing disciplines in significant ways. For the first time, coverage includes services (including construction services), sub-central government entities and public utilities. National treatment remains the core principle: foreign suppliers must be treated no less favourably than domestic ones. The Agreement translates this basic obligation into specific rules governing such issues as tendering procedures, the use of technical specifications in invitations to bid, transparency and contract award procedures. To minimise administrative costs for purchasing entities, contracts are generally exempt from the rules when their value falls below established thresholds.

Public procurement policies are closely linked to other regulatory regimes, including rules of origin and standards-related rules. For example, the GPA prohibits Parties from applying rules of origin to imported products covered by the Agreement. For other (uncovered) goods or services, public tenders often include origin tests, which may leave scope for covert forms of national preferences. Origin may also be assessed on the basis of ownership criteria, and technical specifications may be prescribed in a manner that limits foreign participation in national procurement markets. Anti-competitive private practices (including collusion or bribery) tolerated by governments may similarly distort public markets.

Regional procurement rules may have facilitated agreement at the multilateral level during the Uruguay Round. The GPA merely consolidates regional trends with respect to important procedural mechanisms such as firm-initiated bid challenges and the inclusion of public utilities among covered entities.

Given the continued pervasiveness of the public sector across the MENA region, it is crucial that ongoing regional initiatives such as GAFTA establish an effectively level playing field for regional firms to compete in government procurement markets. Procurement rules may be only a necessary but not adequate response to certain non-economic aspects of purchasing behaviour. Long-established purchaser-supplier

relationships (the "loyalty factor"), the appeal of "buy-national" campaigns and other political considerations may be more difficult to address. The trend towards privatisation in the MENA region may also affect the future direction of this issue.

About This Book

In February 1999, the ERF, the OECD Development Centre and the World Bank jointly sponsored a conference exploring the dynamic aspects of regional integration in the MENA region. The papers selected for publication here present different aspects of this central theme. The purpose of the book is to identify dynamic gains from the Euro-Med Agreements and the policy instruments and institutions necessary to achieve them. While the focus lies primarily on recent integration initiatives *vis-à-vis* the EU and Arab states, the conclusions can apply generally to the emerging forms of "open" regionalism in MENA. The volume contributes to the growing literature on dynamic gains from regionalism among developing countries in general, but makes a particular contribution to analysis of regional trade agreements in MENA. Existing studies of regionalism in MENA have focused almost exclusively on CGE modelling of static gains from Euro-Med integration at the country level (Rutherford, Rutström and Tarr, 1993), explaining low levels of regional trade in general (World Bank, 1995*a*, 1995*b;* El-Erian and Fischer, 1996) and only very preliminary analysis of the effects of sub-regional agreements.

The book has three sections. Part One provides a general introduction and overview of potential dynamic gains from the EMA as well as empirical analysis of changes in the pattern and structure of Euro-Med trade since the early 1990s. Part Two addresses the current state of the EMAs from the vantage point of FDI. It also looks at the need for expanding the scope of liberalisation under the bilateral FTAs in terms of commercial policy and the introduction of a euro currency area. Case studies on the impact of EMAs on agriculture in Morocco and Tunisia underscore the need to accelerate liberalisation of domestic markets commensurate with tariff reductions. Part Three explores other options for expanding liberalisation under the EMAs through the creation of links with intra-regional trade agreements such as GAFTA to foster competitiveness in non-traditional export sectors and promote firm linkages.

The main findings are:

First, dynamic gains attainable under the EMAs and GAFTA through the harmonisation of trade-related infrastructure, customs and product standards are not automatic and require effective domestic policies targeting financial and labour markets, as well as the redesign of institutions to anchor liberalisation measures and incentive structures. Enhancing the contestability of domestic markets is particularly critical in the case of agriculture, which maintains extensive input and output linkages with the industrial and manufacturing sectors.

Second, while progress on implementing the EMAs is slow, important changes are occurring in the structure and patterns of trade between MENA partners and the EU. The rise of two-way trade in high growth sectors such as electronics among Euro-Med partners, for example, presents growing opportunities for technology transfer and FDI. Increasing foreign capital inflow, however, will require proactive policies targeting the incentives of foreign investors and effectively broadening the reach of domestic markets. One avenue for deepening integration among MENA countries themselves is to peg domestic currencies to a basket in which the euro is prominent or at least significant. A euro currency area would not only provide a monetary anchor but would also make the Euro-Med region more attractive to foreign investors.

Third, in a regional and global trade environment characterised by the proliferation of RTAs, an important emerging issue concerns the optimal mix of RTAs and unilateral liberalisation commitments. MENA countries have made important strides in improving competitiveness *vis-à-vis* the rest of the world, but trade at the intra-regional level remains heavily distorted by non-tariff barriers and transport links which run in primarily North-South patterns. In addition, MENA exports remain for the most part heavily concentrated in oil and a relatively limited number of products. FTAs with important trade partners such as the United States can be used to complement existing liberalisation commitments under GATT/WTO and the EMAs, as well as to deepen commitments in areas where reciprocity provides an important instrument for leverage, such as services. In addition, an RTA at the intra-regional level, like GAFTA, can serve as a vehicle to mitigate potential hub-and-spoke effects as well as promote export diversification.

Part One. The Dynamics of Open Regionalism in the Middle East and North Africa (MENA)

In Chapter 2, Bob Stern surveys the evidence regarding options for trade and domestic policy reform under the EMAs as well as the associated comparative static and growth effects. A review of CGE modelling studies of the EMAs for Morocco, Tunisia and Egypt suggests the possibility of trade diversion in the short run, while allowing for significant welfare gains in the long run, to the extent that improvements in trade facilitation, the harmonisation of standards and other export-related dynamic productivity effects are realised. The growth benefits of the EMAs would not necessarily come automatically, however; they require effective domestic policies to anchor the environment in which liberalisation occurs as well as to create favourable incentives for domestic investment and FDI. Such policies would include financial and labour market reforms and the recruitment of emigrants with high skills and entrepreneurial talents, as in the case of Lebanon.

Agnes Chevallier and Michael Freudenberg expand this analysis of potential dynamic gains in Chapter 3, with an empirical investigation of structural changes in the composition of trade between Mediterranean and EU trade partners. Most trade

between Morocco, Egypt, Turkey, Tunisia and the EU, for example, is based on complementarity and comparative advantage in primary and consumption goods. The MENA economies appear to be more specialised in trade with the EU than do the Central European economies. Two significant trends have emerged since the late 1980s, however. First, shares of primary exports are declining (1988-96), while exports of consumption and capital goods are on the rise. Second, two-way trade in vertically differentiated products or intra-industry trade is becoming significant for Turkey and Tunisia, particularly in new export sectors such as electronics.

Part Two. Expanding Domestic Markets and Liberalisation under Euro-Med Agreements (EMAs)

One important channel for enhancing the dynamic gains from the Euro-Med Agreements is the alignment of trade and investment policies among MENA countries on a multilateral basis with the global trading system. Introduction of a common currency and an investor-friendly business environment would enlarge the market created by bilateral FTAs with Europe into a broader economic entity more attractive to the domestic and foreign private sectors.

In Chapter 4, Mohamed El Hédi Lahouel surveys the performance of FDI in Morocco, Tunisia, and Jordan following introduction of the bilateral FTAs. In general, flows of FDI to potential and existing Euro-Med partners have not increased significantly. They actually declined from 1992-95 to 1996-97, with the exception of Egypt and Lebanon. Most capital inflow to MENA comes from EU investors and continues heavily concentrated in energy, tourism and light manufacturing, traditionally in Egypt, Tunisia and Morocco. This performance highlights the need to focus more domestic policy attention on aspects of the local market that attract foreign investors to choose FDI over serving the market from abroad. While import liberalisation under the EMAs will enhance the efficiency motive of foreign investors, greater attention must focus on market-seeking motives, the capacity of MENA markets to offer after-sale services for consumer durables and capital goods, and timely adjustment to tastes in the case of highly differentiated products.

In Chapter 5, Agnès Bénassy-Quéré and Amina Lahrèche-Révil explore the potential benefits of pegging domestic currencies to a basket in which the euro would be prominent (Morocco, Tunisia, Turkey) or at least significant (Algeria, Egypt, Israel), as a continuation of trade and capital-flow liberalisation under the EMAs. Given the relative size, trade patterns and business cycles of countries such as Morocco Tunisia and others, there are potential gains from creating a euro currency area. Such an arrangement would strengthen trade and financial linkages with Europe and provide a buffer against harmful euro/dollar fluctuations. Exchange-rate stability would also serve to enhance the role of the euro for debt denomination, lessen the sensitivity of balances of payments to dollar fluctuations and promote euro-denominated financing through official guarantees or through the issue of euro-denominated bonds.

One important component of trade liberalisation among Southern Mediterranean countries that was to be addressed more fully in 2000 is the liberalisation of agricultural trade. Preliminary studies suggest that reduction in tariff-based protection and domestic subsidies for agricultural products could strengthen competitive pressure against farmers in domestic markets. To the extent, however, that import liberalisation lessens domestic protection in industry and manufacturing and mitigates the MENA region's traditional anti-agricultural bias, and if governments use well-targeted policies such as the upgrading of rural labour skills, effective protection of agriculture may increase and the adverse effects of trade liberalisation on rural households can be offset.

In Chapter 6, Hans Löfgren, Moataz El-Said and Sherman Robinson develop a dynamically recursive, computable general equilibrium (CGE) model to analyse various trade liberalisation and domestic policy scenarios in terms of their impact on rural and urban households in Morocco. Implementation of tariff liberalisation under the EMA without other domestic policy changes results in modest growth of real GDP and slight welfare improvements for rural and urban-poor households. The removal of non-tariff barriers in conjunction with tariff liberalisation, however, leads to a major expansion in non-agricultural exports, agricultural imports and higher growth in the non-agricultural sectors. Among the most affected groups are owners of rain-fed areas and the rural poor. Two domestic policies, which can to some extent offset the negative impact of such trade liberalisation, include a non-distorting transfer programme and the upgrading of rural labour skills, resulting in a win-win policy outcome that is pro-rural and pro-poor.

In Chapter 7, Mohamed Abdelbasset Chemingui and Sébastien Dessus use a dynamic CGE model for Tunisia to assess the possibilities of restructuring agricultural policy, introducing agriculture reforms at lower cost and using the instrument of reciprocity provided by the EMA to benefit the rural economy. Despite Tunisia's comparative advantage in tree crops and related derivatives, the agricultural sector demonstrates a limited capacity for reallocation and adjustment. This, combined with the tariff-quota policy currently applied by the EU, inhibits expansion of potential commercial outlets and prevents significant welfare gains from accruing to rural communities. Yet while reduction in tariff-based protection and domestic subsidies for agricultural products induced by the EMA could strengthen competitive pressure facing Tunisian farmers in the domestic market, the abolition of tariffs on industrial products would also enhance the effective protection of agricultural sectors. To the extent that the EU improves access for Tunisian agricultural products, reform of this sector is attainable in conjunction with benefits for European producers of agricultural and industrial goods and limited welfare losses among rural Tunisian households.

Part Three. The Optimal Mix of Regional Trade Agreements (RTAs)

Two potential shortcomings of EMAs include the lack of explicit commitments in the areas of harmonisation and upgrading of customs procedures on the part of MENA countries and potential hub-and-spoke effects. Although the EMAs include

technical and financial assistance to ensure greater harmonisation and upgrading of customs, standards-related institutions and infrastructure, individual MENA partners make no explicit commitments to take action in these areas. Nor do these agreements commit countries such as Egypt to take any actions to liberalise access to their services markets or to grant a general right of establishment for foreign investors. An important additional consequence of the EMAs lies in the potential emergence of hub-and-spoke effects created by overlapping bilateral free trade areas. To the extent that countries such as Morocco and Tunisia implement FTAs with the EU but maintain barriers between themselves, the hub (EU) effectively becomes the pole of attraction for FDI, because goods produced in the hub can be sold throughout the RTA while goods produced in a spoke can be sold only in the hub.

To offset these shortcomings, MENA countries have the option of layering and sequencing RTAs with important trade partners to commit themselves to making progress on "deeper" forms of integration, such as the harmonisation of customs procedures to improve competitiveness overall as well as to prevent hub-and-spoke effects. In Chapter 8, Bernard Hoekman, Denise Konan and Keith Maskus use a CGE model for Egypt to explore the potential impact of an FTA between Egypt, the Arab League and the United States to determine the optimal sequencing and incremental gains of "shallow" and "deeper" integration scenarios.

While the EU and Arab states are important trade partners for Egypt, the United States is also an important source of imports. In the first scenario, Egypt implements an EMA as well as the GAFTA, while a second, shallow scenario adds an Egypt-US FTA to this mix. In the joint EMA-GAFTA FTAs, welfare gains are to the order of 1 per cent, with the additional result that improved allocation of domestic resources allows a decrease in the General Sales Tax as tariff elimination induces resources and consumption to move into sectors subject to relatively higher GST rates. A shallow FTA between the United States and Egypt would raise welfare relative to the EMA-Arab FTA by another 1.3 per cent of GDP. The most significant gains to Egypt, however, would accrue under a "WTO-Plus" agreement with the United States that goes beyond the "shallow" FTA scenarios by eliminating not only tariffs but also all the NTBs applying to both goods and services in Egypt. The motivation for this is that a WTO-Plus agreement must extend to investment and trade in services — no "opting out" would be allowed in these areas, in contrast to the EMA and Arab League agreements.

In Chapter 9, Julia Devlin and John Page explore the extent to which an Arab RTA such as GAFTA has the capacity to mitigate potential hub-and-spoke effects, to serve as a platform for accelerating trade liberalisation under the Euro Med timetable and to generate additional productivity gains. To the extent that an Arab FTA leads to trade creation through the emergence of new producers in non-traditional, non-oil exports, it can provide a mechanism for learning by exporting. Intra-industry trade in particular represents an important and rapidly growing component of regional trade among Arab states and will likely generate additional pressures for liberalisation in regional service industries. In addition, deeper forms of integration — harmonisation

of standards and reduction in barriers to the movements of technical and professional manpower among Arab states — together with the development of trade-related infrastructure can potentially reduce transaction costs and raise measured productivity. SME development and firm linkages, present notably in sectors that trade at the regional level, represent another form of deeper integration with the potential to enhance the competitiveness of domestic productive structures and improve overall productivity.

In Chapter 10, Jamal Zarrouk takes a closer look at dynamic sectors traded intra-regionally and the extent to which an Arab Free Trade Area such as GAFTA can stimulate production in dynamic sectors as well as complement trade liberalisation and domestic reforms initiated under the EMAs. For most Arab states, dynamic sectors or products with high growth in value concentrate largely in intra-regional trade among Arab states rather than trade with the EU. There is little overlap between sectors traded heavily at the intra-regional level and those represented in EU trade, such as services. Given these stylised facts, the EMAs could serve as anchors to enhance the credibility of sub-regional RTAs such as GAFTA. The combined influence of the EMAs and GAFTA would cover additional areas such as services, investment, and the temporary movement of professionals. In this vein, a broader regional liberalisation such as GAFTA would also enhance market efficiency, allowing Arab countries to face greater competition from emerging world exporters in Asia and the Central and Eastern European states.

Notes

1. In October 1999, the EU proposed that Bulgaria, Latvia, Lithuania, Malta, Romania and Slovakia join the accession negotiations underway since 1998 with Cyprus, the Czech Republic, Estonia, Hungary, Poland and Slovenia. In December 1999, Turkey was added to the list. Also in 1999, the EU signed a bilateral FTA with South Africa and later concluded a comprehensive FTA with Mexico. EU and Mercosur are currently exploring a possible FTA.
2. Yeats (1998) finds that MENA countries have a higher than average propensity to trade with each other, and for some of them, the same characterises their trade with the EU.
3. MFN barriers in the MENA region are among the highest in the world. Average taxes on trade are around 15 per cent (Hoekman and Djankov, 1998).

Part One

The Dynamics of Open Regionalism in the Middle East and North Africa (MENA)

Chapter 2

Dynamic Aspects of Euro-Mediterranean Agreements for the Middle East and North African Economies

Robert M. Stern

Introduction

With the proliferation of RTAs that has occurred in the past several years, questions naturally arise as to the motivations that countries may have in joining such arrangements and what economic benefits they may gain. The EMAs are essentially FTAs that amount to the unilateral removal of trade barriers by the individual MENA countries, given that in most cases they have already had virtually duty-free access for their exports of manufactures to the EU for a considerable time. EMAs thus can be characterised as a form of what is referred to as shallow integration, although they may also involve aspects of deeper integration insofar as they specify that MENA countries will remove or modify certain domestic barriers and harmonise particular regulations with those existing in the EU.

By entering into an EMA, a MENA country apparently expects that it will realise economic benefits. These benefits will come ostensibly from the reduction/removal of the country's trade barriers and assurance of continuing and unimpeded access to the EU market. Further, there may be an expectation of increased domestic investment and larger inflows of FDI, especially from the major EU trading partners, insofar as the country's investment climate will be improved by the locking-in of its policy reforms. If all goes well, the country may enter into a virtuous circle of growth as it experiences increases in capital formation and improvements in productivity resulting from the knowledge spillovers generated in its trade and investment relations with the economically more advanced EU partners. Transfers of income and technical assistance made available by the EU may further assist this process.

Analysis of Options for Trade and Domestic Policy Reforms

It is clear from historical experience that effective policies and institutions are crucial underpinnings for successful economic development and growth. In this light we can consider the policy options that governments have available. These options include unilateral measures, multilateral measures and preferential arrangements. The issue is the framework to use in analysing them, in particular to identify and assess the static and dynamic growth effects of the different policies.

Policies and Institutions

Abundant historical evidence reveals the crucial role that effective policies and institutions play in fostering economic development and growth. As François (1997, pp. 35-36) has noted:

> "[The] recent movement to market-based policies has…served to highlight the importance of political economy constraints in the economic reform process. As North (1990) has emphasised, not all stable policy regimes are characterised by good practice. In fact, through most of history, and across most of the world, regimes conducive to stagnation and decline have been remarkably tenacious and even robust. At this point, the fundamental problem of development economics is perhaps not so much the identification of good practices, but rather the identification of the institutional arrangements necessary for the sustainability of such practices. Not surprisingly, given the demonstrated difficulties inherent in pursuing good long-run policies both through painful short- and medium-run adjustments, and through sustained pressures of rent seeking (and rent preservation), a common theme to emerge in some of the recent development literature is the potentially positive role, at least in the economic arena, that can be played by a strong, stable central government in anchoring such policies[1]."

This then is the context in which we can consider the choice of policy options that governments have available to them.

Choice of Policy Options

It has long been recognised that it may be in a country's interest to institute policy reform and liberalisation unilaterally. England's repeal of the Corn Laws and the adoption of free trade in the 1840s is the classic illustration of unilateralism. Modern counterparts of the free-trade ideal can be found in Hong Kong, China and Singapore. There are innumerable examples of other, relatively small developing countries that have undertaken unilateral policy reforms in the past three decades in

an effort to do away with the distortionary and welfare-reducing effects brought about by policies of import substitution. Thus as, Puga and Venables (1998, p. 238) have noted:

> "Unilateral liberalisation can attract industry and bring a real gain in income. Although more intense competition has an adverse effect on profitability in the liberalising economy, import supply creates beneficial forward linkages to domestic production and promotes industrialisation…[T]hese linkages arise just from the use of imported goods as inputs; in reality these linkages might come through several channels. A recent World Bank (1994*a*) study argues that 'By opening their economies, countries gain access to more affordable consumer goods and to technologies and intermediate goods that help reduce production costs. Thus, by improving the climate for investment, liberalisation also helps to attract foreign capital. Foreign investment, in turn, can provide the technology and financing required to establish a more efficient production structure.'"

Even though countries can liberalise unilaterally, there is no guarantee that they will be able to improve their access to foreign markets so long as trade barriers exist. Thus, multilateral liberalisation carried out in the context of the GATT/WTO is an option that has merit. The multilateral option is based on the Most-Favoured-Nation (MFN) principle of non-discrimination, and concessions are negotiated on a reciprocal basis. This serves to protect the interests of small, developing countries *vis-à-vis* the large and more powerful industrialised countries, and it also provides the small countries with improved access for their exports to the large markets of the industrialised countries. Concerted action in pursuit of freer trade globally may therefore result in significant mutual benefits to all countries involved, especially if combined with unilateral liberalisation.

Entry into a preferential trading arrangement such as a Euro-Med Agreement is another option that countries may have. The questions here are why countries may choose this option and what they have to gain, especially in relation to the unilateral and multilateral policy options. The pros and cons of multilateral and preferential arrangements have been discussed in Deardorff and Stern (1994). As they point out (pp. 49-50), a number of criticisms can be levied against multilateralism and presumably in favour of preferential arrangements. These are:

> "1. The more countries that are involved in a multilateral negotiation, the more difficult and time consuming it will be to draw up a negotiating agenda and to conduct and conclude a negotiation. In view of the numerous parties involved…and the size and complexity of the negotiating agenda, individual countries/blocs may find themselves less able to focus on issues that concern them directly. It is possible furthermore that there may be foot dragging and a tendency for negotiating results to reflect the 'lowest common denominator' of the countries participating in the negotiations.

These difficulties can presumably be avoided in negotiating preferential arrangements in which fewer countries are involved and the negotiating agenda can be more readily agreed on.

"2. Because of MFN, concessions may be granted to individual countries without there being any *quid pro quo*. Free riding may thus occur, unless steps are taken to make concessions conditional.... [Preferential]…arrangements may therefore be appealing as a way of limiting free riding.

"3. …[T]he [multilateral] rules are inadequate in important respects. For example, it has proven difficult to resist the introduction of nontariff restrictive measures [e.g. antidumping] and effectively constrain the use of…subsidies….

"4. …[Multilateral negotiations have] been too narrowly focused on trade in goods and [have] not dealt effectively with...the 'new' issues of services and trade related intellectual property rights…investment measures…and environmental issues…. This suggests that [preferential arrangements]…can be more focused and tailored to specific circumstances.

"5. Asymmetries exist with respect to the influence of large as compared to medium size and small countries. Large countries may believe that the [multilateral]…system ties their hands because of the nondiscrimination and MFN principles, and, accordingly that their…economic and political interests would be better served in [preferential]…negotiations that are designed to protect their domestic firms and to open foreign markets to their exporters. Medium size and small countries, on the other hand, while recognizing the benefits of MFN, if their trade is predominantly with a single large trading country or trading bloc, may believe that they can get better and more assured access to its market by means of preferential trading arrangements rather than through multilateral negotiations."

Having articulated a number of criticisms of multilateralism, we can turn the discussion around and note some significant limitations of preferential arrangements and, by implication, arguments favouring multilateralism. Thus, according to Deardorff and Stern (1994, pp. 51-52):

"1. Perhaps the chief concern over preferential trading arrangements is that they may be detrimental to world welfare because of the trade diverting effects that may result and the potentially exploitative tariff behavior that the formation of large trading blocs may engender. However,…there is no presumption that preferential arrangements need be welfare reducing. …Also, the formation of trading blocs need not in itself lead to exploitative behavior if there is a strong sense of commitment to international cooperation among governments in the design and implementation of trade policies and to the removal of trade barriers. Of course, nothing can be guaranteed one way or the other. It will depend on the circumstances.

> Nonetheless, it might be argued that this agnostic conclusion is fraught with danger. That is, there is a case to be made that the world needs a strong multilateral system with effective rules and discipline….
>
> "2. Critics of multilateralism have pointed to the slowness and cumbersomeness of [multilateral] negotiations and thus to the greater comparative ease of [preferential] negotiations. [But] this favorable view of preferential arrangements has been questioned,… [the point being] that the serious and definitive [multilateral] negotiations are concentrated within a relatively short period of time. Also, most of the actual negotiations involve a limited number of the major trading countries/blocs. In contrast, Schott (1989) cites some specific drawbacks of preferential arrangements, in particular: …elaborating detailed and potentially costly rules of origin; and the need in any event to cover in detail the same issues as in a multilateral negotiation and to reconcile possible divergences of rights and obligations between multilateral and preferential arrangements. Further, if existing preferential arrangements are to be extended to additional countries, a whole new set of negotiations may be required each time. A case can be made therefore that it is misleading and even false to believe that it may be relatively easy to negotiate preferential trading arrangements.
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> "3. …Support for multilateralism might…be eroded if a large part of the available negotiating effort and expertise were shifted to the preferential option. Furthermore, once a preferential arrangement is created, it may become dominated by vested interests that feel threatened by, and will thus oppose, multilateral liberalisation."

It should be evident from the preceding discussion that each of the three policy options mentioned — unilateralism, multilateralism, and preferential arrangements — has some particular merits as well as limitations. It is difficult accordingly to reach an *a priori* judgement as to which policy option or combination thereof offers a country or group of countries the greatest possible benefits. This will depend upon the circumstances of each case, thus necessitating careful and detailed empirical analysis of the various options. Let us turn then to consider the analytical framework that can be used to identify the main economic effects at issue.

Analytic Framework: Comparative Statics

Following long-standard conventions, consider first the comparative static effects of changes in policies and thereafter the dynamic growth effects. Suppose, to begin with, that we have a small country that opts to reduce/remove its existing trade barriers and to undertake domestic policy reforms on a unilateral basis. Traditional analysis under conditions of perfect competition suggests that there will be an intersectoral reallocation of resources away from industries formerly protected towards export industries and a corresponding change in the country's composition of trade that reflects

its comparative advantage *vis-à-vis* its trading partners. Consumers will benefit from the realignment of domestic and foreign prices, and the nation as a whole will experience an increase in welfare. There may be some short-run domestic costs of adjustment, to the extent that factors may not be perfectly mobile. But these adjustment costs will presumably be small in relation to the welfare gains involved and can be dealt with by redistributive policies. If, instead of perfect competition, firms are imperfectly competitive and produce differentiated products, and consumers enjoy product variety, there could be even further benefits from unilateral liberalisation. Furthermore, if capital is permitted to be mobile internationally, the country may experience an increase in inward investment with further consequent beneficial effects.

How is the foregoing textbook account of unilateral policy reform altered if we now consider the multilateral policy option? If the unilateral reform was undertaken with trade barriers present in the country's trading partners, the reduction/removal of these trade barriers on a non-discriminatory MFN basis would reinforce the changes already described and further enhance both national and global economic welfare. The same would be true if trading partners instituted domestic policy reforms.

What distinguishes a preferential arrangement from unilateralism and multilateralism is that trade liberalisation and domestic policy reforms are undertaken with respect to a certain designated trading partner or group of partners. Such an arrangement could take the form of a customs union or an FTA. The FTA may be *trade creating* if it results in a shift from higher- to lower-cost sources of supply, and *trade diverting* if there is a shift from lower- to higher-cost sources of supply. Which effect will predominate depends on given circumstances. To illustrate, in Tunisia's EMA agreement, because Tunisia already has virtually free access to EU markets, the EMA would amount essentially to a unilateral removal of Tunisian barriers on EU imports and might therefore be trade diverting and thus detrimental to Tunisia's welfare. As Brown *et al.* (1997, p. 79) note:

> "When Tunisia eliminates its relatively high tariffs against all EU-members but keeps its tariffs in place against other ('third') countries, a first effect is to cause substitution away from the imports of third countries. The reason is that imports from the EU now appear cheaper to buyers within Tunisia, who no longer have to pay the tariff. But these imports are not cheaper to the country as a whole, since, if they had been cheaper, they would have been purchased before when all imports faced the same tariffs. Therefore, the country as a whole loses from this substitution.
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> "The way that this loss manifests itself within Tunisia is through the loss of tariff revenue. Initially, buyers were paying high prices for imports from the third countries, but a part of these high prices was staying within the country in the form of tariff revenues collected by the government: This tariff revenue was available to be used by the government and therefore contributed to economic welfare. …consumer incomes include …earned factor incomes plus … transfer [of tariff revenues] from the government, both of which are spent on goods and services. When tariffs against the

EU fall, consumers pay less for the imports that they now buy from the EU instead of from third countries, but they lose even more as the transfer of tariff revenue is reduced as well."

It is conceivable that the trade-diverting effects could be even greater than described, depending on whether restrictive rules of origin are put in place. A further detraction that may arise is the establishment of a hub-and-spoke arrangement in which the EU is the main beneficiary of separately negotiated EMAs that leave intact the bilateral barriers to trade between individual MENA economies.

As already mentioned, preferential tariff reduction can be trade creating and thus welfare improving. As Brown *et al.* (1997, p. 82) note:

> "Trade creation occurs when buyers substitute imports from the EU for purchases of domestically produced goods. Since these two sources both now face zero tariffs, imports from the EU must be cheaper than their domestic alternatives in order to be bought, and the country therefore gains from switching to the more efficient source. …there is no loss of tariff revenue to offset the gain experienced by the purchasers. A limited amount of trade creation can occur to the extent that imports overall are made cheaper by the tariff reduction relative to domestic goods. But a greater scope for trade creation exists if the country is also able to increase exports, for then the revenues from increased exports can be spent on imports. Tariff reductions abroad…and a more general reallocation of factors toward export sectors can therefore contribute to trade creation and cause the overall welfare effect of an FTA to become positive."

While the preceding discussion of trade creation and diversion will be familiar to trade specialists, it nonetheless serves to clarify how the forces at work in preferential arrangements can be compromised in comparison with the manner in which unilateral and multilateral liberalisation affect factor reallocation, consumer expenditures, and changes in trade. Preferential arrangements can also have positive scale and variety effects if firms are imperfectly competitive and produce differentiated products.

One final point that has been stressed by Hoekman and Djankov (1997*a*, pp. 130-132) is that:

> "An EMA may involve harmonizing regulatory regimes and administrative requirements relating to product standards, testing and certification procedures, mutual recognition agreements, common documents for customs clearance…, coordination and cooperation on linking computer systems of customs, etc. While such comparative efforts can be pursued unilaterally, formal agreements may be necessary to induce the administrative bodies involved to cooperate. The greater the share of trade with partner countries, the greater the benefits of such non-tariff barriers, which impose real resource costs. ... Some administrative barriers may not differentiate between sources of imports. If these barriers are reduced or removed in the context of an EMA, they will also reduce the costs of trade with non-EU countries. This will further increase the gains from an EMA."

An effort has been made in this section to identify the main economic effects that may result from trade liberalisation and domestic policy reforms undertaken unilaterally, multilaterally, or on a preferential basis in a setting of comparative static analysis. In principle, unilateral and multilateral liberalisation are the preferred policy options in terms of the efficiency of resource use and maximisation of consumer welfare. Preferential arrangements have the downside of possible trade diversion and therefore may not enhance welfare as much as the other options. In the final analysis, the assessment of the different policy options is an empirical matter. This paper will review a number of computable general equilibrium (CGE) modelling studies of EMAs for selected MENA economies that may help to clarify the comparative-static magnitudes involved. Yet the story does not end here, because the dynamic growth effects of the different policy options need to be considered.

Analytical Framework: Dynamic Growth Effects

This section addresses a number of dynamic aspects of the effects that changes in policies may have, concentrating especially on the special characteristics of preferential arrangements such as the EMAs that may be critical to the growth process. For analytical purposes, following Schiff and Winters (1998, p. 179), dynamics is defined "…to include both permanent increments to the rate of growth and temporary but long-lived increases of, say, more than five years as countries move from one growth path to another." The dynamic aspects to be considered include policy credibility, capital accumulation, foreign direct investment, industrial location and knowledge accumulation and spillovers.

Policy Credibility as a Pre-Condition for Growth

Fernandez and Portes (1998) is a seminal work that explores issues of policy credibility and political economy constraints. As they ask (p. 200): "Is there more to an RTA [regional trading arrangement] than meets the eye? Could the entry of a country into an RTA change the incentives, and hence the behaviour of that country, other countries, or the private sector in ways beyond the actual provisions of the agreement? And insofar as the RTA does alter future incentives and behaviour, how does it change the expectations of all parties involved?" There are apparently a number of ways in which RTAs may be beneficial. These include dealing with problems of time inconsistency, signalling, insurance, bargaining power, and co-ordination.

Time Inconsistency

Problems of time inconsistency arise (p. 203) "…if the government faces the temptation to undertake surprise trade policy actions when other first-best instruments are not available. This may lead to governments finding themselves in suboptimal equilibria if they cannot make a credible promise not to intervene." An RTA may be

helpful in dealing with time inconsistency (p. 204) "…by making the cost of even a small deviation from an agreed trade liberalisation large (either by forcing the country to exit from the agreement or by having members punish the deviating country), [which] makes it easier to overcome small temptations that culminate in a greatly distorted economy overall."

The question arises as to whether commitment could just as well be attained through the GATT/WTO rather than an RTA. As the authors note (p. 205):

> "The answer, it seems to us, must lie in the differing incentives for countries to punish a deviating member….Within GATT, the responsibility for singling out a culprit and, if the organization delivers a guilty verdict, delivering some retaliating punishment lies with the country or countries that have been hurt by the action. In a large organization with a more diffuse trade structure, this incentive is likely to be much smaller for any single member, and the process likely to be slower and the outcome more uncertain, than within a regional agreement. In an RTA it is much clearer who has the responsibility to punish, and the reputational loss from not doing so should accordingly be greater."

A further implication of time inconsistency arises when an incumbent government fears that a future government could reverse existing policies. An RTA could therefore help to resolve problems of political time-inconsistency and may even serve to strengthen the incumbent party's electoral position. This can help accordingly to sustain policy reform, and there may be advantages as well in reinforcing the commitment to democratic principles.

Signalling

Aside from time inconsistency, a government may use an RTA to signal its policy intentions, the status of its economic conditions, and its future relationships with other countries. Fernandez and Portes (p. 209) state that:

> "Two conditions are needed for a signalling explanation to make sense. First, there has to be a significant information asymmetry. That is, the government has to have superior knowledge, either about its own preferred policies or about the economy, than other agents. The information asymmetry condition is most likely to be met in cases where there is a significant degree of doubt about the government's commitment to liberalisation or reform. …Second, …, there has to be a significant cost to entering the agreement…."

Insurance

An RTA can help to insure a small member country against possible future disruptions of access, especially to the market of a large member country. A small country may be willing accordingly to enter into an RTA on relatively unfavourable terms for insurance purposes.

Bargaining Power

Joining an RTA may enhance the bargaining power of member countries *vis-à-vis* non-members. This is more likely, however, for a customs union with a common external tariff than an FTA in which members retain their sovereign external trade policies.

Co-ordination Device

Given that trade liberalisation and related policy reforms will create winners and losers, an RTA may be a means of mobilising the forces that will benefit and increasing co-operation on issues important to the interests of the participating countries.

Conclusions

The common theme running through the preceding discussion is the importance of reducing uncertainty or increasing the credibility of economic policies and policy reform. This is important, as Fernandez and Portes (p. 217) state, because: "Increased credibility makes it easier for the private sector to plan and invest. Indeed, in some cases the reduction in uncertainty resulting from an RTA may even be a necessary precondition to realising gains from liberalisation[2]." A discussion below considers whether policy credibility may be enhanced by MENA countries entering into an EMA. For now, it will suffice to view policy credibility as preconditioning the environment for increased capital accumulation and enhanced economic growth.

Capital Accumulation

The issue here is how and the extent to which trade liberalisation and domestic policy reform may affect rates of return on capital and therefore capital accumulation and economic growth. Winters (1997, p. 11) reminds us that if investment increases in response to higher rates of return, there will be "…a temporary, but generally rather long-lived, increase in growth rates as the accumulation takes place to shift the economy onto a higher trajectory: there will be higher levels of output per head once the new level of capital stock has been achieved but growth will return to its original level." Further, he notes (p. 2) that "…it is well to remember the distinction between output and welfare. Since … accumulation … requires investment, it is not free. So while future output might be higher…, total economic welfare measured over time will not increase by as much, because the investment has to be paid for in terms of foregone current consumption. It is not true to say that absolutely every increase in the rate of growth is welfare-improving."

There is a question of what model to use in analysing how investment may respond to liberalisation. Thus, for example, the simple Heckscher-Ohlin trade model would suggest that the rate of return to capital, the scarce factor, would fall in a typical MENA country that is capital-scarce. There may be several reasons why this may not be the case, however. According to Winters (1997, pp. 12-13):

> "First, trade liberalisation typically reduces the transactions costs on tradable goods more than those of non-tradable goods. Thus it is likely to shift demand and supply from non-tradables to tradables, and if, as we commonly believe non-tradables are labor intensive and tradables capital intensive, trade liberalisation will tend to increase the demand for capital more than … the demand for labor. This, in turn, will drive up the rate of return on capital. Relatedly, … increased competition in tradable goods sectors may include improvements in efficiency and declines in markups in this sector. This will cause increased demand for inputs into the tradable sector, and thus reinforce the effect above further increasing the relative demand for capital over labor.
>
> A second route through which integration might affect the rate of return on capital is through the price of capital goods. A reduction in tariffs and trading costs on imports of capital equipment will reduce the prices which industry has to pay for investment goods. This, fairly naturally, is likely to increase the rate of return and encourage greater accumulation.
>
> …As in the case of non-tradable goods, there is also the possibility that increased competition from imports in capital goods could stimulate the domestic capital goods industry to greater efficiency and less monopolistic behavior. This is an important benefit for major producers of capital goods…
>
> Third, economic integration that goes beyond tariff reductions could improve efficiency in the financial sector. If this led to reductions in lending margins it would stimulate investment by reducing the cost of funds."

The earlier discussion noted that policy credibility may be of crucial importance in shaping the environment in which capital accumulation takes place. Credibility extends beyond trade policy, of course, to include sound domestic macroeconomic and financial policies, protection of property rights, and generally effective government. Unless these conditions are present, investment responses are likely to be limited.

Foreign Direct Investment (FDI)

Recipient countries often prize FDI because of the potential growth-enhancing benefits that it may bring. As Winters (1997, p. 14) notes: "Many economists see inflows of FDI, first as harbingers of confidence in the economy and, second, as the route through which an economy can modernise — for example through access to modern technology, modern management, marketing networks and sources of inputs." Spillover effects from FDI may take the form of improving productivity in domestic firms through a kind of demonstration effect or because of increased competitive pressures. Workers and managers may also become better trained and more efficient in working in multinationals and possibly moving on elsewhere in the country.

The extent to which a preferential arrangement may help to attract FDI will depend importantly on sound economic policies in the host country. This will include stable macroeconomic conditions and policies, absence of labour strife, and a high degree of openness such that trade and financial flows can move efficiently across borders. In order to assess the prospects for FDI, it is important to be cognisant of the interrelated motivations involved. For example, some multinationals may be attracted to locate in countries with sizeable domestic markets. Others may wish to take advantage of lower labour costs and to produce for export to third markets or back to the source country. Further, in some cases, the profitability of multinationals may stem from particular firm-specific characteristics that are best exploited through FDI rather than other types of commercial arrangements. This complex of motivations thus suggests that it is difficult *a priori* to identify precisely what will generate FDI inflows in given circumstances. Also, it is by no means clear that a preferential arrangement will in itself necessarily be a crucial element in attracting FDI unless the preferential arrangement carries with it significant policy credibility along the lines discussed above.

Industrial Location

Our earlier discussion put the emphasis on the economic effects associated with unilateralism, multilateralism, and preferential arrangements involving perfectly competitive economies with different factor endowments and levels of income, and extensions to make allowance for imperfect competition, scale economies, and product variety. In contrast to this time-honoured approach, Puga and Venables (1998) have developed a modelling framework in which changes in trade policy can affect industrial location and set into motion a process of agglomeration of industrial activity that is conducive to economic development in low-income countries. As they state (p. 222):

> "We use building blocks from new trade theory and from somewhat older development economics. As in new trade theory, we focus on the location of firms using technologies with increasing returns and operating in imperfectly competitive environments. From development economics, we take the ideas of forward and backward linkages between firms. Combining these linkages with imperfect competition creates pecuniary externalities between firms, thus providing the mechanism for cumulative causation. The pecuniary externalities support existing agglomeration of industrial activity and provide a mechanism for the 'takeoff' of newly industrializing economies."

To illustrate the Puga-Venables modelling framework, divide the world into two industrialised countries (North) and two developing countries (South). Assume a perfectly competitive agricultural sector and an imperfectly competitive manufacturing sector in each country and that manufacturing is nascent in the developing countries. Trade barriers are exogenously given in each country. Now suppose that one of the southern economies engages in unilateral import liberalisation. As a consequence (pp. 229-31):

> "…openness to imports of manufactures causes manufacturing production to start….Import competition obviously has a negative effect through the product market, particularly because access to the northern market is not liberalized. But the cheaper supply of intermediate inputs becomes the dominant force, enabling industry to become established. …the combination of low wages and low-cost intermediates…is sufficient to lead to industrialisation."

Alternatively, assume that multilateral trade liberalisation takes place in all countries. As global tariffs are lowered, it becomes profitable to begin manufacturing in the South insofar as imported intermediate goods are cheaper and there is now access to the large northern market. Only one of the two southern economies will industrialise, since once the process of industrialisation is started, the cost and demand linkages will reinforce the industrial agglomeration. As global tariffs are lowered further, the conditions for industrialisation in the second developing country will become favourable. The shares of world industry in the southern countries will thus increase as the process of industrialisation unfolds. Multilateralism will bring about a greater degree of southern industrialisation than unilateralism because of the opening of the markets in the northern countries.

Now consider the formation of a preferential trading arrangement (PTA) between one of the southern countries and the North. Puga and Venables conclude (pp. 233-37) that the PTA results in a larger share of industry in the liberalising southern economy as compared to unilateralism and multilateralism:

> "The spread of industry is larger because the southern economy benefits from both improved access to the large northern market and the low cost of northern intermediates. The liberalizing southern economy suffers from more competition from northern firms, but, because southern wages are lower, the balance of the improved reciprocal access favors the South. This spread of industry is associated with a large fall in the North's share of industry… Compared with the other arrangements, the other (not liberalizing) southern economy loses because it does not attract any industry…"

The last point mentioned suggests that there will be an incentive for the second southern country to join the PTA. Puga and Venables analyse other trading arrangements besides those noted above. Their modelling framework is purposefully simplified to focus on the spread of industrial agglomeration, and they use simulations to illustrate their analytical conclusions. They acknowledge that they have abstracted from issues of policy credibility and political economy constraints and from the forces determining capital accumulation and foreign direct investment. Further, they do not consider more complex structures of protection and the possibility of trade diversion that have been noted in our earlier discussion. While they highlight the potential superiority of PTAs over other policy options, clearly more research is needed to determine what the facts are that are at issue with the different trading arrangements.

Knowledge Accumulation and Spill-overs

Consider now the possible impact that trade has on economic growth due to the accumulation of knowledge and associated improvements in factor productivity and the possible spillover effects that may be transmitted from advanced to less developed countries. As noted in Vamvakidis (1998, p. 251), a large empirical literature concludes that free trade and growth were positively correlated, especially during the 1970s and 1980s. Presumably, such trade would generate positive spillover effects.

There are several channels through which trade may lead to faster growth (p. 253):

> "…trade increases innovation through economies of scale, technological spillovers, and elimination of the replication of research and development (R&D) in different countries. …[I]nnovation of new products is a positive function of past innovations, which represent the stock of knowledge. International trade provides access to a large international market, to advanced technology, and, therefore to a larger stock of knowledge, leading to more innovations and faster growth. This implies that a country benefits from free trade with large economies and an advanced stock of knowledge, assuming that technological spillovers are absorbed to the same degree across countries."

The earlier discussion of the role of capital accumulation and foreign direct investment in fostering growth raises the question of whether the sources of growth are more likely to result from greater capital accumulation or from improvements in factor productivity. This is of course an empirical question. Further, it is not clear that trade *per se* is necessarily the only force behind spillover effects. Thus, as Winters (1997, p. 8) notes in his discussion of the phenomena of and evidence on convergence over time in levels of income per head in different countries:

> "…convergence [in total factor productivity growth] arises from contacts and spillovers rather than incentives to accumulate physical capital. It might also be due to the stimulating effect of overseas competition performance, to the direct consequences of technology improvements through FDI, or even to the mobility of highly skilled labor, be it permanent or temporary."

While the precise channels by which spillovers may occur remain ambiguous, there is nonetheless reason to believe that spillovers have central importance in the growth process. The question then is how developing countries such as those in the MENA region can best exploit them. That is, would MENA countries be better off by expanding their trade with large and open industrialised economies on a multilateral or on a preferential basis? The analysis returns to this question below.

Ex Ante Assessments of the Euro-Med Agreements

The preceding sections have been devoted to an analysis of options for trade and domestic policy reform and the comparative static and growth effects involved. Since many of the issues raised cannot be resolved clearly on *a priori* grounds, it is necessary to look at the available empirical evidence with reference to the MENA economies, concentrating in particular on the effects that EMAs may have upon them. This is by no means an easy task since the existing EMAs have been in effect for short periods and others are still in the process of negotiation. This section reviews briefly the *ex ante* CGE modelling results for selected MENA countries as well as some qualitative analyses that have been done.

CGE Modelling Assessments

Table 2.1 summarises the main findings of a number of CGE modelling assessments of alternative liberalisation scenarios for Morocco, Tunisia and Egypt. CGE models are useful for analysing the economic effects of various types of trade liberalisation and related policy changes. They can incorporate economy-wide relationships both within and between countries and provide numerical estimates of the aggregate effects of different policies as well as details on how individual sectors may respond. The results indicated in Table 2.1 cannot be compared precisely because the models differ somewhat in conceptual structure, and the computational scenarios are not uniform. Nonetheless, the results provide a reasonably good indication of the likely comparative static effects of the different trade policy options shown[3].

The CGE analysis for Morocco by Rutherford, Rusträm and Tarr (1993) suggests that unilateral removal of import protection by Morocco would increase welfare by 2.06 per cent to 3.12 per cent, depending on the elasticity of supply assumed for the resource sectors. Comparable welfare increases are 1.70 per cent to 2.38 per cent for an FTA with the EU, suggesting that unilateral liberalisation would produce larger welfare gains. Presumably, the gains from multilateral liberalisation would be even greater than those indicated.

Two CGE analyses have been done for Tunisia. Rutherford, Rusträm and Tarr (1995) provide results for scenarios involving elimination of Tunisian tariffs and NTBs on imports from the EU, improved access of Tunisian agricultural exports to the EU, harmonisation of standards, and improvements in the efficiency of trade-related activities. Taking all of these together, they estimate that an FTA between Tunisia and the EU would increase Tunisian welfare by 3.11 per cent in the short run, with sector-specific capital, and 4.65 per cent in the long run with mobile capital. A multilateral liberalisation would increase Tunisian welfare by an estimated 3.71 per cent to 5.33 per cent.

Table 2.1. ***Ex Ante*** **CGE Modelling Results of Alternative Trade Liberalisation**
Scenarios for Selected MENA Economies

Morocco

Rutherford, Ruström and Tarr (1993) – Based on 39-sector CGE model, with constant returns to scale, a 1980 Social Accounting Matrix, 1991 tariffs adjusted for duties collected, VAT replacement tax to offset loss of tariff revenue, Armington assumption but fixed terms of trade, and high (H), medium (M), and low (L) elasticity of supply in resource sectors.

	% Change in Welfare		
Scenarios	H	M	L
Unilateral removal of import protection against all imports	3.12	2.37	2.06
Free trade agreement with the EU, including increased export prices for citrus fruits and vegetables	2.28	1.52	1.20

Tunisia

Rutherford, Ruström and Tarr (1995) – Based on 19-sector CGE model, with constant returns to scale, 1990 input-output matrix, 1993 tariff rates adjusted for duty collections, VAT replacement tax to offset loss of tariff revenue, Armington assumption, and allowance for harmonisation of standards with the EU and improvements in the trading environment through more efficient telecommunications and financial services. Short-run with sector-specific capital and long-run with mobile capital.

	%Change in Welfare	
Scenarios	Short Run	Long Run
Elimination of tariffs on all imports from EU	0.50	1.56
Elimination of NTBs on all imports from EU	0.08	0.15
Improved access to agricultural markets in EU	0.20	0.14
Harmonisation of standards	1.14	1.31
Improvements in efficiency of trade related activities	1.20	1.33
All expected effects from an FTA with the EU	3.11	4.65
FTA with the EU plus 100% across-the-board tariff liberalisation	3.71	5.33

Tunisia

Brown, Deardorff, and Stern (1997) – Based on 29-sector CGE model, with perfect competition in the agricultural sector and monopolistic competition with free entry in the manufacturing and services sectors, 1990 input-output matrix and base year for other data, pre-Uruguay official (statutory) tariff rates, revenues from tariffs assumed to be redistributed to consumers, and endogenous allowance for economies of scale and product variety. The model has eight countries/regions, including Tunisia, Greece/Portugal/Spain, France/Italy, and the rest of the EU.

	Percentage Changes			
Scenarios	Terms of Trade	Welfare	Real Wage	Real Return to Capital
Free trade, with sector-specific capital: trade only	-5.0	-0.2	2.5	6.6
Free trade with sectorally mobile capital: trade only	-4.9	3.3	-1.7	6.5
Free trade with sectorally mobile capital: trade and FDI	-7.0	-0.1	4.6	7.1
Free trade with sector specific capital: trade and FDI	-5.1	0.9	3.5	6.6
Free trade with sector specific capital and capital tax: trade and FDI	-5.1	1.0	3.6	6.6

Table 2.1. contd.

Egypt

Konan and Maskus (1997*a*) – Based on 38-sector CGE model, with perfect competition, 1989-90 input-output table, 1994 trade and tariff rates based on duties collected, alternative replacement taxes to offset loss of tariff revenues, and Armington assumption. The model includes Egypt, the EU, United States, MENA, and rest-of-world. Allowance is made for reductions in administrative trade costs.

Scenarios, with Prior Trade Reform and Lump-Sum Tax Replacement	Percentage Change			
	Welfare	Real Wages Prod. Workers	Non-Prod. Workers	Real Rental Rate Mobile Capital
Unilateral tariff elimination against all trading partners, including lower red-tape costs of imports	2.7	8.1	10.4	9.0
Reduction of red-tape costs of imports and exports	1.9	4.7	5.7	5.5
FTA with the EU	1.9	6.5	8.1	7.3
FTA with the EU, US, and MENA and common 10% tariff on imports from ROW	2.4	7.1	9.0	8.0

Egypt

Dessus and Suwa-Eisenmann (1998) – Based on 30-sector CGE model, with perfect competition, Social Accounting Matrix using 1991/92 input-output table updated to 1995, single household with homogeneous labour, three different capital stocks, and four trade partners (EU, NAFTA, South-Mediterranean Rim, and rest-of-world). The model employs sequential equilibria running for the period, 1995-2010.

Scenarios	%Change in Welfare from Benchmark 2010
1. Benchmark scenarios for growth, 1995-2010	--
2. Reduction of import tariffs on EU manufactures	-0.18
3. Scenario 2 plus EU capital transfers to Egypt and more secure market access in EU for Egyptian exports of manufactures	-0.49
4. Scenario 3 plus export-led externality that increases capital and labour productivity	5.24
5. Scenario 4 plus unilateral liberalisation with rest-of-world	4.60

The CGE model simulations for Tunisia by Brown, Deardorff and Stern (1997) focus on an FTA between Tunisia and the EU, with allowance for sector-specific and mobile capital and possible changes in FDI inflows. The FTA results for sector-specific capital indicate a welfare decline of 0.2 per cent, thus suggesting possible trade diversion. With mobile capital, however, there is a 3.3 per cent increase. It is conceptually difficult to incorporate FDI into CGE models, but on the basis of assumptions about how FDI inflows might respond to changes in rates of return, Brown *et al.* conclude that welfare effects range between –0.1 per cent and –1.0 per cent. These results reflect worsened terms of trade as Tunisian exports expand to enable servicing of the FDI inflows. Brown *et al.* did not simulate either unilateral or multilateral liberalisation options for Tunisia.

Two CGE analyses also exist for Egypt. Konan and Maskus (1997*a*) estimate a 2.7 per cent increase in welfare with unilateral liberalisation against all trading partners, including allowance for the lowering of red-tape costs of imports. Taking account of

the lowering of red-tape costs for both imports and exports yields an estimated welfare increase of 1.9 per cent. An FTA between Egypt and the EU that involves both removal of tariffs and NTBs and the lowering of red-tape costs produces the same welfare gain of 1.9 per cent, suggesting the possibility of trade diversion. The final simulation refers to a broadening of an FTA to include the EU, United States and the MENA economies, together with a common 10 per cent tariff on imports from the rest of world[4]. The resulting welfare increase of 2.4 per cent is roughly comparable to that for the unilateral liberalisation option.

Dessus and Suwa-Eisenmann (1998) first calculated a benchmark scenario based on sequential equilibria for 1995-2010, using assumed values of exogenous macroeconomic and policy changes. They then calculated a number of scenarios in relation to the 2010 benchmark. Their Scenario Two refers to removal of Egyptian import tariffs on EU manufactures and shows a welfare loss of 0.18 per cent. With an increase in EU financial transfers and improved market access in the EU for Egyptian manufactured exports assumed in Scenario Three, a welfare increase of 0.49 per cent occurs. In order to make allowance for possible dynamic productivity gains, the authors adapted their model to include an export-led externality in which increasing exports of manufactures enhance the productivity of physical capital and labour. Thus, Scenario Four produces a welfare improvement of 5.24 per cent, which reflects how significant the dynamic productivity improvements may be. Finally, in Scenario Five, unilateral liberalisation with the rest of the world coupled with the export-led externality indicates a smaller increase in welfare than does Scenario Four, due mainly to the decline in tariff revenues[5].

The foregoing CGE modelling results conform fairly well to *a priori* expectations. They suggest that the unilateral and multilateral liberalisation options produce greater comparative-static welfare gains than FTAs. In themselves, FTAs can divert trade and reduce welfare in the short run, but may yield significant welfare gains in the long run. Finally, to the extent that trade liberalisation is accompanied by a reduction in the costs of administering import/export trade, greater facilitation of trade through liberalisation of financial services and telecommunications, and dynamic productivity improvements, the welfare gains will be even greater.

Other Assessments

Hoekman and Djankov (1997*a*) analysed the details of the 1995 EMA negotiated with Tunisia and considered the implications of this EMA for Egypt. As they note (p. 133), the Tunisia-EU EMA has the following major elements:

1) Political dialogue.

2) Free movement of goods — Liberalisation will occur mostly on the Tunisian side because Tunisia already benefits from duty-free access to EU markets for manufactured goods. Tunisian tariffs on particular groups of products will be reduced in stages over a 12-year period, with the reductions back-loaded for

goods with the highest average tariffs. A general safeguard mechanism is provided. The *status quo* of access of agricultural exports to the EU is locked in. Somewhat flexible rules of origin may be implemented.

3) Right of establishment and supply of services — The EMA does not explicitly address commitments on these matters.

4) Payments, competition and other economic provisions — There is a 5-year period for implementation of rules.

5) Economic and social co-operation — The emphasis is on upgrading Tunisian infrastructure and providing support for restructuring of the economy.

6) Financial co-operation — There is a link between EMA implementation and the provision of financial resources by the EU, with specific details to be determined.

7) Institutional provisions — An Association Council is responsible for implementation and operation of the EMA, including dealing with disputes. Details have to be worked out.

The authors provide (p. 141) an overall evaluation of the Tunisian EMA as follows:

> "The transition path to free trade with the EU is a long one, with liberalization of goods competing with domestic production only starting five years after the entry into force of the agreements. By lowering tariffs on intermediates and capital goods first, domestic industries are granted some up front compensation for the adjustment costs that must be incurred later, and are given time in which to restructure. The tariff liberalization strategy ensures that tariff revenues will initially decline slowly, giving more time to mobilize alternative tax bases. But the backloaded nature of the tariff reductions may reduce the incentives to initiate rapid restructuring, and may create problems in implementing tariff reductions in the future…. Much therefore depends on the credibility of the EMA. This in turn depends on the extent to which complementary actions are pursued to improve the functioning of the economy. Important in this connection is the fact that the EMA does little to ensure investors of national treatment or grant the general right of establishment. …FDI is especially important in the services area, where establishment often remains the best way to contest a market. Efficient services are crucial in terms of being able to participate in the global economy By limiting commitments…, the EMA risks sending a signal that liberalization is not on the immediate agenda. It also puts the burden on unilateral efforts to move forward."

Hoekman and Djankov go on to consider the implications for Egypt of emulating the Tunisian EMA. They calculate Effective Rates of Protection (ERPs) for Egyptian sectors based on the Tunisian stages of tariff reductions as well as proportional reductions and reducing the maximum tariff rates through time. They conclude (pp. 146-49) that:

> "The results suggest that *if* nothing is done to improve the cost efficiency and quality of the service sector, the costs associated with the Tunisian approach may not be very high in comparison with alternative approaches given that it insures that industries are compensated to some extent for the lack of improvement in services. However, this is of course very much a second best situation — it would be better to reduce the inefficiency of the service sector concurrently with the reduction in tariffs.…[R]eductions in the inefficiency of the service industries will require greater competition, in part through the encouragement of FDI, which will only materialize if the regulatory and institutional environment is conducive to private sector investment. Indeed, in the absence of improvements in the legal and regulatory framework, opening up to trade with the EU may result in greater competition from imports without much in the way of new investment. If so, the potential negative impact of an EMA is significant and the political viability of its implementation may well decline."

Finally, Hoekman and Djankov suggest the desirability of Egypt taking some complementary actions outside of the EMA framework. These include reduction of MFN tariffs, reducing hub-and-spoke investment-diversion incentives, and pursuing a vigorous privatisation programme to reduce the role of the state and enhance the credibility of the liberalisation programme.

Page and Underwood (1997) consider the comparative static and potential growth impacts of the EMAs for Morocco and Tunisia. They examine in particular the possible effects on investment behaviour, particularly FDI, and the potential channels for accelerating productivity change.

For investment, the questions considered are whether the EMAs will: *i)* improve access to foreign portfolio investment and investor perceptions of macroeconomic management; *ii)* improve credibility of investment rules; and *iii)* change strategic motivations for FDI. They conclude (p. 113) that:

> "…the harmonisation of laws and regulations combined with both economies' prior track record for good macroeconomic management may induce larger portfolio investments by European investors, but financial markets will require substantial strengthening if those increased flows are to be used efficiently. Expanded FDI will depend as much on changing strategic perceptions of investors and reductions in bureaucratic impediments to business as on macroeconomic stability and credible rules."

Page and Underwood calculate measures of total factor productivity (TFP) for an 85-country sample and conclude that both Morocco and Tunisia lag substantially behind the European economies. The same is true for TFP in a number of sectors reported for Morocco. In considering whether the EMAs will improve the acquisition of technology, they consider the potential benefits flowing from: *i)* imports of new, technologically superior equipment; *ii)* inward FDI; *iii)* technology licensing; and *iv)* transfer of non-proprietary technology. They suggest that the benefits of certain

types of FDI may be limited, as there is no guarantee that there will be technology spillovers from multinational firms and that these firms may be hesitant to make their technology easily accessible. Information provided by purchasers of exports and programmes for technological upgrading is considered to be especially important.

Overall, Page and Underwood conclude (p. 121) that:

> "…[While] the EU integration agreements with Morocco and Tunisia…offer both countries an important opportunity to accelerate growth and raise incomes towards Southern European levels, substantial benefits will not accrue to each country automatically. What can Morocco and Tunisia do to ensure that the EU agreements fulfil their promise? First, they can accelerate and generalize the liberalization of trade embodied in the agreements. Second, they can move aggressively to improve the investment climate; and third, they can adopt policies intended to accelerate the rate of productivity change."

Galal and Hoekman (1997*a*) address how Egypt can best achieve the maximum benefits from a partnership agreement with the EU[6]. They view the key elements of the growth process as follows (p. 284):

> "…the evidence is abundantly clear that beyond the initial conditions in a given country, policies matter. Policies can foster the accumulation of capital, improve the allocation of resources, and contribute to productivity growth. Our reading of the literature and the empirical evidence suggests that the key to the accumulation of physical and human capital is savings, domestic and foreign. The key to the efficient allocation of resources is openness of the economy to trade and financial flows. And the key to productivity improvement is competition (domestic and international), private ownership and the acquisition of technology."

To evaluate how an EMA for Egypt might work, Galal and Hoekman focus on the foregoing elements of the growth process. With respect to the openness of Egypt's trade regime, they identify the key issue as the lowering of trade-related transactions costs. The importance of this has already been noted from the Konan-Maskus CGE calculations cited in Table 2.1. The question then is how vigorously this objective of lowering trading costs will be pursued and whether and how the necessary institutions can be created or improved.

As the earlier discussion noted, fostering more investment is crucial to the growth process. An EMA for Egypt conceivably could influence investment positively, depending on how expectations are affected and whether the credibility of policy reform is locked in, including the right of establishment and national treatment. It is also important that the administrative costs of trade be reduced, trade barriers be lowered with respect to other countries, and investment in services be especially encouraged. Further, measures should be instituted to encourage productivity growth more directly, including arrangements for outsourcing inputs and re-exporting to the EU. Finally, issues of competition policy need to be addressed so that markets can be made more contestable, particularly in key services sectors.

An EMA in itself may not be the key to greater growth for Egypt. Other, complementary policies will be required, as Galal and Hoekman (pp. 303-04) note:

> "Increasing savings and investment in productive activities is key in the medium term. For this, Egypt should increase public sector savings (by reducing the size of the public sector) and reducing the tax burdens (by lowering tax rates and improving tax administration). In addition, a comprehensive privatization effort is crucial for fostering national savings (public and private), encouraging private sector investment and the repatriation of capital. Greater openness and exchange rate reform are also essential for fostering savings and domestic competition and promoting manufactured exports.
>
> "…[T]he set of recommended policy reforms should be designed and pursued in a credible, comprehensive and consistent fashion to be successful. The policy initiatives have to be *credible* to evoke a sustained investor response (especially from foreign investors) and overcome cynicism bred by years of patchy implementation and wavering commitment. They have to be *comprehensive* to have their full impact and signal that the effort is not selective and piecemeal. Finally they have to be *consistent* to ensure that they can be implemented without being derailed by internal contradictions."

The final study considered here is the effort by Winters (1997) to assess the possible dynamic benefits of an EMA for Lebanon. Winters first reviews the experience of the accession of Greece, Portugal and Spain to the EU and implications for Lebanon. He concludes that both Portugal and Spain showed strong improvements in their economic indicators with EU accession whereas Greece did not. The differences can be attributed to credible programmes of economic reform, thus suggesting that Lebanon would be best advised to concentrate on the effectiveness and credibility of its macroeconomic policies in particular.

With respect to trade, FDI, possible spillover effects and the convergence of output per head, Winters notes that most of the beneficial effects have occurred primarily in relations among already advanced countries rather than between advanced and developing countries. This is not to suggest that Lebanon and other MENA countries would not benefit from the dynamic effects involved in expansion of trade and FDI associated with an EMA, but there is nothing automatic about this. Indeed, Winters points out that there might be something akin to trade diversion that could result if trade were shifted away from advanced countries like the United States and Japan, which have the highest stocks of knowledge accumulation, towards the EU, which has lower stocks.

A further question is whether an EMA will increase the rate of return to investment in Lebanon and thus encourage capital accumulation. The rate of return might be increased through a number of different channels. Most important is that Lebanon institutes effective domestic policies that will create a favourable climate for

both domestic investment and FDI. So long as this is the case, and given that Lebanon may be in a favourable position to undertake reforms in its financial sector and is well endowed with human capital, prospects for capital accumulation appear to be favourable. Finally, Winters notes the strong potential of Lebanese migrants residing abroad. If an EMA were to succeed in harnessing the skills and entrepreneurial activities of these migrants, there could well be further beneficial growth effects as a result.

Conclusions and Policy Implications

This paper has addressed options for trade and domestic policy reform, including unilateral measures, multilateral measures, and preferential arrangements such as the EMAs. In evaluating the economic effects of these measures, it has given attention to the comparative-static and dynamic-growth frameworks that can be used to analyse the different policies. A review of some CGE modelling studies of the EMAs for Morocco, Tunisia and Egypt suggested that there could be some trade diversion, but significant welfare gains might nevertheless occur in the long run and with allowance for reductions in administered trade costs, harmonisation of standards, improvements in trade facilitation and export-related, dynamic productivity effects.

Qualitative analyses of EMAs for the aforementioned countries and Lebanon identified the various channels through which dynamic growth effects could be realised. A common theme running through these analyses was that the growth benefits of the EMAs would not necessarily be realised automatically. Rather, it was emphasised that individual countries should institute effective domestic policies to anchor the setting in which liberalisation would take place. Furthermore, to obtain the maximum benefits, complementary measures were recommended so that individual countries could align their foreign trade and investment policies more closely on a multilateral basis with the global trading community.

Clearly, the next step in the individual MENA countries is to move beyond these broad generalisations to modify and redesign existing institutions and policies along the lines suggested in the qualitative analyses that have been reviewed. This of course is not an easy matter, given that decisions must be made in a political and social context of competing interest groups with conflicting objectives and influence. Yet, so long as governments remain fixed on the long-run goal of economic and social betterment of their citizenry, their policy designs and dictates will be self-reinforcing in the continued pursuit of efficiency, equity and growth objectives.

Notes

1. Along similar lines, see Hall and Jones (1998) and Olson (1996).

2. See Brunetti, Kisunko and Weder (1998) for an empirical study of the credibility of rules and economic growth, based on firm-level survey data for 73 countries.

3. This presentation concentrates on the overall effects of the policy options. The individual studies can be consulted for the detailed results of the sectoral effects.

4. For a further elaboration of this simulation that focuses on an FTA between Egypt and the United States, see Hoekman, Konan and Maskus (1998).

5. Dessus and Suwa-Eisenmann (1999) use the same model, adapted to allow for labour-market segmentation and unemployment and inward FDI in an EMA between Egypt and the EU. They note the need for Egypt to introduce labour-market reforms in the course of trade liberalisation so that manufacturing firms may be induced to adopt more labour-intensive technologies, thereby creating more employment opportunities for Egyptian workers.

6. For related discussion and analysis in the context of a prospective Egypt-U.S. FTA see Galal and Tohamy (1998), Lawrence (1998), and Hoekman, Konan and Maskus (1998).

Chapter 3

The Nature of Euro-Mediterranean Trade and the Prospects for Regional Integration

Agnès Chevallier and Michael Freudenberg

Introduction

To date, preferential access of Mediterranean manufactured products to the European Union market has produced weak results in terms of increasing market share and adapting export structures better suited to European demand. The relatively small gains in EU market share by the Mediterranean countries can be explained by the sectoral composition of their exports, which are insufficiently adapted to the changing pattern of world, notably European demand (Bensidoun and Chevallier, 1996). Petri (1997) notes that there appears to be a "quality gap" if not a "quantity gap" in Southern Mediterranean trade compared with more dynamic developing areas. In fact, the region is relatively weak in more sophisticated manufacturing sectors that feature prominently in the exports of more dynamic competitors.

The North African countries' preferential, non-reciprocal trade regime in the European market has not contributed to the evolution of export structures better adapted to European demand. The regional division of labour, based on wage differentials and geographical proximity, strongly shapes the specialisation of Mediterranean countries. The peculiar nature of Euro-Mediterranean trade in manufactured products stands out in comparisons with other areas in the world. For many emerging "Southern" countries, manufacturing export (and import) patterns with "Northern" neighbours are becoming increasingly similar to trade patterns with the rest of the world. This is not the case with Mediterranean exports, particularly the Maghreb's exports to the EU. The sectoral structure of these exports is close neither to the "supply" of North African products to the rest of the world nor to European "demand" satisfied by other countries (Bensidoun and Chevallier, 1998).

The EMAs could direct the production activity of Mediterranean countries into areas of greater value added and stimulate their growth, provided that they lead to greater regional integration, above and beyond simple free trade. Improved access to imported inputs, combined with trade specialisation more suited to indigenous comparative advantage and the dynamic effects of a more competitive environment, could have a positive impact on the structure of North African trade. The elimination of trade barriers between Mediterranean countries, stimulated by the EMAs, could help to alleviate some of the obstacles to expansion in domestic and foreign investment. The strength of these dynamic effects will depend, however, on macroeconomic and microeconomic policies adopted in conjunction with trade liberalisation policy.

This paper presents a detailed analysis of trade patterns between four Mediterranean countries (Morocco, Tunisia, Egypt, Turkey) and the European Union (EU) to determine the exact nature of Euro-Mediterranean trade as well as to identify potential areas for upgrading specialisation and fostering growth. It contrasts the results for the Mediterranean countries with those for several Central European Countries as well as with Spain and Portugal.

The Regional Division of Labour

Trade between the Mediterranean countries and Europe represents an international division of labour typical of countries with widely different income levels. Mediterranean countries' exports to the EU concentrate in primary products and consumption goods, while most imports are intermediate, mixed[1] and equipment goods[2] (Table 3.1).

Between 1988 and 1996, the composition of exports changed in the same way in each country: a relative decline in primary goods and an increase in consumption goods. This trend is more recent in Egypt than in the other three Mediterranean countries. Primary goods remain the most important category of goods exported by Egypt, but consumption-good exports are growing faster. Another trend is noticeable in Turkey, Tunisia and Morocco, however, namely growing shares of capital-goods exports[3], although a relatively low base biases its measurement, particularly in Morocco. In comparison with their EU trade, the very different composition of Mediterranean exports to the rest of the world reveals other areas of potential comparative advantage (Devlin and Page, in this volume).

Changes in the composition of imports do not appear to be as significant. Still, a number of interesting features emerge, particularly the increasing share of consumption goods in each country. In Morocco and Tunisia, this trend is quite recent and could relate to trade liberalisation in consumption goods, particularly clothing (this sector has traditionally been one of the most protected in both countries). This, of course, raises questions about changes in the level and structure of imports that could occur with Euro-Mediterranean free trade.

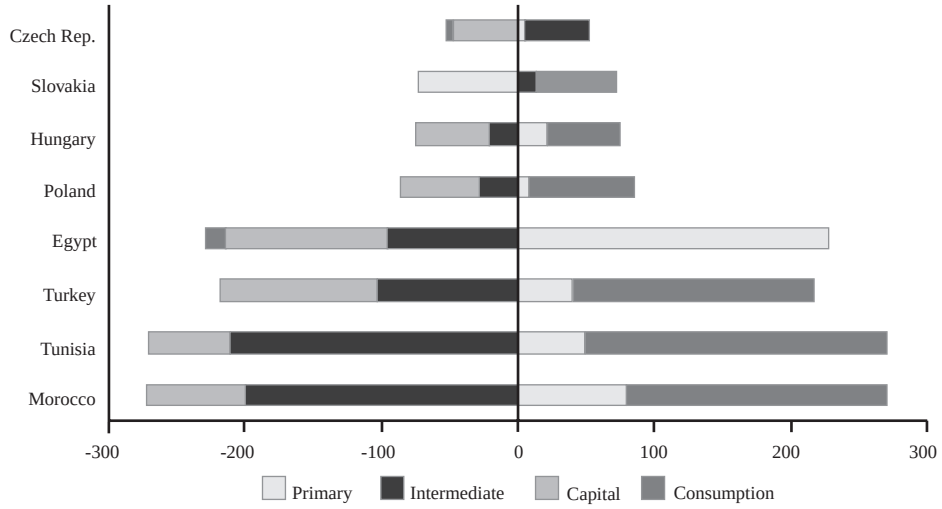
Table 3.1. **Share of End-use Categories in Trade of Mediterranean Countries**
(in percentages)

	Exports to EU		Imports from EU		Exports to the Rest of the World
	1988	1996	1988	1996	1996
Turkey					
I. Primary goods	**23.8**	**12.6**	3.6	6.5	13.5
Base manufactured goods	7.3	7.4	19.7	11.4	19.8
II. Intermediate goods	15.6	15.3	30.0	**27.7**	17.1
Mixed products	14.1	7.4	7.8	11.1	10.7
III. Equipment goods	2.2	5.3	31.3	**32.4**	6.4
Consumption goods	**36.9**	**52.0**	7.7	10.9	32.5
Tunisia					
IV. Primary goods	**18.6**	**11.0**	5.9	3.3	9.0
Base manufactured goods	4.4	2.4	9.2	5.4	30.4
V. Intermediate goods	12.5	8.6	35.5	**37.6**	25.7
Mixed products	15.5	13.4	14.7	13.4	10.1
VI. Equipment goods	6.1	8.1	18.7	**21.2**	5.7
Consumption goods	**42.8**	**56.5**	16.0	19.2	19.2
Morroco					
VII. Primary goods	**31.0**	**18.2**	5.2	7.9	24.1
Base manufactured goods	6.8	5.2	12.1	7.9	20.0
VIII. Intermediate goods	11.0	12.3	35.2	**37.8**	17.8
Mixed products	11.8	12.0	10.1	10.3	23.1
IX. Equipment goods	2.1	3.9	26.2	**21.5**	1.3
Consumption goods	**37.3**	**48.4**	11.2	14.6	13.7
Egypt					
X. Primary goods	**67.0**	**54.6**	7.8	7.9	50.5
Base manufactured goods	9.7	6.2	9.6	7.8	7.2
XI. Intermediate goods	8.9	8.6	26.8	**23.9**	10.0
Mixed products	9.1	17.6	15.5	11.8	13.5
XII. Equipment goods	2.0	2.4	27.4	**35.5**	1.2
XIII. Consumption goods	**3.3**	**10.6**	12.8	13.1	17.7

Source: CEPII-Chelem, authors' calculation.

In their trade with the EU, the Mediterranean countries appear as more specialised along the four production stages than the Central European countries[4]. The contribution of each stage to the trade balance, be it positive (revealed comparative advantage) or negative (disadvantage), is larger for the Mediterranean economies. The Mediterranean countries have positive contributions in primary or consumption goods, while the Czech Republic and Slovakia have positive contributions in intermediate goods[5] (Figure 3.1).

Figure 3.1. **Revealed Comparative Advantages in Trade with the EU by End-use Categories, 1996**



Note: In thousandths of bilateral trade.
Source: Comext, Eurostat, authors' calculation.

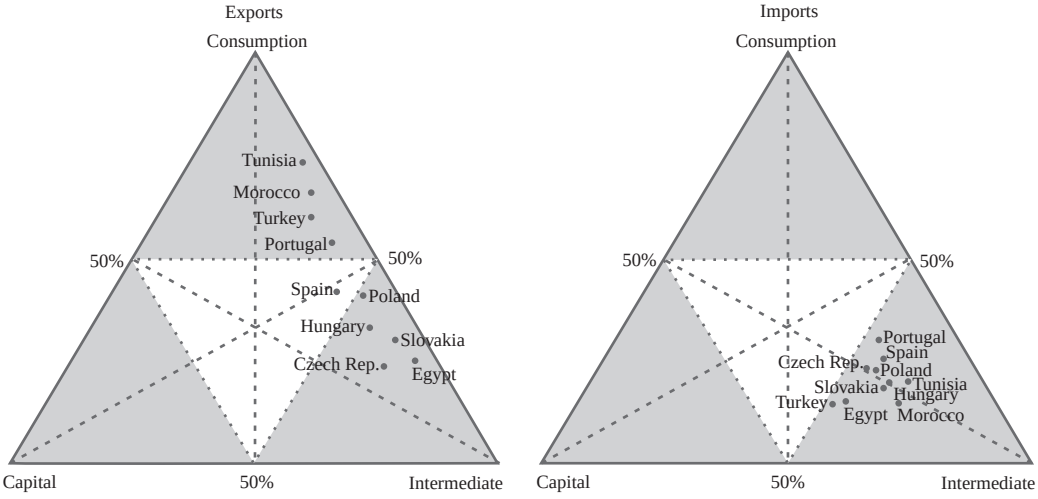
The composition of imports from the EU by end-use categories is quite similar across countries. Intermediate products constitute the main category of imports in each case (Table 3.2 and Figure 3.2). Regional differences in specialisation originate mainly on the export side, with the share of intermediate goods in exports of Central or Southern European countries being far more important than shares in Mediterranean exports. Intermediate good exports also rank first among the European countries, except for Portugal, while consumption goods are by far the most important category in exports of Turkey, Morocco and Tunisia.

Table 3.2. **Composition of Trade with the EU by End-use Categories, 1996**
(in percentages)

	Exports				Imports			
	Primary	Intermediate	Capital	Consumption	Primary	Intermediate	Capital	Consumption
Slovakia	3.4	**61.7**	5.9	29.0	2.8	**58.9**	20.5	17.8
Czech Rep.	6.9	**60.3**	10.7	22.1	3.0	**53.2**	21.4	22.3
Hungary	6.6	**53.5**	9.0	30.9	1.9	**59.9**	18.9	19.3
Poland	9.7	**46.8**	6.4	37.1	5.9	**53.8**	19.2	21.2
Spain	11.0	**41.1**	10.8	37.1	6.2	**53.4**	16.4	24.1
Portugal	3.8	37.4	6.8	**52.0**	6.1	**50.4**	15.2	28.3
Egypt	**55.5**	31.3	2.1	11.1	5.0	**52.0**	28.8	14.3
Turkey	14.0	27.3	7.1	**51.5**	5.4	**49.3**	31.7	13.7
Morocco	21.0	22.7	4.2	**52.2**	5.0	**62.3**	18.8	13.8
Tunisia	12.5	20.6	2.9	**64.0**	2.7	**63.1**	14.8	19.3

Note: The countries are ranked by decreasing share of intermediate products in exports.
Figures in bold indicate the most important end-use category.
Source: Comext, Eurostat, authors' calculation.

Figure 3.2. **Composition of Trade with the EU – Non Primary Goods**



Source: Comext, Eurostat, authors' calculation.

In general, Mediterranean exports concentrate much more in a few industries relative to Central European exports (Table 3.3). The combined weight of exports in the top five industries (NACE rev. 1) in total exports is close to or above 70 per cent for Mediterranean countries whereas it is under 55 per cent for the Central European countries.

Table 3.3. **Share of Top Five Industries in Exports to the EU, 1996**
(in percentages)

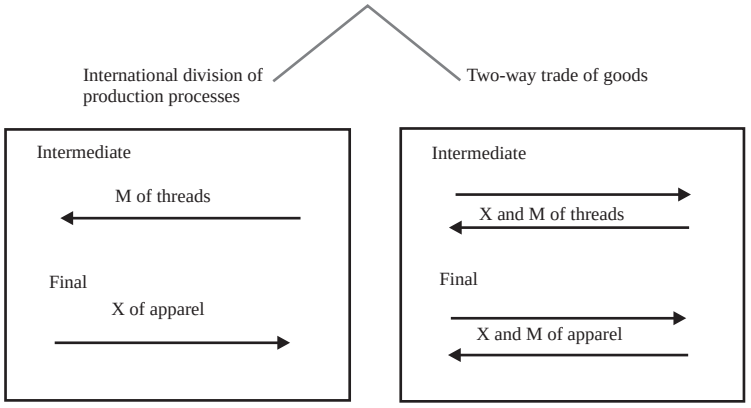
Country and NACE rev.1 industries	Primary	Intermediate	Capital	Consumption	Total
Egypt Top Five Industries	**53.8**	**20.6**	**0.0**	**8.7**	**83.1**
III. 11 Crude petroleum and natural gas	**48.3**				48.3
23 Coke and refined petroleum products		**13.9**			13.9
17 Textiles	0.2	6.7		3.2	10.0
18 Wearing apparel	0.0	0.0		5.6	5.6
01 Agriculture	5.2			0.0	5.2
Tunisia Top Five Industries	**8.5**	**11.8**	**1.1**	**55.5**	76.9
IV. 18 Wearing apparel	0.0	0.0		**49.7**	49.8
11 Crude petroleum and natural gas	8.5				8.5
31 Electrical machinery		5.6	1.1	0.0	6.7
24 Chemicals	0.0	5.9		0.1	6.0
19 Leather and footwear	0.0	0.3		5.6	5.9
Morocco Top Five Industries	**14.2**	**14.6**	**0.0**	**44.1**	**72.9**
V. 18 Wearing apparel	0.0	0.0		**36.8**	36.8
15 Food and beverages	3.6	0.9		7.0	11.5
VI. 01 Agriculture	**10.6**	0.0	0.0	0.3	10.9
24 Chemicals	0.0	8.4		0.0	8.4
32 Radio, television and comm. equip.		5.4	0.0	0.0	5.4
Turkey Top Five Industries	**11.7**	**7.1**	**4.4**	**45.5**	**68.7**
VII. 18 Wearing apparel	0.0	0.0		**28.9**	28.9
17 Textiles	0.4	6.4		**11.5**	18.3
01 Agriculture	8.4			0.2	8.5
15 Food and beverages	3.0	0.4		4.8	8.1
35 Other transport equipment		0.3	4.4	0.1	4.8
Hungary Top Five Industries	**1.1**	**25.2**	**3.7**	**20.4**	**50.4**
VIII. 34 Motor vehicles		**11.8**	0.2	2.7	14.7
31 Electrical machinery		9.0	1.5	1.1	11.6
18 Wearing apparel	0.0	0.0		8.7	8.7
15 Food and beverages	1.1	0.8		6.3	8.2
29 Machinery and equipment		3.5	2.0	1.6	7.2
Poland Top Five Industries	**0.4**	**17.1**	**1.7**	**26.2**	**45.4**
IX. 18 Wearing apparel	0.0	0.2		**12.8**	13.1
27 Basic metals	0.4	8.9			9.3
36 Furniture and manufacturing n.e.c.	0.0	0.6	0.0	8.0	8.6
34 Motor vehicles		1.8	1.7	5.1	8.6
24 Chemicals	0.0	5.7		0.2	5.9
Czech Rep. Top Five Industries	**1.5**	**30.3**	**7.1**	**6.1**	**45.0**
29 Machinery and equipment		6.3	4.6	0.8	11.7
34 Motor vehicles		3.7	0.7	4.9	9.3
31 Electrical machinery		6.5	1.8	0.2	8.5
27 Basic metals	1.5	6.8			8.3
24 Chemicals	0.0	7.0		0.3	7.3
Slovakia Top Five Industries	**0.8**	**33.0**	**2.6**	**17.9**	**54.3**
X. 27 Basic metals	0.8	**14.7**			15.5
34 Motor vehicles		5.2	0.4	8.1	13.6
24 Chemicals	0.0	9.2		0.2	9.5
18 Wearing apparel	0.0	0.0		8.6	8.6
29 Machinery and equipment		3.9	2.2	1.1	7.1

Note: Industries with a share in exports at least equal to 10 per cent in one end-use category are in bold.
Source: Comext, Eurostat, authors' calculation.

The Nature of Euro-Mediterranean Trade

Simultaneous exports and imports within the same industry are generally labelled "intra-industry trade," and typically occur among rich countries with similar levels of development and geographic proximity. Intra-industry trade is thus often regarded as a corollary of smooth economic integration. Yet it may hide two different concepts whose implications clearly differ (Figure 3.3). This difference can be detected empirically only by examination of disaggregated trade flows, i.e. flows at the product rather than the industry level (Fontagné, Freudenberg and Ünal-Kesenci, 1996).

Figure 3.3. **Intra-industry Trade can have Two Meanings**



First, the international division of production processes allows firms (as well as countries) to specialise, based on comparative advantage, in different stages of the value-added chain for the same industry (i.e. in textiles, one firm specialises in threads, another in apparel). This one-way trade tends to imply additional gains from trade relative to trade flows based on traditional inter-industry specialisation. It involves trade in intermediate goods and corresponds partly to intra-firm trade.

Second, two-way trade in products occurs through the simultaneous export and import of products having the same basic technical characteristics. It may include horizontally differentiated goods (two-way trade of varieties, i.e. exports of cotton yarns and imports of synthetic filament yarns) or vertically differentiated goods (two-way trade of qualities, i.e. exports of basic shirts and imports of high-fashion shirts). Two-way trade also leads to important gains from trade, but for different reasons, as it provides consumers and producers with a larger choice of varieties and/or qualities. The vertical differentiation of products may lead firms (as well as countries) to specialise in different quality segments within narrowly defined product groups.

To break down Euro-Mediterranean trade into these three categories (one-way trade, two-way trade of varieties or of qualities) this paper uses very disaggregated bilateral trade data[6]. The following three defined categories depend on the extent of overlap in trade and similarity in unit values (see Methodological Appendix 2).

1) *One-way trade*: no or no significant overlap between exports and imports;

2) *Two-way trade in similar products* (trade in varieties): significant overlap and small unit value differences;

3) *Two-way trade in vertically differentiated products* (trade in different qualities): significant overlap and high unit value differences.

The relative importance of these three trade types suggests the extent of complementarity versus competition between countries. It can also indicate the economic distance that separates EU countries from selected trade partners. In general, similar countries engage in two-way trade in similar products (trade in varieties), whereas different countries engage in one-way trade or in two-way trade in vertically differentiated goods (trade in different qualities). Within the EU, Spain and Portugal are interesting examples of countries that seem to have integrated successfully into intra-EU trade by gradually shifting away from "residual" (one-way) specialisation on activities abandoned by more advanced countries (Fontagné and Freudenberg, 1997). Some Mediterranean countries might eventually show a similar pattern.

The most important type of trade between EU countries and the Mediterranean as well as Central European countries is one-way trade, suggesting strong complementarity between the EU and its neighbours (Table 3.4). Some striking differences among the partner countries can be detected, however. Trade between the EU and the Mediterranean countries is, in a very large proportion, one-way trade, whereas Central European countries demonstrate significant shares of two-way trade. Two-way trade represents about one-quarter of trade for Poland and Slovakia, one-third for Hungary (as well as Portugal), and about one-half for the Czech Republic (about the same as for Spain).

Table 3.4. **Share of Trade Types in Trade with the EU, 1996**
(in percentages)

	One-way trade	Two-way trade in vertical differentiation	Two-way trade in horizontal differentiation
Spain	45.9	36.3	17.8
Czech Rep.	54.5	36.7	8.8
Hungary	62.5	30.6	6.9
Portugal	64.8	24.4	10.8
Slovakia	74.3	20.0	5.7
Poland	77.4	20.0	2.7
Tunisia	**80.9**	**15.0**	**4.1**
Turkey	**84.4**	**9.8**	**5.8**
Morocco	**91.4**	**5.3**	**3.3**
Egypt	**96.1**	**2.9**	**1.0**

Note: The countries are ranked by the share of one-way trade.
Source: Comext, Eurostat, authors' calculation.

While Euro-Mediterranean trade is mainly one-way, however, Turkey and Tunisia have higher shares of two-way trade (15.6 per cent and 19.1 per cent) than Egypt and Morocco (3.9 per cent and 8.6 per cent) (Figure 3.4). Moreover, a look at the nature of Euro-Mediterranean trade in each sector (Statistical Appendix Table 3.A1), shows that intra-industry trade is far more significant in new export sectors (electrical, electronics) than in more traditional activities. In Egypt, for example, the level of intra-industry or two-way trade with the EU is 20 per cent in electronics. Intra-industry trade also constitutes one-quarter of Euro-Moroccan trade in mechanics and more than 45 per cent in electrical products. In Euro-Turkish trade, the share of two-way trade is 20 per cent or higher in three sectors: electrical goods (20 per cent), mechanics (26 per cent) and vehicles (29 per cent). In Tunisia, two-way trade accounts for more than 46 per cent of trade with the EU in electrical goods and about 30 per cent in electronics. Tunisia is the only country in this sample that exhibits a large share of two-way trade in textiles (24 per cent).

Figure 3.4. **Share of Trade Types in Trade with the EU, 1996**

Source: Comext, Eurostat, authors' calculation.

The methodology here uses a very disaggregated classification of products, so that, for example, the regional complementarity between European threads and weaving and Mediterranean apparel does not mean intra-industry trade in the textile sector

characterised by traded goods belonging to distinct product categories. Nearly one-quarter of textile trade between the EU and Tunisia involves exports and imports of products having the same technical characteristics (i.e. knitted articles). In this particular case, goods traded are of different qualities (vertically differentiated goods, i.e. basic T-shirts against fashion sweaters). In other cases, however, two-way trade of varieties (horizontal differentiation) is quite significant: it amounts to 17.7 per cent for Turkey and 20 per cent for Morocco in mechanics and for 22.7 per cent for Tunisia in electrical equipment.

From a policy perspective, this analysis suggests real potential for the development of intra-industry trade between the EU and Mediterranean countries, leading to additional gains from trade as well as technology transfers. The nature of trade is also important for the consequences of competition between countries. Necessary adjustments to foreign competition, particularly those concerning the labour force, are easier with intra-industry competition than with inter-industry competition (which, for example, threatens workers in labour-intensive northern industries). In the past, Mediterranean countries have confronted protectionist measures from the European textile industry, and the regional free-trade agreement does not entirely rule out such an outcome. The proliferation of EMAs and adoption of the EU competition policy by Mediterranean countries does not in fact stop the EU from taking anti-dumping actions (Winters, 1996). Thus the progression of Euro-Mediterranean trade from one-way to two-way-trade could be a positive outcome.

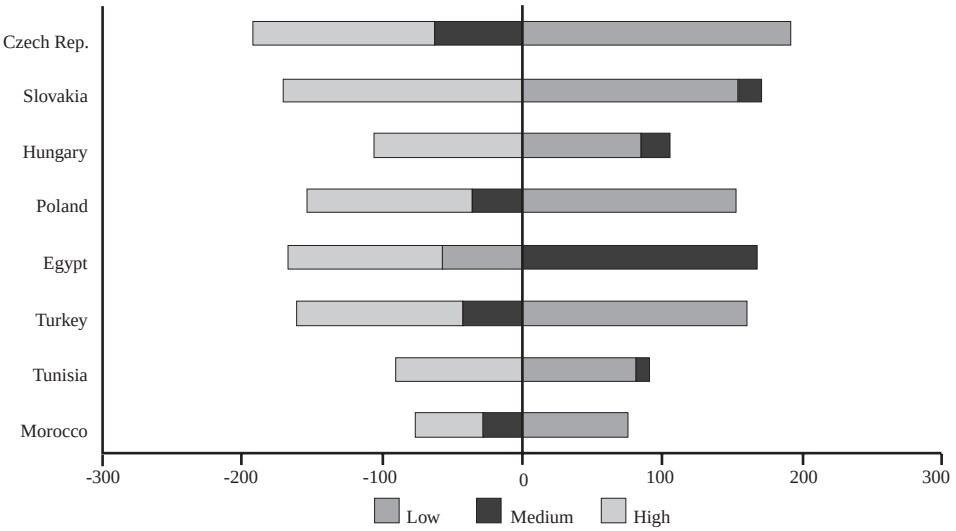
Nevertheless, the net result of increased Euro-Mediterranean integration on the nature of trade is ambiguous. If the reduction of transport costs or transaction costs more generally tends to favour the development of two-way trade, the suppression of non-tariff barriers seems to favour one-way trade, at least in the Single Market (Fontagné and Freudenberg, 1997). Deeper integration may thus partly reactivate the process of a "natural" specialisation of countries, and agglomeration economies in some cases cannot be excluded.

Euro-Med Specialisation in Market Segments

Market segmentation in terms of price and/or quality is not "neutral" from a policy point of view. Products sold at significantly different prices on the same market can be considered outputs of distinctive production functions. High quality (as revealed by high unit values) means more R&D, higher-qualified labour and a more specific organisation of internal procedures in firms. This issue has particular interest for Mediterranean countries as they face the opening of their markets and deeper integration under the EMAs. Their positions in different market segments can help to reveal the nature of their comparative advantages, which could be useful in designing the *mise à niveau* programmes.

Comparisons between Mediterranean and Central European countries do not reveal any clear-cut distinctions in revealed comparative advantage. All countries appear disadvantaged in the high-price, high-quality ranges, with comparative advantages concentrated in the low-price range (Figure 3.5)[7].

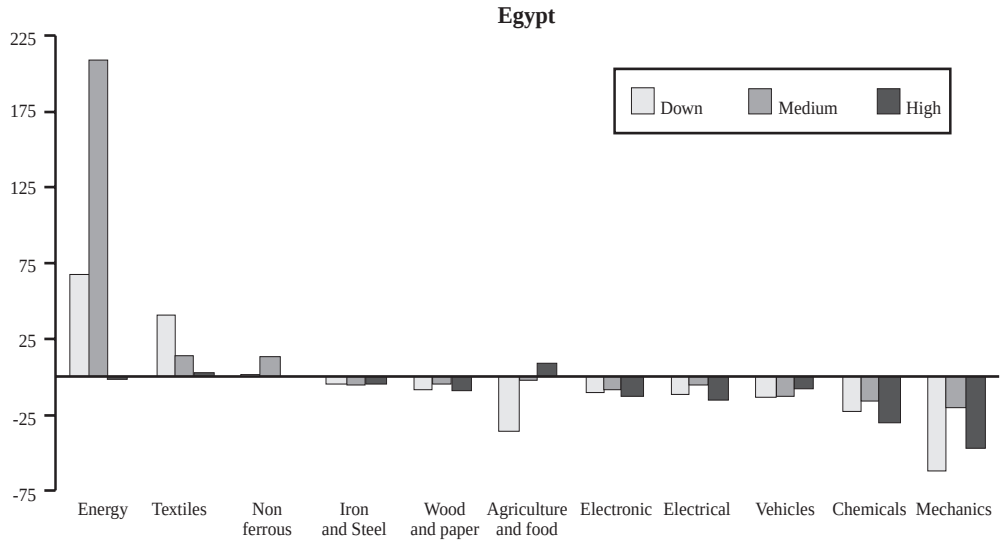
Figure 3.5. **Revealed Comparative Advantages in Trade with the EU by Quality Range, 1996**



Note: In thousandths of bilateral trade.
Source: Comext, Eurostat, authors' calculation.

For the Mediterranean countries, disadvantages in the high-quality range accrue primarily from their weaknesses in mechanics, vehicles and chemicals (Figure 3.6)[8]. On the other hand, in Turkey, Morocco and Tunisia, comparative advantage in the low-price ranges arises from a high positive contribution of textiles to trade balances, mostly in down-market goods whose unit values are at least 15 per cent below the intra-EU average. While Turkey also has a small advantage in the medium-quality and high-quality segments of this industry, Morocco is weak in the first and Tunisia in the second. Egypt's primary comparative advantage concerns energy, particularly in the medium-market range, followed by down-market textiles.

Figure 3.6a. **Revealed Comparative Advantages by Industry and Price/Quality Range, 1996**



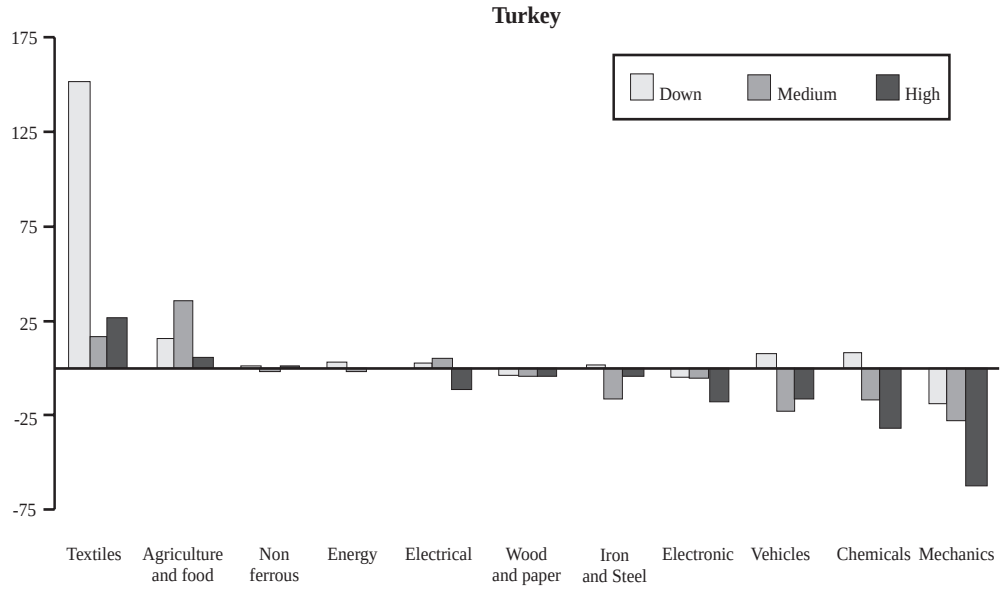
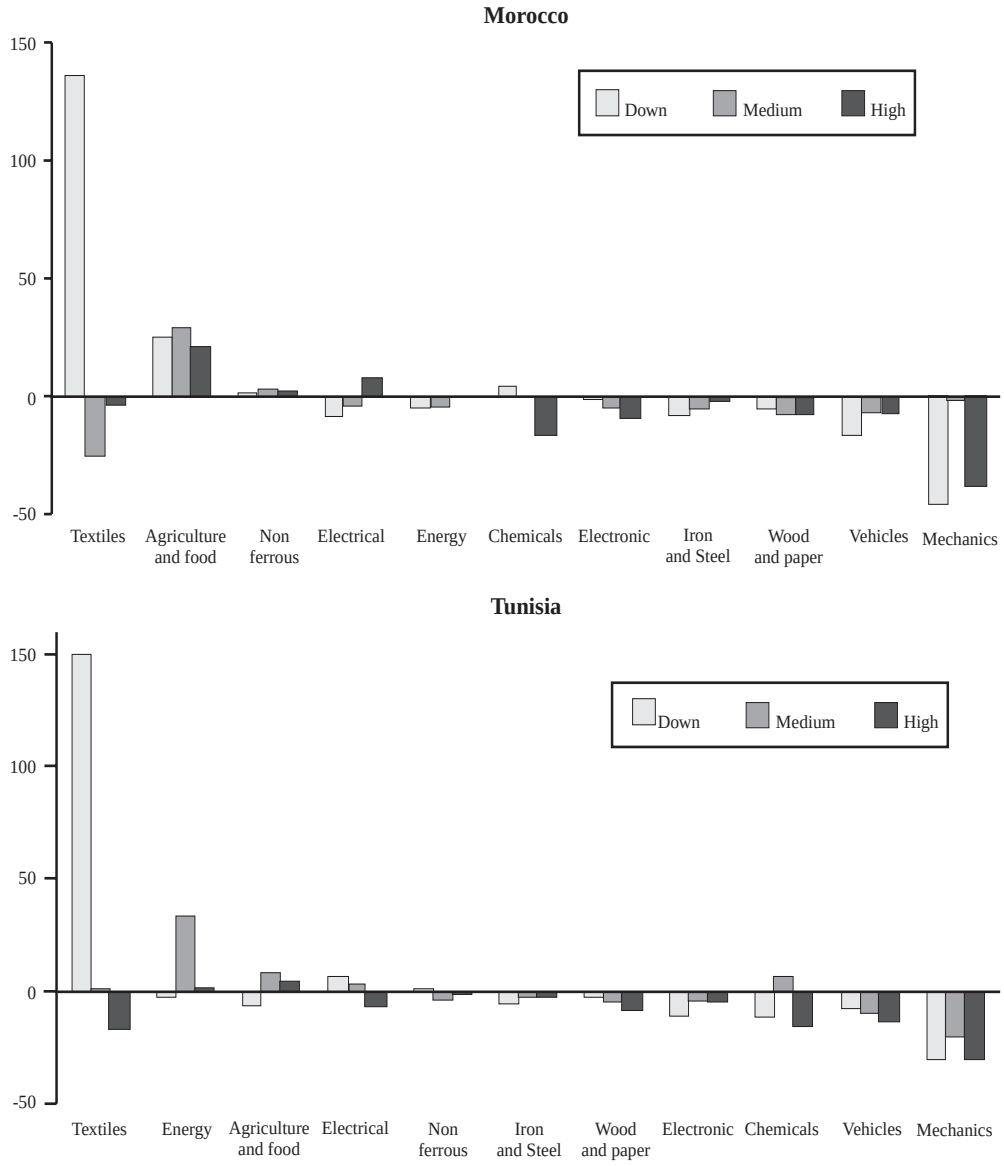


Figure 3.6b. **Revealed Comparative Advantages by Industry and Price/Quality Range, 1996**



Note: The industries are ranked from the one with the largest advantage to the one with the largest disadvantage.
Source: Comext, Eurostat,. authors' calculation.

The role of textiles in positioning Mediterranean exports in the down-market range does not obscure the better positions of other sectors along the quality range. In fact, the share of medium-quality or even high-quality goods in exports of some sectors is quite significant (Figure 3.7), particularly for vehicles (Egypt and Tunisia), electronics (all four Mediterranean countries) and electrical equipment (Morocco and Egypt). Once again, contrasting results appear between textiles and the new exporting industries that have weak shares in exports but demonstrate rapid growth (Statistical Appendix Tables 3.A3 and 3.A4). New export categories concentrate primarily in intermediate products.

The share of down-market goods in Mediterranean exports is distinctly less important for intermediate goods than for consumption goods (Table 3.5). This difference originates in part from the nature of the goods themselves. The concept of quality does not have the same meaning when applied to diversified products (consumption goods) and more homogeneous ones (intermediate goods). The price range for homogeneous goods is relatively tight, so it is not surprising that a great part of intermediate-products trade appears inside the medium-range margins.

Table 3.5. **Composition of Exports to EU by Price/Quality Range for Selected End-use Categories, 1996**

	Low	Medium	High	*Categories' Share in Countries' Exports*
Consumption goods				
Slovakia	51.7	21.0	27.2	*29.0*
Hungary	42.8	32.8	24.3	*30.9*
Portugal	27.7	49.6	22.7	*52.0*
Turkey	**68.7**	**12.5**	**18.8**	*51.5*
Morocco	**75.5**	**10.3**	**14.3**	*52.2*
Spain	22.4	63.5	14.0	*37.1*
Tunisia	**70.7**	**15.8**	**13.4**	*64.0*
Czech Rep.	71.9	14.9	13.2	*22.1*
Egypt	**75.3**	**15.9**	**8.8**	*11.1*
Poland	74.4	17.1	8.5	*37.1*
Intermediate goods				
Morocco	**47.5**	**25.0**	**27.5**	*22.7*
Spain	32.3	41.4	26.3	*41.1*
Portugal	30.2	43.8	26.0	*37.4*
Hungary	45.6	30.4	24.0	*53.5*
Tunisia	**38.5**	**43.4**	**18.1**	*20.6*
Czech Rep.	65.7	19.1	15.2	*60.3*
Turkey	**56.7**	**30.1**	**13.2**	*27.3*
Egypt	**18.1**	**72.3**	**9.6**	*31.3*
Poland	61.8	29.4	8.8	*46.8*
Slovakia	57.0	34.7	8.3	*61.7*

Note: The countries are ranked by decreasing share of the high price/quality range.
Source: Comext, Eurostat, authors' calculation.

This can explain, for example, the larger share of medium-quality products in Egyptian exports of intermediate goods: these exports consist largely of base manufactures, which are rather homogeneous. Nevertheless, the sectoral composition of the other Mediterranean countries' intermediate-goods exports is less specific, and their quality range can be compared with that of Central or Southern European countries. Such comparisons reveal that, for intermediate goods, Morocco and Tunisia engage less in low-quality exports than do the Central European countries. This suggests that Mediterranean exports are not locked into the low-quality range; the ability to export products of higher quality in intermediate goods could extend to consumption goods.

On the import side, the evidence indicates different patterns according to end-use categories of products. For consumption goods, the results do not clearly differentiate between the three country groupings; the share of low-quality products in imports goes from less than 20 per cent (Spain) to more than 60 per cent (Poland). Higher shares of down-market products in imports seem to associate with lower income levels (Statistical Appendix Table 3.A5).

On the other hand, the share of low-quality products in imports of intermediate and capital goods in the Mediterranean countries, apart from Turkey, appears to be significantly higher than in the other countries (Table 3.6). By lowering the cost of imported inputs from the EU, free trade could favour imports of better-quality products to enhance the quality of production and exports. To develop subcontracting possibilities, imports of intermediate goods used by exporting enterprises, especially in the textile industry, have already had exemption from import taxes for several years in Morocco and Tunisia. Still, the share of the high-quality range in imports of woven goods, for example, is significantly lower in these two countries (Morocco 29 per cent, Tunisia 38 per cent) than in Poland (49 per cent) or Hungary (56 per cent).

Table 3.6. **Composition of Imports from the EU by Price/Quality Range for Selected End-use Categories, 1996**

	Low	Medium	High	*Categories' share in countries' imports*
Intermediate goods				
Slovakia	21.3	23.1	55.6	*58.9*
Hungary	21.9	25.5	52.6	*59.9*
Czech Rep.	22.6	30.3	47.2	*53.2*
Turkey	**20.8**	**34.9**	**44.4**	*49.3*
Portugal	20.5	35.2	44.3	*50.4*
Poland	24.1	34.0	42.0	*53.8*
Tunisia	**33.7**	**28.6**	**37.7**	*63.1*
Egypt	**40.1**	**23.6**	**36.3**	*52.0*
Spain	21.9	43.8	34.3	*53.4*
Morocco	**34.5**	**31.3**	**34.2**	*62.3*
Capital goods				
Slovakia	23.0	31.7	45.3	*20.5*
Czech Rep.	22.3	34.3	43.4	*21.4*
Turkey	**22.1**	**37.2**	**40.7**	*31.7*
Hungary	31.3	28.3	40.5	*18.9*
Poland	31.8	27.7	40.5	*19.2*
Spain	27.4	38.5	34.1	*16.4*
Portugal	29.1	37.0	33.8	*15.2*
Egypt	**50.0**	**18.0**	**32.0**	*28.8*
Tunisia	**42.4**	**28.9**	**28.7**	*14.8*
Morocco	**57.8**	**19.9**	**22.3**	*18.8*

Note: The countries are ranked by decreasing share of the high price/quality range.
Source: Eurostat, Comext, authors' calculation.

Figure 3.7. **Position of Sectors According to the Quality Composition of their Exports**

Source: Comext, Eurostat, authors' calculation.

Conclusion

It is generally recognised that Mediterranean countries are integrated into the world economy in a way that does not fully reap the benefits of globalisation. Exports concentrated in a few labour-intensive and resource-intensive sectors are insufficiently adapted to international demand.

Diversification and qualitative upgrading of exports are often regarded as important factors for future sustained growth. This paper presents evidence to suggest that Turkey, Tunisia and Morocco have strongly reduced the share of primary goods in their exports, to the benefit of consumption goods. This has helped them to overcome the relative decline in foreign financing provided by their primary exports, and has created new jobs. The situation is quite different for Egypt, which has delayed necessary adjustment but now seems to be accelerating the reform process.

Diversification of exports generally goes hand in hand with the development of intra-industry trade. The analysis of Euro-Mediterranean trade at a very detailed level confirms that one-way trade accounts for most trade between these two regions, suggesting strong factors of complementarity. Nevertheless, two-way trade is becoming significant in some cases. A breakdown of two-way trade by product shows trade in similar products (exchange of varieties) not negligible in machinery for Turkey and Morocco, and in electrical equipment and electronics for Tunisia. Yet in most cases two-way trade involves vertically differentiated goods, which means that the countries export to and import from the EU goods that clearly differ by quality. This phenomenon is most pronounced in electrical equipment (Morocco, Tunisia and Turkey), in electronics (Tunisia and Egypt), in vehicles (Turkey), and in textiles (Tunisia).

Concerning trade patterns with the European Union by price and quality ranges, Mediterranean countries are globally specialised in the low range and disadvantaged in up-market goods, a pattern that also occurs in Central European countries. Nevertheless, a closer look reveals that in some of their main industries, Mediterranean countries already have a structural surplus in up-market goods — particularly Turkey in textiles and Morocco in agriculture and food. Conversely, in some disadvantaged industries, structural surpluses appear in down-market or medium-market goods (chemical and vehicles in Turkey).

These observations suggest that changes are underway, with more potential for diversification and for quality and technology upgrading in consumption goods as well as intermediate products. Could the association agreements with the EU help to realise this potential?

Euro-Mediterranean free trade will increase competition and thus drive the least efficient local firms out of the market. Positive trade-related effects, however, will likely overwhelm this negative impact, especially through imports of better and/or cheaper intermediate inputs, which render production more efficient and exports more competitive. Even more important dynamic effects will accrue if integration goes one step beyond the present commitments of the association agreements to include

harmonisation of standards and liberalisation of services and foreign investment. Coupled with carefully sequenced domestic reforms and properly designed fiscal and exchange-rate policies to increase the incentives for domestic and foreign investment, this could induce a better integration of Mediterranean countries into the division of labour with Europe, lead to a qualitative change in production, and give rise to a new dynamic of exports and growth.

Methodological Appendix

1. The Commodity Classification by End-use Categories

The United Nations classification of Broad Economic Categories (BEC) makes it possible to group products according to their nature (primary or processed) or according to their end uses (intermediate, capital, consumption goods). This paper distinguishes end uses only for processed goods (for intermediate, capital or consumption uses) and regroups all primary goods (whether intermediate or final) under a single heading (see Freudenberg and Lemoine, 1998, for a more detailed discussion).

Primary products (intermediate or final consumption)	Primary food and beverages, mainly for household consumption; Primary food and beverages, mainly for industry; Primary industrial supplies n.e.c.; Primary fuels and lubricants.
Intermediate goods (processed)	Processed food and beverages, mainly for industry; Processed industrial supplies n.e.c.; Other processed fuels and lubricants; Parts and accessories of capital goods; Part and accessories of transport equipment.
Capital goods (processed)	Capital goods (excl. transport equipment); Other industrial transport equipment and parts and accessories thereof.
Consumption goods (processed)	Processed food and beverages, mainly for household consumption; Processed fuels and lubricants: motor spirit; Passenger motor cars; Other non-industrial transport equipment and parts an accessories thereof; Durable consumer goods n.e.c.; Semi-durable consumer goods n.e.c.; Non-durable consumer goods n.e c.

2. The Measurement of Intra-Industry Trade

This study is based on a methodology first put forward by Abd-El-Rahman (1986) and refined by Fontagné and Freudenberg (1997), which *i)* minimises the bias arising from sectoral[9] aggregation by using far more disaggregated classifications; *ii)* minimises the bias of geographic[10] aggregation by considering only bilateral flows; *iii)* considers, depending on the degree in overlap, both exports and imports as being part of either two-way trade or one-way trade; and *iv)* distinguishes between vertical and horizontal differentiation by incorporating price differences.

In order to operationalise the notion of "two-way trade in similar products", it is necessary to define what a "product" is empirically, what a "similar" product is, and what "two-way trade" is. The following definitions are used here.

The product. The detailed composition of the classification is the best guarantee for avoiding the empirical problems of sectoral aggregation: the data published by Eurostat for EU member states in the classification of the 8-digit "Combined Nomenclature (CN)" cover some 10 000 items. For each elementary flow (exports or imports of the declaring country to/from the partner country for a given product item) two criteria are applied, as noted below.

The similarity of products. Even inside an item of the "Combined Nomenclature", products may differ clearly by their quality. Here, it is assumed that differences in prices (unit values) reflect quality differences. Therefore, products whose unit values are close (in a given year) are considered as similar. Traded products are considered to be similar (or horizontally differentiated) if the export and import unit values differ by less than 15 per cent, i.e. if they fulfil the following condition:

$$\frac{1}{1.15} \leq \frac{UV^{X}_{kk'it}}{UV^{M}_{kk'it}} \leq 1.15$$

where *UV* stands for unit value, superscripts *X* and *M* refer to exports and imports and indices *k* representing the declaring country, *k'* the partner country and *i* the product in year *t*. When this is not the case, products are considered to be vertically differentiated.

The overlap in trade. Trade in an item is considered to be "two-way" when the value of the minority flow (for example imports) represents at least 10 per cent of the majority flow (exports in this case), i.e. if they fulfil the following condition, where X and M stand for the value of exports and imports:

$$\frac{\mathrm{Min}\left(X_{kk'it}, M_{kk'it}\right)}{\mathrm{Max}\left(X_{kk'it}, M_{kk'it}\right)} > 10\%$$

Below this level, the minority flow cannot be considered significant, as it does not represent a structural feature of trade.

If trade flows of a particular product with a partner country fulfil the two criteria of similarity and overlap, both exports and imports are qualified as "two-way trade in similar products". The method allows total trade for each year to be broken down into different categories according to the similarity in unit values and to the overlap in trade:

1) two-way trade in similar products (significant overlap and low unit value differences);

2) two-way trade in vertically differentiated products (significant overlap and high unit value differences);

3) one-way trade (no or no significant overlap).

This approach permits the totality of trade to be broken down according to these criteria, where both imports and exports can be part of one and the same type. A surplus or a deficit may thus appear for each of the three types.

Statistical Appendix

Table 3.A1. **Trade With EU by Types and Sectors, 1996**

	One-way trade	Two-way trade in vertical differentiation	Two-way trade in horizontal differentiation
Egypt	96.1	2.9	1.0
Electronic	80.7	14.5	4.9
Mechanics	94.1	4.9	1.0
Textile	94.2	4.7	1.1
Wood, paper, misc.	96.1	2.9	1.0
Chemical	96.5	2.1	1.5
Electrical	97.4	2.3	0.2
Non-ferrous	97.5	2.5	0.0
Iron and steel industry	98.0	1.3	0.7
Vehicles	99.6	0.3	0.1
Energy	99.4	0.0	0.6
Agriculture and food	99.4	0.5	0.1
Turkey	84.4	9.8	5.8
Vehicles	71.0	25.1	3.9
Mechanics	73.8	8.6	17.7
Electrical	80.0	18.6	1.4
Non-ferrous	85.6	9.8	4.6
Electronic	86.3	11.1	2.7
Wood, paper, misc.	88.2	10.7	1.1
Iron and steel industry	88.6	4.7	6.6
Chemical	89.5	9.5	0.9
Textile	89.8	8.4	1.8
Agriculture and food	97.8	1.8	0.4
Energy	98.3	1.7	0.0
Morocco	91.4	5.3	3.3
Electrical	52.6	45.8	1.7
Mechanics	75.3	4.5	20.2
Electronic	90.8	5.1	4.2
Wood, paper, misc.	90.9	8.5	0.6
Textile	94.5	5.0	0.5
Vehicles	94.9	2.4	2.7
Chemical	96.7	2.7	0.5
Non-ferrous	97.5	2.3	0.1
Agriculture and food	97.9	1.4	0.6
Iron and steel industry	99.0	0.8	0.1
Energy	100.0	0.0	0.0
Tunisia	80.9	15.0	4.1
Electrical	53.2	24.1	22.7
Electronic	70.6	17.7	11.8
Textile	76.4	20.4	3.2
Mechanics	78.8	18.0	3.2
Vehicles	84.9	14.5	0.7
Wood, paper, misc.	89.2	8.9	1.9
Iron and steel industry	93.9	3.7	2.4
Chemical	97.1	2.6	0.3
Non-ferrous	97.9	2.1	0.0
Agriculture and food	98.9	0.9	0.2
Energy	99.8	0.0	0.2

Note: The sectors are ranked by increasing share of one-way trade.
Source: Comext, Eurostat, authors' calculation.

Table 3.A2. **Composition of Trade with EU by Price/Quality Range, 1996**

	Share in exports (%)			Share in imports (%)		
	Low	Medium	High	Low	Medium	High
Hungary	45.4	29.7	24.9	28.3	25.6	46.0
Morocco	**56.8**	**24.0**	**19.3**	**41.5**	**29.3**	**29.2**
Turkey	**55.7**	**28.2**	**16.0**	**21.3**	**37.2**	**41.5**
Czech Rep.	66.6	18.3	15.0	27.1	30.9	42.0
Tunisia	**55.4**	**29.9**	**14.8**	**38.9**	**28.2**	**32.9**
Slovakia	56.2	29.5	14.3	25.2	26.4	48.4
Poland	65.9	23.0	11.1	33.7	30.4	35.9
Egypt	**32.4**	**59.5**	**8.1**	**45.1**	**22.4**	**32.5**

Note: The countries are ranked by the share of the high price/quality range in exports.
Source: Comext, Eurostat, authors' calculation.

Table 3.A3. **Share of Price/Quality Ranges in Exports to the EU, by Industry, 1996**

	Low	Medium	High	Industry's Share in Exports
Egypt	32.4	59.5	8.1	100
Vehicles	26.7	6.6	66.7	0.1
Electronic	5.9	34.6	59.5	1.4
Agriculture and food	36.4	23.9	39.7	7.6
Chemical	32.0	32.1	35.9	2.8
Mechanics	52.4	12.8	34.8	3.7
Wood, paper, misc.	35.7	40.1	24.1	0.7
Electrical	23.9	52.6	23.5	0.3
Textile	66.5	25.0	8.5	15.8
Non-ferrous	9.0	84.4	6.6	4.2
Iron and steel industry	20.9	75.2	3.9	0.9
Energy	24.5	75.5	0.0	62.5
Turkey	55.7	28.2	16.0	100
Wood, paper, misc.	33.3	17.4	49.3	1.5
Electronic	12.0	42.1	45.9	2.5
Non-ferrous	31.2	40.6	28.2	1.5
Textile	70.3	11.6	18.1	48.1
Mechanics	36.3	49.8	13.9	9.2
Agriculture and food	32.5	53.9	13.6	17.3
Chemical	59.9	29.7	10.4	8.4
Electrical	46.4	46.2	7.4	4.4
Vehicles	72.3	22.3	5.4	3.6
Iron and steel industry	53.0	45.5	1.5	2.4
Energy	62.0	37.9	0.2	1.2
Morocco	56.8	24.0	19.3	100
Electrical	15.9	2.6	81.5	2.9
Electronic	44.9	6.0	49.2	5.8
Wood, paper, misc.	35.3	26.0	38.7	1.2
Energy	12.3	58.6	29.1	0.7
Non-ferrous	18.2	53.5	28.2	2.8
Agriculture and food	33.8	42.8	23.4	24.1
Iron and steel industry	3.5	83.5	13.0	0.2
Textile	80.6	7.2	12.1	46.3
Chemical	53.4	37.9	8.7	12.1
Mechanics	12.0	82.6	5.4	3.4
Vehicles	73.3	21.7	5.0	0.3
Tunisia	55.4	29.9	14.8	100
Vehicles	13.6	26.3	60.1	0.6
Mechanics	43.7	10.4	45.9	2.1
Electronic	27.7	27.9	44.4	1.9
Wood, paper, misc.	37.0	32.0	31.0	1.3
Agriculture and food	10.1	64.7	25.2	7.1
Electrical	58.9	22.7	18.4	7.2
Textile	73.8	13.1	13.1	61.2
Chemical	34.8	57.4	7.8	7.2
Non-ferrous	63.4	30.6	5.9	0.6
Iron and steel industry	38.3	57.5	4.2	0.4
Energy	0.8	95.2	4.0	10.3

Note: The sectors are ranked by decreasing share of the high quality range.
Source: Comext, Eurostat, authors' calculation.

Table 3.A4. **Top Industries* Selected by Their Export Growth Rates**

Morocco			**Tunisia**			**Egypt**			**Turkey**		
Industries	1996/98	Share in exports	Industries	1996/98	Share in exports	Industries	1996/98	Share in exports	Industries	1996/98	Share in exports
	Annual growth rate %	1996 %		Annual growth rate %	1996 %		Annual growth rate %	1996 %		Annual growth rate %	1996 %
Elect. Compo.	24.8	1.8	Leather	24.6	6.2	Coke	37.4	0.9	Commerc. Vehicles	92.3	0.7
Electr. Apparat.	20.2	0.9	Engines	23.1	0.7	Carpets	35.7	2.9	Cement	34.3	0.8
Clothing	16.5	17.6	Knitwear	18.1	11.6	Misc. Hardware	31.3	0.7	Ceramics	31.9	1.0
Knitwear	13.3	8.9	Electr. Apparat.	17.7	5.6	Clothing	26.3	2.7	Fats	31.2	0.8
Leather	9.2	4.5	Clothing	17.4	42.2	Knitwear	22.4	3.6	Vehic. Comp.	28.9	1.2
			Electr. Equip.	16.6	0.9	Refin. Petrol. Pd.	16.6	15.2	Electr. Apparat.	28.2	2.5
						Fruits & Veget.	14.7	4.9	Domestic Elect. Appli.	26.5	1.1
						Aeronaut.	9.0	1.3	Pneu. Tires	23.0	1.6
Total	**9.2**	**100**	**Total**	**12.7**	**100**	**Total**	**6.4**	**100**	Beverages	21.8	0.7
									Engines	20.5	1.3
									Consum. Electronics	19.4	1.3
									Tubes	17.7	1.2
									Misc. Hardware	16.1	2.0
									Knitwear	15.1	22.8
									Basic inorg. Chemic.	11.5	0.9
									Vet.conf.	11.0	14.6
									Plastic Art.	10.1	0.8
									Non fer. Metals	9.4	1.2
									Preserved Veget.	9.3	3.9
									Carpets	9.2	4.4
									Total	**8.5**	**100**

Note: * Among industries which have a share in total exports at least equal to 0.7% of total exports
Source: CEPII-Chelem, authors'calculation.

Table 3.A5. **Share of Price/Quality Ranges in Trade with the EU by End-use, 1996**

	Imports			*Share in Imports*	Exports			*Share in Exports*
	Low	Medium	High		Low	Medium	High	
Egypt	45.1	22.4	32.5	*100.0*	32.4	59.5	8.1	*100.0*
Primary	68.5	16.1	15.4	*5.0*	31.5	62.4	6.1	*55.5*
Intermediate	40.1	23.6	36.3	*52.0*	18.1	72.3	9.6	*31.3*
Capital	50.0	18.0	32.0	*28.8*	46.9	20.7	32.4	*2.1*
Consumption	45.1	29.4	25.5	*14.3*	75.3	15.9	8.8	*11.1*
Tunisia	38.9	28.2	32.9	*100.0*	55.4	29.9	14.8	*100.0*
Primary	18.7	56.2	25.0	*2.7*	7.0	78.3	14.7	*12.5*
Intermediate	33.7	28.6	37.7	*63.1*	38.5	43.4	18.1	*20.6*
Capital	42.4	28.9	28.7	*14.8*	44.3	34.8	20.9	*2.9*
Consumption	56.2	22.3	21.4	*19.3*	70.7	15.8	13.4	*64.0*
Morocco	41.5	29.3	29.2	*100.0*	56.8	24.0	19.3	*100.0*
Primary	17.4	62.2	20.4	*5.0*	30.0	48.4	21.6	*21.0*
Intermediate	34.5	31.3	34.2	*62.3*	47.5	25.0	27.5	*22.7*
Capital	57.8	19.9	22.3	*18.8*	7.6	67.3	25.1	*4.2*
Consumption	59.4	20.9	19.7	*13.8*	75.5	10.3	14.3	*52.2*
Turkey	21.3	37.2	41.5	*100.0*	55.7	28.2	16.0	*100.0*
Primary	20.2	64.8	15.0	*5.4*	21.8	64.2	14.0	*14.0*
Intermediate	20.8	34.9	44.4	*49.3*	56.7	30.1	13.2	*27.3*
Capital	22.1	37.2	40.7	*31.7*	24.9	64.4	10.7	*7.1*
Consumption	21.8	34.8	43.4	*13.7*	68.7	12.5	18.8	*51.5*
Hungary	28.3	25.6	46.0	*100.0*	45.4	29.7	24.9	*100.0*
Primary	27.8	33.7	38.5	*1.9*	42.5	35.0	22.5	*6.6*
Intermediate	21.9	25.5	52.6	*59.9*	45.6	30.4	24.0	*53.5*
Capital	31.3	28.3	40.5	*18.9*	55.2	11.0	33.7	*9.0*
Consumption	45.4	22.7	31.9	*19.3*	42.8	32.8	24.3	*30.9*
Poland	33.7	30.4	35.9	*100.0*	65.9	23.0	11.1	*100.0*
Primary	28.4	57.2	14.4	*5.9*	60.4	23.0	16.6	*9.7*
Intermediate	24.1	34.0	42.0	*53.8*	61.8	29.4	8.8	*46.8*
Capital	31.8	27.7	40.5	*19.2*	54.5	10.7	34.7	*6.4*
Consumption	61.5	16.3	22.2	*21.2*	74.4	17.1	8.5	*37.1*
Czech Rep.	27.1	30.9	42.0	*100.0*	66.6	18.3	15.0	*100.0*
Primary	52.1	23.8	24.1	*3.0*	53.3	35.8	10.8	*6.9*
Intermediate	22.6	30.3	47.2	*53.2*	65.7	19.1	15.2	*60.3*
Capital	22.3	34.3	43.4	*21.4*	69.7	9.8	20.5	*10.7*
Consumption	39.3	30.0	30.7	*22.3*	71.9	14.9	13.2	*22.1*
Slovakia	25.2	26.4	48.4	*100.0*	56.2	29.5	14.3	*100.0*
Primary	54.4	17.7	28.0	*2.8*	45.7	36.5	17.8	*3.4*
Intermediate	21.3	23.1	55.6	*58.9*	57.0	34.7	8.3	*61.7*
Capital	23.0	31.7	45.3	*20.5*	76.1	13.0	10.9	*5.9*
Consumption	36.3	32.4	31.3	*17.8*	51.7	21.0	27.2	*29.0*
Spain	21.6	45.6	32.8	*100.0*	28.2	50.2	21.6	*100.0*
Primary	14.8	65.1	20.1	*6.2*	22.1	59.6	18.3	*11.0*
Intermediate	21.9	43.8	34.3	*53.4*	32.3	41.4	26.3	*41.1*
Capital	27.4	38.5	34.1	*16.4*	38.7	28.3	33.0	*10.8*
Consumption	18.5	49.5	32.0	*24.1*	22.4	63.5	14.0	*37.1*
Portugal	21.7	39.3	39.0	*100.0*	28.4	47.1	24.4	*100.0*
Primary	13.7	68.1	18.2	*6.1*	20.1	54.8	25.1	*3.8*
Intermediate	20.5	35.2	44.3	*50.4*	30.2	43.8	26.0	*37.4*
Capital	29.1	37.0	33.8	*15.2*	28.6	42.9	28.5	*6.8*
Consumption	21.7	41.6	36.7	*28.3*	27.7	49.6	22.7	*52.0*

Source: Comext, Eurostat, authors' calculation.

Notes

1. Mixed products can have multiple uses: e.g. sugar can be both an intermediate and a consumption good.

2. This section identifies areas of specialisation in terms of stages of the production process. As a first approximation, and before using the much more detailed classification of the BEC (see footnote 4), it uses CHELEM, CEPII's database on harmonised world trade, which defines 71 product categories in terms of six stages of production.

3. Some of the products classified as capital goods in CHELEM nomenclature are intermediate products in the more detailed BEC classification.

4. A more accurate picture emerges using the United Nation's classification of Broad Economic Categories (BEC): primary products, intermediate goods, capital goods and consumption goods (see Methodological Appendix 1). The countries' specialisation along different stages of the production process is measured by the "contribution to the trade balance".

5. The "contribution to the trade balance" (Lafay, 1987) is a *structural* indicator which tries to eliminate business cycle variations — by comparing an industry's performance to the overall one — and, unlike many other indicators, a *symmetrical* indicator in the sense that it focuses not only on exports but also on imports. If there were no comparative advantage or disadvantage for any industry j, then a country's total trade balance (surplus or deficit) should be distributed across all industries according to their share in total trade. The "contribution to the trade balance" is the difference between the actual and this theoretical balance. Expressed in thousandths of total trade, that is:

$$\left(\frac{1000}{X+M}\right)\left(\left(X_j - M_j\right) - \left(X - M\right)\frac{\left(X_j + M_j\right)}{\left(X+M\right)}\right)$$

   A positive contribution is interpreted as a "revealed comparative advantage" for that industry. Another important feature is that the indicator is additive. Thus the values for products or industries can be aggregated to any desired level. By definition, the sum over all industries is zero.

6. This is 8-digit level of the Combined Nomenclature, corresponding to some 10 000 product items.

7. The composition of exports and imports by quality range appears in Statistical Appendix Table 3.A2. Here again, assume that differences in unit values reflect quality differences. To define the price/quality ranges, the analysis compares, for each product, the unit value of each bilateral flow to the unit value of the intra-EU trade flow for the same product (Freudenberg and Müller, 1992). When the unit value of the bilateral flow exceeds the intra-EU average by at least 15 per cent, this flow is classified in the up-market range. It is classified in the down-market range if its unit value is 15 per cent below the norm, and in the middle-market range if its unit value is within +/- 15 per cent around the average. Being carried out at the most detailed level of the classification, this work allows headings to be aggregated to any desired level.

8. Despite their common use of unit values, trade types and price/quality ranges are two distinct and strictly independent notions. For example, two-way trade in *similar* products can occur in *different* European price segments. Likewise, two-way trade in *vertically differentiated* products can arise in the *same* market segment.

9. Sectoral bias stems from insufficient disaggregation in the trade classifications: the lesser the detail of the nomenclature used, i.e. the more products are lumped together into a single "industry", the more trade appears as intra-industry trade.

10. Geographical bias arises when different partner countries are put together before doing the calculations and, in the extreme case, only a country's trade relations with "the rest of the world" are examined. The sign of the trade balance for a particular product may change for trade from one partner to another, however, corresponding to the accumulation of various inter-industry flows for the same item of the product classification, and will show up as a "multilateral" intra-industry flow.

Part Two

Expanding Domestic Markets and Liberalisation under Euro-Med Agreements (EMAs)

Chapter 4

Foreign Direct Investment, the European Mediterranean Agreements and Integration between Middle East and North African Countries

Mohamed El Hédi Lahouel

Introduction

Many countries in the MENA region are committed to the implementation of major trade liberalisation programmes within the framework of the multilateral trading system as embodied in the WTO and, more importantly, through bilateral co-operation agreements with their most important trading partner, the European Union. Tunisia and Morocco signed bilateral EMAs in 1995 and 1996. Jordan followed suit in 1998, and Egypt's negotiations with the EU on a similar agreement have just concluded. Other countries, Lebanon, Syria and perhaps Algeria, will most likely seek similar agreements with the EU. The European initiative encompasses aspects related to trade, finance, culture and political co-operation, but the major component involves liberalising trade according to a pre-defined schedule extended over a twelve-year period.

The revival of interest in building regional trading blocs throughout the world, a movement led by the North American Free Trade Agreement (NAFTA), has certainly influenced the EMAs. Prior to these agreements trade relations between the EU and countries of the region had been managed through the so-called Co-operation agreements, which granted highly preferential access of manufactured goods to the EU market. The EMAs, therefore, bring little change in access to Europe's markets. By contrast, they introduce major changes in European access to the Mediterranean partners' markets, where high tariff and non-tariff trade barriers must be removed, albeit gradually.

Most studies have focused on the static effects of import liberalisation in MENA partners. Dynamic effects, to which policymakers accord relatively more importance, have received far less attention. One such effect that MENA governments anticipate and in fact count on is the attraction of larger foreign investment inflows, from both the EU and other regions of the world. Some analysts argue that the effect of the partnership agreements on FDI is a crucial issue (Page and Underwood, 1997; Galal and Hoekman, 1997*a*). Along with the increase in European financial and technical assistance, attracting higher FDI inflows ranks high, in policymakers' minds, among the objectives pursued through the Association agreements. Although the arguments underlying these expectations are not well spelled out and the Agreements already signed leave out critical issues, particularly those related to investment liberalisation, the main arguments for this optimism are probably the reduced uncertainty in duty-free access to the EU market and the stronger commitment of the Mediterranean partners themselves to openness.

Contrary to expectations, FDI inflows benefiting MENA partners have not intensified. The region has failed so far to take part in the worldwide expansion in FDI flows. Domestic factors certainly lie behind both this failure and why the hopes associated with the EMAs have not materialised. Foreign firms remain shut out of many activities, mainly in the services sectors, existing infrastructure is not as good as in competing countries and so forth.

This paper argues that expectations regarding increases in FDI flows were misplaced, given the preferential access that MENA partners already enjoyed in the EU market under the former Co-operation agreements and the hub-and-spoke nature of the new bilateral trade liberalisation agreements. In view of recent international experience, intra-MENA integration is likely to play an important role in attracting larger flows to the region.

Changes in FDI Flows to MENA countries (1992-97)

Are there any indications that the EMAs have attracted more FDI to Tunisia, Morocco, Jordan, Egypt, Lebanon and Syria, the six countries that have EMAs or are negotiating them? One may argue that it is still early to assess the impact on FDI while some countries are still negotiating, but some tentative conclusions may still be drawn insofar as foreign firms could have shown some response as early as when negotiations were launched. Such anticipation effects have been noticed elsewhere, notably in Mexico when negotiations leading to the creation of NAFTA got off the ground (Blomstrom and Kokko, 1997).

The analysis compares investment flows during two periods, 1992-95 and 1996-97. Tunisia signed the first Association agreement in 1995. Changes in flows over these periods show that the region has in fact lagged behind in attracting FDI, in comparison with the whole group of developing countries where total flows increased by over 70 per cent annually, from an annual average of $81 billion during 1992-95 to almost $140 billion in 1996-97 (Table 4.1). This increase is impressive whether China is included in the group or not.

Table 4.1. **FDI Flows to MENA Countries (1992-97)**

	$ million annual average		Percentage of GDP		%Share in all FDI to developing countries	
	1992-95	1996-97	1992-95	1996-97	1992-95	1996-97
MENA Countries (1)-(6)	**1 728**	**1 662**	**1.4**	**1.0**	**2.12**	**1.20**
Egypt	701	735	1.4	1.0	0.86	0.53
Jordan	6	16	0.1	0.2	0.01	0.03
Lebanon	13	115	0.1	0.9	0.02	0.08
Morocco	439	405	1.5	1.2	0.54	0.29
Syria	148	85	1.0	0.5	0.18	0.06
Tunisia	421	306	2.6	1.6	0.52	0.22
Inflows to developing countries	81 182	139 378	-	-	100	100
Total developed countries FDI outflows	233 435	32 1356	-	-	-	-
Total EU outflows	**121 599**	**165 364**	-	-	-	-
France	23 034	27 463	-	-	-	-
Italy	7 084	8 190	-	-	-	-
United Kingdom	30 865	46 128	-	-	-	-
Total US outflows	69 785	94 685	-	-	-	-

Source: World Investment Report, UNCTAD, 1998; and *IFS Yearbook 1998*, IMF.

Inflows to the six MENA countries declined slightly, from an annual average of $1 728 billion to $1 662 billion. Egypt, Morocco and Tunisia account for the bulk of FDI inflows to the region. Flows to Egypt and Lebanon experienced increases, whereas those to Tunisia, Morocco and Syria fell. Inflows to Jordan remained insignificant, both in absolute terms and as a share of the country's GDP. The ratio of FDI to GDP fell in greater proportions, particularly in Tunisia where it lost one percentage point from 1992-95 to 1996-97. The region and the developing world as a whole have thus experienced divergent trends, resulting in a shrinking share for the region, from an average of over 2.1 per cent in the first period to 1.2 per cent in the second. It is thus clear that the region has not taken part in the significant intensification of FDI flows that the world has experienced in recent years. The bilateral FTAs with the EU have not produced the expected stimulating effects on such flows.

Geographical Sources of FDI

The EU, the main source of FDI inflows to MENA countries, accounted for almost 75 per cent of FDI in Tunisia over 1989-92 and about 60 per cent in Morocco during 1992-95. The EU held almost half of the total FDI stock in Egypt as of 1995 (Table 4.2). The breakdown of these flows between European countries is very different across host countries for reasons that do not always reflect cultural or historical ties. Italy was the principal source for Tunisia, accounting on average for over 41 per cent of the EU's share. This dominant position arose from construction of the transcontinental gas pipeline carrying Algerian gas to Italy through Tunisian territory.

France remained the main source for Morocco, with a share of about 26 per cent in 1992-95. The United Kingdom emerges as the first European source of FDI for Egypt, although its share in total FDI stock did not exceed 11 per cent as of 1995, as against over 20 per cent for the United States. Morocco and Tunisia sourced about 12 per cent of their FDI in the United States. Japan's investment in the region has been marginal, except perhaps for Egypt, where it accounted for 5.6 per cent of the FDI stock in 1995.

Table 4.2. **Geographical Distribution of FDI Inflows into MENA countries**
(Percentage shares of total FDI)

	Egypt (1995)[a]	Tunisia (1989-92)[b]	Morocco (1992-95)[b]
European Union	**49.2**	**73.0**	**60.8**
France	(7.3)	(14.4)	(26.2)
Germany	(5.5)	(1.7)	(1.7)
Italy	(7.1)	(41.3)	(1.3)
Netherlands	-	(3.2)	(2.9)
Spain	-	(2.1)	(10.7)
United Kingdom	(10.6)	(9.3)	(14.9)
Other EU	(18.7)	(1.0)	(3.1)
USA	20.4	11.7	12.2
Japan	5.6	0.0	0.7
Other countries	24.8	15.3	26.3
Total	100	100	100

Notes: *a)* FDI stock; *b)* FDI flows.
Source: *World Investment Report*, UNCTAD, 1996.

The performance of the EU as a source of world wide FDI stands in sharp contrast with that in MENA. Although there are significant differences across European countries, the EU as a whole increased its outbound investment more or less at the same pace as the United States and other developed countries, with flows during 1992-95 exceeding those of 1996-97 by about 36 per cent. France and Italy increased their total outflows by 19 per cent and 16 per cent, respectively (Table 4.1). These rates are lower than those registered for the EU as a whole but do not explain, on the supply side, the regression of flows to MENA countries. The evidence clearly shows that European firms have played an active role in the worldwide expansion of FDI flows in recent years, but have not shown any new interest in extending these to the region. As far as FDI of EU origin is concerned, bilateral FTAs have not generated the impetus that was expected when the agreements were signed.

Sectoral Distribution of FDI to MENA countries

The benefits of FDI vary according to the recipient sector. As an additional source of investment financing, FDI plays the same role regardless of its destination in the host economy. Benefits involving the transfer of technology, organisational

know-how, marketing and the development of skills, however, associate more with manufacturing (machinery rather than light manufacturing) and services, such as information technology and telecommunications, than with other sectors.

Most FDI flowing to MENA countries has found its way to the energy sector, tourism or light manufacturing with low skill intensity, where low labour costs have provided the principal motivation. In Tunisia, the energy sector attracted three-quarters of total FDI in 1992-95 and 63 per cent during the two years following the signing of the EMA with the EU. Two major projects dominated FDI through 1997: the doubling of the transcontinental gas pipeline and the local Miskar natural-gas project, with its heavy involvement of British Gas. With completion of the two gas-related projects, the share of manufacturing rose from about 17 per cent in 1992-95 to 21 per cent in 1996-97, and that of tourism almost doubled (Table 4.3).

Table 4.3. **Sectoral Distribution of FDI Inflows into MENA countries**

Sector	Egypt	Morocco		Tunisia	
	1995[a]	1992-94	1995	1992-95	1996-97
Agriculture	4.2	1.1	4.4	-	-
Mining	-	5.8	3.1	-	-
Energy	-	3.7	-	74.7	63.1
Manufacturing	47.5[b]	26.6	28.5	16.6	20.8
Textile, leather, clothing		(25.0)	(25.9)		
Other manufacturing		(1.6)	(2.6)		
Services	48.3	62.8	64.0	8.7	16.1
Finance and insurance	(26.0)	(22.0)	(30.3)	(3.0)	(5.3)
Real estate		(6.6)	(7.3)		
Other services (tourism,…)	(22.3)	(34.2)	(26.4)	(5.7)	(10.8)
Total	100	100	100	100	100

Notes: *a):* FDI stock; *b):* For Egypt this share includes both manufacturing and energy.
Source: Calculations based on *World Investment Report*, UNCTAD and *Rapport de la Banque Centrale de Tunisie*, various issues.

In Morocco, small amounts of FDI have gone into the primary sector. The services sector received about two-thirds of the total amounts invested during 1992-94, and this share remained more or less the same in 1995. Two service activities attracted the bulk of the flows: finance and tourism. Privatisation open to foreign participation accounts for the relatively large share of finance. Two major companies, a financial holding company and a large bank (Banque Marocaine du Commerce Extérieur), were privatised in 1994-95 with major foreign participation. In Tunisia, privatisation moved slowly until recently, and foreign participation stayed very modest. The pace accelerated only in 1998, with the sale of two cement plants to foreign firms (one Spanish and one Portuguese) totalling about $400 million, an amount close to total privatisation receipts during the decade from 1987 to 1997. In Egypt, the petroleum sector had the lion's share of the total FDI stock in 1995, and the financial sector accounted for 26 per cent (Table 4.3). Privatisation has played a significant role in the rise of FDI in the last three years.

Stimulating FDI and the Effects of Regional Trade Agreements

Factors Underlying FDI Flows

The literature has identified three factors that act to stimulate FDI: *i)* extraction of natural resources; *ii)* serving the local market; and *iii)* efficiency seeking. The availability of natural resources is an obvious factor attracting FDI. Conditions in the host country must favour it, but not to the same extent as for the other two factors. If the local environment is unstable and hostile to a foreign presence, experience has shown that FDI inflows will fail to materialise even if the country is very well endowed with natural resources. Examples abound where countries rich in natural resources could not attract foreign investment because of domestic instability and the lack of an enabling environment (Caves, 1996; UNCTAD, 1998).

Establishing production units in a foreign market is not the only way to serve local markets. The foreign firm can produce in its home country and export to foreign markets, and license or even sell its patents to other producers. These can be viable alternatives to setting up subsidiaries abroad. In many cases, it can be in the firm's interest to deal at arm's length with foreign markets rather than through direct involvement in production.

Other factors may nevertheless induce firms to invest in targeted markets rather than deal with them at arm's length. The first involves the commercial policies pursued by host countries. Until recently, quantitative restrictions and import licensing were pervasive in the developing world in general and in many MENA countries in particular. Very high import duties also protected these markets. Setting up subsidiaries in foreign markets can bypass such restrictions. Nevertheless, the presence of import restrictions is neither sufficient nor necessary to attract FDI. Multinational enterprises (MNEs) indeed will likely stay away from countries where the conduct of business is difficult. Inadequate infrastructure, excessive taxation, low skill levels, bureaucratic red tape and lack of transparency are all likely to deter FDI even if the local market offers important opportunities behind protective barriers. Restrictions on imports may even discourage FDI if they increase the cost of intermediate and capital goods. High tariffs and long delays in customs clearance also make transaction costs excessive and discourage local production. Finally, although tariff jumping may be an important motive for market-seeking FDI, border protection is not a necessary condition; most FDI flows have gone to developed countries where barriers to trade are very low.

One main argument developed in the literature on FDI is that foreign firms hold specific ownership assets that they prefer to put to use through subsidiaries rather than through arm's-length relations. These proprietary assets can be of different types: technology that firms do not want to transfer to others (production process, nature and quality of the product, etc.), organisational and marketing know-how, quality of after-sale services, etc. Such specific assets result in a competitive edge that may more than offset the disadvantage due to inadequate acquaintance with foreign markets and their business environment (Caves, 1996). Other factors working in favour of FDI as opposed to serving the market from abroad include the importance of after-

sale services for consumer durables and capital goods as well as of timely adjustment to tastes in the case of highly differentiated products. Again, all these factors encourage MNEs to set up subsidiaries abroad but only in countries offering favourable business conditions and interesting local markets. Countries that do not offer markets with adequate size and good prospects for expansion generally are not serious candidates for market-seeking FDI.

The search for efficiency, the third factor that acts to stimulate FDI flows, has become more important recently as a result of increasing globalisation and worldwide competition. Firms now locate production operations in many different countries to exploit each country's comparative advantage. According to this strategy, operations intensive in unskilled labour will move to countries where labour costs are low and labour legislation is not too constraining (light industries such as the garment and footwear industry). Countries relatively well endowed with human capital will attract technology and skill-based FDI (software development, accounting, information and telecommunications technology). Good infrastructure and efficient supporting services and public institutions are needed for timely delivery of output of parts or finished goods. In this kind of strategy, the size of the local market loses the importance it has for market-seeking FDI. A small country can be highly competitive in attracting FDI, provided it offers efficiency advantages that reduce costs and facilitate international production.

FDI and Domestic Conditions in MENA Countries

Important opportunities to attract FDI are of course missed in sectors where restrictions on foreign ownership are severe. In Tunisia, FDI is unrestricted only in manufacturing activities, provided that at least 80 per cent of output is exported. FDI in the manufacturing sector to serve the domestic market requires prior government approval. The prior-approval requirement has been lifted on foreign majority ownership for several services such as real estate development, consulting and auditing, but important restrictions remain for others, including not only banking and insurance but also distribution, health, education, etc. In addition, public utilities and telecommunications remain in the hands of public monopolies, although some build-own-operate-transfer (BOOT) operations have been launched in power generation and sanitation. Land ownership by foreigners is prohibited and ownership in farming is limited to a minority share (49 per cent). Foreign ownership of stocks is limited to a minority share.

Jordan restricts foreign equity to less than 50 per cent in mining, distribution, commercial services and construction contracting (Kanaan, 1998). Morocco restricts foreign industrial ownership only in activities considered strategic, such as petroleum refining and public utilities, where FDI is not allowed to exceed 50 per cent. Egypt has no restrictions on foreign ownership, although investment in manufacturing tends to be of the joint venture type. The Egyptian government has also launched discussions on BOOT operations in order to attract FDI to infrastructure projects in power

generation, telecommunications and transportation. Important service activities, such as insurance, transportation and telecommunications, remain in the hands of public monopolies (Mohieldin, 1997).

Other important domestic factors that help stimulate FDI flows are macroeconomic stability and predictability, the quality of infrastructure and skills and the efficiency of bureaucracy and administrative procedures. Macroeconomic stability is crucial insofar as it reduces uncertainty in the movement of the exchange rate with its concomitant impact on various cost components and the freedom to transfer capital and earnings abroad. MENA countries have achieved significant progress on this front. Inflation has been cut down significantly in most of them, and in Egypt from double-digit rates in the early nineties to less than 5 per cent in 1997. The rise in the consumer price index (CPI) averaged less than 2 per cent in Morocco, less than 5 per cent in Syria and under 4 per cent in Tunisia in 1996-97. Budget deficits have been kept in check both in Egypt and Jordan, the latter even registering surpluses in recent years. In Morocco and Tunisia, the deficits hover around 3.5 per cent of GDP, which calls for additional efforts to reduce them to more manageable levels. These countries have also succeeded in recent years in cutting down their external deficits; Jordan brought its deficit from over 9 per cent of GDP in the first half of the 1990s to 3 per cent in 1996[1].

One other factor that influences FDI is growth and its potential in the host country. In MENA, growth rates have held above the developing countries' average, although exhibiting much volatility. Jordan and Syria experienced high growth, at rates of 6.4 per cent and 7 per cent respectively, in 1996-97. Tunisia's and Egypt's growth rates (4.9 per cent and 4.2 per cent, respectively) fell in the middle range. Morocco swung from double-digit positive rates to high negative rates due to very wide fluctuations in agricultural production, yielding low average growth at 2.5 per cent a year over 1990-97.

The business environment is important for foreign and domestic investment alike. Significant positive changes have occurred in governments' attitudes towards the private sector in the region: removal of investment licensing for most activities, acceleration of the privatisation process, simplification of administrative procedures, improvements in port and customs services, etc. Business still suffers from serious impediments, however, as several studies have shown. The relative effects of the constraints vary across countries but the main ones are more or less the same: still-cumbersome clearance of goods through customs, inefficient port services, inconsistent tax administration, inefficient commercial dispute settlement, high telecommunications costs and inadequate skills (Fawzi, 1998; Kaanan, 1998; Lahouel, 1998*a*). These are serious shortcomings that need to be addressed more profoundly than in the past.

Effects of Regional Trade Agreements on FDI

The EMAs contain articles dealing with political, social, cultural and financial issues, but judged by the content of the Agreements already signed with Tunisia and Morocco, they are first and foremost trade liberalisation agreements. They establish

FTAs between the signatories over a twelve-year period following ratification, which Tunisia and Morocco completed in 1998. The FTAs apply only to industrial goods, negotiations on agricultural goods having been postponed until the year 2000.

Tunisia's phase-out of tariffs is scheduled according to a classification of imports into five groups. Capital and intermediate goods not produced in Tunisia (which are not listed explicitly) were to be liberalised immediately following ratification. These products accounted for 12 per cent of imports from the EU in 1994. A second group, comprising essentially intermediate goods and accounting for 28 per cent of imports from the EU, is to be liberalised over a five-year period following ratification (1998-2003)[2]. The liberalisation of the third list of products (30 per cent of total imports from the EU) is planned over twelve years beginning in 1998. The removal of tariffs on the fourth list, which includes manufactured goods competing with domestic production, is postponed until 2002 and will be implemented gradually throughout the remaining eight years of the transition period. This last list covers a high share domestic production, exceeding 40 per cent in 1992.

The EU is committed to assisting Tunisia technically and financially in restructuring its economy and overcoming transition difficulties associated with import liberalisation. Nevertheless, the Agreement leaves out many areas especially important for stimulating FDI. It doesn't cover services or investment, the parties having only expressed their intention to deal with these issues in future negotiations and to assess progress towards investment liberalisation within five years after ratification, i.e. before 2003. This feature stands in sharp contrast to the Agreements signed by the EU with the Central and Eastern European Countries (Hoekman and Djankov, 1996).

In another area, the Agreement stipulates that the EU will help Tunisia to use European product standards and certification procedures — but mutual recognition of certification is set only as an objective to be put into effect only when "the required conditions are met". Liberalisation of public procurement is also set only as an objective with no horizon indicated for implementation. In another limitation of the Agreement, the signatories reserve for themselves the right to apply anti-dumping measures towards each other in conformity with WTO rules. All these shortcomings reduce the scope and depth of integration for Morocco, Tunisia, Jordan and other MENA countries, should they end up signing similar agreements with the EU. In fact, the EMAs do not go much beyond FTAs and lack many important aspects in order to qualify as the deep-integration agreements originally intended in the Barcelona Declaration (Lawrence, 1997).

Given these limitations and the focus of the EMAs on trade liberalisation, the question arises as to whether they are likely to favour more FDI flows into MENA. The analysis here focuses on the efficiency and market-seeking factors discussed above, leaving aside investment to extract natural resources because it depends essentially on the availability of natural resources in the host country.

For MNEs seeking efficiency, trade liberalisation within the integrating area may encourage them to rationalise the international distribution of their production processes and choices of location in line with the competitive advantages each country offers: low labour costs, high skills, good infrastructure, etc. Will such advantages be affected following the removal of trade barriers between the EU and Mediterranean countries?

Firms producing in Egypt, Morocco and Tunisia have had duty-free access to the EEC market for most manufactured non-food products since the mid-1970s. Trade in textiles, clothing and footwear has been regulated through quotas that have not generally been binding, except in Egypt, which has restricted such exports somewhat. The bilateral co-operation agreements, concluded in the 1970s between each of these countries and the EEC and renewed periodically until the signing of the EMAs, provided them with preferential duty-free access to the EEC market. Combined with favourable conditions in host countries, this preferential treatment led to the expansion of European export-oriented investment in Morocco and Tunisia, particularly in textiles, clothing and footwear. In Tunisia the share of foreign ownership in exporting firms (firms shipping more than 10 per cent of output abroad) averaged about 53 per cent; its share in firms oriented to the domestic market was negligible. In metals and machinery, the share of foreign ownership in the export-oriented group averaged 38 per cent for both countries, about twice as high as its share in firms producing for the local market (Page and Underwood, 1997).

The co-operation agreements were not sufficient to induce FDI in the region. Domestic policies conducive to such investments were also implemented, although they discriminated in favour of exports over sales to the domestic market. Tunisia makes a distinction, going back to the 1970s and still in place, between off-shore firms exporting all their production and other firms exporting partially or selling all their output in the local market. Under the offshore regime, firms have duty-free access to imports of equipment, raw materials and intermediate products as well as long-term tax holidays. It is safe to say that, but for these advantages as well as the facilitation of customs and other administrative procedures, the flows of FDI of the 1970s and 1980s would not have occurred.

The Co-operation Agreements did help to attract FDI from the EEC and to introduce domestic policies favourable to export-oriented FDI. The EMAs have brought little change to the access of MENA partners to the EU market. The only important change with respect to trade in manufactures is to lock in this access and make it long lasting; the Co-operation Agreements were limited in time although renewable. The attraction of the region as a host to export-oriented, efficiency-seeking FDI may thus be enhanced only because of this locking-in effect. The temporary nature of previous agreements probably biased FDI inflows in favour of the footloose type, i.e. light investment with short payback periods (garments and footwear). By locking in the removal of trade barriers on imports, the EMAs may induce more technology-intensive FDI to the region. That such FDI has not come forth so far, however, suggests that market-access factors have probably worn off, at least in the case of Tunisia and Morocco.

Although little changes for the EU countries, the EMAs are introducing radical changes in the trade policies of MENA partners, which still have high trade barriers with average tariffs exceeding 30 per cent. These changes have little direct impact on exporting firms already exempted from import duties on their imports of intermediate and capital goods under the offshore or the "*admission temporaire*" regime. Import liberalisation may, however, induce indirect positive effects insofar as local suppliers of services and non-tradable products will benefit from a significant reduction in their import-related costs[3]. The most important incentives stimulating FDI flows will likely result from the general efficiency gains that import competition will induce. These gains can be substantial, given the existing gap between the region and the EU and the persistent high degree of protection in the region.

The other benefit resulting from the EMAs, already mentioned, is the effect of locking in trade liberalisation commitments in signatory MENA countries. The permanent removal of trade barriers *vis-à-vis* the EU, a powerful and most important trade partner, amounts to a strong commitment to openness. Because such signalling reduces the probability of policy reversal and may be accompanied or followed by further market-friendly reforms, it may encourage more FDI flows into these countries[4].

For market-seeking FDI, the likely outcome of bilateral EMAs may not favour the MENA countries for the obvious reason that their markets are too small. Instead, the removal of trade barriers between each of these countries and the EU is likely to divert investment away from the former and towards the latter in order to optimise plant use and exploit economies of scale. Indeed, to the extent that FDI was initially attracted to the region because of high import barriers, the *raison d'être* of the tariff-jumping strategy disappears. It may thus become in the interest of European-based firms to relocate small production units back to the EU and export to their Mediterranean partners out of their plants in Europe. The result is the well known hub-and-spoke effect of bilateral FTAs, where the EU will be the hub and the Mediterranean countries its spokes.

One final effect involving market-seeking FDI is an investment-creation effect, however, resulting from the response of MNEs located outside the EU to the trade diversion that may occur because of discrimination against non-partner countries. MENA countries' imports are highly concentrated in goods of EU origin. Tunisia has the most concentration (70 per cent of its total imports), followed by Morocco (60 per cent). Egypt's imports are relatively lower but still exhibit high geographical concentration in respect of the EU (45 per cent). Still, many non-EU suppliers may find themselves at a disadvantage because of the preferential treatment granted to EU suppliers. Faced with actual or potential loss in export market shares, some of these suppliers may decide to establish affiliates in the integrated area in order to continue to sell in markets previously serviced through exports. Given the limited size of these markets and the trade barriers that separate them, this investment-creation effect may benefit the larger EU countries rather than MENA partners, thus strengthening the hub-and-spoke effect.

In summary, the EMAs have created an environment where FDI flows will take place towards the EU and away from MENA partners. By locking in trade liberalisation in MENA partners and reducing uncertainty of access to the EU market, the incentives for FDI may become stronger but, because market access was already facilitated under the Co-operation Agreements, efficiency-seeking FDI may be modest. Given the limited size of individual markets and the hub-and-spoke phenomenon, less market-seeking FDI may end up making its way to the region.

Regardless of the impact on FDI flows, the EMAs clearly are of the hub-and-spoke type as far as trade is concerned. As Kowalczyk and Wonnacott (1992) argued, if a small country forms an FTA with a large country (or region such as the EU), the net welfare incidence will most likely be positive. Trade will expand between the two countries and the terms-of-trade loss will be very small and even nil for the small country. As the hub signs similar bilateral treaties with other spokes, however, the welfare of the original small country declines. This arises from trade diversion that may take place at its expense if the new FTAs are substitutes for the initial one — i.e. if the first small country's exports to the hub (as well as to the other spokes) decline. Because exports of MENA countries (Egypt, Morocco, Tunisia and perhaps other Mediterranean countries) to the EU have a high degree of similarity, such trade diversion may take place. It is true that many of these countries already enjoy duty-free access to the EU market for manufactured goods prior to the EMAs, but they may lose this advantage if they do not become partners in the new agreements[5].

One may summarise the effects regional integration initiatives may have on FDI with the help of a two-way classification scheme from Blomstrom and Kokko (1997). The scheme has two dimensions: induced environmental change and changes in location-specific advantages. The first involves the degree to which international trade and foreign investment are liberalised following the preferential agreements. If barriers to trade are initially high between member countries, then the removal of these barriers following the formation of an FTA or a customs union constitutes a significant environmental change that should facilitate the conduct of business in general and foreign investment in particular. Changes in policy towards FDI also create such change; they include the lifting of restrictions on firms of member countries, rights of establishment, national treatment and so forth. Locational advantages involve the quality and the cost of factors of production and infrastructure, the degree of proximity to targeted markets and the size of the host market. This two-way classification is illustrated in Figure 4.1.

Figure 4.1. **Effects of Regional Integration on FDI: A Two-way Classification**

	Changes in location advantages (Positive to negative ⇒)	
Environmental change (Strong to weak ⇓)	1	2
	3	4

Source: Blomstrom & Kokko, 1997.

In Figure 4.1, movements across columns from left to right associate with weaker changes in locational advantages, while movements down the rows indicate declining environmental change. Thus, the incidence on FDI will be the strongest in area one, where regional integration induces both a strong environmental change, i.e. a high degree of trade and investment liberalisation, and greatly improved advantages for the member country involved. In area two, the impact on FDI is likely to be negative as the tariff-jumping motivation disappears and the locational disadvantages push foreign and even national firms to locate in more attractive member countries. Area three describes countries with high locational advantages but relatively low initial barriers to trade and investment (OECD countries). Integration will have little effect on FDI in area four, where it brings little liberalisation and where location advantages are weak.

The EMAs bring strong environmental changes for trade in industrial goods, but not in other areas such as agriculture, services or investment. As regards location-specific advantages, countries such as Tunisia and Morocco enjoy proximity to the important EU market. Moreover, many countries of the region remain competitive in terms of labour costs but have lagged behind other regions, such as South East Asia and Latin America, in infrastructure development and human capital formation, and their local markets remain too small to attract market-seeking investment.

FDI and Integration between MENA Countries

The hub-and-spoke effect may be offset by integration between the MENA countries themselves. If barriers to trade are removed between these countries, MNEs may be enticed to locate production in the region instead of serving its markets individually from the EU, as one would expect under the existing hub-and-spoke arrangement. This applies to market-seeking FDI and depends on the importance of economies of scale, in conjunction with the proprietary assets that firms may want to internalise. For some products, even the whole integrated region will not be large enough to meet the optimal scale; but for others the regional market may be attractive, especially if exploiting ownership assets plays an important role in locational decisions. Barring liberalisation between these small countries, the advantages of establishing production units are outweighed by the higher costs of operating on a small scale. Integration between MENA economies, which are small by international standards, will thus increase the market attractiveness of the region, at least when economies of scale are important enough to justify local production but not so important that they induce firms to keep production in the hub.

International Evidence

The international experience offers some empirical evidence on the likely effects of integration on FDI flows. The Southern Common Market (Mercosur), a successful case of south-south integration, resulted not only in a tremendous expansion in intra-

regional trade but also in significantly higher FDI inflows. The bilateral trade liberalisation agreement between Brazil and Argentina of the mid-1980s evolved into a customs union signed in 1991, which entered into force in January 1995. Paraguay and Uruguay are also signatories. Dominated by the two large countries, this integrated area comprises a large population of more than 200 million and a combined GDP of almost $800 billion.

In addition to the removal of trade barriers among the signatories and the adoption of a common external tariff towards third countries, the Treaty provides for free movement of services and harmonisation of standards, testing and certification. Technical committees have done extensive work in these areas, but little progress has emerged in comparison with the trade liberalisation that has been accomplished (Laird, 1998).

Mercosur's internal trade grew rapidly during the period leading to the establishment of the customs union. Intra-regional exports grew from less than 9 per cent of total exports in 1990 to over 20 per cent in 1995. Intra-regional imports rose from 14.5 per cent of the total to over 18 per cent. The expansion in intra-regional trade did not take place at the expense of trade with the rest of the world, however. It has grown faster in recent years than before the formation of the customs union.

Of special interest here is what has happened to FDI. In Mercosur, FDI flows increased in greater proportions than intra-regional trade. As Table 4.4 shows, average annual flows increased almost fourfold from the period prior to the customs union (1992-94) to 1995-97, rising from less than $4.4 billion to more than $16 billion. This growth was much higher than the average rate for all developing countries where inflows rose by about 62 per cent annually between the two periods. It is even more dramatic in a comparison with the FDI flows of the late 1980s. Mercosur countries not only took part in the expansion of FDI flows of recent years but also increased their share in total worldwide flows, particularly since the entry into effect of the union in 1995.

Table 4.4. **FDI inflows to Mercosur Countries (1986-1997)**
(Annual average amounts in $ million)

	1986-91	1992-94		1995-97	
	$ million	$ million	% change (1992-94/ 1986-91)	$ million	% change (1995-97/ 1992-94)
Argentina	1 168	2 429	108	5 400	122
Brazil	1 258	1 833	46	10 828	490
Paraguay	3	108	-	203	88
Uruguay	41	128	212	175	37
Total Mercosur	**2 470**	**4 371**	**77**	**16 431**	**276**
Total Developing countries (Mercosur excluded)	**26 620**	**68 702**	**158**	**111 658**	**62**

Source: World Investment Report, UNCTAD, 1998.

It would be stretching the point to attribute all this expansion to the formation of the customs union, although the creation of a large integrated market has been a major contributing factor. Before and after the formation of the union member countries implemented far-reaching liberalisation measures unilaterally and through their multilateral commitments within GATT/WTO (Laird, 1998). Argentina's comprehensive privatisation programme attracted significant amounts of foreign investment. Some inflows were even motivated by new measures protecting specific sectors such as the automobile sector in Argentina, where a quota system was established in the early 1990s.

In terms of Figure 4.1, Mercosur member countries fall into area one, because the union has brought strong changes in the environment with clear locational advantages for Brazil and Argentina, by far the two largest economies in the union. The significant rise in FDI flows confirms this. During the transition period (1992-94), flows into Mercosur increased much less than for all developing countries in spite of the deep reforms implemented. The evidence thus points to a strong reaction to the integration process in the Southern Cone. Blomstrom and Kokko (1997), although they had less recent data, share this conclusion: "The available evidence, although patchy, shows that a strong investment expansion has coincided with the integration process, and it is reasonable to assume that the continuing integration process may stimulate further significant responses".

NAFTA provides another example of integration, as the first North-South FTA, involving the United States, Canada and Mexico. The agreement was signed in December 1992 and entered into force in January 1994. The trade effects have been significant. The US share of Mexican imports increased from 69 per cent in 1993 to 76 per cent in 1996, following a sharp reduction in Mexico's tariffs on imports from the United States, from an average of 10 per cent to 3 per cent (Schott, 1998). US imports from Mexico more than doubled between 1992 and 1996.

One major objective of the Mexican government in NAFTA was to attract FDI. In addition to the removal of tariff and non-tariff trade barriers against imports from the United States and Canada, Mexico introduced a comprehensive system of rules and obligations dealing with foreign investment. Business surveys report that most foreign firms, especially the larger ones, changed their investment strategies because of NAFTA (Schott, 1998). As a result, FDI flows into Mexico rose from an average of about $4.4 billion prior to the entry into effect of the FTA (1992-93) to an average of over $10 billion during 1994-97[6]. Most of these additional flows came from firms outside the United States (Blomstrom and Kokko, 1997).

This expansion stands in sharp contrast to the stagnation and even decline of FDI flows to countries of the MENA region that signed FTAs with the EU. Differences in the reaction of foreign investors could be explained by differences in the depth of domestic reforms as well as in the depth of the integration agreements themselves. Some of the impact on FDI in Mexico may have arisen from the lifting of important entry barriers to the US market that had constrained exports in the pre-FTA period, especially textile and apparel exports (Schott, 1998). Such constraints practically did

not exist for Morocco and Tunisia in the pre-FTA period, which may explain why the new FTAs have not attracted more efficiency-seeking FDI. Furthermore, given its much bigger size, Mexico can attract significant market-seeking investment.

Another example of a positive FDI response to integration came with the enlargement of the EEC to include Spain and Portugal in 1986. Estimated on the basis of a five-year average, FDI increased by some two percentage points of GDP in these two countries from the pre-EU-membership period (1981-85) to the post-membership period (1986-92). Econometric analysis of FDI flows into Spain covering 1964-89 and taking into account several explanatory variables confirms the conclusion that the accession to the European Community in 1986 significantly increased inflows from other EEC partners (Bajo-Rubio and Sosvilla-Rivero, 1994). In contrast, inflows into Greece declined following accession to the EU in 1981, due mainly to a lack of improvement in the macroeconomic situation (de Kleine and Riordan, 1995). These findings suggest that regional integration stimulates foreign investment, provided that it induces significant changes in the environment as well as in location specific-advantages.

FDI and Integration among MENA Countries

Intra-regional trade among MENA countries is low compared with other regions in the world, averaging less than 9 per cent of their total external trade in 1995-97, as against about 19 per cent for Mercosur and 12 per cent for the West African Economic and Monetary Union (UEMOA). This low share contrasts even more sharply with the region's high trade-intensity ratios with the EU. Intra-trade within the Maghreb sub-region is even weaker than for the MENA region as a whole, with a share in total trade lower than 4 per cent. Among the many factors accounting for this are inadequate infrastructure, production similarities and instability in political relations. High tariff barriers — applied to the rest of the world on an MFN basis — and non-tariff barriers, however, are the major obstacles to the development of intra-regional trade.

The region has made the least progress in the world in terms of regional integration and trade expansion. Partial bilateral preferential agreements exist but they generally cover only limited sets of products not competing with domestic production, and the degree of compliance with them has fluctuated with the state of political relations. Political tension has often disrupted intra-regional trade flows. Until recently, therefore, concrete progress towards integration did not occur. Contrary to the speed with which Tunisia and Morocco concluded their EMAs, intra-Maghreb trade liberalisation has had low status on the co-operation agenda, and not a single comprehensive, concrete integration project has had serious consideration. Heads of state did meet and sign the Marrakech Treaty in 1989 to establish the Arab Maghreb Union (UMA), with the creation of a customs union as an objective. Yet neither the Treaty nor any later agreement fixed a timetable to put the customs union in place.

Recently, the UMA has been overshadowed by the Arab League's decision to establish a Greater Arab Free Trade Area (GAFTA) over a ten-year period starting from 1998. Import duties are to be reduced on intra-Arab imports in steps of 10 per

cent each year, with complete removal by 2007. Negotiations on non-tariff barriers, however, have been postponed, and the approved liberalisation programme includes many exceptions. Nevertheless, the move likely will create a far more integrated region, provided the eighteen members adhere to the tariff removal schedule and do not replace tariffs with non-tariff barriers.

What would an FTA or customs union between MENA countries mean for FDI in terms of the classification scheme in Figure 4.1? It would signal additional positive changes in the environment, to the degree that trade liberalisation among countries with very similar production structures translates into to a stronger willingness to foster competition in their respective economies. More generally, it would enhance the credibility of policies of openness, thus reinforcing the effects of the commitments made in the WTO and in the EMAs. More importantly, it will create a relatively large market that will enable both domestic and foreign-owned firms to exploit economies of scale and other location specific-advantages, such as low labour costs.

Integration within the MENA region will enable member countries to lessen, if not totally avoid the hub-and-spoke effect of the bilateral FTAs with the EU. Because no country in the region carries much economic weight at the international level, the bilateral FTAs, absent greater MENA integration, would push MNEs to locate production in the EU (the hub) rather than in the spokes. Egypt's GDP is one-fourth of Belgium's and one-ninth of Brazil's. An integrated area offers much larger opportunities to MNEs. Although still limited by developed-country standards, the combined GDP of Egypt plus Morocco, Tunisia and Jordan, the three signatories of FTAs with the EU, was about $130 billion in 1996, equal to half of Belgium's GDP, a third of Mexico's and 16 per cent of Mercosur's. If the integrated area includes other MENA countries as planned for GAFTA, the region will become a much larger market[7].

The six countries listed in Table 4.1 received an average of $1.662 billion in FDI annually during 1995-97, about 1 per cent of their combined GDP. For comparison, FDI flows into Mercosur averaged $16 billion during the same period, about 2 per cent of its combined GDP. In addition to having higher per capita incomes, which generally attract FDI, the Mercosur countries have implemented deeper reforms than the MENA countries. Many of these reforms, including privatisation, had been completed by the early 1990s. FDI inflows rose significantly then, at an average annual rate of about 70 per cent, but more slowly than for the developing countries as a group. The flows have become much more important since the formation of the customs union in 1995.

It is difficult to estimate precisely the far from negligible magnitude of the effect of integration on FDI, but a rough guess can help to project the likely effects for the MENA region. Assume that, in the absence of the customs union, FDI to the four Mercosur countries would have risen at about the same rate as for all developing countries in 1992-94 and 1995-97. Inflows in 1995-97 would then have fallen short of the actual amounts by an annual average of about $6 billion, representing almost 0.8 per cent of their combined GDP (cf. Table 4.4)[8]. Applying this ratio to the joint

GDP of the six MENA countries listed in Table 4.1 yields an estimated increase in their FDI flows on the order of $1.2 billion, 70 per cent more than the actual inflows. This provides only a rough indication of additional FDI that integration within the region might attract. Trade liberalisation alone will not suffice to provide that attraction. Adequate infrastructure and low transportation costs also are crucial for potential intra-regional trade to materialise and to play its important role in encouraging foreign firms to invest.

Conclusions

EMAs are still in their early days; only a few MENA countries have yet signed such agreements. Nevertheless, three years have passed since Tunisia and Morocco signed and more than four years since the Barcelona Declaration set the general framework for deeper integration between the EU and the Southern Mediterranean region. The MENA countries' hopes to attract much-needed FDI through such closer co-operation have not yet materialised. FDI flows to the region have stagnated while they have expanded significantly to much of the rest of the world. Two conclusions emerge from the analysis. First, weaknesses in the business environment continue seriously to deter FDI, and the EMAs themselves do not bring significant new incentives to stimulate FDI. They are essentially bilateral FTAs that do not reach deeply enough to foster profound changes in the business environments of MENA partners. For foreign firms motivated by access to the EU market, the conditions remain more or less the same as under the former Co-operation agreements. Second, because the EMAs were designed as bilateral rather than multilateral FTAs, and due to the limited size of the individual markets, the EMAs may actually create a disincentive rather than an incentive for FDI. Integration within the region can offset this hub-and-spoke effect by offering a much larger market. International evidence points to the stimulating effects of such integration, provided that it is accompanied by improvements in the business environment, including the development of adequate infrastructure to facilitate intra-regional trade.

Notes

1. Estimates based on macroeconomic data published in *International Financial Statistics* (IMF). Data on government deficits are derived from *Economic Trends in the MENA Region* (ERF, 1998).

2. In principle the Agreement came into force in March 1998 after ratification by all partners. The Tunisian government began implementation earlier, in 1996, with the removal of import duties on capital goods. Use will most likely be made of the whole official transition period extending from 1998 to 2010.

3. The export regime allows exporting firms to get refunds for duties and other indirect taxes paid on local purchases of intermediate inputs but the red tape involved is sometimes prohibitive and discriminates against local purchases as opposed to purchases abroad.

4. Some authors argue that non-discriminatory liberalisation within the multilateral framework constitutes a stronger commitment to openness, because it involves trade with many more countries than the partners in an FTA.

5. Morocco and Tunisia already enjoyed duty-free access to the EU market and have both signed separate FTAs with the EU. There will therefore be no trade substitution between them *vis-à-vis* the EU.

6. Average annual FDI flows to Mexico are derived from data published in the *World Investment Report*, UNCTAD (1998).

7. The combined GDP of the whole Arab region reached $560 million in 1996, representing about half of the UK's GDP and 70 per cent of Mercosur's.

8. As Table 4.4 shows, FDI increased annually by 158 per cent from 1986-91 to 1992-94 and then by 62 per cent in 1995-97. Applied to the average amounts for the Mercosur countries in 1986-91, these rates would bring Mercosur flows to $6 373 million and $10 324 million, respectively, in the following two periods.

Chapter 5

The Euro and Southern Mediterranean Currencies

Agnès Bénassy-Quéré and Amina Lahrèche-Révil

Introduction*

This Chapter examines the impact of the introduction of the euro on Southern Mediterranean Countries (SMCs)[1]. The Asian crisis in 1997 taught, among other lessons, that exchange-rate policies are sensitive to trading relationships and to the currency distribution of the external debt (Bénassy-Quéré, 1997). The EU is by far the main partner of the SMCs. They should seize the opportunity provided by the EMU to use the Euro for their international currency transactions, as the means of payment (for trade and financial transactions), the unit of account (in trade or the design of the exchange-rate policy) and the denomination currency for debt and official reserves. Furthermore, one main conclusion of this Chapter is that the Euro's impact on the SMCs will depend largely on the extent to which the SMCs use it in the design of their own exchange-rate policies. Some might adopt the euro as a monetary anchor. Moreover, following the full introduction of the euro in the EMU, the SMCs will no longer need to contemplate policy responses to moves by their main competitors (Spain and Portugal) to devalue their currencies against their main European customers (France and Germany). SMCs should nevertheless pay due attention to their competitiveness relative to Eastern European countries fiercely trying to attract direct investment.

Fixed exchange rate regimes do not attract much support nowadays. The general liberalisation of capital movements has put their viability in question. Yet this does not necessarily argue in favour of freely floating the exchange rate. Perfect flexibility

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does not insure that the exchange rate will stay in line with economic fundamentals, i.e. be stabilising for domestic economies. For emerging countries, there are two additional arguments against perfect flexibility. First, where foreign-exchange markets are relatively narrow, small capital flows may have large impacts on exchange rates, which can become very unstable. Second, if a central bank fails to impose a credible internal peg, an external peg can reduce inflationary bias.

IMF (1998) discusses the appropriate framework for limiting exchange-rate variability, moving from a currency board to a loose managed float. The mechanism to be adopted depends on the relative weights of inflation and competitiveness in the implicit loss function of the authorities. It also depends on inflation inertia, the level of official reserves compared to capital mobility, the extent of output and export diversification, fiscal degrees of freedom, the degree of openness, labour mobility, the proportion of nominal shocks compared to real shocks and extra-economic factors such as the importance of monetary sovereignty.

The analysis here starts by assuming that emerging markets need some exchange-rate stabilisation in both nominal and real terms, the trade-offs depending on the factors just mentioned. The concern then shifts to examination of the appropriate foreign-exchange anchor. It shows that the Euro could be used as a monetary anchor, or at least assume a large share in foreign-exchange management in the SMCs.

The following analysis adapts an econometric model developed in Bayoumi and Eichengreen (1996). The model allows the assessment of past pegging policies with reference to the optimal currency area (OCA) theory. It also makes it possible to investigate whether SMCs should stabilise their nominal exchange rates against the euro or the dollar. The situation in which emerging markets find themselves is more complex than the OCA theory suggests, given that these countries must take external financing constraints into account in designing their exchange-rate policies. Real exchange-rate stability becomes crucial, both to preserve competitiveness and to prevent the external debt burden from growing. A third section analyses the appropriate real exchange-rate strategies of SMCs, if they focus on external intermediate targets. The sample includes Algeria, Egypt, Israel, Morocco, Tunisia and Turkey[2].

A Nominal Anchor for SMC Currencies

Official and de facto *Exchange-Rate Regimes in the SMCs*

As Table 5.1 shows, none of the six SMCs in the sample has adopted any particular official pegging strategy *vis-à-vis* the Deutschmark, considered here as foreshadowing the Euro. Managed floating means that the central bank acts on a discretionary basis. The basket peg refers to a rule, but does not much differ from a managed float when the composition of the basket is not disclosed or when managed floating refers to a basket with wide bands (as in Israel, for instance).

Table 5.1. **Exchange rate regimes in SMCs**

	Algeria	Egypt	Israel	Morocco	Tunisia	Turkey
Official regime in 1997	MF	MF	MF	Basket	MF	MF

Notes: MF: Managed float. Basket: peg to a basket of currencies according to the geographical distribution of trade.
Source : IMF, *Exchange Arrangements and Exchange Restrictions* (1997*a*).

The official exchange-rate regimes reviewed regularly by the IMF do not convey very precise information about actual exchange-rate policies. Frankel and Wei (1993), and Bayoumi and Eichengreen (1996, 1997), suggest looking at *de facto* rather than official exchange-rate regimes. The volatility of its currency against potential anchors can describe a country's *de facto* exchange-rate regime. Table 5.2 offers such measures for the SMCs during 1990-96, based on quarterly data[3]. These regimes are not homogenous. Morocco and Tunisia exhibit a clear peg on the DM. The volatility of their nominal exchange rates against the dollar is twice as high as against the DM. Egypt, by contrast, pegs its pound unambiguously to the dollar, and the Israel shekel seems mainly to be stabilised against it. Algeria and Turkey appear to keep a balance between the two currencies, and Turkey's nominal volatility is high against both potential international anchors[4].

Table 5.2. ***De facto* exchange-rate regimes in SMCs**

In percentage per quarter	Algeria	Egypt	Israel	Morocco	Tunisia	Turkey
Volatility against the dollar (1)	3.84	0.07	2.33	3.09	3.93	12.60
Volatility against the DM (2)	4.37	1.75	3.08	1.47	1.56	12.86
(1)/(2)	0.80	0.04	0.76	2.10	2.52	0.98

Notes: (1), (2): standard deviation of the quarterly log variations of exchange rates.
Source: authors' calculations, using IMF data.

The Optimal Currency Area Theory and the Choice of a Nominal Anchor

The OCA theory, as originally developed by Mundell (1961), McKinnon (1963) and Kenen (1969), offers a normative framework to define the conditions under which a range of countries should form a monetary union, i.e. fix exchange rates irrevocably among themselves. A currency area eliminates exchange-rate risk, thereby creating added incentives to trade and invest. In a monetary union, the denomination of all prices in the same unit of account reduces transaction costs and helps to deepen economic integration. A monetary union also introduces some costs, however, the most important being loss of the exchange-rate instrument and the loss of monetary policy independence. A monetary union should be implemented only if the benefits exceed the costs. The OCA theory points out several criteria that define the costs.

The next section applies this traditional OCA theory to the design of less extreme monetary arrangements than monetary unions, namely pegging strategies ranging from currency boards to smooth managed-float regimes, with fixed but adjustable pegs in between. Because the variables highlighted by the OCA literature can differ across potential anchors, one can define which among a set of international currencies would be the best anchor.

Since the 1960s, the OCA literature has evolved in two main directions. The first highlights other determinants of the benefits and costs of a currency area, such as credibility, transition costs and the needs for accompanying policies (Tavlas, 1993). The second shows that OCA criteria are themselves endogenous. According to Krugman (1993), exchange-rate stabilisation endogenously increases the cost of losing the monetary instrument through increased specialisation. Fatás (1997) and Fontagné and Freudenberg (1998) challenge this view and show that exchange-rate stabilisation tends to create the conditions for an optimal currency area.

These new developments should be taken into account, but most of them are irrelevant to the choice of a specific anchor currency by an emerging country. They include credibility effects (the euro and the dollar can be viewed as carrying similar anti-inflationary credibility), the need for fiscal co-ordination (irrelevant in a unilateral anchor choice) and several features that have implications for choosing a monetary commitment rather than for selecting a specific anchor currency — complementary domestic policies like wage flexibility or fiscal adjustment, or transition costs.

Endogenous OCA criteria have greater interest. If SMCs stabilise their currencies against the euro, it becomes crucial to determine whether their specialisation patterns will diverge or converge towards that of Europe. This will reveal both the scope for asymmetric shocks in the long run and whether such policies will promote or conflict with Euro-Mediterranean integration. Nevertheless, these endogenous criteria, which refer to the theories of international trade and economic geography, lie beyond the scope of this Chapter. It considers trade patterns as exogenous, although it does examine various scenarios.

The Choice of a Nominal Anchor in the SMCs

The OCA Criteria

According to OCA theory, two countries should peg their bilateral exchange rate when the following conditions prevail:

1) both economies face mostly symmetric shocks;

2) external trade is important as a share of GDP;

3) the countries are mutually important trade partners; and

4) specific shocks can be absorbed by factor mobility, real wage flexibility and/or fiscal federalism.

Although OCA theory initially seeks to define the conditions under which two areas can unify their currencies, it is not necessary to interpret the nominal peg as the establishment of a fixed exchange rate regime. The peg is defined here by the regularity of exchange-rate variations between the two areas. This can be associated with a fixed-rate regime (no variations), with a crawling peg or even with a managed float.

Bayoumi and Eichengreen (1996, 1997, 1998) suggest applying the OCA theory on cross-section samples. They use an equation that explains the volatility of each bilateral nominal exchange rate by the asymmetry of business cycles between the two partners, the asymmetry of their trade distribution across three sectors, their bilateral openness ratio and the size of each economy. These explanatory variables reflect the first three conditions of the optimal pegging strategy. They leave the fourth aside, because it has "not played a significant role in responding to shocks that are felt asymmetrically across countries, at least over the sample period" (Bayoumi and Eichengreen, 1997, p. 763)[5]. The estimates, based on a sample of industrial countries or a combination of industrial and Asian countries, support the OCA theory and reveal that the relative stability of exchange rates in Europe and between Asian countries (except for the case of Japan) conforms to real integration in both areas.

Bénassy-Quéré (1997) questions these conclusions, pointing out that the stability of intra-European exchange rates comes from genuine monetary co-operation, whereas stability in emerging Asian countries, is explained not by mutual pegging of their currencies but by a common peg to the dollar. Thus, for emerging countries it seems more interesting to study pegging strategies in relation to international currencies, which are more likely to be selected than third-country currencies as a reference.

Econometric methodology

The interest here lies in explaining past pegging behaviour with respect to three potential anchors: the US dollar, the DM (used as a proxy for the euro) and the yen. The explanatory variables sum up the criteria retained from the OCA theory, namely the asymmetry of business cycles with respect to the three reference areas (core-EMS countries, USA and Japan), the share of intra-industry trade in bilateral trade with the three anchor areas and the relative size of each country compared to the anchor area. The methodology, although relying largely on Bayoumi and Eichengreen (1997), is nonetheless distinct because it focuses on pegging relations (instead of studying the bilateral relations between all the countries of the sample) by including SMCs in the sample (and studying their specific behaviour) and by using somewhat different explanatory variables.

Each SMC is identified by the subscript *i*, while the anchor area is represented by the subscript *j*, where *j* = USA, Core-ERM[6] or Japan. The nominal exchange volatility between *i* and *j* (SDS_j) is an indicator of the *de facto* pegging behaviour of the nominal exchange rate; it is measured by the standard deviation (σ) of the quarterly log-variation of the bilateral, nominal exchange rate during 1992:I-1996:IV:

$$SDS_{ij} = \sigma\left(LogS_{ij} - LogS_{ij}(-1)\right) \qquad (1)$$

where S_{ij} refers to the nominal quarterly exchange rate of currency *i* against the potential anchor currency *j* (IMF, *International Financial Statistics*). The choice of a relatively recent period underlines the objective to analyse the issues based on a world with high capital mobility. Central and Eastern European countries are also included in the analysis because they too will consider using the euro as a monetary anchor.

The asymmetry of business cycles between *i* and *j* (SDY_{ij}) is measured by the standard deviation (σ) of the differences in year-on-year log variations of real output between *i* and *j* over 1992:I-1996:IV (IMF, *International Financial Statistics*, line 66):

$$SDY_{ij} = \sigma\left(Log \frac{RGDP_i}{RGDP_i(-4)} - Log \frac{RGDP_j}{RGDP_j(-4)} \right) \quad (2)$$

where $RGDP_i$ is the GDP of country *i* at constant prices. The relative size of *i* compared to *j* ($RSIZE_{ij}$) is the ratio of current-dollar GDPs of *i* and *j* in 1995 (CHELEM-CEPII database and IMF).

$$RSIZE_{ij} = \frac{GDP_i}{GDP_j} \quad (3)$$

Finally, the share of intra-industry trade (IIT) is measured using the relative Grubel and Lloyd index (RGL_{ij}). This index (see Grubel and Lloyd, 1971) captures the importance of intra-industry trade in *ij* bilateral trade in comparison to *i*'s external trade with the three pooled reference zones (noted as *w*):

$$RGL_{ij} = 100 \frac{GL_{ij}}{GL_{iw}} \quad (4)$$

$$\text{with } GL_{ij} = 1 - \sum_{k=1}^{70} \frac{X_{ij}^k + M_{ij}^k}{X_{ij} + M_{ij}} \cdot \frac{\left| X_{ij}^k - M_{ij}^k \right|}{X_{ij}^k + M_{ij}^k} \quad (5)$$

The second term in the sum is the share of inter-industry trade in the bilateral trade of product *k*. The first term measures the share of product *k* in total bilateral trade. The Grubel and Lloyd index varies from zero (only *inter*-industry trade) to one (only *intra*-industry trade). It is computed for 1995, using the 70-product decomposition provided by the CHELEM database.

The relative Grubel and Lloyd index accounts for the total IIT behaviour of each country *vis-à-vis* the "rest of the world" ("ROW" — the pooled three reference areas). It thereby controls for the behaviour of countries that, because of their factor endowments or levels of development, naturally exhibit more (less) IIT than others. Industrialised countries, for example, tend to exhibit more IIT than developing countries[7]. Similarly, using relative and not absolute size variables takes into account that, *ceteris paribus*, each country would have an interest in pegging its currency to that of a large area. This choice also avoids using the same size value three times to explain exchange-rate volatility against the three reference areas.

The estimations are carried out on a cross-section sample of 49 countries, including five SMCs (Algeria, Israel, Morocco, Tunisia and Turkey)[8]. They pool the data for *j*=$, DM, yen, so that the total sample contains 49×3=147 observations[9]. The important heterogeneity of nominal exchange-rate volatilities is a source of heteroskedasticity confirmed by econometric tests. Using the method developed by White (1980) provides heteroskedastic-consistent standard errors.

Two equations are estimated. The first is a "pure" OCA equation, which explains nominal exchange rate behaviour where the three determinants of pegging are as defined above. The second includes regional dummies that account for a possible bias in the behaviour of the exchange rates of SMCs, compared with what OCA theory would predict. $SMCDM_{ij}$ equals one when *i* is an SMC and *j* is the DM or the Core-ERM, and zero in all other cases. $SMC\$_{ij}$ equals 1 when *i* is an SMC and *j* the dollar or the United States, and zero in all other cases. These dummies allow possible excess stability of SMCs currencies against the alternative anchor currencies to be identified. They should not be significant if the pegging behaviour is in line with the standard theory.

$$SDS_{ij} = a_0 + \overset{+}{a_1} SDY_{ij} + \overset{-}{a_2} RGL_{ij} + \overset{+}{a_3} RSIZE_{ij} + u_{ij} \qquad (6)$$

$$SDS_{ij} = b_0 + \overset{+}{b_1} SDY_{ij} + \overset{-}{b_2} RGL_{ij} + \overset{+}{b_3} RSIZE_{ij} + b_4 SMCDM_{ij} + b_5 SMC\$_{ij} + u_{ij} \qquad (7)$$

The anticipated signs are noted above the coefficients. The asymmetry of business cycles can derive from asymmetric shocks or structures that justify frequent exchange-rate adjustments. Similarly, industry-specific shocks should have a rather symmetric impact in countries where IIT prevails, which reduces the need for exchange-rate variations. Consequently, high values of SDY_{ij} and low values of RGL_{ij} should be associated with higher nominal exchange-rate volatility. In contrast, small country size compared with the potential anchor partner (low $RSIZE_{ij}$) should lead to more stable exchange rates.

Econometric Results

Table 5.3 presents the estimates obtained with the full sample of 49 countries and 147 observations. Although the variance of exchange-rate volatilities across currencies is much larger than that of the explanatory variables, and despite the rather crude specification, the equations explain 30 per cent of the variance of the exchange-rate volatilities, a relatively good result. OCA coefficients exhibit the expected signs and are significant at the 1 per cent or 5 per cent level: exchange rate volatility is all the more important given that business cycles differ *(SDY)*, that the IIT share is relatively small *(RGL)* and that the country is large compared to the potential anchor area *(RSIZE)*.

Table 5.3. **OCA Estimates**

Equation	(6)	(7)
Number of observations	147	147
Constant	4.95**	4.943**
SDY_{ij}	0.356**	0.355**
RGL_{ij}	-0.022**	-0.022*
$RSIZE_{ij}$	0.040*	0.042*
$SMCDM_{ij}$	-	0.474
$SMC\$_{ij}$	-	0.485
Adjusted R^2	0.299	0.291
Fisher statistics	21.85**	12.977**
S.E. of the regression	2.773	2.791

Notes: ** significant at the 1%; * 5% level.
Levels of confidence are consistent with heteroskedasticity.
Source: authors' calculations.

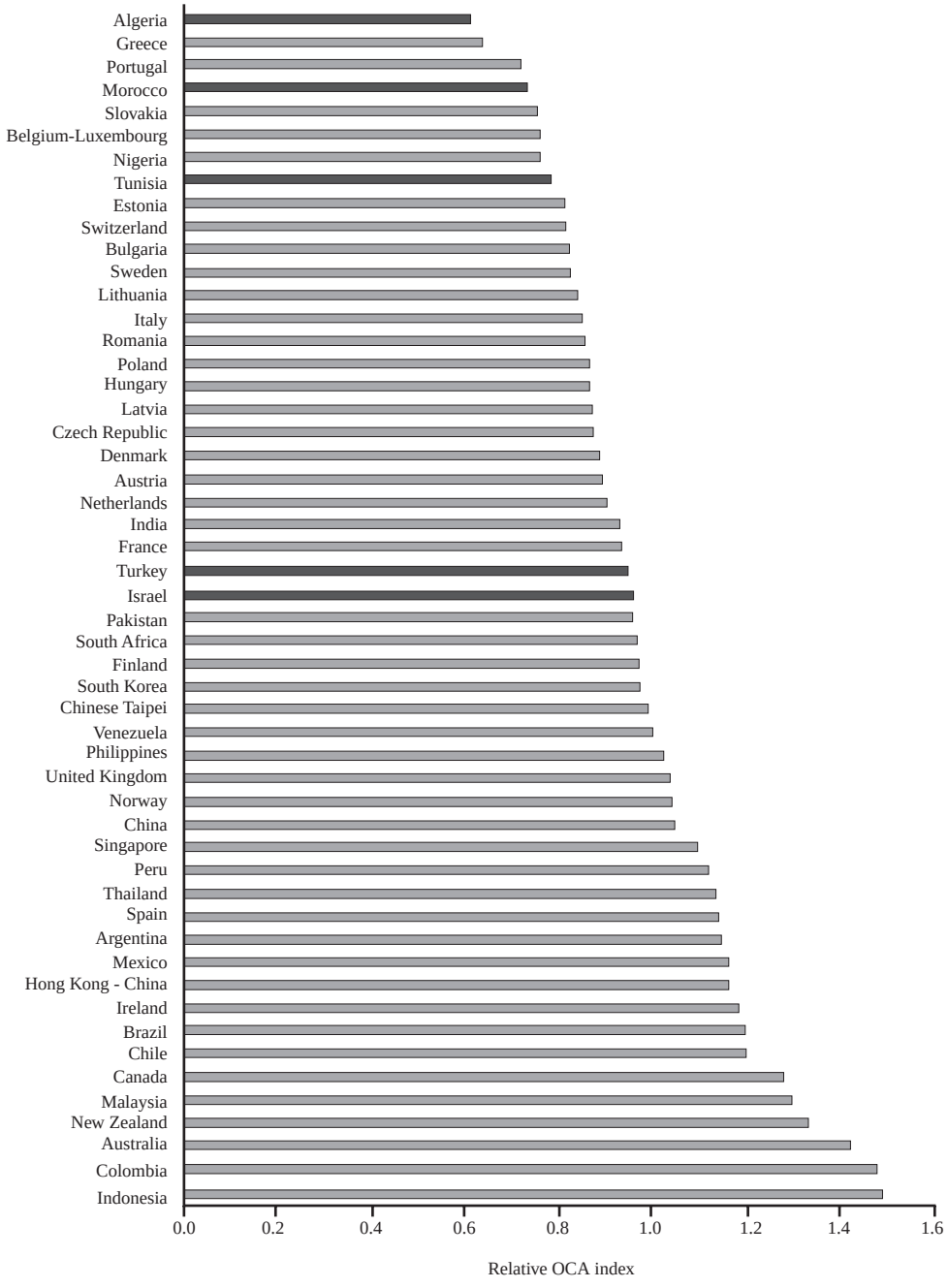
Estimates for the SMC dummies are not significant. One can therefore conclude that the SMCs' currencies behave *on average* in a standard accord with OCA theory, based on the 49-country estimates. The SMCs as a whole do not seem to have adopted any specific behaviour against the DM or the dollar, showing no evidence of any excessive stabilisation with regard to any of the potential anchor currencies.

OCA Indexes

The estimated coefficients of equation (6) allow for a switch to a normative point of view, because one can calculate the volatility of each nominal exchange rate that would be consistent with OCA theory. It is then possible to determine which anchor currency should be preferred in each country of the sample (see Bayoumi and Eichengreen, 1997). These results should of course be considered as only one set of the economic parameters that figure in the design of exchange rate-regimes. Equation (6) explains only 30 per cent of the variance of exchange-rate volatilities across currencies, and it is possible that the OCA approach may have missed some important economic characteristics of emerging countries. The latter point is discussed below. Finally, extra-economic factors may interfere, stemming from past and future political interactions between the SMCs and Europe, but this lies beyond the scope of the current investigation.

Equation (6) is taken as deterministic and used to calculate the theoretical volatility of exchange rates against the DM and the dollar[10]. The ratio of these two theoretical volatilities then makes it possible to determine the anchor currency that should be preferred. A ratio less than one indicates the DM (the euro) should be preferred. The results are presented in Figure 5.1.

Figure 5.1. **The Choice of a Nominal Anchor**
(A value lower than one means
that the euro should be preferred as a currency peg)



The indices take values much lower than one for the three Maghreb countries, meaning that they should prefer nominal pegs to the euro rather than to the dollar. This result arises mainly from IIT, which is much more important with the core-ERM than with the United States (see Appendix), although it is still low against both areas[11]. Turkey and Israel, however, should prefer a basket with the DM and the dollar equally weighted, because their indices are close to unity. Most European countries, including those in Eastern and Central Europe, lie below the unit line. The exceptions are the United Kingdom and Norway, which have so far refused to enter the monetary union, and Spain and Ireland, whose participation in European monetary integration can be explained by the benefits it conveyed through direct investment. Several core ERM countries are close to the unit line. This means that pegging their currencies to the DM alone was not consistent with OCA theory, but it has no implication for the desirability of EMU. That should be valued as a multilateral arrangement involving all bilateral relationships, which are not under study here.

The ratio of observed to theoretical volatility makes it possible to evaluate observed volatility in the past. Table 5.4 presents the volatility indices with respect to the dollar and the DM, computed for the SMCs of the sample. The data compare, for each potential anchor, the effective volatility of the nominal exchange rate to the theoretical one, as given by Equation (6). An index above (below) one means that the observed volatility is too high (low) compared with what the standard theory suggests. The comparisons define whether or not SMCs have tended to contain their volatility *excessively* against one or the other international currency.

Table 5.4. **Excess Volatility: Observed Volatility/Theoretical Volatility**

	Excess volatility with respect to		
	the DM (1)	the dollar (2)	ratio (1)/(2)
Algeria	1.13	0.61	1.85
Israel	0.52	0.51	1.01
Morocco	0.37	0.57	0.65
Tunisia	0.27	0.54	0.50
Turkey	2.36	2.18	1.08
Excl. 94(*)	*0.71*	*0.71*	*1.01*

Source: authors calculations, based on regression (6), table 5.3. (*) See explanations below.

The past pegging strategies of SMCs did not conform systematically to what OCA theory would have predicted. For the three Maghreb countries, the observed volatility against the dollar is smaller than what the OCA theory would have anticipated. The bias towards exchange rate stability is strong against the DM in Morocco and Tunisia, whereas in Algeria volatility against the DM seems to conform to the theoretical predictions. Israel has shown excess stability against both currencies in the same proportions. Turkey exhibits excess volatility against both currencies, which the 1994 financial crisis explains[12]. Removing 1994QI to 1994QIV from the calculation of observed volatility changes excess volatility into excess stability against both the dollar and the DM (figures in italics in Table 5.4), so that both Israel and Turkey display the same stability bias *vis-à-vis* the two anchor currencies.

Hence, the past pegging behaviour of *each* SMC departed from the OCA theory, but in different ways across countries. This departure explains the lack of significance of the regional dummies in equation (7). The Algerian dinar was too stable against the dollar and not stable enough against the DM. Morocco and Tunisia tended to stabilise their currencies excessively against the DM, while in Turkey and Israel this stabilisation was too important against both anchor currencies.

Still, as noted above, the OCA norm itself depends on past volatility against both anchor currencies. Fontagné and Freudenberg (1998) show that reducing the exchange-rate uncertainty that prejudices inter-industry trade encourages IIT, especially in horizontally differentiated products. One could therefore think that Morocco and Tunisia have partly created for themselves the conditions under which a policy of nominal exchange-rate stabilisation against the euro can succeed.

Finally, the SMCs (except Algeria) seem to have broadly followed the OCA prescriptions, although sometimes excessively. These prescriptions mean using the euro as a monetary anchor in Maghreb countries, and a basket mixing equally the euro and the dollar in Israel and Turkey. Yet these conclusions face two main limitations. First, the results do not provide any information about the kind of nominal peg that should be adopted (fixed, adjustable or crawling). Second, developing countries face specific constraints that can move them away from the targets that theory suggests. The section that follows addresses the latter limitation.

Exchange-Rate Stabilisation and the External Constraint

According to OCA theory, the final objective of public authorities is output stabilisation. A country that is relatively closed and subject to specific shocks should adopt a flexible exchange-rate regime, which offers an efficient means of stabilisation in a context of short-run nominal rigidities. Although this argument can be easily accepted for industrialised countries, it does not necessarily fit the reality of emerging countries, which face external constraints that lead them to focus on intermediate external targets. One must then study not only their optimal strategies for nominal stabilisation, but also the currencies against which they should try to stabilise their real exchange rates[13].

The External Constraint

Normative analyses referring to the real exchange rate usually rely on the fundamental equilibrium exchange rate (FEER) framework. Williamson (1994) suggests that monetary authorities should target a FEER to ensure that the current account remains consistent with FDI and full-employment needs. Once the FEER is reached, the policy objective should be to stabilise an effective exchange rate weighted by the distribution of trade and/or of foreign competitors, i.e. to peg the currency in

real terms to a trade-weighted currency basket. When a country carries debts denominated in foreign currencies, however, the real exchange-rate target must deal with twin policy objectives: competitiveness and the debt burden. Two issues then arise: first, the overall impact of exchange-rate movements on the foreign account and, second, the potential mismatch between the currency distribution of debts and the country distribution of trade.

A real depreciation improves the current account if the Marshall-Lerner condition holds (demand effect), or if higher profitability raises the incentive to export (supply effect). Yet the debt service is simultaneously revalued, and the net effect on the foreign account becomes uncertain. This argument holds especially for heavily indebted countries like Algeria or Morocco (Table 5.5)[14].

Table 5.5. **Some Macroeconomic Indicators in SMCs in 1997**

	Inflation %	Current account % of GDP	Exports % of GDP	Gross ext. debt % of GDP	Debt service % of GDP
Algeria[a]	21.7	n.a.	35.1	76.7	9.2
Egypt	4.6	-0.3	20.6	41.5	3.0
Israel	9.0	-5.1	22.9	27.6	4.5
Morocco	1.0	-2.7	28.7	65.8	11.1
Tunisia	3.6	-2.6	42.2	51.0	8.4
Turkey	85.7	-1.5	27.9	47.8	6.8

Note: *a)* 1996. GNP instead of GDP for Algeria.
Source : Caisse des Dépôts et Consignations (1998), IMF and Bank of Israel (1998).

If the currency distribution of the debt matches that of trade, using a trade-weighted basket of course remains the best way to target the foreign account, because both the trade account and the debt service will remain stable. This is not the case for the SMCs, however, where the geographical distribution of trade does not match the currency distribution of the external debt, as shown in Table 5.6. Most of the countries included in the sample trade prominently with the euro currency area, for exports as well as imports. The debt, however, is more evenly distributed between the European currencies (now the euro) and the dollar. Tunisia presents the most striking case. Only 1.4 per cent of its exports go to the United States, but a third of the debt is dollar-denominated. For these countries, stabilising the real exchange rate against the euro is good strategy for stabilising the trade account, but it can become painful for debt service if the dollar appreciates. Using a basket including both currencies could then prove to be optimal.

Table 5.6. **Country-Distribution of Trade and Currency-Distribution of the External Debt in Percentages, 1996**

	Percentage of exports to					Percentage of imports from					Medium and long run debt [b]			
	US	EU11[a]	Other EU15	Intra SMCs	RoW[d]	US	EU11[a]	Other EU15	Intra SMCs	RoW	USD	Euro[c]	Yen	Other
Algeria	16.4	59.8	2.4	1.8	19.6	8.3	64.6	2.5	5.6	18.9	38.8	23.9	12.2	25.1
Egypt	13.0	36.7	10.0	5.3	36.0	20.0	29.6	6.6	2.6	41.2	41.0	30.7	12.8	15.5
Israel[e]	30.8	24.0	8.3	1.2	35.7	10.0	40.7	11.1	0.9	27.4	n.a.	n.a.	n.a.	n.a.
Morocco	3.5	51.7	4.8	3.7	36.3	7.4	49.3	4.8	2.1	36.3	29.9	34.9	7.4	27.8
Tunisia	1.4	77.0	3.0	3.8	14.8	4.5	67.9	4.4	4.1	19.1	33.6	26.4	18.6	21.2
Turkey	7.1	42.2	7.6	3.2	39.9	7.1	31.4	8.3	2.7	48.9	31.0	38.0	21.0	10.0
Israel	30.8	24.0	8.3	4.3	38.8	20.0	40.7	11.1	3.1	48.4	n.a.	n.a.	n.a.	n.a.

Notes:
a) Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Italy, Luxembourg, Netherlands, Spain.
b) Long-term debt for Algeria.
c) EU11 currencies + ECU.
d) Rest of the world.
e) For Israel, intra-SMCs trade only concerns Egypt and Turkey.
Sources: IMF, *Direction of Trade*, Chauffour and Stemitsiotis (1998).

Table 5.7. **Share of Mining and Energy in Total Exports of SMCs**

	Mining and Energy Exports to (in percentage of total exports)						Mining and Energy Imports from (in percentage of total imports)					
	US	EU11	Other EU15	Intra SMCs	RoW[a]	Total	US	EU11	Other EU15	Intra SMCs	RoW[a]	Total
Algeria	3.0	51.3	2.1	5.1	8.0	69.5	1.4	0.6	0.1	0.3	3.1	5.6
Egypt	2.4	17.3	9.1	8.1	5.5	42.4	0.4	0.2	0.2	0.0	0.8	1.6
Israel[b]	0.0	0.3	0.1	0.0	0.3	0.7	0.1	0.1	0.0	1.1	0.8	2.1
Morocco	0.8	3.6	0.1	0.1	3.5	8.2	0.6	1.0	0.1	0.7	10.0	12.4
Tunisia	0.3	7.0	0.6	0.2	0.7	8.8	0.0	0.6	0.1	1.6	2.8	5.1
Turkey	0.2	0.9	0.1	0.0	0.9	2.1	0.5	1.2	0.3	1.6	10.2	13.8

Notes:
a) Rest of the world.
b) For Israel, intra-SMCs trade only concerns Egypt and Turkey.
Source: CHELEM database (CEPII).

Although the euro currency area is an important trading partner for all the countries in the sample, the share of energy and mining varies to a large extent across countries (Table 5.7). This is important because these items are traded on world markets where the law of one price holds and the price is quoted in US dollars. Thus, although Algerian and Egyptian energy exports go to the euro currency area, their price cannot deviate from the world dollar price. Pegging the local currency to the dollar then helps to maintain stable profits when the dollar fluctuates. Hence, unless the euro is used for oil invoicing, energy exports to the euro currency area should be treated as exports to the United States when designing the optimal exchange-rate regime.

The Share of the Euro in the Optimal Basket

The Model

Start by assuming that the monetary authorities of two identical SMCs ($i=A,B$) wish to stabilise both their external competitiveness c_i and the real price of their external debt f_i (both expressed in logarithms).

$$\underset{e_{i\$}}{Min}\, L_i = \frac{1}{2}\left(c_i^2 + \beta f_i^2\right),\ i = A, B,\ \beta \geq 0 \tag{8}$$

Equation 8 depicts a loss function that depends on the trade account (which depends on c_i) and on the external debt burden (which is a function of f_i). Each country is assumed to control its bilateral exchange rate against the US dollar, e_i, (also expressed in logarithms)[15]. The issue here is whether it is optimal to adjust $e_{i\$}$ when the euro moves against the dollar.

Both c_i and f_i are effective real exchange rates relying on different weights. Let a_j be the weight of country j as a trade partner, and b_j the weight of the currency of j for debt denomination. For simplicity, the same subscripts refer to countries and currencies: \$ stands for the US dollar and the United States, and E for the euro and the Euro currency area[16]. The real effective exchange rates c_A and f_A can be written as:

$$\begin{cases} c_A = a_\$ e_{A\$} + a_E e_{AE} + \left(1 - a_\$ - a_E\right) e_{AB} \\ f_A = b_\$ e_{A\$} + b_E e_{AE} + \left(1 - b_\$ - b_E\right) e_{AB} \end{cases} \tag{9}$$

where e_{Aj} stands for the logarithm of the real exchange rate of currency A against j (j=\$,E,B). For simplicity, assume that all trade occurs with the United States, the EU-11 and the South-Mediterranean partners, and that the dollar and the euro are the only currencies of debt denomination. In most countries, these hypotheses are not too far from reality (Tables 5.6 and 5.7). They are discussed *infra*, in relation to the calibration of the model. Recalling that $e_{ij} = e_{i\$} - e_{j\$}$, equation (9) can be re-arranged as follows:

$$\begin{cases} c_A = e_{A\$} + a_E e_{E\$} + (1 - a_\$ - a_E) e_{B\$} \\ f_A = e_{A\$} + b_E e_{E\$} + (1 - b_\$ - b_E) e_{B\$} \end{cases} \quad (10)$$

Similar relations prevail for country B. If each country maximises its loss function without taking the reaction of its partner into account, the following Nash equilibrium obtains:

$$e_{A\$} = e_{B\$} = \frac{(a_E + \beta b_E)}{(a_\$ + a_E) + \beta (b_\$ + b_E)} e_{E\$} \quad (11)$$

Equation (11) describes the optimal response of each SMC exchange rate against the USD to euro/USD variations. The response depends on the relative weight of each trading partner, and the currencies of debt denomination. In the special case where $a_\$ = a_E = b_\$ = b_E = 0.5$, i.e. where all trade and capital flows are carried out equally with the US and the euro-area, Equation (11) then becomes:

$$e_{A\$} = e_{B\$} = 0.5 \cdot e_{E\$} \quad (11')$$

When the euro appreciates by 1 per cent against the dollar, each country appreciates its currency by 0.5 per cent against the dollar, which means a 0.5 per cent depreciation against the euro. This rule keeps the real effective exchange rate stable in terms of both trade weights and debt weights. The pattern is different in the SMCs, however. The weight of the United States as an export destination varies from 1.4 per cent in Tunisia to 13 per cent in Egypt, while 34 per cent and 41 per cent of the debt, respectively, is denominated in dollars. The country distribution of trade and the currency distribution of debt therefore are critical parameters in the context of setting optimal real peg baskets.

The optimal real peg basket also depends on the value of β. If $\beta \to \infty$, the monetary authorities will focus on stabilising the financial real effective exchange rate (REER) by pegging their currency to a basket in which the share of the euro matches the currency distribution of the debt. If, on the other hand, $\beta = 0$, they will focus on stabilising a trade REER, and the share of the euro in the basket will match that of the euro zone in the country distribution of trade[17]. For values of β between zero and infinity, monetary authorities are faced with a trade-off between stabilising c_i and stabilising f_i.

Optimal Baskets

Setting an optimal pegging basket depends critically on the relative weight of the "trade" and "financial" exchange rates in the loss function of the authorities, i.e. on the value of β. If monetary authorities have a foreign-account target, they will be indifferent between a 1 per cent of GDP variation in the trade account and a 1 per cent of GDP variation in the debt service. The reaction of the trade account/GDP ratio to a 1 per cent depreciation in c_i amounts to Δ_c per cent, where Δ_c per cent is given by the Marshall, Lerner and Robinson formula (Robinson, 1947):

$$\Delta_C = \frac{X}{GDP}\left(\frac{X}{M}\left[1+\gamma_X\left(\varepsilon_X - 1\right)\right]+\gamma_M\left(\varepsilon_M - 1\right)\right) \tag{13}$$

where X stands for exports and M for imports, ε_X and ε_M are export and import price elasticities, γ_X is the elasticity of export prices to domestic prices and γ_M is the elasticity of import prices to supplier prices. The reaction of the debt service/GDP ratio to a 1 per cent depreciation in f_i amounts to Δ_f per cent, with:

$$\Delta_f = \frac{SD}{GDP} \tag{14}$$

where SD stands for the debt service. If the authorities are indifferent between raising the trade account and reducing the debt service, then they should be indifferent between a 1 per cent depreciation in c_i and a Δ_c/Δ_f per cent depreciation in f_i. Hence, the consistent value of β is:

$$\beta^* = \frac{\Delta_f^2}{\Delta_c^2} \tag{15}$$

The data in the top part of Table 5.8 present computed values of β^* for each of the countries included in the sample. Because price-elasticity estimates are not available for SMCs, the calculations use the Mimosa team (1996) estimates of elasticities for the Southern European countries[18]. In all cases, β is less than one, which means that the SMCs in the sample pay more attention to their competitiveness than to the valuation of their debt. The value lies close to one only in Morocco, where the debt service is rather high and the export/import ratio is less than one.

Table 5.8. **Share of the Euro in the Optimal SMCs' Pegging Baskets**

	Algeria	Egypt	Israel	Morocco	Tunisia	Turkey
X/M	1.43	0.79	0.68	0.83	0.93	0.9
X/PIB (%)	35.1	18.1	22.9	28.6	42.8	25.7
Δ_c^1	0.339	0.066	0.060	0.115	0.212	0.120
SD/GDP(%)	9.2	3.2	4.5	10.5	8.4	6.9
Δ_f^2	-0.092	-0.032	-0.045	-0.105	-0.84	-0.069
β^*	0.07	0.23	0.56	0.83	0.16	0.33
Debt denomination						
$b_\$$	0.62	0.54	*0.80*	0.56	0.45	0.69
b_E	0.38	0.46	*0.20*	0.44	0.55	0.31
High scenario						
$a_\$$	0.60	0.39	0.35	0.10	0.08	0.16
a_E	0.37	0.57	0.64	0.88	0.88	0.81
Max. euro share	0.38	0.57	0.49	0.69	0.87	0.70
Intermediate scenario						
$a_\$$	0.66	0.59	0.54	0.33	0.23	0.48
a_E	0.31	0.39	0.45	0.65	0.74	0.50
Interm. euro share	0.32	0.41	0.36	0.56	0.73	0.46
Low scenario						
$a_\$$	0.67	0.65	0.65	0.39	0.26	0.55
a_E	0.30	0.32	0.34	0.59	0.71	0.43
Min. euro share	0.30	0.33	0.30	0.47	0.67	0.42

Notes:
Values of the elasticities: $\varepsilon_X = 0.70$; $\varepsilon_M = 0.44$; $\gamma_X = 0.21$; $\gamma_M = 0.67$.
1) Trade account sensitiveness to the trade REER (Equation 13).
2) Debt service sensitiveness to the financial REER (Equation 14).
Source: authors' calculations, using previous tables and Mimosa estimates.

Calculating the share of the euro in the optimal pegging basket requires values for the parameters $a_\$$, a_E, $b_\$$, b_E. As a first step, assign all exports of energy and raw materials to exports to the United States. From Tables 5.6 and 5.7, calculate the shares of the United States, the euro currency area and intra-SMC trade in the SMCs' total external trade (average of exports and imports). In a similar way, derive the shares of the US dollar and the euro in the external debt from Table 5.6 (assuming that the Southern Mediterranean currencies are not used for debt denomination)[19].

In both cases, the shares do not sum to one, because they do not include the rest of the world. The share of other currencies is relatively high for debt denomination, given debt denominated due in yen and composite baskets. Because the yen will not likely become a major anchor currency, especially in the SMCs, the analysis excludes it and adds it to other currencies, for which the breakdown between the euro and the dollar is assumed to match the relative shares of the two currencies. Alternatively, one could make some assumptions about the evolution of the euro share for debt denomination, in line with the development of the euro as an international currency, but they would be rather *ad hoc*, as this development will typically be endogenous. Some assumptions are retained about the future role of the euro for invoicing energy.

Hence, the analysis is made with *other things equal concerning the international role of the euro*. The internationalisation of the euro would of course enhance the incentive to use it as a currency anchor.

Three different assumptions are made for trade with the rest of the world (i.e. non-energy or mining trade with countries other than the United Sates, the EU-11 and South-Mediterranean partners):

— In the *"low" scenario*, trade with the rest of the world is taken as trade with the United States. This extreme assumption reflects that a large segment of the SMCs' rest-of-world partners (Asia, the Gulf countries) belong or have belonged to an area of exchange-rate stability against the dollar.

— In the *"high" scenario*, all EU-15 countries are included in the euro-zone, and trade with the rest of the world is excluded from the analysis. This is equivalent to sharing corresponding trade amongst both areas in proportion to their relative share. The underlying ideas are that: *i)* even if they stay outside the euro, the currencies of the rest of EU-15 (and especially the UK pound) will likely exhibit less volatility against the euro than against the dollar; *ii)* many countries in the rest of the world, especially in Asia will not likely come back to a dollar peg; and *iii)* there is no reason why the yen should be more unstable against the euro than against the dollar.

— The "*intermediate" scenario*, includes all EU-15 countries in the euro-zone, but the rest of the world is still in a dollar zone.

In all cases, the model used to calculate the optimal basket (Equation 11) assumes that the SMC partners of each country have the same structure (in terms of β and of the distribution of trade and debts). This simplifying assumption has little impact on the results, because strategic interactions between the SMCs are very weak due to the low share of intra-SMC, non-energy trade. The results are presented in Table 5.8.

The share of the euro in the optimal baskets varies from 30 per cent to 67 per cent for the "low" scenario, and from 38 per cent to 87 per cent for the "high" scenario. This means that the SMCs of the sample would have a clear interest in considering the euro in the management of their real exchange rates. This results from the prominence of the EU-11 as trading partners, with debt rather evenly distributed between the euro and the dollar. SMCs should not fear too much an appreciation of the euro, because the euro currency area not only is a main trade partner but also contains several of their main competitors (e.g. Spain, Portugal and Italy).

The SMCs included in the sample do exhibit some important differences. Not surprisingly, the two oil producers and Israel display the lowest optimal euro share. In Algeria the euro share holds roughly stable across the three scenarios, in which the rest of the world, especially EU countries outside the euro currency area, represents only a minor share of trade (Table 5.6). Conversely, the optimal Egyptian basket peg will depend on exchange-rate regimes in the rest of the world, especially in the United Kingdom. In Israel, although the dollar's share of debt denomination is especially

high, the weight of the euro reaches 49 per cent in the high scenario. Tunisia would benefit from a basket in which the euro would be prominent, given its high openness ratio (the highest in the sample) and its trade bias towards the EU-11. Finally, Morocco and Turkey show similarities, although for different reasons. Morocco has a relatively high debt-service ratio with relatively balanced debt denomination, whereas Turkey is in the opposite situation. This makes the debt service argument neutral for Morocco and unimportant for Turkey. The trade pattern, the important factor, varies across the scenarios due to the importance of trade with the rest of the world.

The figures in Table 5.8 can represent only orders of magnitude, given the simplicity of the model used and the great uncertainty surrounding the parameters. Nevertheless, they show that — even without further use of the euro for debt denomination in the SMCs, further real integration with the euro currency area or any internationalisation of the euro — the optimal weight of the euro in the real basket pegs of the SMC currencies will lie above 30 per cent, perhaps reaching 70 per cent to 80 per cent in some countries. Interestingly, the differences across countries only partially match those obtained for nominal anchoring. The analysis based on external constraints can explain why Tunisia and Morocco seem to over-stabilise their currencies against the euro compared to the OCA standard, and why Algeria seems to over-stabilise its currency against the dollar.

Conclusions

The Southern Mediterranean countries generally view progress in European integration with some disquiet, as they fear being progressively left aside. The framework adopted at the Euro-Mediterranean conference in Barcelona in 1995 is designed to prevent such an outcome. It provides for progressive liberalisation of trade and capital flows between the two areas. Pegging the Southern Mediterranean currencies to the euro would appear as the natural continuation of this first step.

Indeed, given their relative sizes, their trade patterns and their business cycles, the SMCs included in the analysis would find an interest in stabilising their currencies against the euro, at least to the same extent as against the dollar and much more in the Maghreb countries. Moreover, given that their trade is clearly oriented towards the EU-11, and notwithstanding the burden of debts that are more often than not dollar-denominated, the same SMCs would also find an interest in pegging their currencies in real terms to a basket in which the euro would be prominent (Morocco, Tunisia, Turkey) or at least significant (Algeria, Egypt, Israel).

If the SMCs were to adopt such exchange-rate policies, several consequences for both them and the EU-11 countries would emerge. First, trade and financial relationships between the two areas would strengthen. Second, the consistency of exchange-rate policy would, to a certain extent, isolate Southern European countries from harmful euro/dollar fluctuations. Third, exchange-rate stability would enhance

the role of the euro in debt denomination, which would further reduce the sensitivity of balances of payments to dollar fluctuations and reduce the risk of an excessively strong euro. The euro currency area could strengthen such a monetary policy stance through further opening of its own markets, because the fear of competitive devaluations would be reduced for the main euro competitors of SMCs (Spain, Portugal and Italy). It could also promote euro-denominated financing through official guarantees or through the issue of euro-denominated bonds.

APPENDIX

OCA Theory and SMCs

	Algeria	Egypt	Israel	Morocco	Tunisia	Turkey
SDS_{ij}: Nominal exchange rate volatility (% per quarter)						
/$	3.84	0.07	2.33	3.09	3.93	12.60
/DM	4.37	1.75	3.08	1.47	1.56	12.86
/yen	4.67	2.36	5.29	5.28	5.78	13.49
SDY_{ij}: Asymmetry of business cycles (annual %)						
/US	4.31	-	3.26	3.53	7.38	6.16
/Core ERM	4.13	-	2.95	3.29	7.69	6.48
/Japan	3.24	-	3.15	3.36	6.06	5.50
$RSIZE_{ij}$: relative size (%)						
/US	0.60	0.68	1.96	0.47	0.26	2.43
/Core ERM	0.86	0.98	2.83	0.67	0.38	3.52
/Japan	1.96	2.24	6.43	1.53	0.85	8.01
RGL_{ij}: relative Grubel & Lloyd index (%)						
/US	10.94	40.98	106.33	39.39	15.12	74.77
/Core ERM	130.95	125.61	11.78	108.45	99.86	98.60
/Japan	5.27	14.71	25.25	3.53	15.13	24.19

Source: authors' own calculations.

Notes

1. Chauffour and Stemitsiotis (1998) offer a comprehensive analysis of the impact of the European monetary union on its Mediterranean partners.

2. Egypt is excluded from nominal anchor analysis due to a lack of quarterly data for real GDP.

3. Nominal exchange-rate volatility is defined *infra*, equation (1). It can be interpreted as the irregularity of nominal exchange variations (and not as the instability in the level of the exchange rate).

4. Note that this could be due to the financial crisis that hit Turkey during the 1990s. This hypothesis is discussed *infra*, along with the comment on Table 5.4.

5. Sadeh (1997) argues that, although high labour mobility compensates for low intra-area trade in Middle Eastern countries, the latter do not constitute an OCA. Labour mobility is much lower in SMCs, and it is low between all Middle East and North African (MENA) countries and other regions in the world, including the European Union.

6. Germany, France, Netherlands, Belgium, Denmark and Luxembourg, whose exchange rates were stable during 1992-96, contrary to the EU11.

7. Note that the Grubel and Lloyd index with respect to the three reference areas is not equivalent to the average of each bilateral index. By construction, IIT with a large and diversified area is more important than that with a given country, because more products are traded.

8. Egypt is not included here due to a lack of data. The values of the variables are reported in the Appendix for the five remaining SMCs.

9. Note that the econometric analysis is performed on a cross-section sample, not on either panel data or time series. This choice is motivated by the difficulty of building time series for variabilities over such a short period. By definition, an exchange-rate regime cannot change every quarter or even every year. Hence, the authors believe that cross-section analysis is appropriate here.

10. The yen is not taken as a potential anchor, the theoretical volatility against this currency always being higher than against both other currencies.

11. See Chevallier and Freudenberg (2001) for an analysis of IIT trade in the SMCs.

12. We are grateful to Ali Bayar for suggesting this point.

13. Note that these strategies do not exclude each other: the nominal peg is defined by the regularity (and therefore the predictability) of nominal exchange rate variations with respect to the anchor. It is therefore consistent with a crawling-peg regime, where the real exchange-rate level, the real peg of the currency, is preserved.

14. The trade balance is influenced by the real exchange rate, while valuation effects are due to variations in the nominal exchange rate. Inflation in anchor countries is low, however, compared with emerging countries, where the behaviour of the real exchange rate fundamentally depends on the movement of the nominal exchange rate compared to domestic inflation. The value of the external debt depends on the nominal exchange rate, while nominal GDP depends on domestic inflation. Hence, the debt-service ratio rises when the currency depreciates in real terms.

15. The same results would stem from using the exchange rate against the euro as the instrument. The ability of each country to control its real exchange rate can be discussed. This ability however exists in a country which has not fully liberalised capital movements, and which displays little dollarisation.

16. Some SMCs export mainly raw materials and energy, which can lead them to prefer a dollar peg, as quotations are made in dollars. This situation is not fixed, however. The European countries as well as the SMCs could find an interest in using the euro for trade denomination. The special role of the dollar in the trade of SMCs with the rest of the world is discussed *infra*.

17. Theoretically, both countries would have an interest in co-operating, as it would prevent price competition that is costly in terms of the debt burden. However, intra-SMC trade is too small for the co-operative equilibrium to differ significantly from the Nash equilibrium.

18. Modifying these elasticities for Algeria and Egypt in order to allow for the law of one price in the energy sector does not change the results, because the estimated elasticity of export prices to domestic prices is already very low (0,21) for Southern European countries.

19. The currency distribution of the Israelian debt is not available. We assume 80 per cent is dollar denominated and 20 per cent euro denominated, so as to favour the dollar-oriented exchange-rate policy in the results.

Chapter 6

Trade Liberalisation and the Poor: A Dynamic Rural-Urban General Equilibrium Analysis of Morocco

*Hans Löfgren, Moataz El-Said and Sherman Robinson**

Introduction

Morocco is about to start implementing an Association Agreement with the European Union (AAEU) at the same time as the country adjusts its trade policies to conform to WTO rules. Morocco's policy makers face a major question: whether and to what extent they should pursue additional unilateral trade liberalisation. The aggregate impact of a carefully formulated programme of trade liberalisation is likely to be positive. Like other major changes in economic policy, however, it may have very different effects on different segments of the population. Given that Morocco's agriculture currently enjoys substantial protection, additional broad-based trade liberalisation will likely have a detrimental impact on rural households, including the bulk of the poor population. This means that policy makers may consider the introduction of complementary domestic policies that compensate those who lose from changes in trade policies. In the absence of such policies, the political feasibility of significant agricultural tariff cuts is questionable.

This study uses a dynamically recursive, computable general equilibrium (CGE) model of Morocco as a laboratory for analysing alternative policy scenarios for 1998-2012. In order to focus on agriculture and issues of poverty, the model distinguishes explicitly between rural and urban activities and households. It has a relatively detailed treatment of agricultural and other rural production, the labour market and households.

* The constructive comments of the discussants of an earlier version of this paper, Drs. Mohamed Lahouel and Bachir Hamdouch, are highly appreciated.

The basic simulation scenario assumes gradual implementation of the EU partnership without additional unilateral changes in trade policies. The first set of simulations investigates the impact of alternative scenarios for unilateral trade liberalisation. The second simulates the impact of a maximum unilateral trade liberalisation scenario in combination with two alternative domestic policy changes, increased rural education (enhancing the skills of the rural labour force), and a non-distorting programme for cash compensation to owners of resources used in rainfed agriculture.

Background

Agriculture provides somewhat less than 20 per cent of Morocco's GDP but around 45 per cent of total employment, attesting to its relatively high labour intensity. Rural households derive most of their income from agriculture; 77 per cent of rural labour was employed in agriculture in 1994. The services sectors (including government administration) employed more than half of all workers in urban areas. If defined narrowly, Morocco's agriculture plays a limited role in the country's relatively diversified foreign trade, accounting for around 8 per cent of exports and 6 per cent of imports. If agro-industrial trade is included, however, the shares are considerably higher. The most important agricultural exports are fish, fruits and vegetables. Wheat and sugar are the major agricultural imports (Royaume du Maroc, 1997; EIU, 1997).

Since the early 1980s, Morocco has gradually reformed its economy in the direction of trade liberalisation and increased reliance on market forces and the private sector. Its macroeconomic management has been more successful since the mid-1980s than that in most other countries in the MENA region, according to key indicators such as the rate and volatility of inflation, the level of the budget deficit and stability of the real exchange rate (Page and Underwood, 1997). In trade, the level and dispersion of tariffs have both receded, while quantitative restrictions have been eliminated (Alonso-Gamo, Fennell and Sakr, 1997; IMF 1997*a*). Compared with most countries oriented to structural adjustment, Morocco successfully combined positive growth with rapid restoration of internal and external balance (Karshenas, 1994). Nevertheless, compared with the 1970s, economic growth decelerated in the 1980s and even more so during 1990-96. Despite far-reaching trade reforms, Morocco still has significant trade barriers with a high dispersion of protective rates across sectors. Table 6.1 shows 1994 data for tariff and non-tariff barriers that are used for the model-based analysis of this paper. Non-tariff barriers are defined broadly to include all domestic price deviations that cannot be accounted for by import duties. The agricultural trade regime was particularly distorted in the mid-1990s, especially for cereals and animal products.

Table 6.1. **Tariff and Non-tariff Rates and Values for Morocco, 1994**

	Non-tariff Barrier(%)	Aggregate Tariff Rate(%)	EU Tariff Rate(%)	Non-EU Tariff Rate(%)	Aggregate Tariff Revenue (mn Dh)	EU tariff Revenue (mn Dh)	Non-EU Tariff Revenue (mn Dh)
Hard wheat	60.1	16.2		16.9	40.5		40.5
Soft wheat	177.9	16.2	16.6	15.9	180.5	85.7	94.8
Barley		25.2	21.8	37.6	21.9	14.8	7.1
Maize		19.6	17.5	20.9	122.6	40.6	82.0
Sunflower		29.6	37.4	29.5	192.3	3.1	189.2
Other industrial crops		29.4	18.4	35.4	380.9	84.4	296.5
Vegetables		10.8	15.3		25.2	25.2	
Olives		51.1	46.7	60.8	20.8	13.1	7.8
Other fruits		63.9	78.6	61.3	15.3	2.8	12.6
Milk	44.1	98.2	97.3	99.3	9.3	5.1	4.1
Beef	162.0	89.7	88.9	96.7	139.2	125.2	14
Sheep-goat meat	154.8	90.9	90.6	91.1	26.6	10.3	16.2
Sheep-goat wool	158.8	92.3	94.4	91.0	5.1	2.0	3.1
Other animals	186.6	88.2	87.9	89.6	890.7	751.1	139.7
Forestry		3.0	19.4		7.6	7.6	
Fishing		48.3	68.5		7.9	7.9	
Mining		8.4	18.1	6.6	142.3	48.6	93.7
Petroleum		20.6	46.8	16.3	1 647.8	522.8	1 125.0
Manufacturing	2.0	31.6	37.0	22.1	16 527.2	12 344.9	4 182.3
Total		29.6	37.2	19.8	20 403.7	14 095.1	6 308.6

Source: Model SAM.

Rural development remains a key challenge. According to data from the early 1990s, rural per-capita consumption is around half of the urban level. While rural areas contain less than 50 per cent of the population, they account for 70 per cent of the poor. As shown in Table 6.2, rural areas are also strongly disfavoured according to other indicators, such as access to electricity and safe water, literacy and school enrolment. The female population stands out as particularly disadvantaged. Low educational achievement is reflected in a labour force that for the most part is "unskilled" (in the sense that most jobs require no formal education). The skill gap is a major source of inequality between rural and urban areas; on average skilled workers earn 6-7 times the wage of unskilled workers (Karshenas, 1994). Relatively unfavourable rural conditions have led to rapid rural-urban migration, which provides an important outlet for the rural labour force (absorbing the bulk of its natural growth), but exacerbates urban unemployment and puts downward pressure on urban wages.

Table 6.2. **Social and Economic Indicators: Nationwide and by Locale (Rural and Urban)**

	Rural	Urban	Total
Population (1994)			
mn	12.7	13.4	26.1
%	48.6	51.4	100.0
Annual population growth (1982-94)			
Natural	2.6	1.7	2.2
Post-Migration	0.7	3.6	2.0
Poverty rate (1991)	18.0	7.0	13.1
Electricity access (1994)	9.7	80.7	46.2
Safe water access (1994)	4.0	74.2	40.1
Illiteracy rate (1994)			
Male	61.0	25.0	41.0
Female	89.0	49.0	67.0
Total	75.0	37.0	55.0
Primary school enrolment rates (1991)			
Male	56.5	86.7	69.9
Female	29.9	84.7	52.8
Total	43.2	85.7	61.3
Labour force (1995)			
'000	5 024.4	4 982.1	10 006.4
%	50.2	49.8	100.0
Participation rate (1995)	39.5	36.0	37.7
Unemployment (1995)			
'000	384.2	1 111.7	1 495.9
% (of labour force)	7.6	22.3	14.9
Employment (1995)			
'000	4 640.2	3 870.4	8 510.5
%	54.5	45.5	100.0
Skilled labour (1995; % of total)	5.6	41.1	21.7

Note: Units are in percentages (unless otherwise indicated).

The agricultural sector has considerable heterogeneity, perhaps most importantly between relatively prosperous irrigated zones (17 per cent of the cultivated area in the early 1990s) and disfavoured rainfed zones that, *inter alia*, suffer from frequent but irregular droughts and differ greatly in terms of average annual rainfall.

Given the high degree of agricultural protection, the challenge of rural development intertwines with trade policy. Currently, Morocco is implementing both its Association Agreement with the EU and its GATT/WTO commitments in the Uruguay Round. The EU is the major trading partner of the countries in the MENA region, receiving 25 per cent of the region's total exports and providing 44 per cent of its imports (ERF, 1998). For Morocco, EU export and import shares are even higher, at

64 per cent and 57 per cent respectively, in 1994 (Royaume du Maroc, 1997). Since 1994, the EU has sought the conclusion of association agreements with most non-EU Mediterranean countries. The agreements include the establishment of Free Trade Areas (FTAs) covering the EU and each non-EU partner. In line with WTO rules, the FTAs are to be implemented gradually over transitional periods lasting a maximum of twelve years.

Morocco signed such an agreement with the EU in 1996. For industrial imports from the EU, Morocco is committed to a gradual elimination of tariffs and the abolishment of any quantitative restrictions, taxes and other measures that have the same effect as tariffs. In return, it will receive aid for education and infrastructure projects over a period of five years (Oneworld, 1995). With few exceptions, Morocco's non-agricultural exports will continue to enjoy unrestrained, duty-free access to the EU. In spite of slightly improved access, Morocco's agricultural exports to the EU remain strictly regulated, with limited scope for expansion.

As a member of the WTO, Morocco must respect the rules of GATT/WTO. On the basis of the Uruguay Round agreement, it is replacing non-tariff measures with ordinary tariffs (tariffication). For all agricultural commodities, it is committed to maximum tariffs defined by the bindings it submitted, plus a 24 per cent reduction in those bindings in equal annual decrements over a period of ten years. The tariff bindings have no economic significance because no change is required. The submitted bindings lie well above the actual applied rates, which is typical of developing countries. In practice, for a substantial period neither the GATT/WTO or the AAEU will oblige Morocco to reduce significantly the high agricultural protection that is a major source of inefficient resource allocation.

Trade and rural development are two major and interrelated issues in Morocco's current economic policy debate. In trade, the debate revolves around the impact of the implementation of the Association Agreement with the EU and of Morocco's GATT/WTO commitments in the Uruguay Round. Another major concern is whether Morocco should pursue further general import liberalisation, covering agricultural imports irrespective of source and industrial imports from regions beyond the EU. Broad, unilateral import liberalisation may have a positive impact on aggregate economic performance. Given the high degree of agricultural protection, however, the impact of broad-based trade liberalisation on rural welfare evokes particular concern. Liberalisation may also give rise to transitional costs as labour is reallocated between different sectors.

Moroccan policy makers are well aware of the link between rural welfare and agricultural crop prices. In March 1998, in the very first decree he signed, Morocco's new prime minister Youssoufi imposed a sharp increase in tariff rates on imported wheat to counteract a drastic fall in world prices (EIU, 1998). In fact, it may be more appropriate to consider agricultural trade liberalisation in the context of complementary policies that compensate vulnerable rural households. As an example of policies that can be pursued in the short run, Mexico introduced an income transfer programme

(PROCAMPO) that compensated farmers for reduced protection of agricultural markets. By making payments proportional to assessments of past earnings in agriculture, the programme aimed at avoiding distortion of current production decisions (World Bank, 1997*c*). In Morocco, baseline payments could be established on the basis of data from the 1997 agricultural census. Such a system should be easier to administer than direct payments based on the current cropping pattern. Over a longer time period, options include support for an educational system that enhances the skills of the rural labour force and investments in infrastructure that facilitates the development of rural non-agricultural activities.

Model Structure and Data[1]

The current model, which draws on existing economy-wide models of Morocco, is distinguished by an explicit separation of activities and households into rural and urban. The disaggregation aims at identifying the rural poor as well as the factors and activities from which they earn their incomes. Hence, the model has a detailed treatment of aspects most closely linked to the rural economy and the welfare of the rural poor, including agricultural and other rural activities, and rural factors of production. Although the treatment of urban production is more aggregated, the model also permits an analysis of the impact on the urban poor of policies and exogenous shocks. Moreover, the resulting economy-wide perspective avoids the fallacy of viewing the rural economy as isolated. This is important because the rural and urban economies and the welfare of their households are interdependent, with numerous linkages in the markets for commodities and factors.

Model Disaggregation

Table 6.3 displays the disaggregation of activities, factors and institutions. The model comprises 45 activities, among which 38 are rural and seven are urban. Most rural sectors are part of crop or livestock agriculture. The non-agricultural sectors (disaggregated into the major types of industrial and service sectors) are classified as rural or urban.

Table 6.3. **Disaggregation of Activities, Factors and Institutions**

Sets	Elements
Activities (45)	
Irrigated crops	Soft wheat, Hard wheat, Barley, Maize, Other cereal, Legumes, Fodder, Sugarbeet, Sugarcane, Sunflower, Other industrial crop, Vegetable, Olive, Citrus, Other fruit
Irrigated Livestock	Cow, Sheep-goat
Rainfed crops	Soft wheat, Hard wheat, Barley, Maize, Other cereal, Legumes, Fodder, Sugarbeet, Sunflower, Other industrial crop, Vegetable, Olive, Other fruit
Rainfed Livestock	Cow, Sheep-goat
Other agriculture	Other animal, Forestry, Fishing
Rural non-agriculture	Manufacturing, Construction, Other service
Urban	Mining, Petroleum, Electricity, Manufacturing, Construction, Other service, Public administration
Factors (7)	
Agricultural resources	Irrigated land, Water, Rainfed land, Pasture
Other	Skilled labour, Unskilled labour, Capital
Institutions (7)	
Households	Rural Poor, Rural Non-poor, Urban Poor, Urban Non-poor
Other	Government, EU, Non-EU (Rest of the world)

All activities use capital and labour. Agricultural activities demand additional factors: livestock makes use of pasture-fallow land; crop activities rely on rainfed land; irrigated crop activities use water. Outside agriculture, the labour force of each activity includes both skilled and unskilled labour whereas for all agricultural activities, except fishing and forestry, the labour force consists of a separate category of (unskilled) agricultural labour. In crop and livestock agriculture, most activities produce multiple commodities and two activities, one in rainfed and one in irrigated areas, produce most commodities. Most crop activities have fodder by-products. Livestock activities produce meat and milk (disaggregated by animal type) and, for the cow activities, manure. Multiple-output activities produce their commodities in fixed physical proportions.

Outside crop and livestock agriculture, each activity produces only one commodity. Given that service commodities tend to have location-specific characteristics, rural and urban service activities are viewed as producing distinct commodities. For industrial and agricultural commodities, markets are treated as integrated across regions (irrigated and rainfed agricultural zones or rural and urban regions) and with international trade.

The model includes four household types, disaggregated by region and income level: rural poor, rural non-poor, urban poor, urban non-poor. The other institutions consist of the government and the rest of the world, divided into the European Union (EU) and non-EU in the area of goods trade, given that one purpose of the analysis is to understand the impact on rural development from Morocco's partnership agreement with the EU.

Production Activities

Producers are assumed to maximise profits given their technology and the prices of inputs and outputs. The technology of the production activities is specified as a Leontief function of aggregate value-added and an aggregate intermediate input. Value-added is produced by a CES function of primary factors. In order to permit technique change in response to significant price changes for inputs, the intermediate coefficients are flexible inside agriculture but fixed for other sectors. For irrigated crop agriculture, an aggregate land-water factor is among the arguments in the CES function. This aggregate factor is produced by a set of alternative factor-aggregation activities based on Leontief technology that specifies substitution possibilities between the land and water along a linearised CES isoquant. This Leontief representation is preferred over a continuous CES function, to allow for the possibility of water or land in excess supply, with a corresponding price of zero for the non-scarce factor. The income of each factor is allocated to domestic institutions (households and government) in fixed shares, after adjustments for factor payments to and from the rest of the world (both of which are fixed in foreign currency).

Institution

In the base year, both rural and urban *households* receive the bulk of their incomes from factor earnings in their respective regions. Compared to the non-poor, the poor in both regions depend more heavily on labour incomes in general and unskilled labour incomes in particular. In addition to factor income, households receive transfers from the government (the transfer received by each household is a fixed GDP share) and the rest of the world (fixed in foreign currency). Total household income is used to pay direct taxes, save and consume. Direct taxes and savings are fixed shares of household income. Consumption demand is determined by the linear expenditure system (LES).

Besides factor incomes, *government* revenue consists of taxes — direct taxes from households, indirect taxes from domestic activities, domestic sales taxs, and import tariffs (with different rates applying to EU and non-EU goods' imports). All taxes are *ad valorem*.

Apart from the above-mentioned transfers to households, the government uses its income for consumption (fixed quantities), transfers to the rest of the world (fixed in foreign currency) and consumer subsidies (a fixed share of the consumption value for manufactured goods, representing food items). The *rest of the world* interacts with Morocco through commodity trade and the above-mentioned transfers (which add to or deduct from the incomes of factors and domestic institutions).

Commodity Markets

Commodities are supplied by domestic production and imports. Domestic demand and exports make up the other side of the market. Imperfect substitutability is assumed for commodities from different geographical sources (different domestic activities,

imports from EU vs. non-EU, or aggregated imports *vs*. domestic output). Symmetrically, commodities delivered to different destinations (exports to EU vs. non-EU, or domestic market vs. aggregated export market) are imperfectly transformable. Import demand results from a CES aggregation function of domestic and imported goods, and export supply is symmetrically modelled as a Constant Elasticity of Transformation (CET) function. The shares of commodities from different sources or to different destinations are sensitive to relative prices. These assumptions of imperfect substitutability and transformability grant the domestic price system a certain degree of independence from international prices and dampen responses of imports, exports and domestic sales to price changes.

For imports, it is assumed that Morocco is a small-country facing infinitely elastic supplies at exogenous world prices; thus the supply side clears the market. For most exports, under a similar assumption, Morocco faces infinitely elastic demand at exogenous world prices; in this setting, the demand side clears the market. The only exception is for agricultural exports to the EU. Here, under a dual-regime formulation, an increase in Morocco's supply price will give rise to reduced exports along a constant-elasticity demand curve. A decrease in the Moroccan price will not give rise to a corresponding increase in demand, however. The EU will purchase the base-year quantity at the (lower) price, in the process capturing the rent produced by the constraint. As a result, the EU pays exactly the price needed to induce Morocco to export the fixed quantities.

Factor Markets

Given the medium-to long-run perspective of the current analysis, the dynamic model version assumes that each factor is mobile across the activities that use it. A market-clearing price generates demand-supply balance in the context of fixed resource utilisation. The only exception applies to land and water in irrigated agriculture, where the model allows that flexibility in technique choice may not be sufficient to assure that both factors always are fully used. Hence, for each factor, two regimes are possible: full employment with a market-clearing price, or unemployment with the utilisation level as the clearing variable. Given that the sectoral production function always demands the land-water aggregate, at most one of the two factors is unemployed at any given time.

Macro Closure

The macro constraints determine how balance is achieved for the macro aggregates associated with the accounts for the government, the rest of the world and saving investment. Government savings — the difference between the government's *current* revenues and *current* spending — are a fixed share of GDP. Proportional adjustments in the rate of value-added tax (uniform across all sectors) assure that the government savings target is met. Foreign savings are fixed. A flexible real exchange rate (measuring the ratio between prices of traded commodities and domestic outputs sold domestically)

clears the balance of the rest of the world. As noted earlier, for each household category, saving is a fixed share of its disposable income. This means that none of the three types of saving — government, household and foreign — is free to equilibrate the aggregate saving-investment balance. Hence, the model has a savings-driven determination of investment: aggregate investment varies endogenously to achieve saving-investment equilibrium.

The Dynamic Module

The within-period, static model is solved for 1994 (the base year for the database) and 1998 (to update the model to the base year for the model-based analysis), and every two years thereafter until 2012. Between the static-model solutions, selected parameters are updated in the between-period (dynamic) module, using either lagged endogenous variables (from solutions in previous periods) or exogenous trends. The aggregate capital stock is updated endogenously on the basis of previous investment and depreciation, interpolating for the inter-period years. Total population, supplies of skilled and unskilled labour, foreign savings, institutional payments to and from the rest of the world, and total factor productivity by activity are all updated exogenously.

Database and Solution Approach

The model data are based on a disaggregated Social Accounting Matrix (SAM) for 1994, to which the model parameters are calibrated. The SAM was constructed on the basis of data from various sources[2]. It should be emphasised that in areas lacking detailed information (for example, wage gaps across different activities), some simplifying assumptions had to be imposed. They were guided by the underlying premise of the analysis: the impact of trade policy on the rural economy cannot be properly assessed without a model structure that captures the salient characteristics related to the urban-rural divide, including large skill and wage gaps, and differences in sectoral structure.

Available information was brought together in one matrix, the disaggregation of which parallels the disaggregation of the current model. Underlying the construction of such a SAM is an attempt to make the best possible use of available scattered data. Inevitably imbalances appear when data from different sources and years are integrated in one framework; a cross-entropy method was used to generate a balanced model SAM that uses all the information contained in the original data set (Thissen and Löfgren, 1998; Robinson, Cattaneo and El-Said, 1998). A variety of other studies of Morocco were consulted for estimates of elasticities for the Armington, CET, CES (production), LES (household consumption), and export-demand functions[3].

The current model is solved as a mixed-complementarity problem (MCP), consisting of a set of simultaneous equations that are a mix of strict equalities and inequalities but without an objective function. This approach, made feasible by the recent development of solvers, makes it possible to formulate a model that combines

desired features of mathematical programming models (in particular by permitting excess supplies of agricultural resources, such as water) while allowing the full range of assumptions for consumer demand, government policies and foreign trade that appear in standard CGE models. The GAMS modelling software is used both to generate the database and to implement the model. The model is solved with PATH, a solver for mixed complementarity problems[4].

Simulations

The simulations, based on the CGE model presented in the preceding section, explore the impact of alternative scenarios for trade liberalisation and the potential role of complementary domestic policy changes. The first sets of simulations are defined in Table 6.4.

Table 6.4. **Alternative Trade Policy Simulations: Scenario Definitions**

Item	AAEU	TARIFF	TARIFF + NTB	TRADE-LIB
Industrial tariffs				
EU	AAEU*	AAEU*	AAEU*	AAEU*
Non-EU	No change	Unified at 29%**	Unified at 29%**	Unified at 10%**
Agricultural tariffs				
EU	No change	Unified at 29%**	Unified at 29%**	Unified at 10%**
Non-EU	No change	Unified at 29%**	Unified at 29%**	Unified at 10%**
Non-tariff barriers	No change	No change	Eliminated**	Eliminated**

AAEU = implementation of the Association Agreement with the European Union with *status quo* policies.
TARIFF = tariff unification.
TARIFF + NTB = tariff unification plus non-tariff barriers cut.
TRADE-LIB = tariff unification and reduction plus non-tariff barriers cut.

Notes:
* AAEU = Gradual elimination of tariffs on industrial imports from EU 1999-2010.
**Tariff unification and elimination of non-tariff barriers is done gradually 1999-2005. In 1994, the average tariff for industrial and agricultural imports was 29 per cent.

Table 6.5 summarises the results. The simulation AAEU defines the *status quo* in the sense of policy changes limited to what Morocco unambiguously made a commitment to implement in association with the EU. On the aggregate level, real GDP at factor cost grows at an annual rate of 3.7 per cent, a rate that changes very little across the simulations reported in this paper[5]. Growth is biased in favour of urban production and non-agricultural sectors, in part because these do not depend on natural resources, the physical quantity of which cannot be expanded easily. (In the model simulations, the quantities of agricultural resources — land, water, and pasture-fallow areas are fixed at the 1994 level.) Changes in the allocation of labour between agriculture, rural non-agriculture and urban activities are minor.

Table 6.5. **Simulation Results**

	1998 value	AAEU	TARIFF	TARIFF+ NTB	TRADE-LIB	TRANSFER	SKILL–UPGRADE
	Percentage Annual Growth 1998-2012						
Real GDP at factor cost (bn. 1994 Dh.)							
Agriculture	48.46	2.16	2.07	1.88	1.83	1.8	1.86
Rural non agriculture	27.21	3.43	3.23	3.40	3.48	3.48	3.73
Urban	191.06	4.07	4.04	4.08	4.11	4.16	4.42
Real factor income (bn 1994 Dh.)							
Total	265.42	3.24	3.29	4.10	4.18	3.86	4.34
Irrigated resources	6.38	6.71	6.57	6.23	5.93	5.53	6.67
Rainfed resources	20.04	5.57	5.41	3.98	3.48	3.09	4.08
Unskilled labour	37.96	3.91	3.79	4.05	4.01	3.71	4.49
Skilled labour	94.91	2.63	2.70	3.94	4.14	3.93	4.03
Capital	106.12	2.74	2.90	4.14	4.27	3.89	4.45
Labour shares (%)*							
Agriculture	43.47	43.48	42.88	39.29	38.36	38.03	37.34
Rural non agriculture	11.00	10.11	10.13	11.08	11.30	11.30	11.18
Urban	45.53	46.41	46.99	49.63	50.34	50.67	51.49
Real household per capita income/welfare ('000 1994 Dh) **							
All	9.77	1.88	1.94	2.32	2.41	2.34	2.57
Urban Poor	3.08	2.66	2.58	2.95	2.96	2.72	3.46
Urban Non-poor	13.45	1.65	1.78	2.12	2.25	2.07	2.08
Rural Poor	3.00	2.86	2.71	2.71	2.60	3.03	3.83
Rural Non-poor	7.52	2.19	2.15	2.65	2.67	2.78	3.33
Real trade quantities (bn 1994 Dh.)							
Exports	80.05	4.52	4.42	4.93	5.29	5.25	5.60
Agriculture exports	5.45	-0.13	-0.23	-0.13	0.13	0.12	-0.16
To EU	4.15	-0.55	-0.52	-0.72	-0.75	-0.76	-0.93
To non-EU	1.30	1.07	0.62	1.50	2.42	2.41	1.89
Industrial exports	43.89	5.97	5.82	6.57	7.04	6.99	7.43
To EU	28.97	5.72	5.52	6.33	6.81	6.76	7.14
To non-EU	14.91	6.45	6.36	7.01	7.48	7.43	7.96
Imports	98.12	4.17	4.08	4.52	4.81	4.78	5.04
Agriculture imports	7.86	6.20	6.32	10.25	11.38	11.32	11.93
From EU	3.32	5.61	6.28	12.17	13.32	13.23	13.79
From non-EU	4.54	6.60	6.35	8.50	9.63	9.59	10.27
Industrial imports	69.75	4.75	4.64	4.50	4.66	4.65	4.89
From EU	39.86	7.38	7.57	7.42	6.75	6.73	6.99
From non-EU	29.89	-1.11	-2.52	-2.63	0.61	0.60	0.82
Real exchange rate (index 1998 = 100)	100	105.02	106.94	113.74	116.37	116.41	116.55
				(% of GDP)***			
Tariffs	7.34	2.46	2.56	3.52	1.63	1.61	1.67
Value added tax	-0.42	4.09	3.86	2.21	4.03	8.04	4.07
Transfers and compensations						3.75	

Note: See Table 6.4 for description of the simulations.
* In all columns, share of labour force by aggregate sector (not annual growth).
** Per-capita income in 1998 column; percentage age change in welfare for other columns (see footnote 7).
*** Except for the 1998 column, GDP shares in 2012.

On average, real factor incomes grow at a similar pace to GDP, with the most rapid growth for agricultural resources, both irrigated and rainfed. Household welfare grows at 2 per cent to 3 per cent per year, both on the aggregate level and for the different household groups[6]. Welfare growth is slightly biased in favour of the poor and rural areas, reflecting that growth in factor incomes is faster for agricultural resources and unskilled labour than for skilled labour and capital[7]. Rapid growth in the rents of agricultural resources, including pastures, may lead to overexploitation and environmental degradation. That resource incomes in irrigated agriculture grow faster than for other factors points to the growing importance of efficient resource management in this area.

Imports and exports grow faster than GDP and incomes; the economy gradually becomes more open. The agricultural trade deficit grows, as domestic production, hampered by the limited resource supply, cannot keep up with growing domestic demand. For industry, exports grow faster than imports; imports from the EU rise rapidly while those from non-EU countries decline, i.e. the AAEU leads to trade diversion toward the partner countries in the free-trading area. Compared to 1998, the real exchange rate appreciates. To maintain savings at a predetermined share of GDP in the face of reduced tariff rates and other trends, the government collects value-added taxes at a level equivalent to 4.1 per cent of GDP.

The other three simulations in the first set assume that Morocco implements policies that reduce the price distortions caused by trade policies. For the simulation TARIFF, unification of all commodity tariffs except industrial imports from the EU at the 1994 average rate reduces protection significantly for agriculture but has less impact on the industrial protection rates facing suppliers from outside the EU. Accordingly, compared to the AAEU scenario, agricultural imports expand (most strongly for commodities from the EU, including beef) while growth in agricultural production and resource incomes slows down. Growth decelerates for rural non-agriculture which, more than the urban sector, is driven by demand from agricultural production and rural households. The rural economy's primary reliance on unskilled labour reduces its income growth. Growth in the urban economy accelerates slightly, generating higher incomes for capital and skilled labour as well as on the national aggregate factor level. Aggregate household welfare is enhanced, due to a significant improvement for urban non-poor households with small declines for other categories, an outcome that stems from the pattern of change in factor incomes. In general, the repercussions of tariff unification, including efficiency gains, are quite limited. This is not surprising because tariff unification takes place in a setting where numerous other distortions are in place.

In the simulation TARIFF+NTB, non-tariff barriers, primarily affecting agriculture, are gradually removed. The impact is much stronger than for tariff unification alone, and economic openness is enhanced significantly. The driving force has reduced prices for demanders (both consumers and producers) of agricultural commodities.

Factor incomes grow considerably more strongly for capital and skilled labour. In agriculture, resource income growth declines, especially in the rainfed subsector. A growing part of the labour force migrates away from agriculture to urban and rural non-agricultural activities. All households groups gain except the rural poor, who are unaffected. Households that rely more heavily on incomes from rainfed resources than the representative rural households in the model would be likely to see their situation deteriorate under this scenario. Rapid agricultural import expansion raises the trade deficit, as a result of which the real exchange rate depreciates, further enhancing exports and dampening imports. Import growth engenders higher tariff revenues, reducing revenue from the value-added replacement tax to 2.2 per cent of GDP.

Unification of tariffs at 10 per cent (industrial imports from the EU excluded; the simulation TRADE-LIB), a significant cut, generates further exchange rate depreciation, increased openness, reduced tariff revenues, increased government reliance on the value-added tax, and reduced growth in agricultural resource incomes. Other effects are relatively minor. On the aggregate level, factor incomes and household welfare stay virtually unchanged. There are minor cuts in agricultural production and rural household welfare. The negative impact on agriculture and rural well being is impelled as, for agriculture, reduced protection gets transmitted more strongly into lower domestic prices because imports are relatively highly substitutable with domestic output[8].

A comparison of scenarios TRADE-LIB and AAEU suggests that, on the household level, the rural poor lose while all other groups are better off under liberalisation in all periods. According to the compensating variation measure, by the year 2012, aggregate gains under TRADE-LIB exceed those of AAEU by more than 5 per cent of the GDP in the AAEU simulation for the same year. Hence, scope exists for the winners to compensate for the losers in a way that assures that both groups are better off than for the AAEU run.

Data for the evolution of disaggregated factor incomes for the same two simulations show that, at this level, the gains are highly unevenly distributed. Households that do not have significant non-agricultural incomes would tend to lose from the reforms during the period considered, but as more time passes they become more able to develop strategies to shift away from reliance on agricultural income.

The second set of simulations juxtaposes the policy changes under TRADE-LIB with complementary measures that aim at compensating rural, vulnerable losers. These actions may be considered worthwhile in their own right (they try to improve the welfare of rural poor) and may also serve to mitigate political resistance to trade reforms. Table 6.6 describes the content of the two simulations. For the first (an imitation of Mexico's PROCAMPO programme), part of the programme cost covers administration; of every Dirham spent on the programme, 70 per cent goes as transfers to farmers while 30 per cent is spent on administration[9]. The skill-enhancement scenario has its motivation in the skill gap between urban and rural areas, a major source of rural-urban inequality. It assumes that the programme can be achieved without economic loss by reallocating educational expenditures, for example from urban-focused higher education that produces graduates lacking skills in demand in the labour market. Neither of the programmes is narrowly targeted to poor households. They benefit all owners of rainfed resources and all rural households with unskilled labour.

Table 6.6. **Complementary policy simulations: Scenario definitions**

Scenario	Description
TRANSFER Rainfed factor compensation	TRADE-LIB + transfers to owners of rainfed agricultural resources (land and pasture), in each period fully compensating for loss compared to AAEU
SKILL-UPGRADE Rural skill enhancement	TRADE-LIB + in each period, the stock of rural skilled labour is augmented by 5% with the additional labour coming from the unskilled labour of rural households

Selected results for the second simulation set are shown in Table 6.5. Compared to TRADE-LIB, the TRANSFER simulation generates gains for rural households, especially the poor, while urban households lose. This result reflects that urban households own few rainfed resources while, like rural households, they suffer from declining factor incomes because of the value-added tax, which increases in rough proportion to the value of the transfer — in 2012 it is close to 3.8 per cent of GDP.

The transfer increases gradually during the implementation of the reduction in border protection. After reaching a peak in 2004, it starts a steady but slow decline. In other respects, the transfer has a limited impact. It functions primarily as a device for income redistribution. As opposed to the TRADE-LIB scenario, the rural poor are now better off than in the base scenario. Relative to GDP, however, the total cost of the transfer program is substantial, suggesting the need to target such programs more narrowly, perhaps to rainfed regions with little rainfall.

The simulation SKILL-UPGRADE explores the impact of raising the skill level of part of the unskilled rural labour force. In every year starting from 1999, the skilled rural labour force is augmented by 5 per cent, boosting its annual growth rate for 1998-2012 from 3.8 per cent to 7.7 per cent. The rural unskilled labour force is reduced; to leave the total labour force unchanged, cutting its growth rate from 2.4 per cent to 2.0 per cent. Compared to the TRADE-LIB simulation, GDP growth accelerates significantly for rural non-agricultural and urban activities, but not in agriculture, which uses only unskilled labour. Incomes go up for all factors except skilled labour, an indication that, in the face of supply shifts, demand for this labour type is inelastic. Welfare is boosted strongly for all households except the urban non-poor, who initially depend more heavily than others on skilled-labour incomes. They see their wages decline without any change in their endowment of skilled labour.

The impacts of the different scenarios may also be compared from a political perspective. In a complementary analysis, measures of political support for the different scenarios were defined on the basis of disaggregated household income changes compared to AAEU and power definitions based on the share of each household type in population (“people power”) or income (“dirham power”). According to both measures, all non-AAEU scenarios are supported — further liberalisation would be supported compared to the AAEU *status quo*[10].

Conclusion

This paper uses a rural-urban CGE model of Morocco to simulate the impact of alternative scenarios for trade and domestic policies. In the base scenario, the AAEU is implemented without other policy changes. For 1998-2012, real GDP at factor cost grows at an annual rate slightly below 4 per cent. Rural poor and urban poor households enjoy the most rapid welfare increases, reflecting how the pattern of factor income growth is pro-poor; agricultural resource incomes grow most rapidly, followed by unskilled labour, with lower growth rates for skilled labour and capital.

The results for the trade policy simulations indicate that, in a world where policy alternatives are second-best, tariff unification has a relatively limited impact on aggregate factor incomes and household welfare. Removal of non-tariff barriers (expressed in tariff-equivalent form), however, has strong positive aggregate effects. Lower tariffs and the removal of non-tariff barriers lead to depreciation and major expansions in non-agricultural exports and agricultural imports. Growth accelerates for non-agricultural sectors but slows down in agriculture. Resources (labour and capital) move from agriculture to other parts of the economy. Aggregate factor incomes and household welfare expand considerably more rapidly.

Trade liberalisation also reduces income growth for agricultural resources, however, especially in rainfed areas. The owners of these resources tend to be a relatively poor part of the rural population. On the household level, the trade liberalisation scenarios disfavour the rural poor, who represent 70 per cent of all the poor in Morocco. Two domestic policy scenarios try to address these relatively negative impacts of trade liberalisation. One of the scenarios introduces a non-distorting transfer programme that fully compensates the owners of rainfed resources for the losses they incur from trade liberalisation compared to the base scenario. On the household level, the result is a pro-rural development pattern, with poor and non-poor rural households registering the strongest welfare improvements. Urban households also become significantly better off than under the base scenario. Yet the tax burden on the government is quite heavy (close to 3.8 per cent in 2012), suggesting the need for targeting, perhaps by providing transfers to rainfed farmers in low rainfall zones.

The second domestic policy scenario upgrades the skills of the rural labour force, approximately doubling the rate of growth for rural skilled labour (from a low base) and reducing growth for rural unskilled labour. This leads to a significant growth expansion for GDP (driven by non-agricultural expansion), aggregate factor incomes and aggregate household welfare. In terms of household welfare, the outcome is pro-rural and pro-poor; the two types of rural households record the fastest growth, followed by the urban poor, while the urban non-poor face a minor growth deceleration. The overall conclusion from the model simulations of this paper is that, if combined with complementary domestic policies, trade liberalisation can lead to a win-win outcome: the welfare of all household groups grows more rapidly than if *status quo* policies are followed.

Notes

1. For additional detail on the model structure and the database, see Löfgren, El-Said and Robinson (1999).

2. The most important sources are: *i)* disaggregated agricultural information from the Moroccan government, the World Bank and the FAO, primarily for 1990-91; *ii)* a disaggregated economywide framework represented by Social Accounting Matrices (SAMs) for 1990 and 1994, an input-output table for 1990, as well as data on the 1994 policy regime — taxes, subsidies and non-tariff barriers (Bussolo and Roland-Holst, 1993; Roland-Holst, 1996); *iii)* 1994 macro and trade data from Royaume du Maroc (1997), the RMSM data base (World Bank, 1997*a*) and United Nations (1998); and *iv)* disaggregated population, consumption, and labour force data from Royaume du Maroc (1993, 1995, 1996, 1997), World Bank (1994*b*, 1995*a*, 1997*a*, 1997*b*); International Monetary Fund (1997*b*); and Karshenas (1994).

3. The consulted studies include Aloui, Dethier and Houmy (1989); de Janvry, Sadoulet and Fafchamps (1992); Goldin and Roland-Holst (1995); Laraki (1989), Mateus *et al* (1988); Morrisson (1991); and Rutherford, Ruström and Tarr (1993). In summary, the values used are: *i)* elasticity of substitution for CES value-added functions: 0.8 for all activities except Public Administration (0.19); *ii)* elasticity of substitution for CES intermediate-input aggregation functions for agricultural activities: 0.5 for all activities except vegetables (2.0); *iii)* CES (Armington) function elasticities for aggregation of imports from different regions and of imports and domestic output: between two and seven for all commodities with the higher values for grains; *iv)* CET function elasticities for transformation of domestic output to aggregate exports and domestic sales and of aggregate exports to exports disaggregated by region: between two and five for all commodities; *v)* elasticities for constant-elasticity export demand functions for agricultural exports to the EU and for service exports: -1.5. Household expenditure elasticities were computed on the basis of Royaume du Maroc (1993).

4. For GAMS, see Brooke, Kendrick and Meeraus (1988). Rutherford (1995) provides more information on PATH.

5. The simulated aggregate growth rate is in line with the expectations of the World Bank, both for Morocco and the region at large (*al-Hayat*, 16 December, 1998; RMSM database). Growth in aggregate real GDP at factor cost (an index of real production) varies little across the different simulations since supplies are exogenous

for all factors except capital (for which supply growth is endogenous but quite similar across the different simulations given similar levels of real investment) while utilisation rates are permitted to vary only for irrigated resources.

6. The welfare index is based on the compensating variation (CV), defined as the amount of money which, if taken away from the household after a price and/or income change, would leave it just as well off as before the change; i.e. what the household would be willing to pay for enjoying the change). More specifically, the index was defined as the ratio between the simulated value of household consumption and the consumption value that would have left household welfare at the 1994 level (simulated consumption value minus compensating variation). In Table 6.5, the household values in all columns except "1998" show the percentage annual growth rate in the welfare index between 1998 and 2012. The 1998 column shows per capita consumption in 1998 (at 1994 prices).

7. Note that the households are classified on the basis of their 1994 characteristics (including location, income level and patterns of asset holdings). Labour that migrates between rural and urban employment does not change its household affiliation.

8. In an additional simulation, TRADE-LIB was rerun but without the gradual elimination of tariffs on industrial imports from the EU. The results were very similar in most respects, including welfare effects. The only major difference was that, as expected, the new simulation showed higher tariff revenues and less reliance on the value-added tax.

9. This charge is highly approximate — it is not clear what the cost of such a programme would be in Morocco, *inter alia* since it depends on the capacity of the existing administration to manage an additional programme. The assumed administrative cost share may be an overestimate — Latin American experience suggests that 30 per cent is at the upper end for administrative costs of targeted social programmes (Grosh, 1994).

10. For details, see Löfgren, El-Said and Robinson (1999).

Chapter 7

The Liberalisation of Tunisian Agriculture and the European Union: A Prospective Analysis

Mohamed Abdelbasset Chemingui and Sébastien Dessus

Introduction*

Tunisia started down the road toward trade liberalisation by signing two major agreements in 1994 and 1995. Tunisia's accession to the multilateral General Agreement on Tariffs and Trade (GATT)[1] stipulates that consolidated tariffs imposed on imports of agricultural produce and domestic subsidies on agriculture must be phased out by 2004. The bilateral partnership agreement signed with the EU provides for the complete abolition of tariff barriers on industrial products by 2010, following a twelve-year transition period. This does not apply to agricultural products, for which the agreement is simply to begin negotiations in 2000.

Trade liberalisation is a major event for a small country like Tunisia, which conducts a good deal of trade with other countries, the EU in particular. Implementation of the two agreements will likely lead to significant changes in overall economic activity and its sectoral distribution. The upheaval will probably not spare the agricultural and food processing sectors. The reduction in tariff-based protection and domestic subsidies for agricultural products could strengthen competitive pressure facing Tunisian farmers in their domestic market. At the same time, however, the abolition of tariffs on industrial products could give Tunisian agriculture greater relative effective protection.

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How can Tunisia lock into these changes to derive maximum advantage from them, notably by redefining its agriculture policy within the framework of the partnership agreement with Europe? This framework provides an opportunity for Tunisia to introduce reform at less cost, because it can obtain reciprocal advantages from its European partner. In addition, the defence component associated with the partnership means that the continued pursuit of Tunisia's goal of self-sufficiency in food becomes less appropriate.

The first task is to ensure correct understanding of the combined effects of GATT (WTO) accession and the partnership agreement. A quantitative assessment should follow of the agricultural policies which Tunisia and the EU plan to pursue both unilaterally and jointly, such as further lowering of import barriers and subsidies. In a second-best world, the theory of international trade alone is not sufficient for this task; computational tools are required to measure policy consequences. Computable general equilibrium (CGE) models usually are used for this. Their main advantage lies in combining detailed and consistent real-world databases within a theoretically sound framework. A few studies have already employed them to analyse the impact of agricultural liberalisation in Tunisia (e.g. Decaluwé and Souissi, 1996; and Boughanmi, 1997).

This paper differs from previous analyses on at least two grounds. First, it uses a dynamic model. Boughzala (1997) asserts that Tunisia would not have signed the partnership agreement if it had expected no more than the concretisation of the predictions derived from static modelling. A swifter accumulation of factors can be expected from the agreements. Moreover, the sequential dimension of liberalisation is important. The tariff consolidation provided for under GATT may lead initially to an increase in the nominal effective protection of Tunisian agriculture. The issue of co-ordination and the net effect over time of the two agreements now signed (and of those to be signed in the future) is also important. Only dynamic analysis can simulate the overall effect of the various measures to be implemented, which will come into force at different times. Second, the social accounting matrix built for this analysis makes it possible to specify agricultural and food processing activities in much greater detail. It also permits differentiation among the agricultural policy instruments available to government and assessment of their specific, individual impacts.

The analysis begins by simulating the Tunisian economy to 2010, accounting for the changes provided for by GATT and the partnership agreement. This simulation forms a baseline scenario for comparison with alternative agricultural scenarios. It shows that, in the absence of further reforms, distortions within the agricultural and food processing sectors increase over time. At the same time, industry makes major efforts to adjust and shows greater drive. The rent provided by effective protection for landowners reduces the income gap between rural and urban households, but is costly for Tunisia because it stems from poor factor allocation. Alternative policy scenarios suggest that liberalisation of agriculture without reciprocal concessions from the EU would not permit Tunisia to generate sufficient gains. It would face a major constraint on outlets for products on which it enjoys a comparative advantage, namely

tree crops and their derivatives. That factors employed in these activities are largely immobile exacerbates the negative impact of this external constraint. The reform seems viable only if accompanied by the lifting of the quotas facing Tunisian agricultural exports to the European market. A final simulation assesses the cost/benefit ratio for Tunisia of a multilateral as opposed to bilateral approach to the liberalisation process.

Agriculture and Agricultural Policies in Tunisia

General Features

Tunisia possesses only limited natural resources favouring agriculture (five million hectares of arable land). Poor-quality land accounts a third of these resources. Erosion and desertification present major long-term obstacles. Rapid urbanisation worsens these handicaps as it deprives agriculture of land, labour and water. Water is increasingly rare and precious, and its availability faces sharp deterioration in coming years. Tunisia has reached its limit for water consumption before beginning to run the risk of irreversible depletion of its reserves. Exhaustion of the water table in the south and an increase in the salinity of underground water in the coastal region underscore the danger.

Despite these drawbacks, agriculture and fisheries employ a large part of the working population. Work in the agricultural sector is essentially casual and usually done by family members, which makes it difficult to pin down statistically. Formal employment in the agricultural sector accounted in 1992 only for 4 per cent of total labour factor income, notwithstanding that seasonally the sector may occupy over a quarter of the working population. In the same year, the agriculture and food processing sectors together accounted for 22 per cent of total value added, 8 per cent of total export revenue, 8 per cent of expenditure on imports, and 35 per cent of final consumption by households.

Olives, livestock and the major field crops (cereals, forage crops, legumes and industrial crops), dominate production. Olives are the main domestic tree crop, with 49 per cent of total tree-crop production by value and 15 per cent of overall agricultural production. Hard wheat accounts for 48 per cent of total field-crop production and 11 per cent of overall agricultural production. The products of the major field crops account for virtually all imports. Soft wheat, the main agricultural import, represents 38 per cent of all such imports. Exports consist largely of fruit (dates principally, followed by citrus fruit) and fisheries products. These two categories make up nearly 80 per cent of all agricultural exports.

Food processing is dominated by meat production (20 per cent of output), grain processing (18 per cent), and oils and fats (19 per cent). Imports consist largely of vegetable oils (29 per cent of all food imports), sugar (21 per cent) and dairy products (18 per cent). The country's food processing industries export olive oil (52 per cent of all food exports), canned food (24 per cent) and other food products (14 per cent).

The EU is Tunisia's main trading partner; 76 per cent of Tunisia's trade goes to or comes from it. It absorbs 77 per cent and 63 per cent of all agricultural and food exports. Imported European agricultural and food products account for 39 per cent and 40 per cent of total imports of these products. European producers therefore stand to make greater gains in market share than their Tunisian counterparts from a strengthening of mutual preferential relations. Outlets for Tunisian exports depend largely on the EU's own agricultural policy decisions.

Agricultural Policies

The Tunisian government has put in place a large number of regulatory mechanisms to ensure adequate income levels for farmers and growers, self-sufficiency for certain products and low prices for staple commodities. It deploys them through five policy instruments: *i)* provision of agricultural infrastructures and incentives for private investment; *ii)* mobilisation and protection of natural resources; *iii)* training for farmers and growers combined with dissemination of new technology and methods; *iv)* control of prices for products, agricultural inputs and consumer prices; and *v)* protection of the domestic market against foreign competition. The last two deserve special attention.

The agricultural and fisheries sector is subject to two forms of price control, namely controls on production and agricultural input prices. Since 1986, Tunisia has conducted a structural adjustment programme to reform the agricultural sector by shifting its prices closer to those in world markets and reducing production subsidies. Nevertheless, support for agricultural production considered strategically important remained very high in 1992. According to Lindert and Tuck (1996), the production subsidy equivalent was 45 per cent for hard wheat, 32 per cent for soft wheat and 14 per cent for sugar. The consumer price for each product whose producer price is subject to control is also itself controlled, particularly for staple commodities like cereals and milk.

In 1992, the Tunisian authorities had two instruments available to protect the domestic market from outside competition: tariff and non-tariff policies. Both began to be modified in 1995 with the implementation of the GATT accession agreement. In order to understand the consequences of this agreement for agriculture, one must to keep in mind the situation prevailing in 1992, the baseline year for the model. The main instrument of non-tariff protection involved quantity restrictions on imports. Quotas for imports and state monopolies to administer import operations (the national offices for cereals and oils) augmented the protection of local production, as tariff barriers alone were considered insufficient. Applied since the 1960s, this policy largely isolated the local from the international market, thus attenuating the impact of international fluctuations on domestic prices. For other categories of product, imports required licenses issued by the Ministry of Trade, plus adherence to a stringent set of specifications related to technical and health-related standards.

The tariff equivalents of the non-tariff barriers provide an indicator of the scale of this protection. The approach developed by Baldwin (1989) can be used to assess them for the main agricultural products Tunisia imported in 1992. Of 19 agricultural

and food products, six showed significant tariff-equivalent levels. Sugar had the highest non-tariff protection, with a tariff equivalent of 28 per cent, followed by hard wheat (20 per cent). The other protected products were barley, soft wheat, vegetable produce and canned goods.

For tariff policy, Tunisia's customs regulations lay down three categories of duty: minimum, general and intermediate. The last two are rarely used and the minimum rate is the base rate applicable to all imports except for those covered by preferential tariff regimes. All duty is expressed *ad valorem* and based on the CIF value. There are no special duties or combined duties. Seasonal duties do not exist.

The agricultural and food-processing sectors benefited in 1992 from high tariff protection compared with other sectors. The average nominal rate was 45 per cent (non-tariff barriers not included), two and a half times the rate on other industrial products. Within the category, tariffs varied greatly between products. Customs duty and other import taxes were generally high for fruit, forest-cultivation products, tobacco, meat, dairy products, products derived from the processing of cereals, canned foods and beverages. They were less high for cereals, livestock, oils and sugar, four categories which together account for 60 per cent of agricultural imports.

The General Equilibrium Model

The model used here is based directly on the prototype developed by the OECD Development Centre (Beghin *et al.*, 1996) for analysis of trade policies. It has been constructed and calibrated using information contained in Tunisia's social accounts matrix for 1992, assembled specifically for the purpose[2]. It considers two representative Tunisian households, one rural and one urban, plus one tourist household, which receives all its income from abroad and consumes it entirely. In all, 57 economic sectors (of which 26 relate to agriculture or food industries) and five types of work are taken into account, these being distinguished notably by their levels of qualification and geographical mobility: three are rural, one urban, and one allocated to the whole country as a buffer between rural and urban areas. The model takes into account three types of capital: physical capital, reserves of natural resources (crude oil, phosphates) and land. Land itself is broken down into eight categories based on the degree of permanence in its cultivation, the level of irrigation and the crop varieties grown. Finally, the model distinguishes two trading partners for Tunisia: the EU and the Rest of the World (ROW). The model is dynamic and is resolved recursively each three years from 1992 to 2010. Its main features are summarised below.

Production

Production is modelled using nested CES functions, which describe the substitution and complementarity relations among the various inputs. Producers are cost minimisers and constant returns to scale are assumed. Output results from two

composite inputs: intermediate consumption and value added plus energy. The intermediate aggregate is obtained by combining all products in fixed proportions (Leontieff structure). The value-added and energy components are decomposed into two parts: aggregate labour and capital plus energy. Labour demand then breaks down into five categories, as mentioned above. Within each segment, labour is totally mobile and fully employed. The composite capital/energy factor is disaggregated into capital and energy. Demand for physical capital makes a distinction between "old" and "new" capital. The model thus integrates the notion of vintage capital, to distinguish the process of allocating capital already installed from that resulting from contemporary investment (putty/semi-putty production function). "New" capital can be allocated more flexibly than "old" capital. It substitutes for other types of capital (land, natural resources) more easily. Accelerating investment therefore strengthens the capacity for adjustment of the productive sector to changes in relative prices. Finally, the energy aggregate comprises two types of energy, oil/gas and electricity, which are substitutes.

Distribution of Income and Absorption

Income from labour is allocated between the various households using a standardised fixed-coefficient distribution matrix. Income from capital is allocated in the same way between households, companies and foreign investors. Companies pay tax on this income and save the remainder. Household demand is derived from maximising the utility function (following the ELES system, Lluch, 1973) specific to each household, subject to the constraints of available income and the consumer price vector. Household utility is a positive function of consumption of the various products and savings. Income elasticities are differentiated by product and by household, and vary from 0.75 for staple products for richest households to 1.20 for services. The calibration of the model determines a per capita subsistence minimum for each product, whose aggregate consumption grows with population, while the remaining demand is derived through an optimisation process. Government and investment demands are disaggregated in sectoral demands once their total value is determined according to fixed coefficient functions.

International Trade

The model assumes imperfect substitution among goods originating from different geographical areas. Import demand results from a CES aggregation function of domestic and imported goods (Armington, 1969). Export supply is symmetrically modelled as a Constant Elasticity of Transformation (CET) function. Producers decide to allocate their output to domestic or foreign markets in response to relative prices. At the second stage, importers (exporters) choose the optimal demand (supply) option across regions, again as a function of the relative import (export) prices and the degree of substitution across regions. The substitution elasticity is set at 2.2 between domestic and imported products and at 5.0 between imported products by origin (EU

or ROW). The elasticity of transformation is 5.0 between products intended for the domestic market and products for export, and 8.0 between the different export destinations. The small-country assumption holds, Tunisia being unable to change world prices; thus, its import and export prices are exogenous. Capital transfers are exogenous as well, and determine the trade balance.

Model Closure and Dynamics

The equilibrium condition on the balance of payments is combined with other closure rules so that the model can be solved for each period. First, the government budget surplus/deficit is exogenous and the household income tax schedule shifts to achieve the predetermined net government position. Second, investment is savings-driven, the latter originating from households, enterprises, government and abroad. The sequential dynamic path of the model results from this closure rule. A change in savings influences capital accumulation in the following period. Finally, exogenously determined growth rates are assumed for other factors that affect the growth path of the economy, such as population, labour supply and total factor productivity (TFP). Agents are assumed to be myopic and to base their decisions on static expectations.

Instruments of Economic Policy

The model considers a large set of policy instruments, some of which have been mentioned previously. They include production subsidies (by activity), consumption subsidies (by product), value-added taxes (by activity), other indirect taxes (by activity), tariff barriers (by imported product and by origin), non-tariff barriers (by imported product and by origin), direct taxes (by household), and taxes on corporate profits. The model also describes the tariff policy implemented by the EU for Tunisian exports, and tariff-quota policies applied by Tunisia and the EU. The modelling of these different policy instruments is conventional. It defines each instrument as a tax on the relevant resource. For example, a production subsidy is modelled as a negative tax on the producer price. In the case of tariff quotas, the process is a little more complex, but boils down to expressing the average tariff level as the average of the preferential and non-preferential tariffs, weighted by the volume of the imported products in each quota. If M is the total imported volume, $\overline{M}$ the volume level below which preferential tariff t_A is applied, and t_B the non-preferential tariff ($t_A < t_B$), then the average tariff t for all imports of a product verifies the following:

$$t\,M = t_A \min\left[M, \overline{M}\right] + t_B \max\left[M - \overline{M}, 0\right] \qquad (1)$$

Because imports subject to these regulatory controls are usually placed under the administrative authority of a public agency, the model assumes that it passes on the average tariff to the imported product's domestic price, in order not to penalise

one category of importer of the same product more than others. This average tariff therefore is endogenous in the model, because total imports are endogenous. If total demand for imports exceeds quota $\overline{M}$, the nominal level of protection can rise, up to the point at which the domestic price of the imported product is equal to the marginal utility provided by consuming it.

Baseline Scenario

Several assumptions have been made to define the plausible development of the Tunisian economy up to 2010, in the absence of new reforms. This is intended merely to define a baseline scenario to which alternative policy scenarios can be compared in order to isolate their specific impacts. Sensitivity analysis (results not published) suggests that the choices for exogenous variables within a realistic confidence interval have no major consequences. The relative variations of the different economic aggregates with respect to the baseline scenario after policy shock seem uninfluenced by those *a priori* choices.

Growth Hypotheses

In order to construct a baseline scenario, the values of a number of variables need to be set. The rate of growth in GDP is set in order to estimate a compatible growth rate for TFP[3]. The chosen figure of 5.7 per cent for average annual GDP growth between 1998 and 2010 accords with the forecasts of the ninth social and economic development plan (Ministry of Economic Development, 1998). Over the same period, the rural (urban) population is assumed to grow at an average annual rate of 1.0 per cent (1.8 per cent). Labour-market supply grows by 0.9 per cent (2.0 per cent) yearly in rural (urban) areas. The percentage of irrigated land rises, reducing total dry land accordingly. Irrigated land increases by 1.0 per cent annually up to 2010, leading to an annual shrinkage of 0.8 per cent in the latter. Total cultivated land area and the areas allocated to tree crops and forestry do not change. Reserves of natural resources are also unaffected. Average land productivity improves by 2 per cent per year, thus rewarding the efforts of agronomic research in identifying appropriate crop varieties.

Economic Policies in the Baseline Scenario

Assume that the government continues its policy of fiscal stabilisation. Budget spending (excluding investment) increases in real terms by only 1.5 per cent annually up to 2010. In the baseline scenario, public savings are endogenous. In the alternative scenarios, they are exogenous (and remain at their baseline level) and are obtained by endogenous shifting of the VAT vector.

This working hypothesis is debatable but appears not to have major consequences on results, as suggested by the sensitivity analysis. The other changes in economic policy included in the reference simulation reflect formal undertakings given by the

Tunisian government to the international community. In connection with GATT implementation, non-tariff barriers are removed on agricultural products from 1995 on; agricultural tariffs with all partners (consolidated in 1995) are reduced by 24 per cent from 1995 to 2004; and agricultural subsidies drop by 13 per cent between 1995 and 2004. In connection with the EU partnership agreement, tariffs on European industrial products fall progressively to zero between 1998 and 2010, and the EU slightly reduces its preferential tariff quotas on Tunisian exports of beverages, citrus fruit, and vegetables between 1997 and 2001.

Tunisian Agriculture in the Absence of Further Reforms

Table 7.1 reports the macroeconomic results of the baseline and alternative policy scenarios, while Table 7.2 reports sectoral results for agriculture and the food industries. The signing of the GATT and partnership agreements with the EU further integrates Tunisia into the system of international division of labour. Exports grow in volume 8.1 per cent per year, imports at 6.2 per cent. The preference granted by Tunisia to European industrial products approximately halves the ROW's share of this market. Without further incentives to substitute one source of agricultural imports for another, the share of agricultural imports originating in the ROW holds stable at around 60 per cent.

The increase in exports comes largely in the industrial sector whereas agricultural exports tend to fall in volume. Domestic demand for agricultural products increases (due notably to population pressure), and focuses on subsidised and protected domestic products. Limited production capacity in the agricultural sector encourages producers to devote an increasingly large share of their production to the domestic market, to the detriment of foreign markets.

Gains in competitiveness allowing Tunisia to increase export market share do not arise from real depreciation, given that the price of value added remains unchanged, the cut in capital revenue being offset by the rise in real wages. They come from the reduction in prices for imported inputs and less distortion of international trade other than in agriculture, a situation that benefits the industrial sector particularly. It encounters fewer constraints on increases in production than the agricultural sector, which faces limits on arable land, and it is more exposed to international competition, forcing it to make greater efforts to adapt. Figure 7.1 makes clear that the nominal level of protection of the industrial sector, already low compared with agriculture, declines significantly to 2010. Nominal protection of agriculture and the food industries remains high and declines very little. Indeed, protection of certain agricultural sectors even rises over the period to 2010, due to the implementation of the system of preferential tariffs. Growing demand for imported products leads inevitably to quota overflow and thereby to an endogenous increase in average protection levels. This is particularly true of soft wheat, livestock, sugar and fruit. This comparative rise in nominal protection for the agricultural and food processing sectors increases their effective level of protection, since they also benefit from the fall in prices for industrial inputs. Between 1992 and 2010, the average level of effective protection of the agricultural and food sectors increases from 36 per cent to 43 per cent, while that of

industry declines from 22 per cent to 18 per cent. After the consolidation of 1995, average tariffs tended to level out. Endogenous tariff increases affecting agriculture, however, counteracted the expected effects of the reduction in tariffs to 2004 provided for in the GATT implementation process. These two phenomena combined explain the observed convergence in average tariff levels in the agricultural and food processing sectors.

Table 7.1. **Macroeconomic Results**

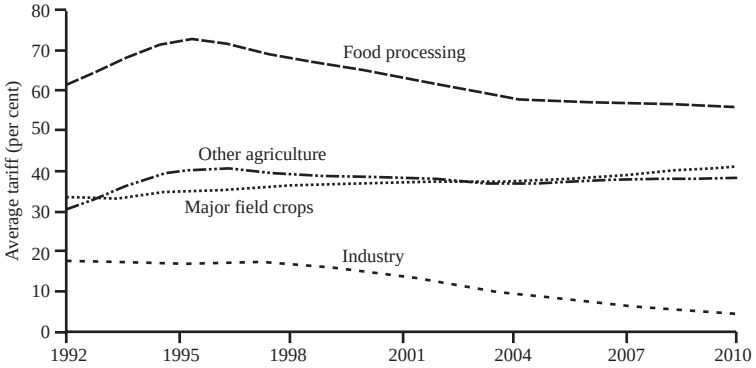
	Baseline Scenario		Alternative Scenarios in 2010				
	1992	*2010*	*A1*	*A2*	*A3*	*A4*	*A5*
Real Gross Domestic Product	12.31	33.67	33.56	33.94	33.68	33.83	34.06
Total production	27.17	75.57	74.82	78.29	75.08	76.71	80.13
Private consumption	9.82	26.43	26.60	26.68	26.53	26.96	27.46
Investment	3.65	8.96	8.79	9.22	8.98	9.05	9.21
Public consumption	2.19	2.87	2.87	2.87	2.87	2.87	2.87
Exports	4.23	17.27	17.59	18.18	17.08	18.19	19.75
Exports to EU	3.33	11.91	12.54	12.13	11.91	12.86	12.38
Exports to ROW	0.89	5.36	5.04	6.05	5.17	5.34	7.37
Imports	6.10	18.17	18.49	19.08	18.13	19.27	20.83
Imports from EU	4.53	15.19	16.01	16.00	15.12	16.70	15.63
Imports from ROW	1.57	2.98	2.48	3.09	3.01	2.57	5.20
VAT revenue	0.90	2.46	2.94	1.87	2.48	2.41	2.84
Tariff revenue	1.13	1.00	0.42	1.00	1.02	0.43	0.04
Physical capital stock	24.62	81.35	81.00	82.23	81.39	81.88	82.64
Real rural available income	776	1 751	1 733	1 706	1 801	1 755	1 771
Real urban available income	1 397	2 862	2 890	2 930	2 852	2 939	3 006
GDP deflator	1.00	1.01	0.98	1.02	1.01	1.01	1.01
Labour remuneration							
Agricultural family	1.00	1.68	1.56	1.68	1.76	1.67	1.65
Unqualified agricultural workers	1.00	1.70	1.62	1.71	1.72	1.65	1.62
Qualified agricultural workers	1.00	2.37	2.22	2.46	2.38	2.33	2.26
Unqualified casual workers	1.00	1.72	1.67	1.78	1.72	1.74	1.77
Qualified casual workers	1.00	1.78	1.74	1.76	1.79	1.73	1.74
Return on capital							
Natural resources	1.00	2.59	2.50	2.70	2.58	2.59	2.65
Annual dryland	1.00	6.10	5.07	3.84	6.19	3.25	3.16
Annual irrigated land	1.00	3.67	3.22	3.81	3.62	3.26	3.32
Permanent dryland	1.00	3.34	2.49	3.65	6.15	6.00	5.83
Permanent irrigated land	1.00	3.16	3.19	3.28	2.56	2.63	2.54
Date-growing land	1.00	6.01	5.89	6.20	5.95	5.98	6.07
Forest	1.00	8.51	5.89	9.23	8.43	6.26	5.69
Physical capital	1.00	0.80	0.80	0.82	0.79	0.81	0.81
Welfare changes							
Rural Household			-1.1%	-3.2%	2.7%	-0.5%	0.2%
Urban Household			1.0%	2.1%	-0.5%	2.4%	4.5%
Aggregate			0.3%	0.5%	0.3%	1.2%	2.5%

Note: These macroeconomic aggregates are expressed in billions of 1992 TND. Real available income levels are the available income levels per inhabitant in 1992 TND, divided by the consumer price index for each area.

Table 7.2. **Sectoral Results (TND Millions 1992)**

	Output							Exports							Imports						
	1992	2010	A1	A2	A3	A4	A5	1992	2010	A1	A2	A3	A4	A5	1992	2010	A1	A2	A3	A4	A5
Soft wheat	54	112	91	102	111	83	85	0	0	0	0	0	0	0	72	200	260	153	203	195	195
Hard wheat	348	367	378	297	367	303	306	0	0	0	0	0	0	0	8	54	64	36	55	43	42
Barley	87	84	84	93	87	96	97	5	0	1	1	0	1	1	1	6	8	5	6	6	6
Other cereal	61	168	167	184	162	173	148	0	1	1	1	0	1	1	37	118	107	112	117	101	125
Legumes	71	123	126	132	122	133	134	1	0	0	0	0	0	0	0	1	1	1	1	1	1
Forage crops	66	142	141	149	141	147	145	0	0	0	0	0	0	0	0	3	5	2	3	4	3
Beet	10	24	18	20	24	16	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Industrial crops	14	17	11	17	16	10	9	2	1	1	1	1	1	1	39	122	123	126	119	123	123
Olives	420	442	424	450	504	511	513	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Citrus fruit	93	180	178	181	186	186	188	8	8	8	7	9	9	9	0	0	0	0	0	0	0
Dates	127	183	184	184	182	183	184	44	24	27	24	23	24	24	0	0	0	0	0	0	0
Grapes	20	58	58	60	65	71	72	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other fruit	328	554	558	554	525	520	511	2	1	1	0	0	0	0	4	13	25	14	15	29	56
Vegetables	410	797	801	805	790	799	799	5	2	3	2	2	3	3	5	21	25	21	21	26	29
Other crops	25	38	37	42	37	39	41	3	1	1	1	1	1	1	5	23	24	23	23	24	29
Livestock	782	1747	1738	1806	1731	1781	1754	5	6	9	7	6	9	10	14	28	46	28	29	47	45
Forestry	61	99	95	100	98	95	94	0	0	0	0	0	0	0	3	21	35	23	22	38	42
Fisheries	246	657	654	652	656	647	647	25	121	121	112	122	113	110	1	2	2	3	2	2	3
Meat	596	1422	1428	1484	1409	1477	1437	1	1	1	1	1	2	2	22	64	167	62	65	170	162
Milk	181	423	362	358	422	304	310	1	1	2	1	1	1	1	54	131	219	145	132	242	245
Flour-milling	555	1032	1074	858	1036	890	894	9	4	7	1	4	1	1	2	7	10	10	7	15	15
Edible oils	480	495	472	503	574	580	582	141	89	98	88	228	265	271	85	320	360	337	358	425	503
Canned goods	204	477	493	480	457	471	471	65	129	146	128	113	124	124	2	5	7	5	5	8	9
Sugar	140	324	248	277	328	213	215	2	5	5	2	5	2	2	60	124	220	134	126	242	244
Other food	733	2136	1994	2195	2075	1952	1953	38	445	526	463	407	488	531	60	130	408	131	133	427	485
Beverages	247	781	780	811	880	954	977	13	115	130	124	178	228	235	10	23	42	24	23	41	42

Figure 7.1. **Nominal Protection Levels, 1992-2010**



Note: The average tariff comprises tariff barriers abolished in 1995 in return for the tariff consolidation provided for by GATT.
Source: Authors' calculations.

From 1992 to 2010, industrial production climbs at 7 per cent annually, while agriculture and food processing grow at only 3.3 per cent and 4.6 per cent respectively. Industry experiences a much more severe external shock than agriculture or food processing, and it consequently supplies virtually all the effort devoted to factor reallocation and enhancing competitiveness. A measure of this effort is the change in composition of the production vectors, which indicates a level nine times as high in industry as in agriculture and food processing. The distortions caused by sector-targeted incentives in agriculture ensure that it remains lacking in dynamism. The food industry, largely dependent on it, also suffers the negative effects. Industry captures an increasingly high percentage of mobile production factors (physical capital and casual labour), and it acquires more substantial commercial outlets, especially abroad. Consequently, labour factor income rises more swiftly in non-agricultural than agricultural employment. Due to much slower growth in the rural population, the real income gap ratio between urban and rural households tends to narrow, however, (from 1.8 in 1992 to 1.6 in 2010), thanks notably to the rents gleaned by owners of arable land from the protection and subsidisation of agriculture. Consumers of agricultural products get penalised in this baseline scenario. The consumer price for agricultural products climbs by 9 per cent between 1992 and 2010, while that for industrial products falls by the same amount[4].

Despite heavy state support, agricultural activity does not therefore appear able to derive benefit from the increasing openness of the Tunisian economy to trade and partnership with Europe. It remains largely outside the globalisation process.

Alternative Policies

The analysis turns now to an evaluation of the impact of three reforms that might be envisaged as part of the deepening partnership between Tunisia and the EU, and which will probably be under discussion from 2000 on. The first two — reductions in agricultural tariffs and government support in Tunisia — can be implemented unilaterally, although it would serve Tunisia's interests to subordinate such reforms to reciprocal concessions from its partner, in order to limit the costs. One possibility, for example, would be to negotiate increased access to the EU market for Tunisian agricultural exports. Initially, each of the three reforms is assessed separately, to evaluate its intrinsic impact on Tunisia's economy and agriculture. A fourth simulation combines the first three. A fifth adds to the three combined reforms a unilateral reduction in tariffs on agricultural and industrial products imported from the rest of the world, to evaluate the loss of revenue arising from the grant of preferential trading terms to the EU alone.

Abolition of Tariff Barriers on Agricultural Imports from the EU (Scenario A1)

This scenario provides for a staged phase-out of preferential and maximum customs tariffs on agricultural and food imports from the EU from 2001 to 2010 — by 25 per cent compared with the baseline scenario in 2001, rising to 50 per cent in 2004 and 75 per cent in 2007, with the tariffs abolished in 2010. This reform has only modest macroeconomic impact. Overall, activity is relatively unaffected (real GDP is down 0.3 per cent on the baseline scenario for 2010). The loss of tariff income amounts to approximately 8 per cent of total government revenue in 2010. It is offset by an increase of one-fifth in the average VAT rate, which rises from 3.7 per cent to 4.4 per cent. The enhancement of the EU's preferential status is reflected in a marginal rise in total import volume on the order of 2 per cent compared with the baseline scenario. All these new imports come from Europe and involve essentially a few previously highly taxed agricultural products, such as soft wheat, milk, sugar and other food products. The volume of imports of agricultural products from the ROW declines, but proportionally less than the rise in imports from Europe. Domestic agricultural production is also affected. In other words, consumers substitute European imports for imports from ROW and local production. Faced with this intensified competition, Tunisian agriculture appears incapable of shifting to more competitive types of production, due to the inadequacy of available land, a system of domestic support still highly focused on sectors now exposed to European competition, and the impossibility of significant enlargement of commercial outlets abroad.

Industry cannot make up for these losses because it must cope with two phenomena that penalise it: first, the increase in fiscal pressure, and second the fall in domestic demand due to a drop in the relative price of agricultural compared with industrial products. Industry nevertheless is less affected than rural activity and benefits from

the unification of protective tariffs. Factor demand in agriculture falls significantly. Agricultural wages decline, although less than income from land use thanks to increased labour mobility. The income of landowners is badly hit. The gap in real income widens between urban and rural households. The agricultural sector's very limited capacity obliges the Tunisian economy to cut its real exchange rate in order to ensure the viability of its balance of payments. This leads to a relative cut in welfare of 1.1 per cent for rural households and a gain of 1 per cent for urban households, compared with their available income in the baseline scenario for 2010[5]. The fall in consumer prices offsets the fall in urban household income, but it does not make up for the same fall in rural household income.

Reduction in Government Support for Agriculture (Scenario A2)

This scenario simulates a gradual reduction of domestic support for agriculture. Production and consumption subsidies are reduced by 25 per cent in 2001 compared with the baseline scenario, 50 per cent in 2004, 75 per cent in 2007 and 100 per cent in 2010. The macroeconomic impact is once again limited, but it is positive (GDP is 0.8 per cent higher than in the baseline scenario by 2010). The fiscal impact is greater than in the previous case: reduced aid for agriculture leads to an increase in revenue equivalent to 11 per cent of total public revenue. The average rate of VAT falls accordingly from 3.7 per cent to 2.6 per cent. The major consequence of this reform is to reduce production generated by agricultural activities previously assisted (hard and soft wheat, milk, sugar) or benefited by an indirect subsidy on intermediate consumption — milling, for example.

For reasons symmetrical with those for the previous simulation, the fall in factor demand in the sectors affected by the reform is not offset by a sufficient increase in demand in other agricultural sectors. The affected sectors retain substantial advantages in terms of real effective protection, and the barriers erected by the EU limit the outlets which exports of other products could provide. This observation therefore seems to confirm what Lahouel says (1998*b*) for the whole economy: given its limited size, efforts to encourage competition cannot be effective unless combined with liberalisation of the domestic market and foreign trade occurs.

Yet this is not the case in the present simulation. Total agricultural production falls, notwithstanding that some sectors (livestock, meat, other cereal crops, and other food products) experience positive substitution effects. Conversely, industry appears to benefit from the reform. It gets help from the reduction in fiscal pressure and expansion in domestic demand, because the cut in support for agriculture means that industrial products become relatively less costly. Industry thus takes up a growing percentage of mobile factors and, once again, the income gap widens between urban and rural households. Loss of revenue focuses particularly on a single factor — annual dry cropland — used principally for cereal crops. Agricultural wages remain comparatively unaffected however, which seems to indicate that support for agriculture

mainly benefits owners of land used for cereal crops. The welfare of rural households declines by 3.2 per cent by 2010 compared with the baseline scenario, but urban households enjoy a positive welfare impact, of 2.1 per cent.

The EU also derives benefit due to its privileged position as an exporter of industrial products, towards which domestic demand turns. Its agricultural exports to Tunisia do not increase because there has been no change in external barriers. The increase in total import volume (by 5.3 per cent by 2010 compared with the baseline scenario) consists almost exclusively of European industrial products. It is offset by an increase in industrial exports to the EU and ROW. No real depreciation occurs in this simulation. The cut in support for agricultural activity allows Tunisia's industrial competitiveness to improve sufficiently to make up for the increase in imports due to the rise in urban household incomes.

Increased Access to the EU for Tunisian Agricultural Exports (Scenario A3)

The previous two reforms, envisaged by Tunisia, are positive for the European Union. The abolition of tariffs imposed on EU agricultural exports automatically improves their competitiveness in the Tunisian market. The reduction in support for Tunisian agriculture increases, by substitution, the Tunisian demand for industrial products, of which the EU is a principal beneficiary due to the preferences granted by Tunisia under the partnership agreement. Tunisia may therefore reasonably seek reciprocal concessions from its European partner, and this would automatically entail reform — a very limited one — of the Common Agricultural Policy (CAP)[6]. No radical amendment to the CAP can be expected as part of a change in the bilateral relationship between the EU and Tunisia. It is possible to envisage reform of measures that relate exclusively to Tunisian products, such as the tariff quotas on vegetable produce, oils and beverages. Agenda 2000 (European Commission, 1997), which lays down the broad lines of CAP from 2000 onwards, makes no mention of quota-based policies with respect to products from the Mediterranean region.

Demand from the European Union is not explicitly specified in the model, which retains the small-country assumption with Tunisia as price taker. This price is exogenous, but Tunisia can modify the unit price it receives according to the quantity exported. By exceeding the quantity for which it has a preferential tariff, it increases the average tariff imposed upon it (leading to a lower pre-tariff export price), and it must therefore make greater efforts to be competitive. Equilibrium is reached when export price reduces production cost to a minimum acceptable level. This mechanism can be expressed formally as shown below. If exports are taxed on the foreign market (the equivalent of a tariff t), the price at which the exporting nation can sell its goods changes in the following manner:

$$Pe_t / Pe_{t-1} = (1 + t_{t-1}) / (1 + t_t) \qquad (2)$$

If the average tariff includes two tariff regimes, the export price paid to the producer will depend on export volume:

$$Pe_t\left[E + t_A \min\left[E, \overline{E}\right] + t_B \max\left[E - \overline{E}, 0\right]\right] = E(1 + t_0), \quad (3)$$

where $t_0.E_0 = t_A \min\left[E_0, \overline{E}\right] + t_B \max\left[E_0 - \overline{E}, 0\right]$ and $Pe_0 = 1$

The scenario simulates a reduction of the preferential and maximum tariffs imposed by the EU on Tunisian exports of the products mentioned above as follows: a reduction of 25 per cent in 2001 compared with the baseline scenario, 50 per cent in 2004, 75 per cent in 2007 and 100 per cent in 2010. The reform has no effect on activity or on fiscal balance. Its main impact is on the export of oils, which by 2010 rise by 150 per cent compared with the baseline volume, generating unit revenue gains of 40 per cent. The beverage sector also benefits, but to a lesser extent (exports are up 50 per cent in volume, with unit revenue better by 5 per cent). This growth in foreign demand leads to demand for agricultural production factors, increasing the revenue they can generate. Mobile factors also focus on the agricultural and food processing sectors. The gap in incomes narrows between urban and rural households. The impact on welfare is very positive for rural households (+2.7 per cent compared with the baseline scenario in 2010), and only marginally negative for urban ones (-0.5 per cent).

Within the agriculture and food sectors, production shifts toward exports. The decline in production competing with imports is offset by growth in imports of agricultural products. All in all, however, foreign trade tends to lessen in volume due to the rise in the real exchange rate caused chiefly by increased agricultural wage levels. Industrial exports and imports decline in volume.

Thus, in the end, the reform is rather favourable to Tunisian agriculture, but its impact is nevertheless restricted, because the reallocation of agricultural factors to expanding sectors is slowed by the incentives given to Tunisian farmers to compete with European producers. This illustrates the existence of an anti-export bias embodied in domestic agricultural policies, which limits the expansion of agricultural exports in which Tunisia enjoys comparative advantage.

Reciprocal Reform of Agricultural Trade between Tunisia and the EU (Scenario A4)

This simulation integrates the combined effect of all three reforms described above. It amplifies the impact of the individual reforms taken separately. Its influence on macroeconomic activity is marginal (+0.5 per cent for GDP by 2010), and its consequences for fiscal balance are similar to the sum of the negative and positive effects of the cuts in agricultural tariffs and subsidies. A slight cut occurs in the VAT rate, to 3.4 per cent in 2010.

Numerous factor movements occur in agriculture. It devotes a much larger share of its resources to export crops. The anti-export bias is now removed. Exports of oils[7] rise threefold in volume compared with the baseline level for 2010, and those of beverages twofold. These two sectors alone account for most of the increase in agriculture and food exports (export volume rises by 33 per cent overall). Conversely, agricultural activity is down sharply on the baseline scenario in areas previously protected or assisted. Hard wheat, and to a lesser extent the other industrial crops, are particularly hard hit: their 2010 production volume is lower than the actual figure for 1992. The other sectors affected (soft wheat, milk, sugar, milling and other food industries) experience a worsening in their situations compared with the baseline scenario for 2010, but their production at least tends to rise. Import substitution compensates for production shortfalls relative to demand and, overall, agricultural production is down 2 per cent on the baseline figure for 2010. Greater access to the European market therefore does not offset completely the negative effects of liberalisation on agriculture, despite a less marked institutional braking effect on the reallocation of production factors in agriculture. The relative decline in welfare is 0.5 per cent for rural households. The relative gain for urban households is 2.4 per cent, and the aggregate gain stands at 1.2 per cent relative to baseline GDP for 2010. Liberalisation of agriculture substantially benefits industry, with production in 2010 up by 7 per cent on the baseline figure. Industry takes up a significant share of resources and urban factor returns rise substantially.

The European Union also benefits substantially from the combined reforms: its exports to Tunisia are up 10 per cent on the baseline level by 2010. Its imports from Tunisia also rise, but to a lesser extent, so that from 1992 to 2010 Europe's trade balance with Tunisia improves by TND 0.5bn over the baseline level. The EU gains a strengthened preferential regime and increased Tunisian demand. The rest of the world sees a cut in export volume; absolute trade diversion occurs. It is somewhat less marked than in the simulation (A1) of unilateral liberalisation of agricultural trade with Europe, as a smaller loss of revenue tends to dampen the decline in Tunisian demand for ROW products.

Multilateral Reform of Agricultural and Industrial Trade (Scenario A5)

This scenario adds to the combined reforms a cut in tariffs on industrial and agricultural products from the rest of the world, similar to that implemented on European products. In it, Tunisian agriculture goes irrevocably down the road of globalisation. It devotes a growing share of its resources to export crops, which expand by 40 per cent in volume compared with the 2010 baseline. Although mobile resources in agriculture are generally smaller than in the previous scenarios, they are more effectively employed and the revenue they generate declines less quickly than consumer prices. As a result, the real income of rural households increases. There is a general opening of the country to trade; total exports are up 14 per cent and imports 15 per cent. GDP expands by 1.2 per cent, despite an increase in VAT. For the first time,

gains in welfare are positive for both rural and urban households, but they remain unequal. Urban households see their available income rise by 4.5 per cent; rural ones gain by only 0.2 per cent. The gap is even more striking in absolute terms, because the marginal gain generated by the reform is approximately eighty times greater for urban than for rural households. The aggregate improvement in Tunisian welfare by 2010 equates with a rise of 2.5 per cent in GDP over the baseline scenario.

Trade diversion disappears. Imports from the rest of the world take a significantly greater share of the Tunisian market than in the baseline scenario. Europe continues to benefit from Tunisian domestic reforms, but its exports rise less quickly than in the previous scenario. Its trade balance with Tunisia remains positive and unchanged from the baseline scenario in 2010. The increase in household incomes in Tunisia also tends to reduce migrant pressure.

One final scenario could be envisaged, in which all trade with all partners is liberalised without awaiting any corresponding concession from the EU. This policy produces more limited gains in welfare at the aggregate level than the policy described above (2.1 per cent against 2.5 per cent), and it is particularly detrimental to rural households, whose welfare is sharply down on the baseline scenario by 2010 (-3.1 per cent).

Conclusion

The institutional attachment of Tunisia to the European Union provides it with an opportunity to leave behind its policy of agricultural self-sufficiency. This costly policy does allow the loss of purchasing power of rural households, which are already much worse off than urban ones, to be mitigated. In this setting, one can envisage changes in agricultural policy only if they do not degrade the situation of rural areas even further. A quarter of the country's population is involved directly or indirectly. Given significant reallocation costs (Rutherford, Ruström and Tarr, 1995), it probably is more appropriate, where the gain in aggregate welfare is similar, to opt for any policy which reduces as far as possible the loss of welfare in rural households.

This paper suggests that a unilateral reduction in the protection and support of Tunisian agriculture is not likely to improve the situation of rural communities. Nor is it likely to improve significantly the wealth of the Tunisian economy, of which a part could be indirectly redistributed to rural households to offset their losses. Tunisian agriculture's limited capacity for reallocation and adjustment can explain this negative outcome. The sector seems to enjoy a relative advantage in tree crops and their derivatives (olives specifically), but its production capacity is nevertheless limited by the very nature of those crops, with their very long investment payback periods, and by the constraint imposed by natural resources. Moreover, the tariff-quota policy currently applied by the EU under the CAP acts as a brake on any expansion of Tunisia's potential commercial outlets.

Reform of Tunisian agriculture can be viable only if accompanied by greater access to the European market for the country's exports. Tunisia would be entitled, as part of a deepening of its partnership with the EU, to ask for concessions of this type. The liberalisation of its agriculture would be of significantly benefit the EU, for two reasons. First, the EU would gain a great deal from reductions in the tariffs imposed on its agricultural exports to Tunisia, as well as from cuts in domestic support for agriculture in Tunisia; this support essentially covers products competing with those of the EU. Second, the rise in incomes of urban households generated by agricultural reform would lead to a significant increase in the demand for industrial imports, which the EU, with its preferential access, would largely capture at the expense of the rest of the world. A scenario like this would limit the loss of welfare in rural communities, and the resulting gain for the Tunisian economy would allow the losses that rural households do incur to be largely offset. EU trade concessions therefore have critical importance for agriculture in Tunisia. They very probably will determine whether reform in the sector is politically feasible.

That the development of Tunisian agriculture depends heavily on its relationship with the EU does not mean that Tunisia could not derive benefit from multilateral liberalisation of its foreign trade. In deciding to grant the same trading privileges to its other partners, it would maximise its potential for growth while minimising losses in agriculture. The EU would lose commercial outlets for its exports, but it would gain from the stability and economic development of Tunisia.

Notes

1. The Uruguay Round incorporated the GATT within the World Trade Organisation (WTO), to which Tunisia has acceded as well.

2. See Chemingui and Dessus (1999) for a precise description of the SAM, as well as for the detailed results of the simulations presented in this paper and a sensitivity analysis.

3. In constructing the baseline scenario, a figure is defined for the rate of growth in the economy. Total factor productivity will then be endogenous. When simulating alternative policies, the previously estimated total factor productivity becomes exogenous and gross domestic product endogenous.

4. This effect could be increased by the expected rise in world food prices following the implementation of the Uruguay Round Agreement on Agriculture (Goldin, Knudsen and van der Mensbrugghe, 1993), which is not taken into account here.

5. The chosen yardstick for welfare is the assessment of compensatory variation proposed by Sadoulet and de Janvry (1995). If E is the monetary equivalent of the utility function, and y is the available income, then measurement is as follows for period t:

   $$(y^* - y) - (E(p^*, u) - E(p, u))$$

   where u is utility, p the price system, and the star exponent the reform. The first term, $y^* - y$, measures the gain (or the loss) of revenue caused by the reform. The second term measures the revenue needed after the reform to obtain the same level of utility as before the reform.

6. In 1996, Tunisian exports accounted for 0.6 per cent of EU imports compared with the rest of the world. In 1995, Tunisian imports accounted for 0.7 per cent of EU exports to the Rest Of the World (Bayar, 1998).

7. Exports of olive oil rise much more rapidly than total production of olive oil, which by 2010 is up only 17 per cent on the baseline figure (due to the resource constraint on land for tree crops). Exports substitute for production intended for the domestic market. Conversely, imports of groundnut oil and sunflower-seed oil from Europe jump by a factor of 3.5 in volume in order to satisfy domestic demand.

Part Three

The Optimal Mix of Regional Trade Agreements (RTAs)

Chapter 8

Overlapping Free Trade Agreements in the Middle East and North Africa: Economic Incentives and Effects in Egypt

Bernard Hoekman, Denise Konan and Keith Maskus

Introduction*

Trade liberalisation figures prominently on the policy reform agenda of the Government of Egypt. Tariffs and other barriers to trade have been reduced significantly since the late 1980s. Egypt has also participated in multilateral agreements to liberalise the trade regime — e.g. through binding its tariffs in the GATT and agreeing to eliminate quotas on textile imports. Preferential trade liberalisation, under which trade barriers are reduced for only a subset of trading partners, has always been important in Egypt's trade policy. The country is far advanced in negotiations with the EU to sign an EMA establishing a bilateral FTA, which will lead to the elimination of import duties and other barriers to trade on goods of EU origin over twelve years. These developments imply that by 2010 a large proportion of Egypt's imports will enter the country without encountering tariffs. In the context of the Arab League, Egypt accords preferential treatment to imports of Arab countries. Most recently, agreement was reached in the Arab League to establish a free trade agreement (FTA) over a 10-year period starting in 1998[1].

Over fifty years ago, Viner (1950) argued that the tariff discrimination implied by an FTA would have two effects. First, members would import some products from firms located in a more expensive partner country, rather than from cheaper suppliers

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located in non-member countries. Second, inefficient domestic production would be replaced with purchases from lower cost producers located in other member countries. Viner argued that if the first effect (trade diversion) was greater than the second one (trade creation) an FTA might result in lower welfare for a member country. Although the concepts of trade diversion and creation are inadequate measures of the welfare effects of regional integration efforts, the standard policy prescription for reducing the opportunity costs associated with an FTA is to lower average trade barriers on rest-of-the-world imports. Similar incentives arise if large countries negotiate many bilateral FTAs with trading partners. The resulting "hub-and-spoke" nature of the FTAs may give rise to "investment diversion" to the hub country, because firms located in the hub have duty free access to all "spoke" countries. The potential for investment diversion can be reduced only if all trading partners remove barriers on each other's trade — co-operation is required. The recent Arab League FTA may, to some extent, have been motivated by a desire to avoid the negative implications of the emerging hub-and-spoke network of bilateral Euro-Med agreements[2]. Non-member countries "left out" of an FTA will also have an incentive to seek reductions in the external barriers imposed by FTA members. This may be reflected in pressure to engage in multilateral trade negotiations in the WTO. Alternatively, non-members may seek to negotiate FTAs in turn or to accede to the initial FTA.

The potential economic implications of an EMA for the Egyptian economy have received a number of analyses in the literature (Galal and Hoekman, 1997*a*). This paper builds on previous studies by exploring the potential economic impact of FTAs between Egypt, the EU and the Arab League, with potential expansion to include an Egyptian-US FTA. The United States is a significant supplier to Egyptian markets, second behind the EU, and there may be significant incentives created for both Egypt and the USA to conclude an FTA, given the realisation of free trade between Egypt and Europe and the Arab League.

Structure of Trade and Trade Policy

Egypt's bilateral trade can be separated into flows to and from four regions: the EU (including Turkey)[3], the Arab League, the United States, and the rest of the world (ROW). In general, Egypt's trade is dominated by transport services (largely because of the Suez Canal), oil, tourism, textiles and clothing. The EU is Egypt's largest trading partner, accounting for roughly 40 per cent ($4.5 billion) of merchandise imports in 1995 and absorbing 45 per cent ($1.6 billion) of total exports. In second place is the Arab League which accounted for nearly $550 million (16 per cent) of Egyptian goods exports in 1995. Shares of exports to Arab markets are greater than 50 per cent of total exports in a number of product categories, such as processed foodstuffs, wood products, paper and printing, glass and mineral products and transport equipment (Table 8.1). In contrast, Egypt's exports to the United States concentrate heavily in textiles and clothing. They totalled $520 million in 1995.

Table 8.1. **Benchmark Output and Trade Shares**

SECTOR	Output	Import				Export			
		Total	EU	US	Arab League	Total	EU	US	Arab League
AGRICULTURE									
1. Vegetable products, foodstuffs (VG1)	12.4	13.3	11.7	47.9	2.2	2.6	27.0	1.5	63.5
2. Vegetable products, non-foodstuffs (VG2)	1.7	0.0	36.9	16.5	1.2	0.1	49.3	13.4	14.1
3. Animal products (ANI)	8.0	0.8	82.7	0.0	9.6	0.3	35.2	2.3	53.0
MINING AND QUARRYING									
4. Crude petroleum and natural gas (OIL)	2.7	1.2	52.0	7.0	24.4	18.5	30.6	4.6	1.0
5. Other extractive industries (MIN)	0.9	2.0	17.7	14.8	3.5	0.2	56.8	9.2	21.4
MANUFACTURING									
6. Food processing (FOO)	7.7	15.1	40.3	10.6	2.3	1.3	20.1	4.5	49.3
7. Beverages (BEV)	0.6	0.0	41.7	16.3	28.5	0.0	1.2	0.0	87.6
8. Tobacco products (TOB)	1.9	1.0	27.0	27.4	2.5	0.0	0.4	0.7	45.3
9. Cotton ginning and pressing (TX1)	1.2	0.5	36.9	0.3	0.9	4.2	33.7	0.2	1.4
10. Cotton spinning and weaving (TX2)	5.2	2.4	33.4	7.1	3.7	10.3	72.4	10.9	6.1
11. Clothing: assembled and pieces (CLO)	1.4	0.0	12.4	0.9	19.1	1.2	34.7	49.1	8.6
12. Leather products, excl. shoes (LEA)	0.2	0.0	25.7	0.9	13.8	0.1	48.8	1.5	30.9
13. Shoes (SHO)	0.4	0.0	16.0	2.9	12.0	0.0	20.5	1.9	60.5
14. Wood products, excl. furniture (WOO)	1.1	5.0	39.8	1.4	0.4	0.1	1.5	0.1	86.1
15. Furniture (FUR)	1.4	0.0	57.0	34.7	1.4	0.5	14.9	10.6	58.5
16. Paper and printing (PAP)	1.5	3.3	46.8	17.1	2.9	0.9	1.6	0.8	91.7
17. Chemicals, excl petro. (CHE)	3.1	10.8	62.6	12.2	7.9	1.8	31.3	3.5	39.4
18. Petroleum refining (PET)	2.7	1.2	48.4	6.2	28.9	3.3	58.5	0.6	7.2
19. Rubber, plastics and products (RPL)	0.8	2.3	42.8	20.4	9.8	0.3	41.3	0.7	45.3
20. Porcelain, china, pottery (POR)	0.3	0.4	47.4	7.8	11.5	0.1	42.2	1.5	32.4
21. Glass and products (GLA)	0.3	0.5	63.3	5.3	3.6	0.1	9.3	5.5	62.1
22. Mineral products, n.e.i. (MPD)	1.7	0.4	61.6	61.6	2.2	0.0	4.8	2.0	80.9
23. Iron, steel, other base metals (MET)	2.8	2.6	35.5	11.8	9.0	0.8	68.3	1.9	24.3
24. Machinery and appliances (MAC)	3.5	23.1	59.4	17.4	2.4	4.6	9.5	3.9	58.0
25. Transportation equipment (TRA)	1.0	5.9	33.8	12.1	0.7	0.4	3.6	0.3	89.8
26. Other manufacturing (OMF)	0.1	0.5	47.6	11.2	3.5	0.1	25.4	3.2	62.5

Table 8.1. (contd.)

SECTOR	Output	Import				Export			
		Total	EU	US	Arab League	Total	EU	US	Arab League
SERVICES AND OTHER									
27. Electricity, gas, and water (ELE)	1.7	0.2	44.6	16.8	4.3	0.7	25.0	7.0	40.0
28. Construction (CON)	5.5	0.2	44.6	16.8	4.3	0.8	25.0	7.0	40.0
29. Trade (TRD)	7.1	0.3	44.6	16.8	4.3	5.6	25.0	7.0	40.0
30. Restaurants, hotels, coffeehouses (RES)	2.3	0.0	44.6	16.8	4.3	5.0	25.0	7.0	40.0
31. Transport and storage (TRN)	6.0	1.3	44.6	16.8	4.3	31.9	44.7	6.7	20.2
32. Communications (COM)	0.8	0.1	44.6	16.8	4.3	0.4	25.0	7.0	40.0
33. Financial establishments (FIN)	1.5	1.1	44.6	16.8	4.3	0.0	25.0	7.0	40.0
34. Insurance (INS)	0.3	0.0	44.6	16.8	4.3	0.5	25.0	7.0	40.0
35. Real estate and business services (HSG)	2.8	3.9	44.6	16.8	4.3	0.0	25.0	7.0	40.0
36. Social and community services (SER)	6.0	0.1	44.6	16.8	4.3	0.2	25.0	7.0	40.0
37. Recreational and cultural services (REC)	0.5	0.2	44.6	16.8	4.3	3.2	25.0	7.0	40.0
38. Personal services (PER)	0.9	0.0	44.6	16.8	4.3	0.0	25.0	7.0	40.0

Source: Modified from Konan and Maskus, 1997*a*.

On the import side, Egypt imports heavily from the EU and the United States, with the latter accounting for $2.2 billion of Egyptian imports in 1995 (19 per cent of total imports)[4]. On the other hand, Egypt imports relatively little from the Arab League states, mainly petroleum products, beverages, and textiles and clothing. Despite their relatively large presence in production, vegetable foodstuffs and food processing are major import goods, as are machinery and chemicals.

These data yield two conclusions. First, although the EU is by far Egypt's largest trading partner, trade flows are rather diversified. The non-Arab, non-EU, non-US "rest of the world" provides 34 per cent of imports and takes 25 per cent of exports. These numbers suggest a significant potential for trade diversion from a preferential trade agreement with just one of Egypt's major trading partners.

Second, services play an important role in Egypt's current account. As there are no disaggregated data available on services trade or its breakdown by region, the modelling exercise that follows assumes that the Arab League region has a 40 per cent export share; the EU 25 per cent; and the USA 7 per cent (see Table 8.1). The Arab share is assumed to be higher than for merchandise, reflecting the similarity in language, the importance of proximity for service delivery, and the prevailing policy of favouring Arab services-related investment[5].

Trade Policy

Although tariffs have declined in recent years — the maximum was recently reduced to 50 per cent — the import-weighted average tariff, at around 20 to 25 per cent, remains relatively high. Tariffs on inputs are often lower than those applied to final goods, leading to effective rates of protection that are often a multiple of nominal rates (Kheir el Din and El Sayed, 1997; Hoekman and Djankov, 1997*b*)[6]. All quantitative restrictions have been abolished except for those on imports of textile products, and they are scheduled for elimination in coming years as part of Egypt's commitments under the Uruguay Round[7].

As tariffs and quotas have declined, administrative control of the import process has become more prominent and important. Such controls and "red tape" occur in customs clearance procedures, the enforcement of national health and safety standards and the logistics involved in moving shipments to, through and from ports. These controls impose real trade costs on the private sector, both directly in terms of financial charges and indirectly through the opportunity costs of delays. For example, the General Organization for Export and Import Control (GOEIC) inspects all consignments of goods entering Egypt that are subject to quality-control standards. As of 1994 some 1 550 tariff lines or 25 per cent of the tariff schedule were subject to such controls[8]. As with tariff rates, many of which escalate sharply, fees for goods intended for retail sale were generally at least twice as large as those that applied if further processing occurred in Egypt.

Customs clearance practices also increase expected costs for businesses. Practices for valuing goods are problematic. Assessed values are frequently reported to exceed invoice values, and applied tariffs may be a multiple of the statutory rate[9]. Fees charged by the public companies providing port services for handling and storage of goods are much higher than in neighbouring countries or nations with which Egypt competes, while these companies do not provide quality service in return. Maritime shipping is also a monopoly of the state-owned Egyptian Maritime Navigation Company, which is reflected in maritime transport costs for shippers 25 per cent higher than those confronting competitors in neighbouring countries for equivalent routes.

A number of initiatives have been taken in recent years to study and reduce red-tape costs. Documentary requirements have been simplified, the incidence of stamp duties reduced, and fees for port and related services lowered. The shipping monopoly is being abolished[10]. While these initiatives have improved the situation, much remains to be done. In principle, implementation of FTAs could help to achieve a reduction in red-tape costs through simplification and abolition of administrative controls and harmonisation and mutual recognition of standards. If extended to include liberalisation of trade and investment in services as well as merchandise trade, input costs for export-oriented producers would fall even farther. The analysis here explores the relative importance of reducing tariffs, removing red-tape costs, and improving the efficiency of the services sectors through raising quality and lowering costs.

Three Liberalisation Scenarios

The model used in this paper to analyse the effects of various trade liberalisation scenarios is a standard, single-country, competitive, computable general equilibrium model (see the Methodological Appendix). Three preferential trade-liberalisation scenarios for Egypt are analysed. The first assumes that Egypt implements a partnership agreement with the European Union along with the Arab League FTA. Under the former, Egypt removes all tariffs on EU goods[11], and the EU responds by providing somewhat improved access to its markets. This access is assumed to be equivalent to a 1 per cent increase in export prices to the EU for all commodities except agriculture and clothing, where a 2 per cent terms of trade improvement occurs. We posit these limited impacts because Egypt already enjoys duty-free access to EU markets for manufactures and is not likely to obtain significantly better market access for agricultural produce[12].

The Arab League FTA is a standard preferential trade agreement that involves the elimination of tariffs on intra-Arab trade in merchandise. As mentioned previously, little is known regarding the tariffs that are effectively applied on intra-Arab trade flows. Because the Arab region is both a major destination of Egyptian exports and tariff levels in the Arab region are significantly higher than those applied in the EU and US markets, liberalisation of Arab trade barriers could have a major impact on Egyptian welfare. The scenarios assume that applied Arab tariffs on intra-Arab trade are 60 per cent of the statutory MFN rates[13].

A potentially important aspect of any FTA is an associated reduction of administrative and other non-tariff barriers to Egyptian trade. Although the draft EMA devotes considerable attention to these issues insofar as there are Articles dealing with technical and financial assistance to ensure greater harmonisation and upgrading of customs, standards-related institutions, and infrastructure, there are no explicit Egyptian commitments to undertake action in these areas. Nor does the agreement commit Egypt to any actions to liberalise access to its service markets or to grant a general right of establishment for foreign investors. The analysis therefore assumes that the EMA and Arab League agreements will do nothing to remove the various NTBs discussed earlier.

The second scenario adds a shallow Egypt-US FTA to this mix. This involves Egypt eliminating all tariffs on imports from the United States, which grants Egypt duty-free and quota-free access to its markets. As with the EU, given that US trade policy towards Egypt is already quite liberal, Egypt has little to gain in terms of improved access. One can assume therefore that Egypt's export prices to US markets increase by only 1 per cent. For agricultural products and clothing, however, two commodities where the US does not currently allow free access, assumed export prices increase by 8 per cent.

The third scenario attempts to evaluate the effects of implementing a "WTO-Plus" agreement with the United States. This goes beyond the "shallow" FTA scenarios by eliminating not only tariffs but also all the NTBs applying to both goods and services in Egypt. The motivation for this assumption is that a WTO-Plus agreement must extend to investment and trade in services — no "opting out" would be allowed in these areas, in contrast to the EMA and Arab League agreements. It is assumed further that the elimination of NTBs is applied on a non-discriminatory basis. That is, all traders benefit from the associated cost reductions[14].

Two final scenarios analyse the implications of non-discriminatory, unilateral elimination of all tariffs and NTBs. The first assumes that Egypt does this on its own. As a result it does not benefit from preferential access to EU, US and Arab markets, but it also is not subjected to the trade diversion costs associated with FTAs. The second assumes that Egypt unilaterally liberalises its trade regime on a non-discriminatory basis, and that the EU, the Arab League and the United States do the same. Given that the EMA and the Arab League FTA should be implemented by 2010, this is a more realistic appraisal of non-discriminatory liberalisation by Egypt. The various preferential scenarios are summarised below[15]:

Shallow EMA and Arab League FTAs	Egypt eliminates all tariffs with EU and Arab League (except BEV and TOB). EU grants improved market access, increasing agriculture and textile prices by 2 per cent and all other goods by 1 per cent, and Arab League countries eliminate their tariffs (except BEV and TOB) with Egypt.
Shallow EMA, Arab and US FTAs	Same as above, plus Egypt eliminates tariffs with the United States. The United States grants improved market access in agriculture and clothing, with export prices rising by 8 per cent. All other export prices increase by one per cent.
EMA and Arab FTAs with a WTO-Plus agreement with US	Combines first scenario with a deep integration agreement with the United States. The latter is assumed to result in the removal of all NTBs on a non-discriminatory basis.

Gains from Shallow Integration

According to the results of these simulations, the joint EMA and Arab League FTAs generate an estimated welfare gain of 1 per cent over benchmark 1994 levels[16], and the trade-weighted average tariff rate falls to 4.1 per cent (Table 8.2). Estimated gains for trade creation, $252 million, are slightly higher than trade-diversion losses ($233 million)[17]. Trade creation is defined as the sum of import trade creation (consumer surplus net of tariff losses) plus export trade creation (change in producer surplus on trade with the partners)[18]. Trade diversion comprises the loss of tariff revenues on imports from non-FTA members resulting from a substitution to partner imports.

Table 8.2. **Shallow Integration: Welfare and Fiscal Impact of a US-Egypt FTA**

	EMA-Arab FTAs	EMA, Arab and US FTAs
Change in Welfare (%)	0.99	1.26
Change in GST (%)	-2.88	5.26
Average tariff (%)	4.11	2.65
Trade Creation ($mn)	252	342
Trade Diversion ($mn)	233	197

A particularly striking result is that the General Sales Tax (GST) can be lowered slightly following the implementation of the FTAs. This arises because of an increase in domestic tax collection as economic activity increases in sectors that are relatively heavily taxed. Thus, despite a significant decrease in tariff collections following implementation of the FTAs, government budget neutrality implies a *reduction* in the GST. This reflects that the tariff elimination induces resources and consumption to move into sectors subject to relatively high GST rates (as well as other taxes). Of course, this will occur only if GST revenues are actually collected. It should also be kept in mind that this result emerges once the adjustment to the new set of incentives has been completed and resources have been reallocated across sectors. During the transition to the new equilibrium, the government will most likely confront a decline in revenues[19].

A shallow FTA between the United States and Egypt that is limited to the abolition of tariffs would benefit Egypt in that welfare would rise relative to the EMA-Arab FTAs by some 25 per cent, to 1.26 per cent of GDP (Table 8.2, last column). In part this comes from the elimination of some of the trade diversion that would otherwise occur; trade creation now becomes significantly larger than trade diversion. The extension of duty-free treatment to imports from the United States leads to a fall in the import-weighted average tariff rate to only 2.6 per cent. It now becomes necessary to increase the GST by about 5 per cent to maintain budget neutrality. The positive welfare impact suggests that Egypt has an incentive to negotiate such an FTA.

In summary, in the two shallow FTA scenarios, the most significant change in trade flows (in percentage terms) occurs with the Arab League. Total imports from Arab countries rise by 33 per cent, while exports to the Arab League increase by 44 per cent. Given that Egypt traditionally exports much more to the Arab region than it imports from it, the Arab League's share of total Egyptian exports rises from 31 per cent

to 40 per cent. This large increase reflects how the greatest improvement in market access for Egyptian exports resulting from the two FTAs occurs in the Arab markets. Tariffs are significant in the Middle East, even taking account of the assumed 40 per cent preference margin. Trade with the EU is already duty-free, so that the effect of an EMA with it is much smaller. The assumed exogenous rise in export prices to the EU is nonetheless quite important. Without this assumption, Egypt's exports to the EU fall by 2.5 per cent (not reported) rather than rise by 2.8 per cent as reported in Table 8.2. The rise in welfare also becomes significantly less, falling to 0.81 per cent (not reported).

One might question the magnitude of the increase in exports to the Arab League, given that these are not large markets. Yet it is often noted that intra-regional trade between Arab League countries is well below its potential, especially if the Persian Gulf states are excluded. Intra-regional trade represents less than 3 per cent of the total trade of Middle East and North African countries. Given the potential for further specialisation and intra-industry trade, intra-regional trade should be able to grow substantially (Havrylyshyn, 1997).

If a shallow FTA with the United States were added to the other two FTAs, total Egyptian imports from the United States would rise by $629 million (or 22 per cent) relative to the benchmark, compared with a loss of $412 million otherwise (Table 8.3). The rest of the world (ROW), not surprisingly, will likely lose from the various FTA combinations. Under the EMA and Arab League FTAs the ROW share of total imports falls by 25 per cent; it drops by 30 per cent with a complementary shallow FTA with the United States added (not reported).

Table 8.3. **Shallow Integration: Impact on Trade Flows**
(percentages and $ million)

	EMA-Arab FTAs	EMA-Arab-US FTA
Share of EU in total exports	31.0	30.5
Share of EU in total imports	54.7	50.5
Share of US in total exports	4.2	5.2
Share of US in total imports	14.1	20.1
Share of Arab League in total exports	40.3	40.2
Share of Arab League in total imports	5.0	4.7
Exports to EU ($ million)	49	43
Imports from EU ($ million)	1 990	1 530
Exports to US ($ million)	-16	40
Imports from US ($ million)	-412	629
Exports to Arab League ($ million)	586	600
Imports from Arab League ($ million)	170	138
Exports to EU (% growth)	3.2	2.8
Imports from EU (% growth)	38.2	29.3
Exports to US (% growth)	-7.0	17.5
Imports from US (% growth)	-14.3	21.9
Exports to Arab League (% growth)	44.4	45.8
Imports from Arab League (% growth)	33.3	26.7

Gains from Deeper Integration

A WTO-Plus accord would bring significantly more benefit to Egypt than the shallow FTAs (Table 8.4). Such an agreement might entail liberalisation of investment (national treatment, right of establishment, binding arbitration), service markets and government procurement, as well as disciplines to ensure that domestic legislation and regulations are applied correctly and transparently. This would imply that over time service-sector inefficiencies would be removed and prevalence of import- and export-related NTBs would be attenuated. It is assumed that this elimination benefits all trade by affecting domestic regulatory procedures that tend to be applied identically to all traders and investors[20].

In this deeper integration scenario, the positive welfare impact of eliminating NTBs as well as tariffs rises to 1.8 per cent of GDP (an increase of almost 50 per cent relative to the EMA and Arab FTAs). Trade creation is almost three times larger than trade diversion, and the absolute magnitude of diversion is lower than under the shallow FTA options, suggesting that the ROW may be somewhat less damaged as well. The underlying trade volumes also increase significantly (not reported). Total imports rise by 25 per cent in volume, while exports increase by over 30 per cent.

This suggests that the total "opportunity cost" of not pushing for a WTO-Plus agreement, given the implementation of the EU and Arab League agreements, is some $1.5 billion ($1.1 billion plus $400 million). The WTO-Plus also leads to significant increases in exports to the EU and the United States, as Egyptian industries benefit from the reduction in real costs associated with producing for export. Exports to the EU rise by one-third, while those to the US increase by over half. The total value of exports rises more than 40 per cent, as compared with only 15 per cent under a set of shallow FTAs (not reported).

It is well known that preferential trade liberalisation is an exercise in the second best. If barriers to foreign competition could be removed on a non-discriminatory (MFN) basis, associated welfare gains will be higher than if they are limited to only a subset of trading partners. For comparison, the results of two unilateral liberalisation programmes are included (Tables 8.4 and 8.5)[21]. Welfare under MFN liberalisation (tariffs and NTBs) rises by 25 per cent relative to what would obtain under a WTO-Plus agreement, assuming that the Arab League, the EU and the United States also liberalise access to their markets. This does not occur if the Arab League maintains trade barriers against Egypt, in which case the predicted increases in exports to Arab countries are also much smaller. One can also see significant trade diversion associated with a WTO-Plus. Increases in imports from the United States, the EU and Arab countries are about $1.7 billion less under a unilateral liberalisation scenario not associated with a reduction in Arab League trade barriers. As total trade increases by roughly the same order of magnitude under both the WTO-Plus and unilateral liberalisation options, this is trade that is diverted from the rest of the world.

Table 8.4. **Deep Integration: Impact of a WTO Plus Agreement**

	EMA-Arab FTA with a WTO Plus	Unilateral Liberalisation of Tariffs and NTBs	EMA-Arab FTA with Unilateral Liberalisation of Tariffs and NTBs
Change in Welfare (%)	1.84	1.51	2.31
Change in Indirect Taxes (%)	6.1	26.0	22.8
Average tariff (%)	2.6	0	0
Trade Creation ($ million)	450	-	-
Trade Diversion ($ million)	170	-	-

Table 8.5. **Deep Integration: Impact on Trade Flows**
(percentage and $ million)

	EMA-Arab FTA with a WTO Plus	Unilateral Liberalisation of Tariffs and NTBs	EMA-Arab FTA with Concerted Unilateral Liberalisation of Tariffs and NTBs
Share of EU in total exports	34.2	37.0	34.0
Share of EU in total imports	50.8	43.1	43.0
Share of US in total exports	5.9	5.7	4.6
Share of US in total imports	20.2	17.7	17.7
Share of Arab League in total exports	34.1	26.5	35.9
Share of Arab League in total imports	4.3	3.7	3.7
Exports to EU ($ millions)	478	628	540
Imports from EU ($ million)	2 467	1 315	1 490
Exports to US ($ million)	115	105	52
Imports from US ($ million)	1 119	627	717
Exports to Arab League ($ million)	546	123	720
Imports from Arab League ($ million)	150	70	83
Exports to EU (% growth)	31.8	41.8	36.0
Imports from EU (% growth)	47.3	25.3	28.6
Exports to US (% growth)	51.3	46.5	22.9
Imports from US (% growth)	38.8	21.7	25.0
Exports to Arab League (% growth)	41.4	9.4	54.5
Imports from Arab League (% growth)	29.4	13.7	16.2

Conclusion

The welfare implications of the EMA and Arab FTAs for Egypt are positive. Yet these gains are much smaller than what could be achieved if these agreements were used to eliminate not just tariffs but real NTB-related trade costs as well. Neither of the two shallow FTAs will do much to achieve a significant reduction in NTBs in the short to medium run, although the EMA has the potential to do so. A potential Egypt-US FTA will likely resemble the NAFTA, and the United States may well seek to conclude an agreement that goes further than NAFTA. Such an agreement would help to reduce the trade-diversion costs for the United States associated with the EMA and Arab League FTAs. More importantly from an economic perspective, it would generate a significant increase in Egypt's welfare by helping to reduce the prevalence of non-tariff barriers and red-tape costs. Welfare under a deeper integration agreement such as a WTO-Plus may be greater by some 50 per cent, assuming that the reduction in NTBs applies not only to US imports but also to all goods and services.

The rest of the world, however, will likely feel adverse effects from the implementation of the FTAs. The share of total imports originating from it declines significantly under the FTA scenarios, and this is costly to Egypt as well. The government should therefore continue to pursue liberalisation of its external trade barriers in conjunction with the implementation of the various FTAs. Assuming the EMA and the Arab League agreements are fully implemented and access to these markets becomes assured, Egypt stands to benefit from a strategy of complementing a WTP-plus agreement with a process of unilateral liberalisation.

Methodological Appendix

It is assumed that Egypt is a price taker on world markets. Thus, policy changes are assumed not to alter prices significantly in other regions of the world[22]. To take into account the impact of the different FTAs noted earlier, Egypt's trade flows are broken down across the three major country groups of interest (EU, Arab League, United States), with all other trade flows collected into a residual ROW. Statutory MFN tariffs, scaled for consistency with reported tariff revenues, are assumed to apply to imports from each of these regions in the benchmark case. These tariffs are weighted across sub-sectors by global import shares. To take into account existing preferential trade within the Arab region, applied tariffs on intra-Arab trade are set at 40 per cent of the MFN levels[23].

Following standard practice in the literature, final outputs are produced according to a Leontief function using intermediate inputs and real value added. A constant elasticity of substitution (CES) production function describes the substitutability between labour and capital inputs in producing real value-added. Intermediate inputs and final goods are differentiated by country of origin according to the Armington assumption, so that export and import prices differ across regions[24]. In each sector, demand for domestically produced and imported goods is represented by a CES function, and intermediate imports are also differentiated by region of supply in a CES structure. Similarly, Egyptian industries supply regionally differentiated goods to both domestic and foreign markets (exports). Production follows a nested two-stage constant elasticity of transformation (CET) function. Total output is first calculated as the sum of domestic supply and total exports, with the latter then being allocated across regions (EU, US, Arab League, and ROW) according to a sub-CET function.

A representative consumer maximises a nested CES utility function with a corresponding multi-staged budget constraint. She receives income from primary factors (labour and capital), net transfers from the government and the current-account deficit, as well as any net economic rents from the operation of non-tariff barriers to trade. The cost of living index associated with the utility function is chosen as *numéraire*. Changes in aggregate consumption are a direct measure of welfare impacts ("equivalent variation"). Capital is assumed to be partially mobile in the sense that there are a number of resource-constrained sectors, taken to be agriculture (VG1, VG2, ANI)), mining (OIL, MIN), utilities (ELE), and transport (TRN). In all other sectors capital is freely mobile. The intention underlying this assumption is to capture the strong possibility in Egypt of resource constraints that limit inter-sectoral factor flows and output changes. In particular, Egyptian experts seem concerned about the ability to expand agricultural production in the face of significant water scarcities. There are also constraints on output in crude petroleum and the Suez Canal, with the latter problem justifying inclusion of the transport sector.

Intermediate inputs are disaggregated into domestic sources and imports, to incorporate importing costs and tariffs in purchases for the production sector. Sector-specific proportionate import costs and export costs capture the impact of administrative NTBs, or "red tape". As mentioned previously, significant NTBs in Egypt include licensing fees, inspection delays, monopoly port charges, difficulties due to inadequate transport facilities, excessive and arbitrary enforcement of product standards, and restrictive licensing schemes and qualification requirements for professional service providers. These NTBs drive wedges between home and foreign prices. Conservatively, it is assumed that there are no resource-using, rent-seeking costs in the economy, so that NTB "taxes" represent a pure transfer among domestic agents. The "revenues" are allocated to the representative agent, so that a reduction in import NTBs simply increases her purchasing power[25].

As any FTA will have a direct impact on government finances in Egypt — import duties constitute over 15 per cent of tax revenues and over 10 per cent of total current revenues (including transfers from public firms)[26] — account is taken of the fiscal consequences of tariff reform. It is assumed that the government operates under a fixed deficit constraint so that changes in tariff collections are compensated by an endogenous domestic tax change to ensure that liberalisation is revenue-neutral. Required changes in domestic tax collections are achieved by varying the Goods and Service tax (GST), a sales tax that applies to final consumption and capital investment of domestic goods and imports, but not to exports[27]. As shown in Appendix Table 8.A1, the GST is applied on sales of goods and services at rates ranging from zero to 25 per cent; the standard rate is 10 per cent[28].

Two standard closure rules are imposed: the savings-investment balance and a fixed current account balance. The first is based on the assumption that the capital stock is exogenously fixed at the benchmark level and is financed through forced consumer saving that acts as a direct (lump-sum) tax. A capital good is modelled as composite goods of fixed composition. Firms buy composite capital according to their preferences. The interest rate (an index price of the composite capital stock) is endogenous and determined by factor-demand conditions[29]. Foreign currencies are scaled so that the appropriate GDP deflator ("world price index") is unity. Keeping the current account fixed while international prices are constant is accomplished by means of a change in the home "real exchange rate", which refers implicitly to a change in the home price index (generated by changes in price of home-produced goods) sufficient to sustain a constant current-account deficit measured at world prices[30]. Because the current account is in deficit, it represents an addition to the representative agent's income through exogenous capital inflows.

The data for the model consist of a Social Accounting Matrix (SAM) and other parameters, such as elasticities of substitution and transformation[31], import and export trade flows by region, and tax and tariff rates. These data are assembled into a consistent

Appendix Table 8.A1. **Government Policy and Elasticity Parameters**
(percentages)

SECTOR	GST 1994 (%)*	Egypt's Tariff-94	Arab MFN Tariffs (import weighted)**	Capital-labour elasticity of substitution
AGRICULTURE, MINING				
1. Vegetable products, foodstuffs (VG1)	0.0	2.5	6.3	0.95
2. Vegetable products, non-foodstuffs (VG2)	10.0	6.7	28.9	0.95
3. Animal products (ANI)	0.0	4.4	6.7	0.95
4. Crude petroleum and natural gas (OIL)	0.0	8.2	2.9	0.43
5. Other extractive industries (MIN)	10.0	7.0	15.6	0.43
MANUFACTURING				
6. Food processing (FOO)	0.0	6.8	18.3	0.95
7. Beverages (BEV)	10.0	953.2	14.8	0.95
8. Tobacco products (TOB)	10.0	65.5	83.1	0.95
9. Cotton ginning and pressing (TX1)	10.0	17.3	24.9	0.93
10. Cotton spinning and weaving (TX2)	10.0	23.3	17.4	0.93
11. Clothing: assembled and pieces (CLO)	10.0	53.7	32.5	1.19
12. Leather products, excl. shoes (LEA)	10.0	34.8	44.6	0.75
13. Shoes (SHO)	10.0	51.8	36.9	0.75
14. Wood, excl. furniture (WOO)	5.0	8.1	28.1	0.93
15. Furniture (FUR)	10.0	46.9	34.9	0.93
16. Paper and printing (PAP)	0.0	13.3	18.6	1.00
17. Chemical, excl petroleum (CHE)	5.0	8.9	17.6	1.01
18. Petroleum refining (PET)	0.0	7.1	20.0	0.43
19. Rubber, plastics and products (RPL)	10.0	15.6	24.7	0.97
20. Porcelain, china, pottery (POR)	10.0	43.5	21.3	0.93
21. Glass and products (GLA)	10.0	29.6	17.2	0.97
22. Mineral products, n.e.i. (MPD)	5.0	18.1	12.7	0.43
23. Iron, steel, other base metals (MET)	10.0	17.2	32.6	0.43
24. Machinery and appliances (MAC)	25.0	17.9	19.9	1.20
25. Transportation equipment (TRA)	25.0	41.2	56.6	1.88
26. Other manufacturing (OMF)	10.0	19.3	24.9	1.19
SERVICES AND OTHER				
27. Electricity, gas, and water (ELE)	2.5	0.0	0.0	1.88
28. Construction (CON)	10.0	0.0	0.0	1.99
29. Trade (TRD)	8.0	0.0	0.0	1.28
30. Restaurants, hotels, coffeehouses (RES)	8.0	0.0	0.0	1.99
31. Transport and storage (TRN)	0.0	0.0	0.0	1.88
32. Communications (COM)	5.0	0.0	0.0	1.99
33. Financial establishments (FIN)	8.0	0.0	0.0	1.99
34. Insurance (INS)	0.0	0.0	0.0	1.99
35. Real estate and business services (HSG)	8.0	0.0	0.0	1.99
36. Social and community services (SER)	10.0	0.0	0.0	1.99
37. Recreational and cultural services (REC)	8.0	0.0	0.0	1.99
38. Personal services (PER)	10.0	0.0	0.0	1.99

* Adjusted to be consistent with the real value of the 1990 government deficit.

** In simulations, it is assumed that applied rates are 60 per cent of these MFN rates.

Source: Based on Maskus and Konan (1997) and authors' calculations.

set of relationships between intermediate demand, final demand, and value-added transactions using the 1989/1990 input-output table for Egypt, updated to incorporate trade and tax policies and trade shares as of 1994[32]. Trade and tariff data by 8-digit HS line were aggregated to the input-output sectoral basis using import weights consistent with the concordance between the input-output table and the tariff classification. From these data, regional trade shares for 1994 were applied to 1990 trade volumes on the input-output basis[33]. As Egypt does not realise the full revenue that would be obtained if statutory tariff rates were applied to all imports because of various exemptions for duty drawback provisions and investment incentives, weighted legal tariff rates were scaled downward (by some 20 per cent) to ensure consistency with total import duty collections in 1994. To take into account the existence of quantitative restrictions on imports of textiles and clothing, the statutory MFN rates for this sector have been doubled. It is assumed further that the cost impacts of red tape on merchandise imports and exports are 10 per cent and 5 per cent respectively. Egyptian import and export NTBs with Arab countries are assumed to be half those facing other trading partners (5 per cent and 2.5 per cent, respectively, on imports and exports of goods), reflecting past integration efforts within the region. As reliable quantitative measures of the price impacts on restrictions on services trade are not available, for purposes of analysis a uniform 15 per cent tax equivalent is imposed on prices of both exported and imported services[34]. Here again it is assumed that there is less discrimination against Arab service suppliers, reflected in a lower, 7.5 per cent wedge.

Notes

1. This agreement was ratified by the Egyptian Parliament in late 1997.

2. Such FTAs have already been concluded between the EU and Israel, Jordan, Morocco, the Palestinian Authority, and Tunisia. Discussions are ongoing with Egypt, Algeria, and Lebanon. See Galal and Hoekman (1997*a*) for the Egyptian case and Rutherford, Rusträom and Tarr (1993, 1995) for assessments of the Tunisian and Moroccan agreements.

3. Turkey is included in the EU grouping because it has recently concluded an agreement to form a customs union with the European Union, implying that any FTA with the EU will automatically be extended to Turkey.

4. Total imports from the United States in 1996 were $3.1 billion, of which $400 million comprised exports of arms and ammunition. The latter are excluded from the simulation analyses that follow.

5. In earlier work, (Konan and Maskus, 1997*a*, *b*) it is assumed that services trade is closely complementary to merchandise trade in terms of its sources so that regional shares of services trade equal each region's share in total imports or exports of merchandise. In this paper this assumption is maintained only for export shares of the Suez Canal.

6. Taking note, however, that services are heavily protected, average effective rates of protection for manufacturing are much smaller. See Hoekman and Djankov (1997*a*) and Galal and Tohamy (1998). Also, total tariff revenue collections are less than what should be collected if all tariffs were fully applied, reflecting a variety of exemptions, including Arab League preferences, as well as circumvention. Exemptions and circumvention come at a cost, however.

7. See Hoekman and Subramanian (1997). What follows draws in part on that study, as well as the contributions in Galal and Hoekman (1997*b*).

8. Consignments that were rejected in 1993 included bolts and nuts; spare parts for cars; transformers; pressure cookers; filters; brakeshoes; ceramic tiles, light bulbs; ballpoint pens; washing machines; wheat; fresh fruit; dried fruit; sesame; frozen meat; and frozen fish. Estimates of the economic impact of the testing system do not exist. However, anecdotal evidence suggests the effect can be significant (World Bank, 1995*b*). For example, in 1993 hundreds of tons of frozen beef were rejected on the basis that the relevant Egyptian standard (no. 1522 of 1991) was violated. It has been claimed that this standard is excessively strict. It requires that frozen beef have a fat content of 7 per cent or less if for retail sale and, once defrosted, have a drip content of no more than 1 per cent by weight.

9. The variance in valuation and applied rates can be significant. Data provided by importers in 1995 suggest that assessed values for capital equipment may exceed invoice values by 25 per cent or more, while applied tariffs may exceed the applicable statutory rates by an even wider margin. See World Bank (1995*b*).

10. *Financial Times*, 25 September 1997, p. 8.

11. Throughout the counterfactual simulations, the beverage tariff is not changed to reflect Egypt's social policy for maintaining rigorous barriers on imported alcoholic beverages. Similarly, tariffs on tobacco products are held fixed in order to reflect that governments in the region will continue to impose high excises on these products for revenue and health purposes.

12. This differs from the more optimistic assumption of an 8 per cent export price gain in the EU's agriculture and textile sectors, used in Konan and Maskus (1997*a*).

13. Data for Jordan's and Lebanon's tariffs were compiled from Hoekman and Djankov (1997*b*); Morocco's and Tunisia's tariffs were obtained from Rutherford, Ruström and Tarr (1993, 1995) A concordance consistent with the Egyptian IO table was developed to map tariffs into the 38 sectors of the model. Tariffs were weighted by 1996 import shares, using the UN COMTRADE data base.

14. This is a strong assumption, as in practice it can be expected that some cost reductions will benefit only trade with FTA partners. In the absence of information on the distribution of such benefits, this paper simply assumes they apply across the board.

15. This paper focuses only on variables most relevant to the issue at hand: the incentives for concluding an FTA with the United States. The model is capable of generating results on a number of other variables of interest, including factor returns. These are not reported here, to conserve space. In all simulations real returns to all factors increase, reflecting enhanced efficiency in the economy.

16. Welfare changes are calculated as the percentage change in GDP, measured as Hicksian equivalent variation.

17. All nominal values reported are in 1996 US dollars. As the base data set is for 1990 (although, as mentioned, variables were updated to 1994), 1996 dollar figures are obtained by appropriately scaling the 1990 data to reflect the increase in aggregate trade volumes between 1990-96.

18. As preferences are homothetic, this measure is a monotonic transformation of the Hicksian equivalent variation (see Konan and Maskus, 1997*c*).

19. As the tariff-tax structure in Egypt is quite distortionary, in principle tariff reforms that move the structure of tariffs towards greater neutrality can have a large impact in terms of raising revenue. For example, if Egypt were to adopt a 10 per cent uniform tariff, the GST could be lowered by 30 per cent while maintaining fiscal neutrality. Similarly, substantial efficiency and revenue collection gains can be achieved through reform of domestic tax structures. See Konan and Maskus (1997*b*) for an in-depth discussion of the impact on government revenues of piecemeal tariff reform in the Egyptian context.

20. In the absence of detailed data on the impact of the current investment regime or policies such as government procurement practices, no attempt is made to calculate the effect of policy changes that might be induced under a WTO-Plus framework.

21. Under unilateral liberalisation, Egypt unilaterally eliminates all tariffs and NTBs on a Most Favoured Nation (MFN) basis, with no preferential market access in US, EU or Arab markets. In the second, concerted unilateral liberalisation is implemented as Egypt unilaterally eliminates all tariffs and NTBs on a MFN basis and the United States, EU and Arab League grant duty-free access to Egypt.

22. See Maskus and Konan (1997) for a fuller description of the model.

23. As discussed further below, there is very little information available regarding the preference margins that actually apply.

24. This assumption may seem inconsistent with the small open economy notion that Egypt is a price taker on world markets. However, this approach is quite standard in the literature, and there is no obvious way to address this issue given the data at hand. De Melo and Robinson (1989) show that models that allow product differentiation are well behaved under a small open economy assumption; in effect the economy is a price taker at the level of aggregate trade flows and each region's aggregation is sufficiently distinctive to support the Armington assumption.

25. Rent-seeking could well be significant in Egypt, imposing additional efficiency losses in the economy. In the absence of information about this possibility, it is ignored in order to be conservative about welfare gains from reducing NTBs. Elimination of NTBs could improve income distribution if recipients of rents are concentrated in higher income classes than those who pay them. This complication is also ignored.

26. International Monetary Fund (1994).

27. The numerous sectoral deviations from the average GST rate and exemptions and evasion of this tax are taken into account by calibrating tax rates to measures of government revenue from indirect taxes in the benchmark year. The corporate tax, or tax on operating surplus, is held constant in the analyses.

28. Taxes paid by firms on their intermediate input purchases are recoverable through a tax credit, with the exception of purchases of investment goods and some service inputs. Given insufficient information on these tax credits, it is assumed that the tax is a levy on final goods purchases, with taxes on all inputs credited back to purchasing firms.

29. No distinction is made between domestic capital and capital inflows from foreign direct investment (FDI). The impact of trade liberalisation on the volume of FDI is generally ambiguous. Tariff reduction will lower the incentive of foreign firms to service Egyptian markets with "tariff jumping" FDI. In contrast, lower tariffs on intermediate imports may encourage export-oriented FDI. These issues are beyond the scope of the present analysis. See Brown, Deardorff and Stern (1997) for an exploration of the issue in the context of the EU-Tunisia agreement

30. A rise in the "real exchange rate" is consistent with a depreciation of home currency, in that the per-unit price of foreign exchange rises.

31. As there is also little empirical evidence on Egyptian elasticities, labour-capital substitution is allowed to vary across industries, using estimates from Harrison *et al.* (1993). Labour-labour substitution is set at a conservative 0.50 (see Table 8.A1). Benchmark trade elasticities are drawn from Rutherford, Rutström and Tarr (1993). The various trade elasticities are 2.0 for substitution between domestic and imported goods, 5.0 for substitution among regional imports and for transformation between domestic output and exports, and 8.0 for transformation among regional export destinations. These parameters are consistent with the ranges of elasticities reported in Löfgren (1994). Results of sensitivity analysis with respect to the various trade elasticities are reported in Maskus and Konan (1997).

32. See Maskus and Konan (1997) for a detailed discussion of the updating procedure, which involved re-calibrating the model on the basis of the 1994 policy parameters.

33. The fact that the model is based on Egypt's trade in 1990 is not much of a problem if attention is restricted to changes in welfare and trade shares, as Egypt's structure of production and trade is unlikely to have changed much since 1990. Note also that the benchmark trade *shares* in the model were updated to 1994.

34. Comprehensive estimates of the cost-raising effects of regulatory regimes that restrict competition in service markets are lacking. However, many case studies of individual sectors suggest that excess costs are more than 15 per cent. See the contributions in Galal and Hoekman (1997*b*) for a discussion.

Chapter 9

Testing the Waters: Arab Integration, Competitiveness, and the Euro-Med Agreements

*Julia Devlin and John Page**

Introduction

The free-trade agreements between the EU and a growing number of economies of the Arab Middle East represent an important change in trade policy for a region where development strategies launched during the 1960s led to growing isolation from the global economy[1]. The agreements, which will result in free trade between the EU and signatory countries in most manufactured products by 2010, offer important potential gains to the developing countries of the Middle East and North Africa. They also pose daunting challenges of adjustment for economies whose agriculture, manufacturing and services sectors have traditionally been heavily protected against international competition.

Economists have traditionally viewed regional trading blocs as offering few benefits compared with universal trade liberalisation (Lawrence, 1997). Nevertheless, efforts to create regional integration schemes proceed worldwide, suggesting that policymakers in both advanced and developing economies fail to share that view. Among the Arab states of the MENA region, three comprehensive regional agreements and over 45 bilateral preferential trade agreements exist. The Arab League's 1997 Executive Programme for Arab Free Trade represents the most recent attempt to forge a free-trade area among Arab states.

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The potential costs and benefits to MENA economies of integration with Europe have been widely discussed (Galal and Hoekman, 1997*b*; Page and Underwood, 1997), but less attention has been given to the potential benefits from intra-regional integration among Arab states. Existing studies of regional integration in MENA have emphasised the importance of labour and capital as opposed to product flows (Shafik, 1992; Fischer, 1993), MENA's low levels of trade in general (World Bank, 1995*b*) and the potential for greater integration on the basis of well established trade links, commonality of language and cultural affinity (El-Erian and Fischer, 1996).

This paper takes a different approach. In it we explore the extent to which integration among Arab states can be used to assist MENA economies in developing global comparative advantage by preparing for integration with Europe and further advances in multilateral liberalisation. Successful adjustment to the Euro-Med agreements will require that Arab economies improve productivity in import-competing sectors and exploit market access in Europe to incorporate more diverse sources of export earnings in processed foods, basic manufactures and services. This will require a much faster rate of productivity change than has characterised MENA economies in the past thirty years.

Intra-regional exchange among MENA countries has historically lagged behind other developing-country regions in volume, but the qualitative character of intra-Arab trade differs from global trade in two important dimensions. First, trade among Arab states resembles that of other developing regions, such as Latin America, in its concentration in non-traditional exports like basic manufactures and products demonstrating higher degrees of value-added and knowledge intensity — key inputs to the development process. Second, although data availability on services is limited, this sector represents an increasingly important component of trade at the intra-regional level.

An Arab integration agreement could raise productivity growth rates through two possible channels. First, a substantial body of literature suggests that improvements in learning and productivity at the plant level are linked to export rivalry and import competition. Thus, to the extent that an Arab free-trade area offers the potential for trade creation — especially through the emergence of new producers of non-traditional exports — it can provide a mechanism for "learning by exporting". Second, "deeper integration" among Arab states, including the harmonisation of standards, improvements in trade facilitation, reductions in barriers to the movement of technical and professional manpower and the development of trade-related infrastructure, can potentially reduce transaction costs and raise measured productivity (Rutherford, Rusträm and Tarr, 1995).

The Euro-Mediterranean Agreements and Arab Integration

That Western Europe has traditionally served as the largest market for Arab exporters and most Arab states maintain high levels of trade with Europe (Yeats, 1995) underscores the importance of the EMAs for Arab states in MENA. Algeria, Syria,

Kuwait and Saudi Arabia provide 90 to 95 per cent of the EU's total oil and natural-resource supply. Agricultural exports represent 6 per cent of total MENA exports to the EU, while manufactured products account for less than a third, drawn primarily from Jordan, Tunisia and Morocco. Much of the growth in manufactured exports consists of textiles and clothing; an important export for Arab states such as Lebanon, and the UAE (Hoekman, 1995*a*).

In November 1995, the EU initiated the Barcelona Process to create a free-trade zone in industrial goods and services, to be phased in by 2010, among 15 European and 12 Mediterranean countries with a population of approximately 600 million. These agreements seek to achieve reciprocal free trade between the EU and the Mediterranean countries in most manufactured goods, as well as to grant preferential and reciprocal access for agricultural goods and establish conditions for the gradual liberalisation of trade in services and capital. Arab signatories to the EMAs to date include Morocco, Tunisia, Jordan and the Palestinian National Authority, with Egypt, Lebanon, Syria and Algeria expected to conclude similar agreements with the EU in the near future. The EMAs also include provisions of $5 billion in education and infrastructure grants combined with soft loans.

Among Arab states, there are three comprehensive regional agreements and over 45 bilateral preferential trade agreements. In the late 1950s, plans for an Arab Common Market were initiated with Egypt, Jordan, Morocco, Syria and Kuwait agreeing in principle to unify economic policies and legislation in August 1964. However, the effective abolition of duties and quantitative restrictions over the period beginning in January 1965 and ending in January 1974 was ultimately delayed by four rounds of discussions and negotiations on goods exemptions. Attempts to establish a common external tariff were ultimately abandoned by 1971, with the remaining agreement reverting to a putative Free Trade Area (Owen, 1992).

Bilateral treaties between Arab states proliferated during the 1960s and 1970s and number over 45 today. Most of these preferential agreements apply to agricultural and raw materials, with minimum local value-added criteria of 40 per cent applied to industrial products. Trade flows covered by these agreements potentially benefit from complete or partial exemption from tariffs, but the limited coverage of these bilateral agreements has largely hindered rather than stimulated intra-Arab trade[2].

Efforts to promote broader integration within the region revived with the 1981 Agreement for Facilitation and Promotion of intra-Arab Trade signed by the Arab League as a declaration of intent to negotiate full exemption of tariffs and non-tariff measures for manufactured and semi-manufactured goods. Due to its lack of binding commitments and a time schedule for implementation, as well as its product-by-product approach to liberalisation, the 1981 Agreement had little effect on regional trade liberalisation and intra-Arab trade.

In 1997, eighteen Arab states signed the Executive Programme for Arab Free Trade, which calls for creation of a Greater Arab Free Trade Area (GAFTA) and a reduction of customs tariffs and tariff-like charges over a period of ten years, effective

1 January 1998. The 1997 Executive Programme goes beyond previous regional trade agreements by incorporating specific commitments to tariff reductions, imposing a schedule for implementation, and addressing non-tariff barriers. It attempts to limit goods exemptions and incorporates the GCC formula regarding value-added. Signatory Arab governments have committed themselves to reducing customs tariffs and tariff-like charges by 10 per cent per year from 1 January 1998 and to abolish them totally by 2008. The binding of national tariff schedules was applied on 31 December 1997, with the binding of tariffs for new members to be applied at the time the Arab League is notified of ratification (Zarrouk, 1998*a*).

Trade Policies among Arab States

Despite recent unilateral trade liberalisation measures, tariff and non-tariff burdens among Arab states remain high, suggesting significant potential gains from further liberalisation of regional markets. For Arab states such as Morocco, Tunisia, Egypt, Jordan and Syria, average tariff rates lie in the 25 per cent to 30 per cent range, and unweighted average tariff burdens represent roughly 17 per cent of imports (Hoekman, 1995*a*). Government revenue shares generated by trade taxes average about 20 per cent, almost three times as high as in Latin American and Asian countries like Mexico, Chile, Indonesia, Malaysia and Korea. While a number of Arab states such as Jordan, Tunisia and Egypt have made significant progress in reducing maximum tariff rates, rates of effective protection remain high, with tariffs on inputs frequently lower than duties on final goods. Rates of effective protection can range from 1.4 per cent for wheat to 481 per cent for the petroleum industry, even in relatively open economies such as Lebanon.

Non-tariff barriers in the form of countervailing services charges, special import taxes and internal taxes have been used extensively. Service charges generally do not relate to import transactions; the head-count, roadway passage and traffic administration fees in Jordan are examples. Charges actually applied to import functions do not reflect the actual cost of corresponding transactions. In Syria, for example, roughly 550 certification charges are levied on importation documents, with charges increasing by $1 for each additional $250 of import value (Zarrouk, 1998*b*).

Complementary import taxes are imposed in addition to customs tariffs to accommodate shortfalls in treasury revenues and support economic development projects. Examples include a fiscal withholding tax of 15 per cent of c.i.f. value plus customs tariff in Morocco, the Fund for Developing Competitiveness of Tunisian Products (FODEC) tax levied at a rate of 1 per cent on the c.i.f. value in Tunisia and a 15 per cent rate on c.i.f. value for the Artificial River Tax in Libya. Internal taxes and charges on imported goods are levied on the basis of import value plus countervailing charges and taxes. For example, the 21 per cent value-added tax in Morocco is applied to a combination of the c.i.f. value, customs tariff, fiscal withholding tax and in-kind consumption taxes, effectively increasing the degree of customs protection against imported goods (See Table 9.1).

Table 9.1. **Non-tariff Barriers in Arab States**

	Countervailing "Service" Charges	Import Taxes Complementing Tariffs	Internal Taxes
Jordan	Fees (0.2% c.i.f. value) Certification charges Stamp tax In-kind service charge i.e. road passage charge veterinary charges	None	Sales tax (10% c.i.f. import value plus other duties)
UAE	N.A.	In-kind customs duties on tobacco (in addition to tariff of 80% c.i.f. value on tobacco cigarettes)	N.A.
Syria	Customs service charges (2.5% c.i.f. value all public sector imports) Consular charges for certifying import invoices ($5-606, depending on import value) on imported cars	General tax on imports (24 rates, 6-35%)	N.A.
Lebanon	Additional customs duties on imported cars (20% +) In-kind duties on alcoholic beverages Stamp fees	N.A.	N.A.
Morocco	Para-fiscal charges collected to support technical inspection of exports, Moroccan Centre for export promotion, other (0.25% c.i.f. value) Stamp dues (1% customs value)	Fiscal withholding on imports (15% c.i.f. value, exemptions for AMU goods) In-kind customs duty on timber (6% c.i.f. value plus tariff, fiscal withholding)	Value added tax (imports+locals, 3 rates, 7-20% c.i.f. value) Consumption tax (varying rates for alcohol, rubber, sugar products, fuels, gold).

Source: Zarrouk (1998*a*).

Recent reforms to liberalise trade present mixed signals to private and foreign exporters and investors. In Egypt, for example, maximum tariffs have recently declined by 20 per cent to 25 per cent, and quantitative restrictions have largely been abolished — but administrative control of the import process has become more prominent. General progress on simplifying bureaucratic procedures has been slow, although the incidence of stamp duties is being reduced, fees for port and related services have been lowered and the shipping monopoly is in the process of being abolished.

Patterns of Intra-Arab Trade

Levels of intra-regional trade among Arab states are low when compared with other regional trade areas in volume terms, but trade patterns reveal the potential for complementarity, competitiveness and geographic diversification. Resource endowments and per capita income vary widely, indicating specialisation in minerals (Tunisia, Morocco), agriculture (Morocco, Egypt, Syria) oil and natural gas (Saudi Arabia, Kuwait, Qatar and the GCC states) and human capital (Jordan). Domestic markets range from large to small, with significant divergence in per capita incomes between small-population mineral exporters such as the UAE, Kuwait and Qatar and the more populous countries in North Africa such as Morocco and Egypt (Table 9.2).

Table 9.2. **Select Indicators for Arab States, 1995/96**

Country	Agriculture as % GDP	GDP at market prices, $ thousands, 1987	Industry as % GDP	Land area, sq km	Manuf. as % GDP	Total population in thousands	Services as % GDP	Trade as % GDP
Egypt	17	58 380	28	995	24	59 272	51	46
Jordan	5	8 477	27	89	16	4 312	64	125
Lebanon	12	5 834		10	17	4 079	61	69
Morocco	20	26 002	33	446	17	27 020	49	55
Saudi Arabia		98 307	46	2 150		19 409		
Syria			24	184		14 502		
Tunisia	14	13 806	31	155	18	9 132	58	86

Source: World Bank, 1997*b*.

Today, intra-regional trade among Arab states equals roughly 5 per cent of total exports to the rest of the world, which largely reflects the importance of oil[3]. Non-oil exports within the region, almost 19 per cent as large as total non-oil exports to the rest of the world in 1996, are comparable in value, but clearly not in volume, to intra-regional exports in Mercosur and ASEAN. Non-oil intra-Arab trade accounts for less than 2 per cent of GDP.

Since the 1980s, oil has become significantly less important in intra-regional trade (Figure 9.1). The top ten non-oil sectors traded among Arab states in 1996 include chemicals such as polymerisation products, iron and steel shapes, aluminium, fruits and vegetables (fresh, dried), lime, cement and building materials. Major non-oil sectors traded with the EU include textiles, fertiliser, vegetables, fruits and nuts. (Figure 9.2).

Figure 9.1. **Non Oil, Total Intra-Regional Exports, $ million**

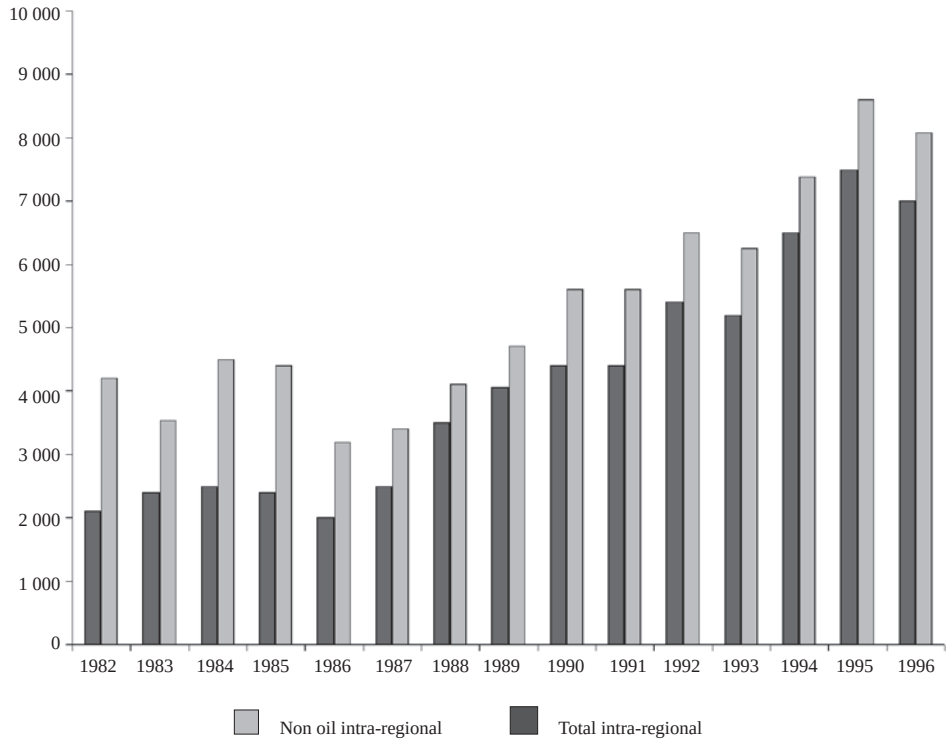
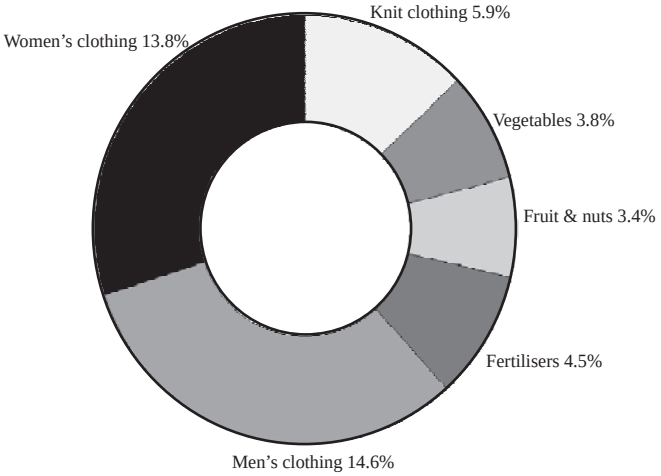


Figure 9.2. **Top Non Oil Sectors Traded with EU,**
As Percentage of Total Exports to EU for Selected Arab States, 1995-96



Among Arab states, the extent of regionalism varies widely. For small ones such as Syria, Lebanon, and the UAE, intra-regional exports accounted for 30 per cent to 40 per cent of total non-oil exports in 1995/6. Egypt and Jordan also depend relatively heavily on Arab markets for non-oil exports, with intra-Arab trade accounting for 20 per cent of total non-oil exports, relative to 3 per cent for Morocco and Tunisia (Table 9.3). Bilateral trade shares indicate that intra-regional trade appears as more diversified in Morocco than in Egypt, Jordan and Tunisia, which maintain high levels of exports to Saudi Arabia and Algeria, respectively.

Trade intensity indices reveal two distinct trends in the direction of intra-Arab trade[4]. First, the majority (excluding Tunisia) increased trade intensity with the Gulf States, particularly Saudi Arabia, throughout the 1980s, reflecting increased purchasing power from higher oil prices and low tariff levels among the Gulf States. Second, and for the region as a whole, intra-regional trade appears to have diversified since the late 1980s, as demonstrated by rates of increase in trade intensity among the Mashreq countries as well as in Mashreq exports to the Maghreb (Table 9.4).

Table 9.3. **Non-oil Intraregional Exports Among Selected Arab States, 1995/96**
($ thousands)

	ALG	BHR	EGY	JOR	MOR	OMA	SAU	SYR	TUN	YEM
Partner										
ALG		4 145.1	48 670.8	11 502.45	46 389.55	5.7	20 151.75	21 102.2	110 201.9	88.4
		1.2%	8.7%	4.1%	24.8%	0.0%	0.7%	5.1%	52.6%	0.2%
BHR			8 392.9	16 677.75	550.3	8 352.5	1 647 331.5	6 690.65	8738.3	21.85
			1.5%	6.0%	0.3%	10.0%	54.3%	1.6%	4.2%	0.0%
EGY	4 606.45	1 240.65		12 656.55	4 870.9	343.5	268 695.6	13 548.05	16 126.35	11 16.95
	7.5%	0.4%	0.0%	4.6%	2.6%	0.4%	8.9%	3.3%	7.7%	2.3%
JOR	1.1	20 181.75	46 127.4		7401	4 624.1	129 772	78410	587.6	3633
	0.0%	5.8%	8.2%	0.0%	4.0%	5.5%	4.3%	19.0%	0.3%	7.4%
MOR	37 199.25	1 006.55	17 469.85	1536.8			85 877	32 738.65	37 574.85	890
	60.9%	0.3%	3.1%	0.6%	0.0%	0.0%	2.8%	7.9%	17.9%	1.8%
OMA	102.3	21 890.2	4 267.25	3 432.75	137.5		144 370.85	2 056.45	894.1	1475
	0.2%	6.3%	0.8%	1.2%	0.1%	0.0%	4.8%	0.5%	0.4%	3.0%
SAU	96.95	230 682.45	247 135.85	108 121.6	55 544.75	57974		155 216.1	18 801.35	40 487.4
	0.2%	66.8%	44.2%	39.0%	29.7%	69.4%	0.0%	37.5%	9.0%	82.2%
SYR	8.4	820.7	68 811.5	73 979.5	22 468.1	252.6	74 888.7		13 022.9	1 448.2
	0.0%	0.2%	12.3%	26.7%	12.0%	0.3%	2.5%	0.0%	6.2%	2.9%
TUN	19 016.6	7 533.55	30 453.95	6 374.95	41 565.75	143.75	39 754.25	32 626.75		92.4
	31.1%	2.2%	5.4%	2.3%	22.2%	0.2%	1.3%	7.9%	0.0%	0.2%
YEM	20.7	454	16 706	16 868	19.2	2 040.6	123 323.6	1561.1	86.8	
	0.0%	0.1%	3.0%	6.1%	0.0%	2.4%	4.1%	0.4%	0.0%	0.0%

Source: United Nations, 1998.

Table 9.4. **Trade Intensity Indices for Selected Arab states, Intra-Regional Non-oil Exports, 1995/96**

Partner	ALG	BHR	EGY	JOR	MOR	OMA	SAU	SYR	TUN	YEM
ALG		0.87/1.91	8.08/7.46	6.445/4.99	3.16/2.98	0.00/0.005	0.71/1.48	10.25/11.63	12.65/8.38	0.03/0.75
BHR			3.13/3.91	23.65/19.91	0.08/0.11	18.11/16.67	200.63/239.39	5.70/12.43	1.67/2.65	0.20/0.28
EGY	1.43/0.35	0.17/0.46		4.21/6.065	0.23/0.28	0.09/0.34	10.28/12.09	4.72/6.61	1.01/1.47	6.54/1.915
JOR	0.001/	38.03/	21.13/		1.51/	11.35/	19.54/	114.06/	0.175/	53.55/
MOR	12.07/10.72	0.25/0.65	4.12/3.47	0.93/1.20			5.845/6.235	26.54/18.28	4.22/5.72	10.48/0.73
OMA	0.115/0.00	13.775/18.085	1.35/1.81	3.82/4.08	0.02/0.02		17.35/16.595	3.59/1.12	0.18/0.21	17.66/12.24
SAU	0.01/0.004	21.715/31.11	12.45/16.21	14.89/24.36	1.27/1.34	15.47/17.76		25.025/32.45	0.49/0.805	61.125/64.47
SYR	0.004/	0.53/	21.79	76.38/	3.17/	0.43/	7.79/		2.68/	14.75/
TUN	6.57/5.225	3.06/3.58	6.06/7.58	3.61/5.34	3.93/3.62	0.18/0.13	2.96/2.65	20.87/25.76		0.76/0.38
YEM		1.16/	20.73/	68.23/	0.01/	13.56/	50.29/	6.15/	0.07	

Note: Data are for 1995/96.
Source: United Nations, 1998.

Liberalisation and Competitiveness in Intra-Arab Trade

Can intra-Arab trade complement ongoing liberalisation and foster competitiveness? Regional trade agreements among developing countries are viewed increasingly as a policy option designed to strengthen commitment to unilateral liberalisation as well as to offset potential short-term losses resulting from North-South regional agreements. Given commitments to liberalisation under the Uruguay Round and accession to the EMAs by MENA economies, a well-designed Arab Free Trade Area could counterbalance the dangers and complement the opportunities offered by such shifts in the global and regional trade environments.

A number of Arab states (Bahrain, Egypt, Kuwait, Morocco, Qatar, Tunisia and the UAE) had already become GATT members by the end of the Uruguay Round. Algeria, Jordan and Saudi Arabia are involved in accession talks. As participants in the Uruguay Round, these countries agreed to extend multilateral liberalisation in the areas of agriculture, textiles and clothing and services as well as to strengthen rules with respect to subsidies.

The abolition of the Multifibre Agreement will have special significance for Egypt, Morocco, Syria and Tunisia, where textile and clothing exports amount to 20 per cent to 40 per cent of total exports and up to 60 per cent of manufactured exports. How these countries respond to the new environment will depend on how effectively they compete (notably in EU markets) with Asian and East European suppliers. Arab countries' exports of fruits and vegetables may benefit from post-Uruguay Round conditions, depending on the extent to which they improve access to EU markets.

The Euro-Med partnership initiative also has both positive and potentially problematic features for the Arab countries involved. The direct gains for Arab countries are not estimated to be very large (1.5 per cent to 1.7 per cent of GDP for Morocco and Tunisia, for example). Yet the so-called "deeper" benefits, in terms of business alliances, diffusion of product and market know-how, technology transfer, harmonisation of regulatory and standards regimes, and increased foreign investment could be substantial (Page and Underwood, 1997).

On the negative side, unless Arab countries make good use of the transition period to 2010 when full free trade in industrial goods and services is to be achieved, there is a danger that they will be hard-pressed to compete in the enlarged market. A second issue is the so-called "hub-and-spokes" question. Simply put, it evokes the danger that investment and production will flow not to Arab partners (the "spokes", linked to Europe but isolated from each other) but rather to the "hub" of the EU, from which exporters will flood individual partners' markets opened by the elimination of import tariff barriers.

A well-designed Arab Free Trade Area could counterbalance the dangers and complement the opportunities offered by the Euro-Med initiative. Elimination of intra-Arab tariff barriers would help counter the hub-and-spoke problem. It would

offer investors a large, open Arab market in which to locate and serve nearly 300 million new consumers, joining forces with Arab sources of capital and making use of a relatively well educated labour force that is substantially cheaper than EU labour. It would open up opportunities for "production sharing", in which firms across the Arab world would trade components incorporated into final goods. It would also eliminate a potentially paradoxical situation that could emerge under current arrangements, whereby EU firms would have easier access to an Arab partner's home market than firms located in other Arab countries. Without intra-Arab trade liberalisation, EU firms could export to Arab partners duty-free while other Arab producers would still face restrictive tariff and other barriers. An Arab FTA could also help stimulate Arab entrepreneurship and promote Arab businesses. Such firms could take advantage of the economies of scale made possible by a barrier-free Arab market, simultaneously making good use of EU transition funds and the dynamic gains resulting from business alliances and marketing arrangements with EU firms.

Trade liberalisation among Arab states in agriculture, industry and services also has the potential to diversify export sectors, stimulate competitiveness and ready Arab economies for fuller participation in global markets. While there is little direct empirical evidence for dynamic gains from RTAs (Schiff and Winters, 1998) there is significant statistical support for the relationship between openness, learning-by-doing, human capital accumulation, and growth. In Asian economies like Malaysia and China, for example, integration into the global market has been associated with the import of knowledge-enhancing capital, accelerated learning by doing, technological catch-up and industrial upgrading (Thomas and Wang, 1997; World Bank, 1994*c*; Wei, 1993). This evidence supports the hypothesis that the learning process in regional markets could be substantial. Hence, the potential exists for intra-regional trade to serve as a laboratory for developing global export competitiveness, particularly in non-oil goods and services. In Latin America, firm-level data indicate that 64 out of 106 firms participating in sampled regional trade agreements successfully made the transition from intra-regional to extra-regional exports (Buitelaar, 1993).

The Potential for Diversification in Agriculture and Manufactured Exports

Patterns of intra-Arab trade relative to those with the rest of the world can be investigated using the Balassa (1979) index of revealed comparative advantage (RCA)[5]. According to traditional Heckscher-Ohlin trade theory, countries specialise in exchange on the basis of complementary factor endowments. The Balassa index of revealed comparative advantage uses commodity patterns in intra-regional and international trade to examine a country's ability to compete in a specific market. It relates the importance of each country as a supplier of goods relative to competing exporting countries. An RCA greater than one indicates that the share of a given product in a country's exports is more than the product's corresponding world trade share, implying that the country has a revealed comparative advantage in production and trade of the product. Conversely, an RCA less than one suggests that the country has a comparative disadvantage in the good.

Indices of revealed comparative advantage indicate moderate levels of regional complementarity among Arab states, with an average of 25 per cent of sectors demonstrating high revealed comparative advantage (RCA>1) in Egypt (Figure 9.3), Jordan, Morocco and Tunisia[6] (Table 9.5). Non-oil exports to the EU from these four countries demonstrate significantly lower levels of complementarity, with roughly half as many sectors with high RCA — an average of 13 per cent for Egypt (Figure 9.4), Tunisia and Jordan, 17 per cent for Morocco and Lebanon and 5 per cent for Syria. In global trade (Figure 9.5 for Egypt), approximately 16 per cent of sectors demonstrate high RCA in non-oil exports, similar to the distribution of complementarity exemplified by Euro-Med trade, but also including a broad range of world exporters.

A closer look at overlapping patterns of comparative advantage indicates possibilities for developing global competitiveness and diversification at the regional level (Table 9.6). At the sectoral level, there is some overlap between sectors demonstrating high RCA in both intra-Arab and EU trade. This is the case for vegetable fibres (Egypt) and fertilisers (Jordan).

Intra-industry trade (IIT) indices are calculated following Grubel and Lloyd (1975), and the aggregation method proposed in Havrylyshyn and Kunzel (1997)[7]. Interpretation of the IIT is as follows: with no intra-industry trade, the IIT index will be zero, and when all trade is intra-industry trade, it will take a value of one. An index value of 0.25 suggests a level of industrial advancement of 25 per cent, which is relatively low; most industrialised countries such as those in the EU have average IIT levels of 0.86. The IIT index does not discern re-exports, which indicate a simple flow of goods through a country rather than increased specialisation[8]. Re-exports are particularly relevant in trade between the UAE and Oman.

Levels of intra-industry trade (IIT) among Arab states are low relative to developing and developed-country RTAs, but significantly higher than total intra-industry trade with the EU and the world economy. For Egypt and Jordan, IIT on the basis of EU trade is roughly 11 per cent in Jordan and Egypt, compared with 16 per cent (Jordan) and 21 per cent (Egypt) for intra-Arab trade (Table 9.7). Morocco and Tunisia enjoy significantly higher levels of industrial concentration in trade with the EU, as demonstrated by IIT levels of more than 20 per cent in EU trade and over 30 per cent in intra-Arab trade (Tunisia) (See Figure 9.6.).

Surveys of the top ten non-oil IIT sectors reveal a higher concentration of basic manufactured goods as well as trade in machines and equipment in intra-Arab trade (Table 9.8). High IIT sectors in intra-Arab trade for Tunisia include iron and steel plates and sheets, wires, metal manufactured parts, internal combustion engines and other machinery, relative to exports of pearls and semi-precious stones and textile products, which demonstrate high IIT in EU trade. Similar results are apparent in Egypt, where high non-oil IIT sectors with other Arab states include R&D-intensive sectors such as chemicals; high IIT sectors based on trade with Europe include oxides, metals and textile products.

Table 9.5. **Distribution of RCA Indices for Regional, Global Markets**

	EGY						JOR					
	Arab		EU		World		Arab		EU		World	
	# sectors	% Total	# sectors	% Total	# sectors	% Total	# sectors	% Total	# sectors	% Total	# sectors	% Total
1983							**1983**					
>1.00	46	20.3	14	6.0	14	7.1	**>1.00**	58	25.6	15	6.4	28	14.2
>2.25	29	12.8	4	1.7	5	2.5	**>2.25**	26	11.5	12	5.1	18	9.1
<1.00	181	79.7	221	94.0	184	92.9	**<1.00**	169	74.4	220	93.6	169	85.8
1989							**1989**					
>1.00	63	27.9	18	7.6	24	11.5	**>1.00**	44	19.5	22	9.2	22	10.8
>2.25	39	17.3	7	2.9	11	5.3	**>2.25**	24	10.6	13	5.5	15	7.4
<1.00	163	72.1	220	92.4	184	88.5	**<1.00**	182	80.5	216	90.8	181	89.2
1993							**1993**					
>1.00	101	43.5	27	11.4	42	18.7	**>1.00**	46	19.8	25	10.6	23	11.2
>2.25	61	26.3	16	6.8	24	10.7	**>2.25**	20	8.6	16	6.8	14	6.8
<1.00	131	56.5	209	88.6	183	81.3	**<1.00**	186	80.2	211	89.4	182	88.8
1996							**1996**					
>1.00	90	39.8	27	11.5	39	17.3	**>1.00**	57	25.2	26	11.1	31	15.0
>2.25	53	23.5	19	8.1	23	10.2	**>2.25**	28	12.4	14	6.0	15	7.2
<1.00	136	60.2	207	88.5	187	82.7	**<1.00**	169	74.8	208	88.9	176	85.0

Table 9.5. (contd.)

	MOR							TUN					
	Arab		EU		World			Arab		EU		World	
	# sectors	% Total	# sectors	% Total	# sectors	% Total		# sectors	% Total	# sectors	% Total	# sectors	% Total
1983							**1983**						
>1.00	53	23.3	38	16.2	44	23.5	**>1.00**	48	21.1	28	11.9	34	18.2
>2.25	38	16.7	28	11.9	27	14.4	**>2.25**	35	15.4	21	8.9	21	11.2
<1.00	174	76.7	197	83.8	143	76.5	**<1.00**	179	78.9	207	88.1	153	81.8
1989							**1989**						
>1.00	60	26.5	40	16.8	43	20.6	**>1.00**	57	25.2	37	15.5	37	18.7
>2.25	43	19.0	26	10.9	26	12.4	**>2.25**	42	18.6	22	9.2	25	12.6
<1.00	166	73.5	198	83.2	166	79.4	**<1.00**	169	74.8	201	84.5	161	81.3
1993							**1993**						
>1.00	64	27.6	39	16.5	43	20.3	**>1.00**	60	25.9	34	14.4	38	18.5
>2.25	39	16.8	26	11.0	28	13.2	**>2.25**	35	15.1	21	8.9	22	10.7
<1.00	168	72.4	197	83.5	169	79.7	**<1.00**	172	74.1	202	85.6	167	81.5
1996							**1996**						
>1.00	62	27.4	42	17.9	42	19.8	**>1.00**	65	28.8	32	13.7	34	16.3
>2.25	44	19.5	28	12.0	28	13.2	**>2.25**	43	19.0	18	7.7	20	9.6
<1.00	164	72.6	192	82.1	170	80.2	**<1.00**	161	71.2	202	86.3	174	83.7

Table 9.5 (contd.)

	SYR							LEB					
	Arab		EU		World			Arab		EU		World	
	# sectors	% Total	# sectors	% Total	# sectors	% Total		# sectors	% Total	# sectors	% Total	# sectors	% Total
1983							**1983**						
>1.00	70	30.8	5	2.1	21	10.9	**>1.00**	104	45.8	29	12.3	61	28.4
>2.25	47	20.7	3	1.3	6	3.1	**>2.25**	60	26.4	20	8.5	35	16.3
<1.00	157	69.2	230	97.9	172	89.1	**<1.00**	123	54.2	206	87.7	155	72.1
1989							**1989**						
>1.00	42	18.6	7	2.9	13	7.0	**>1.00**	41	18.1	39	16.4	46	22.1
>2.25	25	11.1	4	1.7	7	3.8	**>2.25**	28	12.4	24	10.1	22	10.6
<1.00	184	81.4	231	97.1	173	93.0	**<1.00**	185	81.9	199	83.6	162	77.9
1993							**1993**						
>1.00	48	20.7	7	3.0	17	8.2	**>1.00**	58	25.0	41	17.4	59	27.4
>2.25	23	9.9	6	2.5	10	4.8	**>2.25**	40	17.2	25	10.6	37	17.2
<1.00	184	79.3	229	97.0	191	91.8	**<1.00**	174	75.0	195	82.6	156	72.6
1996							**1996**						
>1.00	52	23.0	13	5.6	22	10.4	**>1.00**	66	29.2	40	17.1	53	25.1
>2.25	36	15.9	8	3.4	13	6.1	**>2.25**	37	16.4	26	11.1	31	14.7
<1.00	174	77.0	221	94.4	190	89.6	**<1.00**	160	70.8	194	82.9	158	74.9

Figure 9.3. **Egypt: Regional Non Oil RCA, 1996**
(indices, percentages)

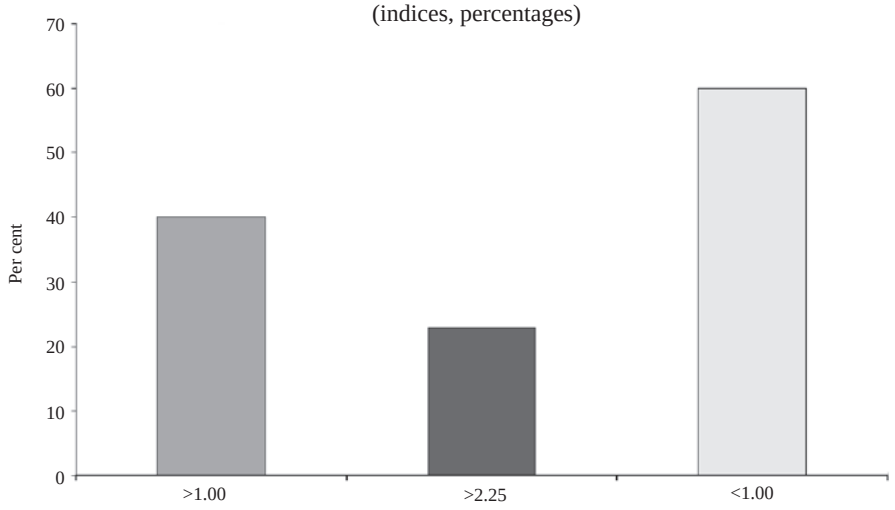


Figure 9.4. **Egypt: EU Non Oil RCA, 1996**
(indices, percentages)

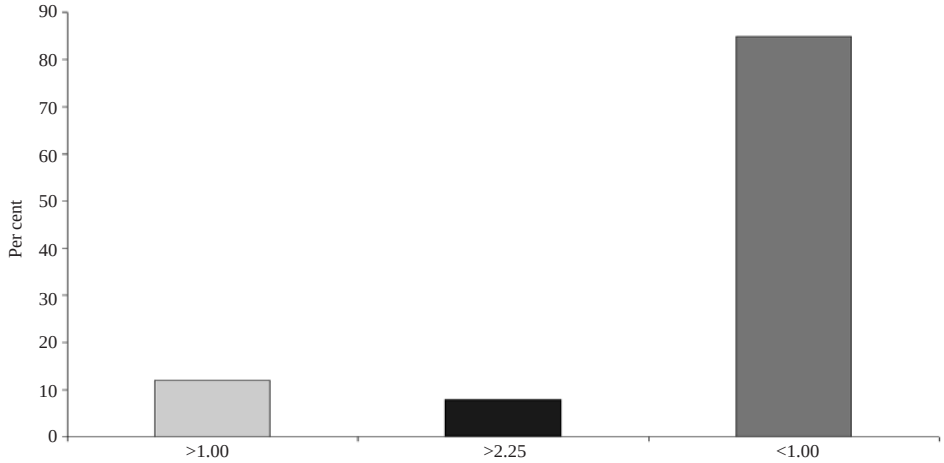


Figure 9.5. **Egypt: Global Non Oil RCA, 1996**
(indices, percentages)

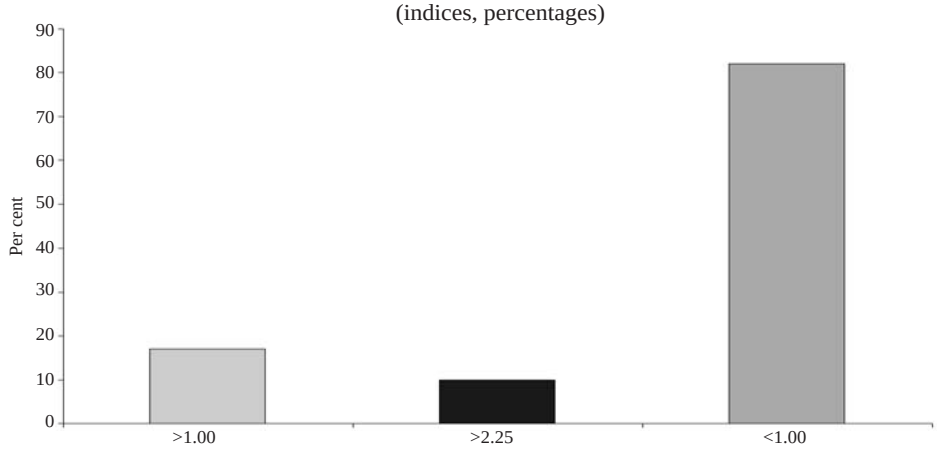


Figure 9.6. **Arab, EU RCA Indices for Non Oil Exports, 1996**

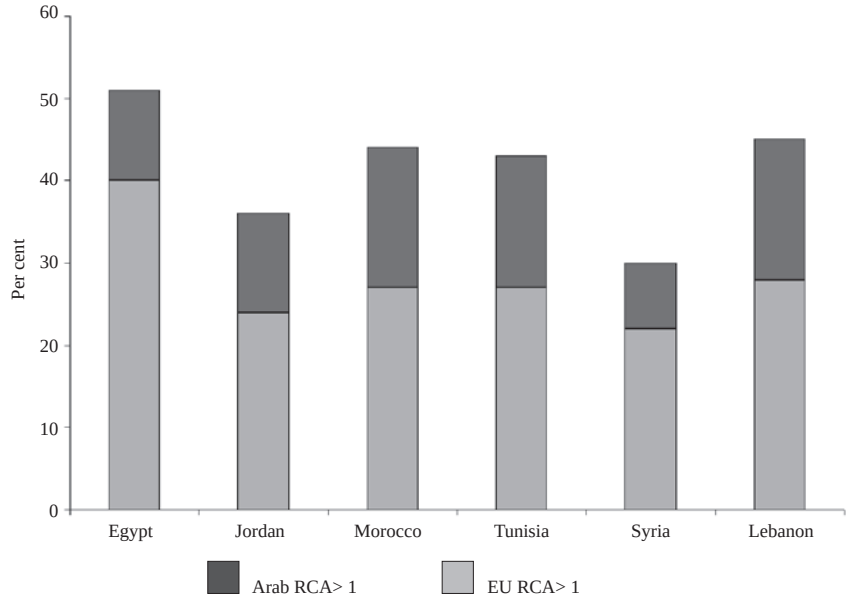


Table 9.6. **Top Ten RCA Nonoil Sectors (Exports): 1996**

Egypt					
RCA Indices (Region)		RCA Indices (EU15)		RCA Indices (World)	
Commodity		Commodity		Commodity	
072 COCOA	16.3	054 VEG ETC FRSH,SMPLY PRSVD	5.2	042 RICE	5.4
074 TEA AND MATE	8.6	075 SPICES	4.3	054 VEG ETC FRSH, SMPLY PRSVD	6.4
098 EDIBLE PRODCTS, PREPS NES	8.2	263 COTTON	7.8	075 SPICES	6.8
232 NATURAL RUBBER, GUMS	15.0	265 VEG FIBRE, EXCL COTN, JUTE	13.2	245 FUEL WOOD NES, CHARCOAL	6.8
245 FUEL WOOD NES, CHARCOAL	11.0	323 BRIQUETS, COKE, SEMI-COKE	14.2	263 COTTON	8.4
265 VEG FIBRE, EXCL COTN, JUTE	18.7	651 TEXTILE YARN	4.9	265 VEG FIBRE, EXCL COTN, JUTE	18.1
322 COAL, LIGNITE AND PEAT	14.1	652 COTTON FABRICS, WOVEN	5.8	323 BRIQUETS, COKE, SEMI-COKE	18.3
323 BRIQUETS, COKE, SEMI-COKE	18.4	658 TEXTILE ARTICLES NES	6.5	658 TEXTILE ARTICLES NES	5.7
524 RADIOACTIVE ETC MATERIAL	18.6	846 UNDER GARMENTS KNITTED	4.1	659 FLOOR COVERINGS, ETC	6.9
696 CUTLERY	12.2	941 ZOO ANIMALS, PETS ETC	5.5	941 ZOO ANIMALS, PETS ETC	5.3
Jordan					
RCA Indices (Region)		RCA indices (EU15)		RCA Indices (World)	
Commodity		Commodity		Commodity	
001 LIVE ANIMALS FOR FOOD	20.2	054 VEG ETC FRSH, SMPLY PRSVD	5.5	001 LIVE ANIMALS FOR FOOD	43.3
212 FURSKINS, RAW	38.9	111 NON-ALCOHOL BEVERAGES NES	8.6	054 VEG ETC FRSH, SMPLY PRSVD	5.3
271 FERTILIZERS, CRUDE	25.2	211 HIDES, SKINS, EXC FURS, RAW	28.9	211 HIDES, SKINS, EXC FURS, RAW	20.4
287 BASE METAL ORES, CONC NES	19.3	271 FERTILIZERS, CRUDE	1092.2	271 FERTILIZERS, CRUDE	719.5
288 NONFERR METAL SCRAP NES	11.2	289 PREC METAL ORES,WASTE NES	9.5	288 NONFERR METAL SCRAP NES	6.7
541 MEDICINAL, PHARM PRODUCTS	16.0	562 FERTILIZERS, MANUFACTURED	68.3	523 OTHR INORG CHEMICALS ETC	4.7
562 FERTILIZERS, MANUFACTURED	13.3	714 ENGINES AND MOTORS NES	18.6	562 FERTILIZERS, MANUFACTURED	80.6
714 ENGINES AND MOTORS NES	17.6	842 MENS OUTERWEAR NOT KNIT	5.3	661 LIME,CEMENT, BLDG PRODS	10.2
873 METERS AND COUNTERS NES	10.9	896 WORKS OF ART, ETC.	7.8	714 ENGINES AND MOTORS NES	5.3
884 OPTICAL GOODS NES	13.8	961 COIN NONGOLD, NONCURRENT	16.1	961 COIN NONGOLD, NONCURRENT	4.6

Table 9.6. (contd.)

Morocco					
RCA Indices (Region)		RCA Indices (EU15)		RCA Indices (World)	
Commodity		Commodity		Commodity	
024 CHEESE AND CURD	17.0	036 SHELL FISH FRESH,FROZEN	14.0	036 SHELL FISH FRESH,FROZEN	22.3
037 FISH ETC PREPD,PRSVD NES	20.6	037 FISH ETC PREPD,PRSVD NES	11.8	037 FISH ETC PREPD,PRSVD NES	12.7
251 PULP AND WASTE PAPER	42.0	056 VEGTBLES ETC PRSVD,PREPD	11.6	056 VEGTBLES ETC PRSVD,PREPD	15.2
611 LEATHER	24.4	244 CORK,NATURAL,RAW,WASTE	12.0	244 CORK,NATURAL,RAW,WASTE	23.3
654 OTH WOVEN TEXTILE FABRIC	20.7	271 FERTILIZERS,CRUDE	113.0	271 FERTILIZERS,CRUDE	167.0
655 KNITTED,ETC FABRICS	26.4	562 FERTILIZERS,MANUFACTURED	13.8	522 INORG ELEMNTS,OXIDES,ETC	24.2
658 TEXTILE ARTICLES NES	21.7	685 LEAD	15.3	562 FERTILIZERS,MANUFACTURED	12.9
685 LEAD	22.8	842 MENS OUTERWEAR NOT KNIT	17.5	685 LEAD	17.0
774 ELECTRO-MEDCL,XRAY EQUIP	16.1	843 WOMENS OUTERWEAR NONKNIT	14.4	842 MENS OUTERWEAR NOT KNIT	15.4
847 TEXTILE CLTHNG ACCES NES	17.6	844 UNDER GARMENTS NOT KNIT	13.9	843 WOMENS OUTERWEAR NONKNIT	12.2
Tunisia					
RCA Indices (Arab)		RCA Indices (EU15)		RCA Indices (World)	
Commodity		Commodity		Commodity	
269 WASTE OF TEXTILE FABRICS	37.0	269 WASTE OF TEXTILE FABRICS	7.1	244 CORK,NATURAL,RAW,WASTE	10.4
515 ORG-INORG COMPOUNDS ETC	17.5	271 FERTILIZERS,CRUDE	10.9	271 FERTILIZERS,CRUDE	29.1
523 OTHR INORG CHEMICALS ETC	32.9	423 FIXED VEG OILS,SOFT	16.1	423 FIXED VEG OILS,SOFT	15.0
625 RUBBER TYRES, TUBES ETC	27.2	562 FERTILIZERS,MANUFACTURED	14.8	522 INORG ELEMNTS,OXIDES,ETC	12.7
628 RUBBER ARTICLES NES	14.1	612 LEATHER ETC MANUFACTURES	19.9	562 FERTILIZERS,MANUFACTURED	14.3
677 IRN,STL WIRE(EXCL W ROD)	13.5	773 ELECTR DISTRIBUTNG EQUIP	6.5	612 LEATHER ETC MANUFACTURES	17.9
679 IRN,STL CASTINGS UNWORKD	31.0	842 MENS OUTERWEAR NOT KNIT	31.2	842 MENS OUTERWEAR NOT KNIT	32.0
721 AGRIC MACHY,EXC TRACTORS	20.9	843 WOMENS OUTERWEAR NONKNIT	18.7	843 WOMENS OUTERWEAR NONKNIT	18.1
749 NONELEC MACH PTS,ACC NES	10.8	844 UNDER GARMENTS NOT KNIT	12.7	844 UNDER GARMENTS NOT KNIT	10.1
776 TRANSISTORS,VALVES,ETC	16.2	846 UNDER GARMENTS KNITTED	9.9	846 UNDER GARMENTS KNITTED	10.1

Source: United Nations, 1998.

Table 9.7. **Non-oil IIT Indices**

	EGY							JOR					
	Arab		EU		World			Arab		EU		World	
Range	**# sectors**	**% Total**	**# sectors**	**% Total**	**# sectors**	**% Total**	**Range**	**# sectors**	**% Total**	**# sectors**	**% Total**	**# sectors**	**% Total**
1983							**1983**						
0.00-0.25	132	89.8	197	85.3	197	84.5	**0.00-0.25**	134	70.5	203	90.6	194	83.6
0.25-0.50	5	3.4	12	5.2	14	6.0	**0.25-0.50**	23	12.1	8	3.6	17	7.3
0.50-0.75	4	2.7	10	4.3	10	4.3	**0.50-0.75**	16	8.4	8	3.6	12	5.2
0.75-1.00	6	4.1	12	5.2	12	5.2	**0.75-1.00**	17	8.9	5	2.2	9	3.9
1989							**1989**						
0.00-0.25	144	82.8	181	79.7	178	77.4	**0.00-0.25**	131	69.7	195	89.9	177	78.7
0.25-0.50	14	8.0	22	9.7	28	12.2	**0.25-0.50**	27	14.4	11	5.1	22	9.8
0.50-0.75	10	5.7	15	6.6	13	5.7	**0.50-0.75**	14	7.4	8	3.7	18	8.0
0.75-1.00	5	2.9	9	4.0	11	4.8	**0.75-1.00**	16	8.5	3	1.4	8	3.6
1993							**1993**						
0.00-0.25	164	77.0	180	78.6	158	68.1	**0.00-0.25**	120	59.7	195	88.6	188	82.5
0.25-0.50	18	8.5	32	14.0	34	14.7	**0.25-0.50**	25	12.4	14	6.4	18	7.9
0.50-0.75	14	6.6	6	2.6	20	8.6	**0.50-0.75**	23	11.4	7	3.2	11	4.8
0.75-1.00	17	8.0	11	4.8	20	8.6	**0.75-1.00**	33	16.4	4	1.8	11	4.8
1996							**1996**						
0.00-0.25	140	67.3	176	76.9	163	70.3	**0.00-0.25**	111	55.8	196	87.9	187	81.3
0.25-0.50	28	13.5	28	12.2	35	15.1	**0.25-0.50**	32	16.1	11	4.9	24	10.4
0.50-0.75	21	10.1	10	4.4	13	5.6	**0.50-0.75**	28	14.1	8	3.6	12	5.2
0.75-1.00	19	9.1	15	6.6	21	9.1	**0.75-1.00**	28	14.1	8	3.6	7	3.0

Table 9.7. (contd.)

	MOR						TUN					
	Arab		EU		World			Arab		EU		World	
Range	# sectors	% Total	# sectors	% Total	# sectors	% Total	Range	# sectors	% Total	# sectors	% Total	# sectors	% Total
1983							**1983**						
0.00-0.25	106	86.9	188	80.7	186	79.1	**0.00-0.25**	88	70.4	180	78.6	174	74.7
0.25-0.50	10	8.2	19	8.2	17	7.2	**0.25-0.50**	14	11.2	23	10.0	24	10.3
0.50-0.75	2	1.6	14	6.0	23	9.8	**0.50-0.75**	10	8.0	12	5.2	19	8.2
0.75-1.00	4	3.3	11	4.7	9	3.8	**0.75-1.00**	13	10.4	14	6.1	16	6.9
1989							**1989**						
0.00-0.25	120	76.4	182	79.1	174	75.3	**0.00-0.25**	118	69.0	171	74.0	159	68.2
0.25-0.50	18	11.5	14	6.1	23	10.0	**0.25-0.50**	18	10.5	22	9.5	33	14.2
0.50-0.75	6	3.8	22	9.6	21	9.1	**0.50-0.75**	17	9.9	20	8.7	20	8.6
0.75-1.00	13	8.3	12	5.2	13	5.6	**0.75-1.00**	18	10.5	17	7.4	21	9.0
1993							**1993**						
0.00-0.25	119	67.6	169	73.8	171	74.0	**0.00-0.25**	114	63.0	174	75.7	153	66.5
0.25-0.50	22	12.5	26	11.4	28	12.1	**0.25-0.50**	19	10.5	23	10.0	37	16.1
0.50-0.75	15	8.5	21	9.2	21	9.1	**0.50-0.75**	28	15.5	17	7.4	20	8.7
0.75-1.00	20	11.4	13	5.7	11	4.8	**0.75-1.00**	20	11.0	16	7.0	20	8.7
1996							**1996**						
0.00-0.25	133	75.6	166	72.5	163	70.9	**0.00-0.25**	107	61.1	162	70.4	157	68.0
0.25-0.50	17	9.7	24	10.5	32	13.9	**0.25-0.50**	28	16.0	32	13.9	30	13.0
0.50-0.75	9	5.1	19	8.3	19	8.3	**0.50-0.75**	14	8.0	16	7.0	21	9.1
0.75-1.00	17	9.7	20	8.7	16	7.0	**0.75-1.00**	26	14.9	20	8.7	23	10.0

Source: United Nations, 1998.

Table 9.8. **Top Ten Non-oil IIT Sectors, 1996**

Egypt					
Non-oil IIT (Arab)		**Non-oil IIT (EU)**		**Non-oil IIT (Wld)**	
037 FISH ETC PREPD,PRSVD NES	0.869	061 SUGAR AND HONEY	0.999	111 NON-ALCOHL BEVERAGES NES	0.95097608
431 PROCESD ANML VEG OIL,ETC	0.953	223 SEEDS FOR OTH FIXED OILS	0.857	522 INORG ELEMNTS, OXIDES,ETC	0.96326634
598 MISC. CHEM PRODUCTS NES	0.920	522 INORG ELEMNTS,OXIDES,ETC	0.989	651 TEXTILE YARN	0.97943831
621 MATERIALS OF RUBBER	0.892	655 KNITTED,ETC FABRICS	0.894	671 PIG IRON ETC	0.95191312.
642 PAPER,ETC,PRECUT,ARTS OF	0.903	666 POTTERY	0.860	681 SILVER, PLATINUM, ETC	0.99654594
679 IRN,STL CASTINGS UNWORKD	0.952	681 SILVER,PLATINUM,ETC	0.876	689 NON-FER BASE METALS NES	0.90858453
716 ROTATING ELECTRIC PLANT	0.985	696 CUTLERY	0.928	696 CUTLERY	0.97448931
741 HEATING,COOLING EQUIPMNT	0.980	812 PLUMBG,HEATING, LGHTNG EQU	0.973	883 DEVELOPED CINEMA FILM	0.94050881
786 TRAILERS,NONMOTR VEH,NES	0.929	848 HEADGEAR,NONTXTL CLOTHNG	0.981	961 COIN NONGOLD, NONCURRENT	0.93884298
882 PHOTO,CINEMA SUPPLIES	0.962	883 DEVELOPED CINEMA FILM	0.941	971 GOLD, NON MONETARY NES	0.92514197
Jordan					
Non-oil IIT (Arab)		**Non-oil IIT (EU)**		**Non-oil IIT (Wld)**	
Commodity	1996	Commodity	1996	Commodity	1996
024 CHEESE AND CURD	0.955	223 SEEDS FOR OTH FIXED OILS	0.6666667	001 LIVE ANIMALS FOR FOOD	0.72579058
562 FERTILIZERS,MANUFACTURED	0.953	233 RUBBER, SYNTHTIC, RECLAIMD	0.75072	054 VEG ETC FRSH,SMPLY PRSVD	0.93928676
635 WOOD MANUFACTURES NES	0.896	282 IRON AND STEEL SCRAP	0.8298667	057 FRUIT, NUTS,FRESH,DRIED	0.72180862
724 TEXTILE,LEATHER MACHNRY	0.899	714 ENGINES AND MOTORS NES	0.9544646	278 OTHER CRUDE MINERALS	0.89474853
727 FOOD MACHRY NON-DOMESTIC	0.953	761 TELEVISION RECEIVERS	0.7664577	523 OTHR INORG CHEMICALS ETC	0.88589426
728 OTH MACHY FOR SPCL INDUS	0.975	842 MENS OUTERWEAR NOT KNIT	0.6923677	611 LEATHER	0.81948705
743 PUMPS NES,CENTRFUGES ETC	0.981	844 UNDER GARMENTS NOT KNIT	0.8700087	714 ENGINES AND MOTORS NES	0.9492474
775 HOUSEHOLD TYPE EQUIP NES	0.968	845 OUTERWEAR KNIT NONELASTC	0.9957768	842 MENS OUTERWEAR NOT KNIT	0.82358607
844 UNDER GARMENTS NOT KNIT	0.919	846 UNDER GARMENTS KNITTED	0.7792514	844 UNDER GARMENTS NOT KNIT	0.73750213
894 TOYS,SPORTING GOODS, ETC	0.975	881 PHOTO APPARAT, EQUIPT NES	0.7642297	845 OUTERWEAR KNIT NONELASTC	0.95025532

In summary, most Arab states demonstrate a higher concentration of non-traditional goods such as processed agricultural products and basic manufactures in intra-regional trade than in exports to the EU and the global economy. In some cases, non-oil goods traded intra-regionally represent non-traditional export sectors, tend to demonstrate greater forward and backward linkages and are relatively more capital, knowledge and R&D intensive than non-oil goods traded with the EU. In Morocco, for example, the top ten non-oil high-RCA sectors in intra-Arab trade include a heavy concentration of intermediate goods — such as processed agricultural products, pulp and waste paper, textiles necessities, fabrics and accessories — whereas trade with the EU is more concentrated in finished textile products and crude fertilisers. Trade among Arab states also demonstrates significant levels of complementarity and competitiveness compared with trade with the EU and the world economy, with some exceptions such as Morocco and Tunisia, where exports to the EU demonstrate higher levels of competitiveness than intra-Arab trade, likely reflecting the importance of FDI.

Non-traditional Exports and Learning Externalities

High RCA and IIT indices for agriculture and basic manufactures in both regional and global trade suggest that an Arab FTA would benefit from a serious commitment to liberalise regional trade in agro-industrial products as well as basic manufactures and intermediate goods. Intra-Arab trade liberalisation in agriculture and manufacturing would also complement ongoing efforts at unilateral liberalisation and Euro-Med integration. In agriculture, for example, recent evidence for Portugal and Spain suggests that European integration is correlated with a rapid increase of IIT in agricultural products (Canali, 1996).

Learning externalities associated with developing competitiveness in agricultural products and basic manufacturing are potentially significant. Processed foods, for example, rely heavily on specialised technical or market knowledge and would clearly benefit from regional specialisation in marketing and distribution as well as provide an environment for technological and human-capital transfer. Processed-food exports require a physical and marketing infrastructure, which has positive externalities for the development of transportation and communications networks, modern processing, storage and trade facilities and brand-name development (Jaffee, 1992).

High perishability and the bulkiness of raw material flows also requires a more efficient transportation infrastructure in addition to complementary facilities for communication, information exchange and related services. Enhancing the transparency of product standards and policies governing transport, food processing, packaging and retailing reinforces general trade-infrastructure improvements and promotes a relatively capital-intensive and advertising-intensive segment of agricultural exports (Box 1).

Box 1. Almarai: World's Best Food Manufacturing Company of 1998

Almarai, the largest integrated food factory in the Middle East, was selected by *International Food Engineering Magazine* as the world's best food manufacturing company in 1998. Past recipients of this award include Carnation Food, Campbell Soup and Nabisco. Almarai, a Saudi company engaged in dairy farming and other activities relating to processing, packaging, marketing and distribution of dairy products, has 70 per cent of Saudi Arabia's market share and leads virtually all other GCC markets for short-life fresh products, with the exception of the UAE. The company produces milk, *laban*, *labneh*, *zabadi* and *ghishta* and recently completed construction of an integrated processing facility in Al-Kharj — one of the biggest in the Middle East. With more than 33 000 dairy cows on five farms and an annual capacity of 79 million gallons of production the company is well positioned to serve existing and potential GCC market growth and has recently diversified into new products such as fruit yoghurt.

Intra-firm linkages also are an important vehicle for promoting market access and penetrating marketing channels in agricultural exports. They can provide detailed information on market conditions and consumer tastes, on reducing uncertainties regarding payments and on brand-name promotion. For Mexican tomatoes, Chilean fruit, Argentinean beef and Thai poultry, for example, personalised trade and ownership linkages provided an effective framework for building up product demand and distribution channels from a rudimentary base. Long-term foreign trading partners also campaign actively for continued supplier access to markets where there is domestic protection against imports.

High tariffs — in addition to a host of non-tariff barriers in the form of quantitative restrictions, such as import bans and quotas, import licenses and state monopolies over imports or exports — have largely characterised regional agricultural policies. In 1984-93, for example, *ad valorem* tariffs on food imports averaged 30 per cent for Kuwait, Syria, Saudi Arabia, Algeria, Libya, Egypt, Morocco and Tunisia, with NTB equivalent rates slightly higher at an average of 34 per cent.

To create a low and uniform tariff structure in agriculture, transitions need to be made: reducing the number of tariff rates, lowering maximum and average tariffs, incorporating other duties and charges into the tariff structure and eliminating discretionary and other exemptions[9]. A gradual phasing-in of tariff liberalisation in cereals could serve to avoid alienating important domestic constituencies. Mexico's accession to NAFTA, for example, incorporated the reduction of tariffs on export-oriented agricultural sectors first, followed by more gradual liberalisation of the staple crops that accounted for most arable land and employment.

Promoting Deeper Integration among Arab States

The preceding section focused on mechanisms by which an Arab FTA could increase the productivity of manufacturing and agriculture through free movement of goods. This one examines several aspects of "deeper integration" among Arab economies, which if implemented would complement the liberalisation of commodity trade as well as strengthen the basis upon which global competitiveness could be built.

RTAs are increasingly viewed as providing strategic benefits associated with the spread of efficiency gains in non-traditional sectors and the development of new productive patterns characterised by higher degrees of value added. (Ffrench-Davis, 1997)[10]. By locking in better access to markets for non-traditional products that may experience limited access and instability in world markets, RTAs can foster the diversification of exports and make use of economies of scale and specialisation, which are critical for enhancing learning by exporting. In addition, market failures in the form of incomplete or distorted markets are generally more significant for non-traditional exports of differentiated products, whether natural resources, manufactures or exportable services. If access to regional markets is improved for exportables in basic manufactures, agricultural products and exportable services, it can complement efforts to liberalise domestic markets.

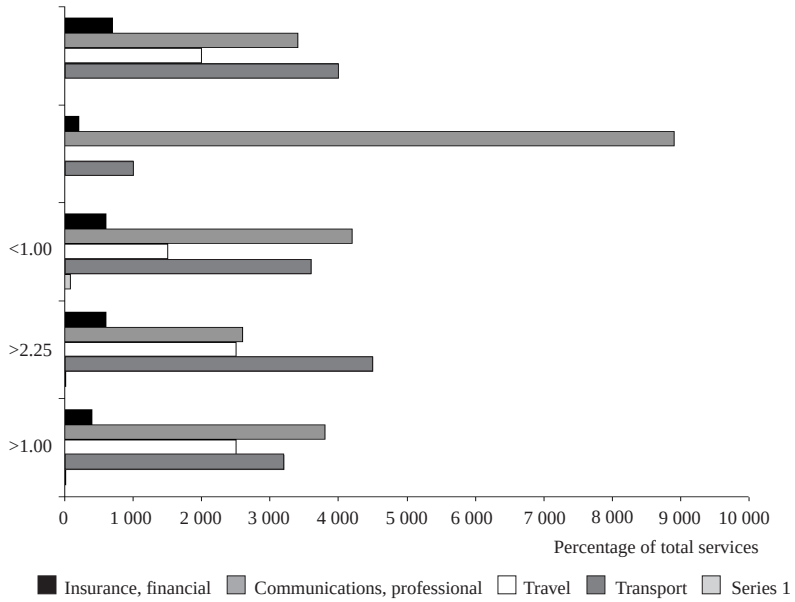
Liberalisation of Trade in Services

An Arab regional agreement that incorporates services is critical for maximising significant exchanges in regional service industries. Given the rising degree of intra-industry merchandise trade among Arab states, growing pressures are likely for liberalisation of services complementary to manufacturing and industrial activities.

Although data on regional service exports are scarce, on a global scale Arab states are significant importers of services, with Saudi Arabia ranking 17th, followed by Kuwait at 34th and Egypt 37th (Figure 9.7)[11]. Labour-related net flows surpassed the value of Egypt's total merchandise exports in 1993, while in Jordan they were two-thirds as large and in Morocco more than half as important[12]. Bahrain, Egypt, Kuwait, Morocco and Tunisia have a relative comparative advantage within the region in services such as tourism and travel activities.

Development of the service sector has well-defined complementarities and linkages with the general level of economic activity and development. Higher inputs of finance, insurance and business services contribute to productivity in manufacturing. Overall, Arab commitments to GATS (Bahrain, Egypt, Kuwait, Morocco and Tunisia) have made little progress beyond the *status quo*, despite significant potential gains from liberalisation of trade in services. A need exists for national service-sector policies complementary to policies and regulations concerning foreign direct investment, technology transfer and licensing requirements.

Figure 9.7. **Arab Service Imports, 1996**



A regional agreement incorporating trade in services should seek to enforce key principles, such as transparency, national treatment, MFN treatment and freedom for providers of services to use any mode of supply (cross-border trade, temporary movement of suppliers/consumers, etc). Extension of liberalisation instruments and principles should ideally not be restricted to individual sectors or measures, and should be accompanied by the harmonisation or mutual recognition of licensing and certification systems and goods and service standards. Discriminatory measures that restrict access to specific service markets in the form of safeguard provisions and rules of origin should be abolished.

At the regional level, trade in services can also be fostered through institutional mechanisms, such as providing information on market access, existing barriers to trade, technical and commercial aspects of service supply, licensing and service technology. Export marketing and research for services clearly complement goods exports, and many developing countries have succeeded in linking the supply of services such as engineering with exports of capital goods. Financial constraints can be overcome through better co-ordination with regional finance institutions such as the Arab Trade Financing Programme.

SME Development and Firm Linkages

Given the growing importance of small and medium sized enterprises (SMEs) in Arab states, the potential benefits of an Arab FTA to SME development are nontrivial. SMEs in Arab states tend to be relatively more concentrated in manufacturing, but trade and service-sector activities also have significant representation in intra-regional trade. A recent survey of SMEs in Lebanon, for example, found 39 per cent of the firms in manufacturing, 36 per cent in trade, 22 per cent in services and 4 per cent in construction (World Bank, 1994*c*) (Box 2).

Box 2. Going Global One Market at a Time: An Arab Franchiser and a Regionally-Based Software Company

Al Tazaj: Saudi fast-food brand Al Tazaj, which means "fresh" in Arabic, plans to expand its grilled chicken franchises in 10 Middle Eastern markets, including Lebanon and Bahrain, as well as Asia and Europe. Owned by the Sakieh family, the Kingdom's largest producer of fresh poultry, Al Tazaj opened in Mecca in 1991, where it competes against McDonald's, Burger King and Pizza Hut in the $220 million plus Saudi fast-food market. Franchises currently operate in Egypt and Qatar, with the first non-Arab owned franchise recently opening in Chicago in August 1997, under the brand name "Tazer" considered to be a more manageable pronunciation for the English-speaking market. (Source: *Advertising Age International Supplement,* 11 May 1998.)

Sakhr Software: Sakhr Software, a Kuwait-owned company operating in Egypt, is a pioneer in Arabic software with sales of more than $7 million (1995). Located in the middle of Cairo, where the average programmer makes about $3 000 per year, the campus of Sakhr Software's development centre houses more than 300 programmers creating Arabic word processors, educational software and customised business applications. For the Arab World as a whole, the market for Arabic software is growing at roughly 35 per cent a year, totalling $75 million in 1995, with the region's top markets located in Saudi Arabia, Egypt and the Gulf countries. Sakhr also has software development offices in Saudi Arabia and is the largest Arabic software company operating in the Kingdom. It controls almost 70 per cent of the Saudi market for retail software programmes for the office and home, Islamic religion and education, and text, database and linguistic products. Its specialisation in linguistics and in speech recognition particularly, has recently attracted interest from international software companies located in Belgium (Lernout&Hauspie), Chinese Taipei (Acer) and the United States (Davidson & Associates, Inc).

Important positive effects resulting from creation of a single market tend to concentrate in improvements in the business environment for SMEs, primarily by removing administrative burdens, border controls and technical barriers. SMEs are particularly sensitive to non-tariff barriers, whose removal has a positive impact on regional as well as global trade. Evidence from Member states of the EU with high

concentrations of SMEs, for example, suggests the likelihood of real supply-side benefits for SMEs associated with cost reduction and economies of scale resulting from creation of a single market. Furthermore, measures related to the opening of markets for products, services and capital have become irreversible with the abolition of border controls (European Observatory for SMEs, 1996).

Demand-side factors for enhancing deeper gains from regional integration include increased opportunities for subcontracting in manufacturing and regional firm linkages. In industry large-scale firms can use subcontracting to obtain semi-finished or finished products from first-tier and second-tier SMEs. Partnerships between large and small firms can create processes of information sharing, technology transfer and co-ordination of management skills and marketing in a mentoring environment. The creation of horizontal and vertical networks facilitates flows of raw materials, labour and information in conjunction with subcontracting operations. Government assistance programmes in marketing, technology acquisition and financial support may be needed, as has been the case in other developing regions[13].

Information access for buyers and sellers is critical. Subcontracting and franchising require co-ordination of market research to identify backward and forward linkage opportunities, matchmaking through computerised databases to link suppliers and buyers, monitoring to assist business partners through contractual and implementation stages, technical assistance and referral systems to help clients access domestic assistance programmes. Business brokers, a key component for forming business linkages, are generally limited in their availability, due to a lack of law offices and consulting firms as well as formal brokerage houses. Arab businesses usually rely on family contacts and *wasda* to seek out potential partners, but this appears to limit exposure to more advanced technology, skills and management practices from larger firms.

In Lebanon, SMEs rely heavily on personal networks for securing financing, suppliers, distributors and customers. Such informal networks raise transaction costs and, while they may improve market functioning, they also serve as a barrier to entry for outsiders or newcomers. This structure also has only limited capacity to supply information on integrating new technologies, improving production organisation, entering foreign markets and improving personnel management (World Bank, 1994*c*). The absence of institutions providing standard business services and information like market surveys presents another significant constraint to SME activity.

Franchising provides another means of extending linkages between large and small firms, but inefficiencies in the legal system frequently limit its use. It offers benefits associated with communicating tried and tested business ideas, providing facilities for permanent mentoring by supplying initial training and ongoing assistance to ensure that the franchise firm follows procedures. It can also reduce the need for start-up capital as well as reduce start-up time, thereby reducing the need for working capital, frequently a binding constraint for smaller businesses. Franchises are also more acceptable candidates for credit from financial institutions. Arab companies such as Ness, a garment manufacturer in Egypt, have succeeded in developing a national

market for their products by incorporating multiple small firms to assemble final products. Other industries and services conducive to franchising include fast-food restaurants and other consumer-driven industries (Box 3).

Box 3. Constraints to Business Linkage in Egypt

According to recent surveys of business linkages in Egypt, market structures provide little incentive to encourage institutional mechanisms such as subcontracting. Frequently entrepreneurs cannot sustain the costs of association with small businesses that lack quality control, management, marketing skills and access to technology.

Quality and management: Virtually all respondents cited the lack of quality control as the most important obstacle to subcontracting. Sixty per cent of respondents cited problems with management and delivery, together with the general skill level, as limiting small firms' ability to produce quality goods and services.

Technology and Information: Roughly half of the firms cited limited access to new technologies and market information as significant obstacles to developing business linkages between large and small firms. The inability of small firms to market their products was also cited.

Credit: Large firms noted lack of credit as limiting small-business access to appropriate machinery, technology and training, although only 25 per cent cited credit as a significant barrier to developing business linkages.

The Policy Environment: Policy and regulatory obstacles included the lack of uniformity and overlapping regulations as well as cumbersome bureaucratic practices. An ill-functioning legal system and non-enforcement of intellectual property rights, burdensome tax systems, local content requirements and lack of proper training in the education system were also cited.

The Glaxo Solution: Glaxo Egypt is one of the few companies using subcontracting functions to provide formal training and skills up-grading programmes for its staff and subcontractors.

Source: Stallard and Hady (1996).

At the regional level, the streamlining of regulatory frameworks to enforce business laws and contracts is needed, along with more rapid progress on harmonisation of tax codes to avoid confusion and arbitrariness in tax systems and the gradual elimination of government pricing and control of critical inputs. Local-content requirements, under which multinational and regional firms must purchase set quotas from local markets, frequently discourage subcontracting to foreign companies. Such measures tend to raise overall costs by forcing companies to rely exclusively on often more costly local inputs.

Allowing increased participation by foreign and regional investors and the development of venture capital funds could eliminate financial constraints. International investors and franchise opportunities also need to be encouraged through the protection of intellectual property rights, streamlining of labour legislation and training of nationals, including computer and customer-service training.

Regional Standards: Improving Trade-Related Infrastructure and Services

An Arab Free Trade agreement could also serve as a useful vehicle for co-ordinating efforts by MENA governments to improve trade-related infrastructure. Shipping, port services and transport fees charged by public companies in MENA are generally higher than in other developing regions. In Egypt, maritime transport costs for shippers are estimated at 25 per cent above those for competitors in neighbouring countries for equivalent routes[14]. In Lebanon, the estimated cumulative impact of informal barriers, such as costly port infrastructure, customs clearance procedures and restrictive licensing rules, has roughly doubled the protective impact of tariffs, based on comparisons of 140 precisely defined tradables in Lebanon and Qatar. Price differentials between Qatar and Lebanon in tradable products like clothing are 68 per cent higher in Lebanon, and 33 per cent higher for food relative to the prices of comparable goods in Qatar.

High freight rates also adversely affect trade. Additional losses come from breakage associated with repeated handling. Transportation laws in Arab states have traditionally impeded the flow of Arab goods and capital, despite repeated efforts at eliminating trans-loading requirements. Recently surveyed excess costs incurred by restrictive transport practices in the Maghreb amount to $30 million for Morocco, $94 million for Algeria and $71 million for Tunisia. These figures, adjusted to take account of the length of transport routes, include dockside dwell times, redundant charges (double handling), billing systems, losses and damage, inefficient tariff structures and various forms of fraud (World Bank, 1996).

A strong case exists for an RTA that insures the harmonisation of regulatory regimes and administrative requirements relating to product standards and common documents for customs clearance. Given existing barriers to intra-regional exchange, a functional Arab regional trade agreement has the potential to reinforce MFN liberalisation through the gradual elimination of administrative barriers to trade in the form of regulatory and bureaucratic requirements as well as strengthen the region's trade and investment prospects.

Increasing the Mobility of Professional and Technical Labour

Labour mobility has traditionally served as the primary form of integration among Arab economies. A regional agreement on professional/technical services is critical for promoting investment and technology transfer as well as enhancing value-

added in other sectors. Arab states face increasing pressure to develop sources of global comparative advantage to counter both skill-intensive and capital-intensive exports from East Asia and low skill-intensive manufactures from China and India. In the European market, increasing competition comes from Central Eastern European countries, which have similar resource endowments and the advantage of geographic proximity. Given such shifts in the global and regional trade environments as well as the worldwide growth of trade in services, a regional agreement on professional/technical services could provide a "laboratory" for experimenting with increasingly sophisticated service exports.

Development of regional professional/technical service activities necessarily involves the physical presence of providers. Consequently, liberalisation is inseparable from the free movement of providers within a regional FTA. Efficiency-enhancing people should be as mobile regionally as efficiency-enhancing goods.

Measures for promoting professional/technical labour mobility include removing restrictions on the admission of professionals from other member countries, general co-ordination of immigration regulations and easing procedures for visas and work permits for temporary movement of corporate personnel, and training specialists and service providers such as architects, accountants, lawyers and engineers. The primary aim should be the creation of a region-wide network of skilled professionals able to provide increasingly sophisticated services in regional markets and to develop the capacity successfully to export those services internationally — in ways already being pioneered, in sectors such as petrochemical and chemical engineering. For example, a Tunisian company, Tunisia Engineering et Construction Industrielle, has developed expertise that has enabled it to export a range of services such as basic engineering for phosphoric acid plants in Greece, Romania and Turkey (Ghosh, 1997).

Conclusions

This paper attempts to shed light on whether an Arab Free Trade Agreement is compatible with regional integration under the Euro-Med agreements and unilateral liberalisation under the GATT/WTO framework. Given the proliferation of regional trade agreements world-wide, the emerging policy debate appears focused less on whether to go regional than on the optimal combination and sequencing of bilateral, regional and multilateral trade initiatives necessary to achieve trade liberalisation and growth. Among the MENA Arab states, the proliferation of GATT/WTO, Euro Med and regional arrangements suggests that regional agreements are becoming more important policy instruments for building new sources of global comparative advantage.

An Arab RTA that makes a commitment to gradual liberalisation of agriculture and services as well as industry sends important signals to a newly emerging export elite regarding the seriousness of commitments to reform[15]. Given the history of failed

attempts at Arab integration, Arab governments will in fact have to go further in their commitment to reform regional trade in order to build a reputation of credibility for the private sector.

Signs of an emerging export coalition within Arab states include the Egyptian Exporters' Association established in 1997, which represents more than 100 private-sector exporters of goods and services. This association has lobbied the government to adopt more export-friendly policies, in addition to establishing a $22 million Trade Development Centre co-financed by USAID, which will provide technical assistance and marketing support, particularly for fast-track industries such as textiles, metal goods, chemicals and processed foodstuffs. In Syria, the Aleppo Chamber of Commerce has taken an unprecedented step by publishing a list of policy recommendations for the government in *Tishreen*, an Arabic language daily, earlier this year. The list included changes to investment regulations, customs rules, economic regulation, transport policy and reform of the finance and banking system.

The 1997 Executive Programme represents a first step towards the creation of a more "open" regional agreement by adopting the basic negative list, a time schedule for implementation, incorporation of non-tariff barriers and streamlined procedures regarding calculation of value added. This agreement does not go far enough, however, in liberalising agriculture and services as well as creating institutional mechanisms to deal with more practical aspects of integration, such as the harmonisation of product standards, information exchange and factor mobility. If the gradual pace of implementation permitted under the 1997 Executive Programme is followed, many potential benefits of this agreement will be lost.

From both political and economic viewpoints, there are increasing incentives for creating an institutional mechanism to liberalise trade in goods and services among Arab states while buttressing commitments under unilateral liberalisation and the Euro Med Partnership Agreements. Empirical analysis of Arab trade suggests that intra-regional exports tend to concentrated in non-traditional sectors, such as processed agricultural products and basic manufactures, with the potential for significant forward and backward linkages, R&D intensity and learning opportunities, as well as complementarity and competitiveness. One area of future research would further investigate sectors heavily represented in regional trade in terms of their degree of knowledge intensity. Expanding regional trade opportunities among Arab states in such sectors might encourage productivity gains through the promotion of a new class of export industries, particularly in non-oil goods, and provide an important laboratory for developing regional competitive advantage in services. Other aspects of "deeper" integration include the expansion of firm linkages through SME development and regional franchising as well as enhancing trade-related infrastructure and the mobility of technical and professional skills.

Notes

1. The Arab states included in this study are Algeria, Bahrain, Egypt, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Qatar, Saudi Arabia, Syria, Tunisia, the UAE and Yemen.

2. For a more complete discussion see Hoekman (1995*b*).

3. Trade data for the Arab states were retrieved from the UN TARS Database at the SITC three digit level. There are gaps in the import and export statistics reported to the United Nations. All data are denominated in thousands of current US dollars. Since no measures of volume are included, figures are based on a pure value basis. Growth rates based on these data must be interpreted with caution and for this reason were generally avoided in preparing calculations. Calculations in this paper are based primarily on non-oil exports reported as imports by partner countries to avoid potential inconsistencies between exports as reported by the individual country and imports received by partner country. Delayed shipments of goods or failure to deliver full goods shipments would largely account for such discrepancies.

4. Trade intensity measures determine whether the value of trade between two countries is greater or smaller than would be expected on the basis of their importance in world trade for MENA. The Trade Intensity Index (TII) is defined as the share of one country's exports going to a partner divided by the share of world exports going to the partner and is calculated as follows: $TIij = (xij/Xit) \div (xwj/Xwt)$ where *xij* and *xwj* are the value of *i*'s exports and world exports to *j*, *Xit* is *i*'s total exports and *Xwt* are total world exports. An index of more (less) than unity indicates a bilateral trade flow that is larger (smaller) than would be expected given the partner country's importance in world trade.

5. Calculation of revealed comparative advantage is as follows: (1) $RCAij = (xijw/TXiw) \div (xjw/TXw)$ where *xijw* is the value of country's exports of *j* to the world (region), *xjw* represents exports of commodity *j* by the world, (region), that is, exports of the commodity by all competing producers. *TXiw* and *TXw* represent total exports of all commodities by country and the world (region), respectively.

6. RCA comparisons should be interpreted as a dichotomous measure of competitiveness in this case, since trade volumes are denominated in current US dollars incorporating random variations in commodity prices. In addition, calculation of RCA indices on the basis of intra-Arab trade are likely to be biased by the low volume of trade among Arab states relative to exports to the EU.

7. Trade in different products or inter-industry trade is defined as $INTe = |Xj–Mj|$ where Xj are total exports in product category j and Mj are total imports in product category j. Intra-industry trade is simply all trade that is not inter-industry trade or: $IITj= [(Xj+Mj)-|Xj-Mj|]$. IIT can be normalised to obtain a measure of the share of intra-industry trade for each commodity: $IITj = [(Xj+Mj)-|Xj-Mj|] \div (Xj+Mj)$. In this paper, Grubel-Lloyd indices for intra-industry trade are computed for each sector and summed over nonoil sectors using the following aggregation index: $\Sigma n\ (Xj+Mj)-\Sigma n|Xj-Mj| \div \Sigma n\ (Xj+Mj)$. For a more complete discussion, see Havrylyshyn and Kunzel (1997). The aggregation measure used here has been criticised as being biased downward by the degree of trade imbalance, so that the larger the trade imbalance, the larger the net trade and the smaller the IIT index. Adjustments to correct for this bias exist but previous studies show that they do not significantly change the unadjusted index.

8. One important distinction needs to be made between horizontal IIT, that is goods which have similar qualities but differ in industrial categorisation and those which demonstrate differences in quality but belong to the same category of industrial classification (vertical IIT). For many developing countries, the import of high quality goods and export of low quality goods reflective of vertical IIT may represent factors of complementarity rather than competitiveness, although critics of this approach emphasise that globalisation of production can result in developing countries importing intermediate goods that are domestically processed in the labour-intensive phase and subsequently re-exported as finished goods.

9. In NAFTA tariff rate quotas were used to transform quantitative restrictions into tariffs as within-quota items entered at a relatively low tariff rate and above-quota items facing a prohibitive tariff. This implies no immediate change in the level of protection, but gradual reductions in the above-quota tariff are implemented until this category equals the within-quota rates, and the quota in effect becomes non-binding. Regulation through marketing boards and monopolies is prevalent in agricultural exports but clearly undermines the ability of producers to respond competitively to changes in price signals.

10. Other non-traditional gains associated with RTAs include mechanisms to overcome political time inconsistency and credibility issues (Staiger and Tabellini, 1987), anchoring domestic reforms (Whalley, 1996), signalling potential competitiveness, insurance against generalised trade war, (Perroni and Whalley, 1994), enhanced bargaining power and creating a co-ordination mechanism for mobilising pro-reform constituencies. Traditional gains from regional trade agreements (RTAs) include static trade creation resulting from the elimination of trade barriers among members of a trade bloc (Viner, 1950), favourable terms-of-trade effects (Mundell, 1964), increased levels of private and foreign direct investment and dynamic effects associated with enlarged market size and economies of scale. (Krugman, 1991). Principal losses associated with RTAs include tariff revenue shortfalls (Panagariya, 1996; Bhagwati, 1993), and trade diversion, following a redirection of trade from low-cost to high-cost producers as a result of eliminating tariffs between bloc members while maintaining external tariffs towards the rest of the world. (Viner, 1950). For a more complete discussion, see Fernandez and Portes (1998).

11. Reported on the basis of data from UNCTAD, World Bank; IMF data sources as reported Ghosh (1997).

12. Ghosh (1997) p. 41, data based on UNCTAD (1995).

13. Campos and Root (1996), p. 65.

14. Hoekman, Konan and Maskus (1998), p. 4.

15. In Mexico, during the period leading up to NAFTA from 1985-94, the government focused its energies on forming new coalitions in manufacturing, creating a new export elite and a new group of foreign investors, which weakened the statist elite and the old private elite. Transformation of the power structure was accomplished through privatisation, deregulation and the enactment of more friendly foreign investment rules. NAFTA also effectively represented a commitment by the Mexican government to eliminate protection in agriculture and services in the next fifteen years.

Chapter 10

Linkages Between Euro-Mediterranean and Arab Free Trade Agreements

Jamel E. Zarrouk

Introduction

The recent European initiative to establish a free-trade area (FTA) between the EU and each of the Southern Mediterranean countries has been followed by the establishment of an FTA among the member states of the Arab League and a proliferation of bilateral FTAs between Arab Southern Mediterranean countries. The latter overtures have been viewed as parts of a renewed attempt at Arab economic integration and as measures to counteract the potential adverse effects of the European initiative on intra-regional trade among member states of the Arab League.

This paper assesses the potential for interaction between the Euro-Med Partnership Agreements and intra-regional integration among member states of the Arab League. The European initiative aims at liberalising bilateral trade between the EU and each of the Southern Mediterranean countries in a non-discriminatory fashion over 12 to 15 years. At the same time, members of the Arab League have committed to establishing a single Free Trade Area among the twenty Arab member states, effective 1 January 1998, through the elimination of import duties and other barriers to trade on goods of Arab origin over ten years.

The Euro-Med and Arab regional free trade agreements are expected to create free-trade areas not only with the centre (the EU) but also among the Southern Mediterranean countries in the Arab region by eliminating barriers to trade and investment. There have been no formal linkages between the two trading arrangements. Hence, there is no mechanism through which a member country can maximise the benefits and minimise the costs of entry into both of them.

Arab states in the MENA region external to the EU-Med Agreements will incur costs to the extent that the latter create bilateral trade patterns that discourage intra-Arab regional economic ties. In addition, if the Arab Southern Mediterranean countries do not have comparable FTAs with each other — that is, if they do not create a single free-trade area — then the common denominator will be the EU. This may lead to a scenario in which the Euro-Med FTA attracts investment in export-oriented industries but foreign firms choose to invest in the EU as the "hub", to attain access to all Arab countries as "spokes". Minimising the so-called hub-and-spoke effect by lowering intra-regional trade barriers has become a major incentive for a single Arab FTA among all Arab countries.

This paper addresses issues of feasibility and desirability in linking the Euro-Med Agreements and the Arab League FTA, to expand stagnant trade flows between Arab states as well as minimise potential hub-and-spoke effects. The objective is to highlight areas of interaction between the two sets of agreements and to explore the potential for deeper integration among Arab countries to enhance the benefits of the Euro Med Agreements. The paper defines the linkages as spill-over effects resulting from the Euro-Med agreements, creating a policy framework to which individual Arab countries in the Southern Mediterranean region can credibly commit themselves. Adoption of EU policies and regulations will help to attract investments and enhance competition in domestic markets, while the negotiation of similar free-trade agreements among Arab countries offers a more credible path to regional integration relative to previous regional trade initiatives.

The Importance and Determinants of EU-Arab and Intra-Arab Trade Flows

EU-Arab and Intra-Regional Trade

The member countries of the Arab League[1] have relatively diverse economic and geographic sizes, natural-resource endowments and per capita GDPs (Table 10.1). These features have a significant impact on the region's trade flows and performance. The EU is their major trading partner, accounting for an average of 26 per cent of total Arab exports and 46 per cent of total imports (1995-97). At the same time, the share of EU imports from Arab countries is small and has declined significantly during the 1980s and 1990s, from an average of 25 per cent in 1980 to 6 per cent of EU global imports in 1997. This decline reflects the fall in world oil prices to some extent, as well as the loss of competitiveness and erosion in EU market share following increases in Asian and Central and East European (CEES) exports to the EU (Table 10.2). Japan absorbs 16 per cent of the Arab region's exports and accounts for 12 per cent of its imports. Trade with the United States has been relatively less important to the region (9 per cent of exports and 13 per cent of imports).

Table 10.1. **Basic Economic Indicators of Member Countries of the Arab League FTA, 1997**

	1997 GDP (million $)	Population (million)	Merchandise Exports (million $)	Share in Total Exports of Arab FTA %	Share in World Merchandise. Exports %	Merchandise Imports (million $)	Share in Total Imports of Arab FTA %	Share in World Merchandise. Imports %	Services Exports (million $)	Share in Total Merchandise & Services Exports (%)	Services Imports (million $)
Arab Mediterranean Countries Partners to the EU in the Barcelona Process											
Total	**206 855**	**137 013**	**33 971**	**19.2**	**0.7**	**54 879**	**38.9**	**1.1**	**15 426**	**31**	**9 717**
Algeria	45 268	28 535	13 820	7.8	0.3	9 090	6.4	0.2	NA	NA	NA
Egypt	67 730	58 621	3 921	2.2	0.1	13 020	9.2	0.3	8 300	68	5 382
Jordan	7 259	4 441	1 505	0.9	0.0	4 293	3.0	0.1	1 543	51	1 196
Morocco	36 820	27 665	4 659	2.6	0.1	8 262	5.9	0.2	1 876	29	1 208
Lebanon	13 079	3 163	642	0.4	0.0	7 559	5.4	0.1	NA	NA	NA
Syria	17 128	14 588	3 865	2.2	0.1	4 905	3.5	0.1	1 556	29	1 102
Tunisia	19 571	9 068	5 559	3.1	0.1	7 750	5.5	0.2	2 151	28	829
Other Member Countries of the Arab FTA											
Total	**368 639**	**49 509**	**142 943**	**80.8**	**2.8**	**86 321.0**	**61.1**	**0.6**	**11 895**	**8**	**19 432**
Bahrain	5 361	600	4 321	2.4	0.1	4 093	2.9	0.1	1 347	24	432
Iraq	78 064	20 826	518	0.3	0.0	700	0.5	0.0	NA	NA	NA
Kuwait	30 984	1 754	14 222	8.0	0.3	8 374	5.9	0.2	1 263	8	4 021
Libya	36 481	5 318	9 285	5.2	0.2	7 879	5.6	0.2	NA	NA	NA
Mauritania	1 117	2 318	548	0.3	0.0	657	0.5	0.0	17	3	162
Oman	15 226	2 196	8 881	5.0	0.2	4 588	3.2	0.1	NA	NA	NA
Qatar	8 381	660	4 652	2.6	0.1	2 382	1.7	0.0	NA		
Saudi Arabia	135 990	18 770	64 554	36.5	1.3	27 765	19.7	0.5	9 097	12	14 004
Sudan	6 587	30 739	594	0.3	0.0	1 504	1.1	0.0	44	7	199
UAE	44 608	2 443	32 866	18.6	0.6	25 873	18.3	0.5	NA	NA	NA
Yemen	5 840	15 961	2 502	1.4	0.0	2 506	1.8	0.0	127	5	614

Source: Arab Joint Economic Report 1998; WTO Annual Report (1998) for data on World Trade in Merchandises & Services.

Table 10.2. **Share of Arab Countries' Exports in EU Markets, 1980-97**
(Percentage Share in Total EU Imports)*

	1980	1984	1989	1991	1997
Southern Mediterranean					
Algeria	1.63	2.65	1.42	1.09	1.11
Egypt	0.97	1.11	0.6	0.52	0.34
Jordan	0.01	0.04	0.02	0.02	0.02
Morocco	0.51	0.5	0.62	0.7	0.63
Lebanon	0.02	0.02	0.03	0.02	0.02
Syria	0.35	0.3	0.18	0.3	0.27
Tunisia	0.5	0.37	0.46	0.59	0.56
Sub Total	3.99	4.98	3.34	3.24	2.96
Other Arab Countries					
Bahrain	0.03	0.03	0.04	0.02	0.03
Djibouti	0	0	0	0	0
Iraq	3.7	1.38	0.77	0	0.17
Kuwait	1.39	1.04	0.6	0.26	0.19
Oman	0.14	0.06	0.04	0.03	0.03
Qatar	0.62	0.44	0.03	0.01	0.01
Saudi Arabia	10.55	2.97	1.53	1.61	1.39
UAE	1.93	1.01	0.4	0.12	0.18
Yemen	0	0	0	0.04	0.02
Libya	2.83	2.8	1.44	1.15	1.03
Mauritania	0.06	0.07	0.06	0.05	0.04
Somalia	0.01	0	0.01	0	0
Sudan	0.07	0.07	0.05	0.03	0.02
Sub Total	21.34	9.87	4.98	3.32	3.12
Total Arab Countries	25.33	14.85	8.31	6.55	6.08
China	0.76	1.02	2.35	4.36	4.92
CEEC**			2.79	5.6	6.64

* Excludes intra-EU Imports.
** CEEC: Bulgaria, Czech Rep., Hungary, Poland, Romania and Slovakia.

Source: IMF, Direction of Trade Statistics.

Intra-regional trade among Arab countries expanded little during the last two decades and its share in total regional trade has remained small. In 1997, the value of Arab intra-regional exports was estimated at $15 billion, up from $8 billion a decade earlier. This overall increase results largely from the expansion of non-energy exports, in particular chemicals and clothing. The relative importance of intra-trade in total Arab trade rose moderately during 1986-97, accounting in 1997 for 9 per cent of total trade [(imports + exports)/2]. There is some indication that these levels lie below those attainable under more open and liberal trade regimes, although trade with the EU will continue to dominate the region's trade flows. According to Yeats (1995), intra-regional trade activity may appear low, but given the region's low share of global exports (3 per cent), regional trade is indeed significant.

Trade statistics suggest that the importance of intra-regional trade varies among individual countries: intra-regional trade shares (of both total exports and imports) have been relatively significant in Jordan, Lebanon and Sudan, due largely to import activity in neighbouring GCC markets. Lebanon has a diverse export base and sells more products in GCC markets than the other Arab countries, while Jordan relies on the GCC markets for both exports and imports.

Table 10.3A. **The Value and Share of Intra-Exports in Total Exports of Individual Countries**
($ million and percentages)

	1986	1989	1993	1995	1997	Average Value 1993-97	Average Growth Rate 1993-97	Share in Intra-Arab Exports av. 1993-97	Share in Country's Total Exports av. 1993-97
Jordan	268	383	412	644	781	601	17.3	4.8	43.3
U.A.E.	783	996	1 626	1 417	1 757	1 660	2	13.4	6.8
Bahrain	660	280	367	393	538	423	10	3.4	14.8
Tunisia	165	296	345	497	418	407	4.9	3.3	8.5
Algeria	37	174	172	243	231	223	7.7	1.8	2.1
Saudi Arabia	1 958	3 035	2 742	4 908	6 357	4 759	23.4	38.4	9
Sudan	83	94	172	175	203	198	4.3	1.6	44
Syria	140	502	278	304	265	278	-1.2	2.2	7.9
Somalia	54	67	68	106	110	95	12.7	0.8	57.7
Iraq	420	955	443	411	515	449	3.8	3.6	80.1
Oman	1 597	2 947	598	682	940	724	12	5.8	12.8
Qatar	153	229	281	308	304	286	2	2.3	7.8
Kuwait	574	795	296	311	408	337	8.4	2.7	3.3
Lebanon	253	255	248	522	295	399	4.4	3.2	52.4
Libya	181	47	351	568	987	625	29.5	5	6.5
Egypt	180	275	533	480	496	503	-1.8	4.1	15
Morocco	126	263	338	378	297	337	-3.2	2.7	7.9
Mauritania	17	0	2	1	5	3	24.2	0	0.5
Yemen	120	66	77	94	86	100	2.8	0.8	--
Intra-Arab Exports	**7 768**	**11 659**	**9 349**	**12 442**	**14 993**	**12 408**	12.5	100	8.7
Exports to Row	71 201	99 469	119 072	134 567	162 048	138 596	8		
(Total Exports)	78 970	111 128	128 411	147 009	177 041	151 40	8.4		

Source: Direction of Trade Statistics, International Monetary Fund.

Table 10.3B. **The Value and Share of Intra-Imports in Total Imports of Individual Countries**
($ million and percentages)

	1986	1989	1993	1995	1997	Average Value 1993-97	Average Growth Rate 1993-97	Share in intra Arab Imports av.1993-97	Share in Country's Total Imports av.1993-97
Jordan	576	588	720	869	963	877	7.5	7	23.2
U.A.E .	503	755	1 600	1 271	1 540	1 476	-1	11.8	6.6
Bahrain	1 076	1 425	1 600	1 767	2 041	1 792	6.3	14.4	41.5
Tunisia	200	382	205	492	502	414	25.1	3.3	5.6
Algeria	148	189	229	331	361	315	12.1	2.5	3.4
Saudi Arabia	791	1 076	1 500	1 623	1 967	1 680	7	13.5	5.8
Sudan	220	277	290	460	401	370	8.4	3	28.6
Syria	296	119	96	120	119	114	5.5	0.9	2.2
Somalia	31	28	39	32	34	33	-3.4	0.3	11.2
Iraq	591	1 241	131	303	228	197	14.9	1.6	33.8
Oman	492	632	1 344	1 234	1 315	1 290	-0.5	10.4	29.8
Qatar	65	139	326	322	414	367	6.2	2.9	13.5
Kuwait	414	815	789	952	1 080	931	8.2	7.5	12.7
Lebanon	107	252	497	580	464	535	-1.7	4.3	8.7
Libya	55	244	504	517	561	513	2.7	4.1	10.2
Egypt	321	171	215	449	692	441	33.9	3.5	3.8
Morocco	415	579	753	766	891	800	4.3	6.4	10.6
Mauritania	2	15	44	32	35	35	-5.6	0.3	5.9
Yemen	202	416	163	212	499	284	32.3	2.3	--
Intra-Arab Imports	6 505	9 343	11 045	12 332	14 107	12 461	6.3	100	9.6
Imports To Row	74 864	86 160	112 230	122 198	132 475	121 051	6.2		
(Total Imports)	81 369	95 503	123 275	134 530	146 582	133 512	6.91		

Source: Direction of Trade Statistics, International Monetary Fund.

EU-Arab and Intra-Regional Trade Composition

On average, 45 per cent of intra-regional exports consist of manufactures (Table 10.4)[2]. This contrasts sharply with the share of manufacturing in Arab exports to the EU, which averages 30 per cent. The largest product categories in intra-regional exports are mineral fuels, chemicals, and articles of base metal (aluminium, articles of iron and steel) and prepared foodstuffs. In contrast, major components of the Arab region's exports to the EU are mineral fuels, which account for two-thirds of total exports, followed by textiles and clothing and chemicals. In general, the structure of intra-regional exports suggests increased trading in industrial goods, chiefly chemicals, electrical articles, machinery, clothing and textiles.

Regarding imports (Table 10.5), the share of food in intra-regional imports (22 per cent) is more than double its share in trade with the EU, but machinery and transport equipment constitutes the single most important category. The commodity structure of intra-regional imports is more diverse than Arab imports from the EU. These comparisons suggest that new regional export capacity may possibly have developed, reducing disparities between intra-regional exports and Arab countries' import needs (Figures 10.1 and 10.2).

Table 10.4. **Composition of Exports in Selected Countries**

HS-Chapters	Description	Egypt			Jordan			Lebanon		
		Intra-Arab	EU	World	Intra-Arab	EU	World	Intra-Arab	EU	World
1-5	Live Animals, Meat, Fish	3.43	0.28	0.59	4.81	0.75	2.28	0.41	2.32	0.93
6-14	Vegetables & Fresh Fruits	18.62	4.89	6.47	13.43	5.56	6.40	14.28	1.13	7.92
15-24	Prepared Foodstuffs	7.40	0.53	1.57	34.64	8.29	16.78	6.58	8.01	11.24
25-27	Mineral Products	8.54	36.82	47.49	6.42	0	13.55	1.33	0.24	0.77
28-40	Chemicals, Plastics and Articles thereof	18.48	6.52	6.36	27.54	27.86	42.78	12.7	14.71	13.43
41-43, 64-67	Leather, Footwear, Travel Goods	1.90	0.36	0.51	0.63	0.8	2.26	6.18	1.63	4.33
44-48	Pulp and Wood, Paper Products	1.83	0.76	0.65	1.5	3.03	1.44	6.62	1.99	4.22
49	Printed Books, Newspapers	1.14	0.03	0.19	0.26	0.06	1.07	5.26	2.61	3.71
50-63	Textiles and Clothing	10.11	32.90	23.83	2.5	18.19	4.31	12.49	19.24	12.21
68-71	Articles of Stone, Cement, Ceramic Products	3.28	2.55	1.69	2.74	0.92	1.46	17.16	4.34	13.52
72-83	Articles of Base Metal	16.28	11.01	8.23	2.7	2.14	2.78	4.85	20.79	10.51
84-85	Machinery and Mechanical Appliances	2.38	0.27	0.50	1.93	11.86	2.48	7.14	15.47	10.41
86-89	Vehicles and Transport Equipment	0.91	1.52	0.74	0.36	16.12	2.09	3.08	5.6	4.04
90-92	Precision Instruments and Apparatus	0.25	0.03	0.05	0.11	2.8	0.06	0.45	1.21	0.77
93-97	Miscellaneous Manufactures	5.45	1.53	1.12	0.43	1.62	0.26	1.47	0.71	1.98
	Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	**100.00**
	Value of Total Exports (million $) in 1997	494.70	1 559.83	3 815.99	781.06	109.66	1 505.00	317.93	148.53	642.28

Source: National data based on the harmonised system classification; computed by author.

Table 10.5. **Composition of Selected Arab FTA Countries' Imports**

HS-Chapters	Description	Egypt			Jordan			Lebanon		
		Intra-Arab	EU	World	Intra-Arab	EU	World	Intra-Arab	EU	World
1-5	Live Animals, Meat, Fish	0.98	5.28	3.48	0.86	5.05	4.19	2.17	6.93	5.25
6-14	Vegetables & Fresh Fruits	3.95	3.99	11.13	9.29	1.42	8.35	24.06	1.44	6.33
15-24	Prepared Foodstuffs	1.80	4.29	9.77	2.4	5.54	8.36	7.22	7.21	8.39
25-27	Mineral Products	14.81	2.07	3.93	56.82	1.83	13.90	30.01	10.41	9.62
281+0	Chemicals, Plastics and Articles thereof	32.96	17.92	14.50	13.79	17.56	14.25	9	14.89	10.80
41-43, 64-67	Leather, Footwear, Travel Goods	0.02	0.09	0.11	0.17	0.23	0.31	0.24	1.43	1.30
44-48	Pulp and Wood, Paper Products	0.66	20.70	12.42	1.24	2.84	4.81	3.39	2.8	3.48
49	Printed Books, Newspapers	0.73	0.25	0.18	0.28	0.33	0.26	0.51	0.66	0.51
50-63	Textiles and Clothing	3.19	1.20	2.55	3.66	3.42	5.57	3.39	6.28	6.49
68-71	Articles of Stone, Cement, Ceramic Products	0.39	1.57	1.69	1.13	6.18	2.48	7.56	5.85	10.11
72-83	Articles of Base Metal	26.88	7.18	9.78	8.35	8.13	10.00	9.05	7.55	8.12
84-85	Machinery and Mechanical Appliances	5.73	26.71	20.13	1.62	27.88	13.64	2.08	19.78	15.48
86-89	Vehicles and Transport Equipment	4.97	3.99	5.26	0.11	15.93	10.67	0.26	10.69	9.98
90-92	Precision Instruments and Apparatus	0.72	2.65	2.30	0.04	2.88	1.91	0.08	1.66	1.95
93-97	Miscellaneous Manufactures	2.21	2.11	2.77	0.24	0.78	1.30	0.98	2.42	2.19
	Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Source: National data based on the harmonised system classification; computed by author.

Figure 10.1. **Composition of Exports in Intra-Regional Trade and Arab Trade with the EU**
(Percentage share based on average value)

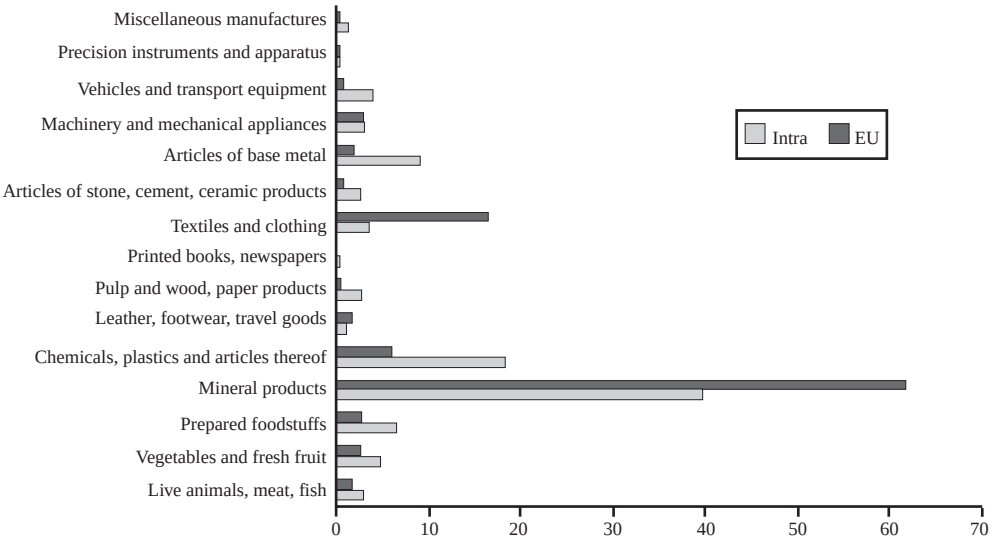
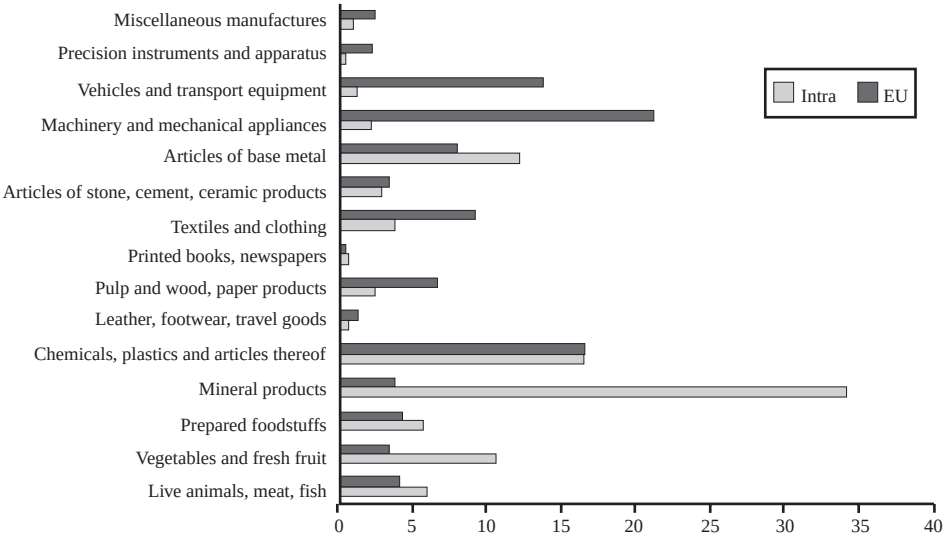


Figure 10.2. **Composition of Imports in Intra-Regional Trade and Arab Trade with the EU**
(Percentage share based on average value)



Dynamic Products in Arab-EU and Intra-Regional Trade

Could evolving exchange patterns in intra-regional trade and regional trade with the EU provide a larger industrial base for future expansion? This paper does not compute revealed comparative advantage (RCA) indices but draws upon the results of existing studies (Yeats, 1995; Limam and Abdalla, 1998). According to these studies, the greatest potential for intra-regional trade expansion exists between energy-exporting countries, such as the GCC, and more diversified economies like Lebanon, Syria and Egypt. However, Yeats (1998) warns that RCA indices can be misleading, because can be measured well only in a trading environment with very low external trade constraints such as tariffs and non-tariff barriers.

Further comparative analysis of Arab trade with the EU and intra-regional exchange examines the potential for specialisation and intra-industry trade in Arab countries. Intra-industry trade is two-way exchange within the same group of products, likely with the same factor intensity in the production process. Theoretical analyses and empirical studies show that a high level of intra-industry trade plays an important positive role in regional arrangements by allowing member countries to integrate more fully into global and regional markets and by accelerating industrialisation and growth in developing countries.

According to Havrylyshyn and Kunzel (1997) IIT indices[3] for Arab countries are lower than those for countries with recently established regional trade arrangements such as NAFTA, APEC and MERCOSUR (which has similar per capita incomes). Nevertheless, computed data for Arab countries show rapidly increasing levels of intra-industry trade relative to a decade ago. Moreover, intra-industry trade levels are higher for trade among Arab countries (i.e. intra-regional trade) and with other developing countries relative to trade with the EU. This suggests that free-trade agreements between Arab countries and the EU should be reinforced by a regional free-trade agreement such as the Arab League FTA. In short, intra-industry trade could be an important vehicle for promoting and supporting the Arab FTA.

To support these findings an attempt was made to identify the most dynamic export products for six major regional trading countries (Egypt, Jordan, Lebanon, Morocco, Saudi Arabia and Tunisia)[4]. The purpose was to determine whether dynamic products in intra-regional trade and trade with the EU have production features different from traditional exports and therefore present new export opportunities in both regional and the EU markets.

Comparative analysis of dynamic products reveals three important characteristics[5]. First, in most countries the number of dynamic products (among the 97 HS chapters) is higher for intra-regional trade than for Arab exports to the EU, suggesting that opportunities for intra-regional trade in processing activities have expanded. For instance, Lebanon records the highest number of dynamic products, accounting for 50 out of the 97 S chapters in intra-regional exports, while only 13 among the 97 are found to be dynamic products in Lebanon's exports to the EU. Saudi Arabian data

show that dynamic products account for 38 among the 97 in intra-regional trade, as against only five in exports to the EU. For Tunisia the analogous counts are 39 and 21. Moreover, the export shares of dynamic products in all the countries studied range from 28 per cent (for Egypt) to 95 per cent (for Lebanon) in intra-regional trade, higher than export shares of dynamic products in total exports to the EU for all countries except Jordan (Tables 10.6 and 10.7).

Finally, while there is some overlap between dynamic products in intra-regional trade and exports to the EU, the majority of dynamic products maintain a differentiated export niche in intra-regional trade. This also suggests that intra-regional export niches may help develop export capacity and enhance the prospects for success in regional trade arrangements.

Table 10.6. **Most Dynamic (non-oil) Products in Intra-Regional Export and to the EU Markets**

Table A

Matching?	H S Code	Product Description	Growth Rate (Intra-Arab), 1993-97	Export Share (Intra-Arab), Av. 1996-97
		EGYPT		
1	43	Textile and Clothing	749.57	1.56
	15	Agricultural and Raw Materials	59.17	2.44
	46	Semi Manufactures	57.97	0.18
	40	Chemicals	49.76	1.27
	34	Chemicals	47.95	3.27
	18	Prepared Foodstuffs	32.73	0.15
1	87	Other Manufactured Products	31.24	0.91
	20	Prepared Foodstuffs	29.56	1.11
	9	Agricultural and Raw Materials	29.53	0.71
	11	Agricultural and Raw Materials	24.56	0.16
1	28	Chemicals	24.29	2.62
	68	Semi Manufactures	24.07	0.60
	23	Prepared Foodstuffs	23.90	1.29
	29	Chemicals	18.26	0.21
1	30	Chemicals	16.74	8.29
	95	Semi Manufactures	10.50	0.27
	62	Textile and Clothing	8.99	3.04
4 Matches out of 17		**Total**		**28.09**

Table B

Matching?	H S Code	Product Description	Growth Rate (EU), 1993-97	Export Share EU, Av. 1996-97
	48	Semi Manufactures	280.65	0.68
1	87	Other Manufactured Products	256.84	1.48
	96	Semi Manufactures	221.71	1.26
	60	Textile and Clothing	141.95	0.24
	85	Other Manufactured Products	82.33	0.20
	69	Semi Manufactures	64.77	2.28
	39	Chemicals	60.51	2.60
	25	Mineral Products	48.31	0.79
1	28	Chemicals	27.42	0.93
	38	Chemicals	24.48	1.30
1	30	Chemicals	18.54	0.19
	33	Chemicals	15.01	0.66
1	63	Textile and Clothing	14.32	4.59
	94	Semi Manufactures	13.96	0.25
4 Matches out of 14		**Total**		**17.46**

Table 10.6 (contd. 1)

Table A

Matching?	H S Code	Product Description	Growth Rate (Intra-Arab), 1993-97	Export Share (Intra-Arab), Av. 1996-97
		SAUDI ARABIA		
1	89	Other Manufactured Products	1687.42	2.23
	55	Textile and Clothing	312.96	0.56
	96	Semi Manufactures	308.32	0.92
	91	Other Manufactured Products	111.64	0.24
	72	Semi Manufactures	109.92	4.36
	79	Semi Manufactures	91.17	0.10
	29	Chemicals	73.86	1.26
	63	Textile and Clothing	56.31	0.33
	18	Prepared Foodstuffs	53.38	0.15
	74	Semi Manufactures	51.81	1.03
	57	Textile and Clothing	41.94	0.87
	1	Agricultural and Raw Materials	37.02	0.12
	2	Agricultural and Raw Materials	36.99	0.60
	31	Chemicals	36.72	0.49
	20	Prepared Foodstuffs	34.96	0.59
	70	Semi Manufactures	34.08	0.87
	16	Prepared Foodstuffs	32.01	0.15
	4	Agricultural and Raw Materials	28.87	1.85
1	76	Semi Manufactures	28.09	1.60
	15	Agricultural and Raw Materials	27.37	0.50
	25	Mineral Products (non-oil)	23.93	1.57
1	39	Chemicals	23.71	8.93
	48	Semi Manufactures	23.14	2.46
	86	Other Manufactured Products	22.79	2.49
	38	Chemicals	22.24	0.44
	19	Prepared Foodstuffs	21.64	0.53
	33	Chemicals	20.25	0.63
	8	Agricultural and Raw Materials	18.28	0.60
	7	Agricultural and Raw Materials	18.06	0.48
	44	Semi Manufactures	16.65	0.11
	17	Prepared Foodstuffs	15.69	0.15
	68	Semi Manufactures	15.57	0.77
1	32	Chemicals	14.81	0.84
	12	Agricultural and Raw Materials	14.64	0.64
	85	Other Manufactured Products	14.49	2.26
	73	Semi Manufactures	13.73	2.47
	22	Prepared Foodstuffs	11.87	0.35
	34	Chemicals	9.08	1.61
4 Matches out of 38		**Total**		**46.51**

Table B

Matching?	H S Code	Product Description	Growth Rate (EU), 1993-97	Export Share EU, Av. 1996-97
1	32	Chemicals	130.44	0.18
1	76	Semi Manufactures	60.11	0.28
	28	Chemicals	40.04	0.16
	41	Semi Manufactures	32.81	0.12
1	89	Other Manufactured Products	26.07	0.21
1	39	Chemicals	20.64	2.07
4 Matches out of 6		**Total**		**3.02**

Table10.6 (contd. 2)

Table A

Matching?	H S Code	Product Description	Growth Rate (Intra-Arab), 1993-97	Export Share (Intra-Arab), Av. 1996-97
		LEBANON		
	62	Textile and Clothing	974.72	8.10
	51	Textile and Clothing	964.58	0.44
	29	Chemicals	866.41	0.45
	37	Chemicals	864.10	0.16
	78	Semi Manufactures	822.68	0.33
1	63	Textile and Clothing	763.15	0.27
	17	Prepared Foodstuffs	676.71	0.96
	49	Semi Manufactures	647.06	5.26
1	39	Chemicals	619.60	3.80
1	30	Chemicals	619.18	0.57
	70	Semi Manufactures	617.75	1.36
	57	Textile and Clothing	615.98	0.26
	95	Semi Manufactures	612.35	0.13
	48	Semi Manufactures	591.93	6.35
	91	Other Manufactured Products	582.73	0.25
	8	Agricultural and Raw Materials	577.61	8.92
	33	Chemicals	575.24	1.07
	20	Prepared Foodstuffs	564.09	1.90
	7	Agricultural and Raw Materials	558.50	4.30
1	21	Prepared Foodstuffs	556.33	1.55
1	84	Other Manufactured Products	547.46	5.72
	38	Chemicals	540.92	0.66
	71	Semi Manufactures	536.73	12.86
	11	Agricultural and Raw Materials	529.16	0.57
	42	Semi Manufactures	528.54	0.76
	28	Chemicals	526.65	0.82
1	22	Prepared Foodstuffs	523.12	0.74

Table B

Matching?	H S Code	Product Description	Growth Rate (EU), 1993-97	Export Share EU, Av. 1996-97
1	31	Chemicals (fertilisers)	699.80	15.48
1	69	Semi Manufactures	578.61	0.31
	54	Textile and Clothing	541.63	0.14
1	30	Chemicals	286.60	0.11
1	96	Semi Manufactures	170.21	0.19
1	39	Chemicals	118.46	0.40
1	4	Agricultural and Raw Materials	97.95	0.51
	12	Agricultural and Raw Materials	87.32	0.38
1	41	Semi Manufactures	80.29	0.95
1	76	Semi Manufactures	71.13	19.01
1	84	Other Manufactured Products	68.82	12.11
1	64	Semi Manufactures	36.18	0.76
1	63	Textile and Clothing	15.97	2.81
0	25	Mineral Products (non-oil)	14.93	0.27
	74	Semi Manufactures	12.94	0.56
1	21	Prepared Foodstuffs	12.88	2.02
	88	Other Manufactured Products	12.83	5.07
1	22	Prepared Foodstuffs	8.58	3.30
		Agricultural and Raw Materials	8.53	2.10

Table10.6 (contd. 3)

LEBANON (contd.)

Table A

Matching?	H S Code	Product Description	Growth Rate (Intra-Arab), 1993-97	Export Share (Intra-Arab), Av. 1996-97
		LEBANON		
1	76	Semi Manufactures	513.00	2.13
	32	Chemicals	510.95	0.86
	90	Other Manufactured Products	507.61	0.19
1	64	Semi Manufactures	497.79	5.21
	9	Agricultural and Raw Materials	487.33	0.28
	18	Prepared Foodstuffs	482.37	0.58
	55	Textile and Clothing	481.07	0.32
	94	Semi Manufactures	473.44	1.21
1	96	Semi Manufactures	466.15	0.11
1	4	Agricultural and Raw Materials	457.67	0.33
	34	Chemicals	455.59	0.37
	82	Semi Manufactures	440.09	0.15
	87	Other Manufactured Products	432.44	1.19
1	69	Semi Manufactures	428.23	1.93
	85	Other Manufactured Products	416.05	1.42
1	31	Chemicals	402.05	3.73
	15	Agricultural and Raw Materials	392.06	0.66
1	41	Semi Manufactures	382.77	0.15
	83	Semi Manufactures	382.60	0.26
	44	Semi Manufactures	372.37	0.26
	61	Textile and Clothing	327.46	2.84
	68	Semi Manufactures	319.71	1.01
	73	Semi Manufactures	292.06	1.28
13 Matches out of 50		**Total**		**95.04**

Table B

Matching?	H S Code	Product Description	Growth Rate (EU), 1993-97	Export Share EU, Av. 1996-97
13 Matches out of 19		**Total**		**66.48**

Table 10.6 (contd. 4)

Table A

Matching?	H S Code	Product Description	Growth Rate (Intra-Arab), 1993-97	Export Share (Intra-Arab), Av. 1996-97
		TUNISIA		
	17	Prepared Foodstuffs	314.16	0.58
1	63	Textile and Clothing	169.55	2.70
	37	Chemicals	163.23	0.96
1	74	Semi Manufactures	132.48	0.45
1	58	Textile and Clothing	122.34	0.19
	21	Prepared Foodstuffs	107.33	0.71
	26	Mineral Products (non-oil)	84.16	0.31
1	24	Prepared Foodstuffs	76.83	1.36
	7	Agricultural and Raw Materials	76.06	0.94
	38	Chemicals	69.01	0.84
	40	Chemicals	67.10	6.62
	29	Chemicals	66.46	0.36
	54	Textile and Clothing	64.08	0.53
	11	Agricultural and Raw Materials	57.13	4.40
	20	Prepared Foodstuffs	50.49	1.52
	96	Semi Manufactures	48.28	0.32
	76	Semi Manufactures	47.73	1.89
	82	Semi Manufactures	47.25	0.35
	19	Prepared Foodstuffs	43.53	3.42
	62	Textile and Clothing	39.70	1.47
	8	Agricultural and Raw Materials	38.40	0.85

Table B

Matching?	H S Code	Product Description	Growth Rate (EU), 1993-97	Export Share EU, Av. 1996-97
	15	Agricultural and Raw Materials	119.89	5.48
	43	Semi Manufactures	80.22	0.12
1	94	Semi Manufactures	56.58	0.26
1	74	Semi Manufactures	50.63	0.13
1	72	Semi Manufactures	46.26	0.48
	87	Other Manufactured Products	42.80	0.58
	45	Semi Manufactures	38.09	0.10
	39	Chemicals	35.85	0.33
1	58	Textile and Clothing	33.86	0.12
	53	Textile and Clothing	33.03	0.18
1	85	Other Manufactured Products	31.30	10.22
	3	Agricultural and Raw Materials	27.66	2.05
	25	Mineral Products (non-oil)	24.01	0.71
	47	Semi Manufactures	22.95	0.20
1	69	Semi Manufactures	22.53	0.26
1	64	Semi Manufactures	16.80	5.12
	48	Semi Manufactures	13.19	0.12
1	24	Prepared Foodstuffs	11.97	0.11
	61	Textile and Clothing	8.98	7.87
	42	Semi Manufactures	8.79	0.69
1	63	Textile and Clothing	8.00	0.71

Table 10.6 (contd. 5)

TUNISIA (contd.)

Table A

Matching?	H S Code	Product Description	Growth Rate (Intra-Arab), 1993-97	Export Share (Intra-Arab), Av. 1996-97
		TUNISIA		
1	85	Other Manufactured Products	38.20	5.63
	28	Chemicals	37.96	15.86
	49	Semi Manufactures	33.66	0.14
	90	Other Manufactured Products	28.79	0.73
1	94	Semi Manufactures	25.99	1.34
	51	Textile and Clothing	23.08	0.14
	55	Textile and Clothing	21.39	0.18
	33	Chemicals	18.77	1.37
	10	Agricultural and Raw Materials	17.16	0.16
	84	Other Manufactured Products	17.10	5.08
	65	Semi Manufactures	14.18	0.12
	22	Prepared Foodstuffs	13.53	0.78
1	69	Semi Manufactures	13.15	3.30
1	72	Semi Manufactures	12.74	3.67
	32	Chemicals	11.47	1.03
1	64	Semi Manufactures	9.85	0.59
	73	Semi Manufactures	8.66	3.94
9 Matches out of 39		**Total**		**74.84**

Table B

Matching?	H S Code	Product Description	Growth Rate (EU), 1993-97	Export Share EU, Av. 1996-97
9 Matches out of 21		**Total**		**35.85**

Table 10.6 (contd. 6)

Table A

Matching?	H S Code	Product Description	Growth Rate (Intra-Arab), 1993-97	Export Share (Intra-Arab), Av.1996-97
		JORDAN		
	56	Textile and Clothing	1565.38	0.36
1	62	Textile and Clothing	1228.74	0.64
	15	Agricultural and Raw Materials	771.18	32.41
	55	Textile and Clothing	155.45	0.53
	34	Chemicals	120.92	0.50
	9	Agricultural and Raw Materials	116.11	0.17
1	33	Chemicals	109.40	0.28
1	68	Semi Manufactures	97.19	1.95
	49	Semi Manufactures	86.65	0.26
1	69	Semi Manufactures	74.59	0.24
	71	Semi Manufactures	67.56	0.44
	32	Chemicals	67.45	0.97
	19	Prepared Foodstuffs	45.54	0.36
1	76	Semi Manufactures	44.99	0.52
1	48	Semi Manufactures	40.77	1.46
1	25	Mineral Products (non-oil)	39.71	6.42
1	38	Chemicals	37.93	0.39
1	31	Chemicals	36.77	0.99
1	39	Chemicals	33.60	2.34
	28	Chemicals	31.56	3.43
1	87	Other Manufactured Products	14.30	0.36
	74	Semi Manufactures	13.50	0.10
	30	Chemicals	13.31	18.42
1	7	Agricultural and Raw Materials	12.89	10.04
12 Matches out of 24		**Total**		**83.56**

Table B

Matching?	H S Code	Product Description	Growth Rate (EU), 1993-97	Export Share EU, Av. 1996-97
1	68	Semi Manufactures	274.23	0.19
	97	Semi Manufactures	221.01	0.83
	24	Prepared Foodstuffs	200.95	0.19
	21	Prepared Foodstuffs	196.30	0.66
	95	Semi Manufactures	181.61	0.10
	63	Textile and Clothing	132.38	0.19
1	48	Semi Manufactures	125.57	3.03
	72	Semi Manufactures	121.88	0.16
	51	Textile and Clothing	94.56	0.31
	61	Textile and Clothing	85.87	2.42
	2	Agricultural and Raw Materials	78.87	0.33
1	87	Other Manufactured Products	66.65	5.22
1	76	Semi Manufactures	53.78	1.10
	73	Semi Manufactures	42.33	0.34
	82	Semi Manufactures	37.99	0.10
	85	Other Manufactured Products	37.35	5.18
	79	Semi Manufactures	36.86	0.22
1	7	Agricultural and Raw Materials	36.36	4.94
1	69	Semi Manufactures	33.50	0.27
1	33	Chemicals	31.67	0.48
1	62	Textile and Clothing	31.58	12.89
1	25	Mineral Products (non-oil)	30.40	48.86
	84	Other Manufactured Products	26.18	6.68
	20	Prepared Foodstuffs	24.67	6.92
	94	Semi Manufactures	22.65	0.69
1	38	Chemicals	16.06	0.27
1	31	Chemicals	12.54	25.20
1	39	Chemicals	11.61	0.74
12 Matches out of 28		**Total**		**128.50**

Table 10.7. **Comparative Profile of Most Dynamic Export Sectors in Arab Countries**

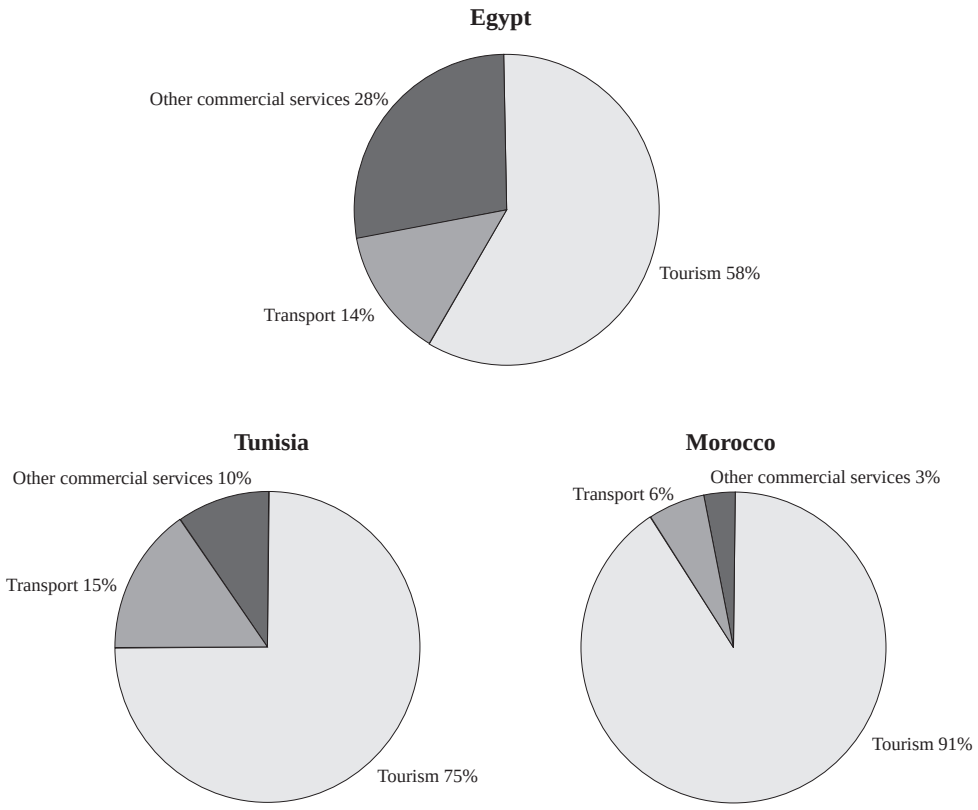
Country	Intra-Regional Markets: Dynamic Export Products		EU Markets: Dynamic Export Products		Matching Dynamic Export Products	
	Number of HS Chapters	Share of Intra-regional Trade (%)	Number of HS Chapters	Share in Exports to EU (%)	Number of HS Chapters	Production Description
Egypt	17	28.1	14	17.46	4	Chemicals, Associated Transport equipment
Jordan	24	83.6	26	86.29	12	Chemicals, semi-manufactures, minerals (non-oil), fertilisers
Lebanon	50	95.0	19	66.48	13	Chemicals, semi-manufactures
Morocco	18	45.8	18	34.26	4	Semi-manufactures, textiles & clothing, agricultural & raw mat.
Saudi Arabia	38	46.2	6	3.02	4	Chemicals, semi-manufactures
Tunisia	39	74.8	21	9	9	Semi-manufactures, textiles & clothing, prepared foodstuffs

Arab-EU and Intra-regional Trade in Services

The pattern of services trade generally complements merchandise trade flows. Among Arab countries, but the intra-regional share in total trade in commercial services has been relatively larger than for merchandise trade, reflecting cultural similarity, proximity for services delivery and preferential treatment of Arab services-related investment. For example, Central Bank data from Egypt, Morocco and Tunisia for 1995-97 show that Arab countries absorb around 17 per cent of total commercial service (non-government) exports from Egypt, 8 per cent from Morocco and 13 per cent from Tunisia. The EU takes up 70 per cent of Morocco's and Tunisia's commercial services exports and around 62 per cent of Egypt's services exports.

Tourism is by far the most important item in commercial services, accounting for 58 per cent of Egypt's services exports to Arab countries, 75 per cent of Tunisia's and 91 per cent of Morocco's. Transportation, the distant second, accounts for some 6 per cent of Morocco's and 15 per cent of both Egypt's and Tunisia's exports of services to Arab countries. Data on the composition of trade in commercial services with the EU were not available. Ironically, the Arab League FTA has not incorporated services liberalisation. Moreover, Arab countries did little to open their services markets through commitments within the General Agreement on Trade in Services (GATS.) Regional liberalisation of services in sectors such as banking, insurance, and transportation would enhance competition in larger regional markets (Figure 10.3).

Figure 10.3 **The Composition of Intra-Regional Exports of Commercial Services** (Average of 1995-1997)



Analytical Framework

The recent European initiative to create a wider Europe-Mediterranean Economic Area is part of a more generalised trend towards regionalism, a powerful force shaping the world economy today. The proliferation of free trade between larger developed countries and smaller emerging economies partly reflects elements of the new regionalism. Following this trend, the EU has concluded agreements with the Central and Eastern European countries. Jordan, Morocco and Tunisia have signed similar agreements. Moreover, there has been revived interest in intra-regional integration among the member states of the Arab League, culminating in the Arab League initiative to create an FTA effective in ten years' time.

The debate regarding benefits of joining one or more such arrangements has not provided a clear-cut theoretical or empirical impetus to encourage their proliferation. Nevertheless, it remains lively, particularly in the post-Uruguay Round era when trade barriers are being substantially reduced world-wide and the international trading system is being deepened and broadened.

Traditional and Non-traditional Welfare Effects of the Euro-Med FTAs

The Euro-Med Partnership Agreements aim to liberalise trade in a non-discriminatory fashion and thus to improve access to the much larger EU market. They also aim to increase import competition in domestic South Mediterranean markets. Standard customs union theory (Viner, 1950) predicts that the elimination of tariffs between two countries that keep their external tariffs toward the rest of the world could lead to reduced economic welfare that outweighs the gains from trade creation. When trade diversion outweighs trade creation, a loss of efficiency will increase the likelihood that losses from trade preferences will exceed gains from freer trade. In the Euro-Med FTAs, it has been argued that the impact of trade diversion will likely be limited because of geographic proximity and well-established trade links between the EU and the Southern Mediterranean countries. Yet this would suggest that these less developed, smaller and economically weaker countries will have to reduce their protectionist trade regimes relatively more and bear the redistribution cost in the form of substantial losses from tariff revenues and the restructuring of local firms not able to sustain increased competition from Europe.

Such asymmetry in the redistribution of gains from the EU-Med FTAs has been contrasted with dynamic benefits that would accrue from more foreign investment in these countries. Reduction or elimination of trade barriers within the region would presumably encourage the reallocation of factors of production to reflect the region's pattern of comparative advantage more closely. There are some prerequisites to realising these beneficial effects. Membership in the Euro-Med FTAs should coincide with sound policies at home, including liberalisation of the institutional framework, legal provision for capital inflows, enhanced legal means for dispute resolution and legal recourse on government contracts (Blomström and Kokko, 1997; Page and Underwood, 1997).

In addition to the effects of the EU-Med FTAs on investment flows, these agreements might possibly have a dynamic effect on industrial location. Puga and Venables (1998) show that a North-South preferential trade arrangement like the Euro-Med FTAs will dislocate industry from the large economy to the small Mediterranean countries as result of wage differentials, assuming that industries are predominantly located in the EU initially. Other factors conducive to North-South liberalisation are low remaining barriers to access the EU markets, namely proximity and low unit labour costs in the south.

Potential Effects of the Arab League FTA

The history of Arab regional integration arrangements, thus far, has not been encouraging for future prospects of intra-regional trade. The poor record in promoting Arab regional co-operation has been widely discussed in other papers[6]. Looking forward, the recent Arab League initiative establishing a Free Trade Area and the proliferation of bilateral free-trade arrangements between Southern Mediterranean countries in the region (e.g. between Egypt and Tunisia, Egypt and Lebanon and Egypt and Morocco) have paid more attention to economic considerations. These initiatives have been supported by ongoing liberalisation of trade and investment policies in individual Arab countries. The implementation of such reforms should create an enabling economic environment for countries in the region to exploit further trade opportunities and economies of scale.

Moreover, the implementation of trade liberalisation measures following the Uruguay Round is expected to confront Southern Mediterranean countries with less advantageous access to the EU markets, their key trading partners, as they lower tariffs and non-tariff barriers *vis-à-vis* the rest of the world. The likely erosion in preferential treatment of exports of Arab Southern Mediterranean countries to EU markets raises the return to shifting trade flows into other market access opportunities, notably, intra-regional markets.

The potential benefits of an intra-regional FTA among member states of the Arab League include enlarging market size, to the extent that a larger market can attract industry. Traditionally, a regional FTA among developing countries is assumed to substitute for rather than complement an FTA between developed and developing member countries, as any preferences provided to intra-regional trade would divert an equivalent amount of trade with developed countries and reduce the region's dependence on industrial countries. Empirical evidence shows this is not always the case, however, because products of primary importance to developing countries are normally capital-intensive goods in which they do not have a comparative advantage.

Linking the Euro-Med and the Arab League FTAs

The Euro-Med Agreements can enhance direct gains from trade liberalisation through various mechanisms. By providing a binding mechanism for Arab Southern Med countries to commit to various policies, these agreements can promote efficiency in them, with spillover effects on the intra-regional free-trade option.

One particularly crucial area in the provisions of the Euro-Med Agreements involves the harmonisation of domestic economic policies, particularly the alignment of national production standards, customs procedures for traders and competition policy laws with those of the EU. The Euro-Med Agreements commit Southern Med member countries to adopt EU competition laws, after a given transition period. Enforcement

is left to the European Commission and the national authorities. Given the lack of well developed competition rules in most of the Arab Southern countries, this will lead to the extension of EU competition policy to the Arab Southern Med countries.

This harmonisation of policy could help the Arab Southern Med countries not only to implement the right policies but also to provide certainty and credibility to the domestic economic environment. Such credibility makes it easier for the private sector to plan and invest. Overall credibility also brings about the expansion of Arab Southern Med countries' capacity to develop industry.

Another area of binding domestic policy concerns the provisions of Euro-Med Agreements concerning government subsidies and public aid granted to selected industries. Many likely beneficiaries of state aid in the Southern Med countries will be potential exporters to the EU. The Euro-Med Agreements provide a transition period after which state aid such as granting tax breaks and subsidies to particular industries will be considered a source of distortion to competition among Southern Med countries for global investments. The Euro-Med Agreements could act as a binding mechanism for Arab Southern Med countries to commit to such industrial policy disciplines in a way that the Arab League FTA would not.

Regarding potential hub-and-spoke arrangements, the European Union has become the hub of a large web of FTAs by forming bilateral FTAs with countries both in Central and Eastern Europe and in the Mediterranean. If trade barriers between Southern Med countries remain high, foreign investors have an incentive to locate industry in the EU as the hub by offering them access to all the Southern FTAs. This deters EU investors and firms from investing in the Southern Med countries because of intra-regional trade barriers. These countries therefore have an incentive to engage in multilateral regional liberalisation to overcome potential hub-and-spoke effects.

Comparison of the Main Features of Euro-Med Agreements and the Arab League FTA

Scope and Coverage of Trade Liberalisation in the Euro-Med and Arab FTA Agreements

The typical Euro-Med Agreement aims at eliminating all tariffs on industrial goods over twelve years. Given that Arab Southern Med countries already have free access to EU markets for most of their manufactured goods, such liberalisation will have limited benefits for exports from the Arab Southern Med countries. This requires that they dismantle tariffs and non-tariff measures on imports of industrial goods from the EU.

In the EU-Tunisia FTA, liberalisation is phased depending on the industrial goods concerned. Full liberalisation of intermediate inputs and capital goods, which face low tariffs, will occur upon the implementation of the Agreement, whereas tariffs

on imports of consumer goods competing with domestic production will be phased out over five to twelve years. During a grace period of four years tariffs remain unchanged, whence gradual reduction starts.

This gradualist strategy is meant to reduce the fiscal adjustment cost for Tunisia. Its shortcoming lies in providing higher effective protection to consumer goods during the transition period. Domestic industries will benefit from tariff reductions on their inputs while their final products will remain protected. Moreover, the transition period would allow for pressures from interest groups to resist market opening or to induce the government to use safeguard measures.

In the Arab League FTA, liberalisation provisions for industrial goods are included in an Executive Programme to implement the 1981 Agreement for Facilitation and Promotion of Trade among the Member States of the Arab League. The main shortcoming of the 1981 Agreement was its status as only a declaration of the signatories' intent. It had no binding terms and everything was open to negotiation. Moreover, the liberalisation scheme it adopted took a product-by-product approach. Negotiating countries were allowed to pick and choose some manufactured products but not others for tariff exemptions. In addition, the Agreement did not lay out a time schedule for the elimination of tariffs and trade barriers. The political barriers also worked against efficiency and mutual confidence.

The recent Executive Programme to revive the 1981 Agreement came up with more specific commitments in terms of across-the-board elimination of tariffs, tariff-like charges and non-tariff measures on industrial goods. Member countries in the Arab FTA agreed to cut customs tariffs and the tariff-like charges over ten years, by 10 per cent per annum. Thus tariffs will be totally abolished by 2007 and the member countries agreed to bind the national tariff schedules, which was done on 31 December 1997. Tariff-like charges and additional taxes are among the main components of the programme and are to be treated like normal tariffs.

Similarly to the EU-Tunisia Agreement the Arab League FTA has allowed countries to draw up limited lists of exclusions from immediate liberalisation. Import-competing industries which need a transition period for restructuring to improve their competitiveness before having to face competition from foreign imports are eligible for such exclusions. Therefore, the previous critique holds here as well, because the right to exclude products during a transition period would substantially limit the liberalisation effect on intra-regional trade flows. A more effective strategy would be to introduce tariff quotas, under which minimum quantities of the sensitive products have to be liberalised immediately and the unrestricted quantity of imports would increase over time.

Trade Liberalisation for Agricultural Products

The Euro-Med Agreements do not provide more favourable treatment for agricultural exports of the Arab Southern Med countries, although new negotiations were to take place by the year 2000. On the other hand, Arab Southern Med countries

have undertaken or will have to undertake new commitments under the Euro-Med Agreements consistent with those agreed in their schedules of accession to the WTO, including tariffication, the conversion of all non-tariff measures into tariff-rate equivalents.

In the Arab League FTA, safeguard measures for agricultural products have been introduced in the Executive Programme, such as the possibility of suspending the liberalisation calendar for some products during peak harvest seasons. Suspension of any product from the liberalisation calendar for tariffs and tariff-like charges cannot last more than seven months per calendar year. Each country may include a maximum of ten products for suspension, and the total suspension time for any product list should not exceed 45 months per calendar year.

A major shortcoming of this liberalisation is that safeguard measures remain during the full ten-year transition period until the full elimination of tariffs. Until then, pressures from interest groups will build to resist market opening and thwart any substantial intra-regional liberalisation for agricultural products.

Measures to Liberalise Services and the Right of Establishment

The EU-Med Agreements, with the exception of the prospective EU-Lebanon Agreement, do not cover services. The Arab FTA is similar. This absence of provisions for free trade in services and the right of establishment in both instruments reduces the benefits, given that trade in services could become an area of dynamic growth and efficiency gains, especially in financial services, insurance and shipping. Access to lower-cost and higher-quality services should increase the competitiveness of domestic goods producers. Commitments to liberalise the right of establishment serve as a stimulus for foreign firms to have a commercial presence, which entails financial and technology transfers.

Harmonisation of Rules and Disciplines

Harmonisation of commercial legislation with regard to competition policy and state aid were envisaged in the provisions of the Euro-Med Agreements, but they are not explicitly addressed in the Arab League FTA. The Euro-Med Agreements contain major provisions that bind the domestic commercial practices of the Arab Southern Med countries to EU competition policy law on the basis of trade between the EU and the Arab Southern Med countries. Domestic commercial measures such as those pertaining to state monopolies and public enterprises must be consistent with the EU laws.

Both the Euro-Med Agreements and the Arab League FTA refer to WTO rules in the areas of anti-dumping and countervailing of subsidies. Only the Euro-Med Agreements have rules on state aid for disadvantaged regions. In the EU-Tunisia Agreement, Tunisia may continue state aid for five years, but it should be judged by reference to EU competition law to decide whether it is state aid or subsidies designed to compete for foreign investment with other Southern Med countries.

Technical Barriers

Technical barriers pertain to the application of standards (testing certification, health, safety, and environmental protection) as a condition for market entry, sale and use. The Euro-Med Agreements, as exemplified by the EU-Tunisia Agreement, generally call for appropriate steps to comply with EU technical standards for industrial and agri-food products and certification procedures. Tunisia has a transition period to update its laboratories, quality control and conformity assessment. At the end of it, Tunisia will have to sign mutual recognition agreements both for conformity assessment and for the supervisory and legal bodies that review standardisation and quality with respect to intellectual, industrial and commercial property. The Arab League FTA, on the other hand, does not contain major harmonisation provisions that bind the member countries' standards to international norms.

Conclusion

The proliferation of Euro-Med Agreements between the EU and each of the Arab Southern Mediterranean countries has raised reasonable expectations of expanding intra-regional trade among Arab states. In light of these developments, the Euro-Med FTAs could act as a binding mechanism for bilateral FTAs and the Arab League FTA by inducing greater credibility in the implementation of these regional trade agreements. The Euro-Med Agreements can bring about successful regional trade liberalisation and thus would limit potential hub-and-spoke effects.

Binding rules contained in the provisions of the Euro-Med Agreements can serve a useful economic purpose above and beyond the direct gains from trade liberalisation through various mechanisms. They could provide a binding mechanism for the Arab Southern Med countries to engage in various policies not incorporated in the Arab League FTA. Yet their provisions alone are not sufficient to insure a more credible road to intra-regional trade expansion. Many new trade areas not covered in the EU Agreements, such as services, investment, and the temporary movement of professionals, should be addressed in the Arab League FTA. A broader regional liberalisation effort of this kind would enhance market efficiency, allowing Arab countries to face greater competition from emerging world exporters in Asia and Central and Eastern Europe.

MENA countries that belong to the Arab League FTA (excluding the GCC) but are not EU partners will face pressure to open their trade regimes in the WTO context. Thus, it may be better for them to open their markets indiscriminately and perhaps to expand preferential trade liberalisation faster than multilateral liberalisation, to encourage commercial ties with partners of similar size in the Arab League FTA.

One area of further research interest concerns the desirability of bilateral free trade agreements between Arab countries. Whether such agreements complement the Euro-Med Agreements and the Arab regional FTA is controversial. Some people view the pursuit of bilateral FTAs as substitutes for the Arab regional FTA in the event the latter process should falter. The primary economic incentive for the regional FTA approach among developing countries of the South is market enlargement, which is conducive to more foreign investment from the North. In the light of this rationale, bilateral FTAs between countries of similar size and levels of development are likely to detract from the regional FTA approach.

Notes

1. To date, the member states of the Arab League that signed the Arab FTA Agreement (14) are: Bahrain, Egypt, Iraq, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Qatar, Saudi Arabia, Syria, Tunisia, UAE. Algeria has expressed intention to ratify the Agreement at a later stage. Djibouti, Mauritania, Sudan and Yemen are in the process of ratifying it.

2. To shed some light on the comparative profile of trade with the EU relative to intra-regional trade, Tables 10.4 and 10.5 provide a summary of the composition of intra-Arab trade and the region's trade with the EU. Shown here are the shares of selected Arab Southern Med countries: Egypt, Jordan, Lebanon, Morocco, Tunisia and Saudi Arabia along with average shares of this exchange, grouped into fifteen product groups, using trade statistics of the 97 Chapters of the HS classification. The data were made available from national sources of those countries.

3. Intra-industry indices are different from trade intensity indices. While the latter can highlight the tendency of two countries to trade with each other, the former measures trade between two industries in similar, but slightly differentiated products. Intra-industry trade occurs as result of increased specialisation (see Yeats, 1998; Havrylyshyn, 1997).

4. These countries have detailed intra-regional trade statistics and trade with the EU for 97 key products, classified by Chapters of the Harmonised System available for the period 1993-97.

5. The identification of the most dynamic export products among the 97 HS chapters was based on the selection of products that recorded compound annual growth rates in intra-regional exports and to the EU market accounting for 8 per cent or more, from 1993 to 1997. In addition the value of exports is no less than 0.1 per cent of the country's intra-regional exports and of its exports to the EU. The latter criterion prevents biased growth rates for products starting from low export bases.

6. For discussion of the reasons underlying the failed attempts to promote regional co-operation, see Shafik (1995), Gamo, Fennell and Sakr (1997) and El-Imam (1997).

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Bibliography

ABD-EL-RAHMAN, K.S. (1986), "Réexamen de la définition et de la mesure des échanges croisés de produits similaires entre les nations", *Revue économique* 1.

Advertising Age International Supplement, 11 May 1998.

AFRICAN DEVELOPMENT BANK/OECD DEVELOPMENT CENTRE (2002), *African Economic Outlook*, Paris.

Al-Hayat (1998), daily newspaper (in Arabic), London, 16 December.

ALONSO-GAMO, P., S. FENNELL and K. SAKR (1997), "Adjusting to New Realities: MENA, the Uruguay Round and the EU-Mediterranean Initiative", *IMF Working Paper*, Washington, D.C.

ALOUI, O., J.-J. DETHIER and A. HOUMY (1989), "L'impact de la politique d'ajustement sur les secteurs des céréales et de l'élevage au Maroc", ministère de l'Agriculture et de la Reforme agraire, Département de la Planification et des Affaires économiques, Rabat; et Banque mondiale, Division des Politiques agricoles, Département de l'agriculture et du développement rural, Washington, D.C.

ARMINGTON, P. (1969), "A Theory of Demand for Products Distinguished by Place of Production", *IMF Staff Papers* 16(1).

BAJO-RUBIO, O. and S. SOSVILLA-RIVERO (1994), "An Econometric Analysis of Foreign Direct Investment in Spain", *Southern Economic Journal* 61.

BALASSA, B. (1979), "Intra-industry Trade and the Integration of Developing Countries in the World Economy" *in* H. FIERSCH (ed.), *On The Economics of Intra-Industry Trade*, J.C.B. Mohr, Tubingen.

BALDWIN, R. (1989), "Measuring Non-Tariff Trade Policies", *NBER Working Paper* 2978, Cambridge.

BANK OF ISRAEL (1998), *Annual Report 1997*, Tel-Aviv, March.

BAYAR, A. (1998), "European Enlargement to the East and its Implications for the MENA Region", paper presented to the fifth international conference of the Economic Research Forum, 31 August – 2 September, Gammarth, Tunisia.

BAYOUMI, T. and B. EICHENGREEN (1996), "Operationalizing the Theory of Optimum Currency Areas", *CEPR Discussion Paper* 1484, London.

BAYOUMI, T. and B. EICHENGREEN (1997), "Ever Closer to Heaven? An Optimum-Currency-Area Index for European Countries", *European Economic Review* 41.

BAYOUMI, T. and B. EICHENGREEN (1998), "Is Asia an Optimum Currency Area? Can It Become One?" *in* S. COLLIGNON and J. PISANI-FERRY (eds.), *Exchange Rate Policies in Asian Emerging Countries*, Routledge, London.

BEGHIN, J., S. DESSUS, D. ROLAND-HOLST and D. VAN DER MENSBRUGGHE (1996), *General Equilibrium Modelling of Trade and the Environment*, Technical Paper No. 116, OECD Development Centre, Paris.

BÉNASSY-QUÉRÉ, A. (1997), "Optimal Pegs for East-Asian Currencies", *Journal of the Japanese and International Economies*, 13 March.

BENSIDOUN, I. and A. CHEVALLIER (1996), *Europe-Méditerranée, le pari de l'ouverture*, Economica, Paris.

BENSIDOUN, I. and A. CHEVALLIER (1998), "Regional Integration in the World Economy", paper presented to the OECD conference on Migrations and North-South Regional Integration, Lisbon, October.

BHAGWATI, J. (1993), "Regionalism and Multilateralism: An Overview", *in* J. DE MELO and A. PANAGARIYA (eds.), *New Dimensions in Regional Integration*, Cambridge University Press, Cambridge.

BLOMSTROM, M. and A. KOKKO (1997), "Regional Integration and Foreign Direct Investment: A Conceptual Framework and Three Cases", *Policy Research Working Papers* 1750, World Bank, Washington, D.C.

BOUGHANMI, H. (1997), "Impact de l'accord de la zone de libre échange entre la Tunisie et l'Union européenne : Évaluation en équilibre général calculable", *in* M. BOUDHIAF, (ed.), *Intégration Economique Régionale*, Tunis Faculty of Economics and Management, Tunis.

BOUGHZALA, M. (1997), "Impacts on Workers of Reduced Trade Barriers: The Case of Tunisia and Morocco", *International Labor Review* 136(3), Autumn.

BRAGA DE MACEDO, J., D. COHEN and H. REISEN (eds.) (2001), *Don't Fix, Don't Float*, OECD Development Centre, Paris.

BROOKE, A., D. KENDRICK and A. MEERAUS (1988), *GAMS: A User's Guide*, The Scientific Press, Redwood, California.

BROWN, D., A. DEARDORFF and R. STERN (1997), "Some Economic Effects of the Free Trade Agreement between Tunisia and the European Union", *in* A. GALAL and B. HOEKMAN (eds.), *Regional Partners in Global Markets: Limits and Possibilities of the Euro-Med Agreements*, CEPR, London and ECES, Cairo.

BRUNETTI, A., G. KISUNKO and B. WEDER (1998), "Credibility of Rules and Economic Growth: Evidence from a Worldwide Survey of the Private Sector", *The World Bank Economic Review* 12.

BUITELAAR, R. (1993), "Dynamic Gains from Intra-Regional Trade in Latin America", *in* R. BELOUS and J. LEMCO (eds.), *NAFTA as a Model of Development: The Benefits and Costs of Merging High and Low Wage Areas*, National Planning Association, Washington, D.C.

Bussolo, M. and D. Roland-Holst (1993), *A Detailed Input-Output Table for Morocco, 1990*, Technical Paper No. 90, OECD Development Centre, Paris.

Caisse des dépôts et consignations (1998), *Emerging Regions Report* 4, February.

Campos, J. and H. Root (1996), *The Key to the Asian Miracle: Making Shared Growth Credible*, Brookings Institution, Washington, D.C.

Canali, G. (1996), "Intra-Industry Trade of Agricultural and Food Products in NAFTA and EU Member Countries: Some Relevant Issues", *Rivista Internazionale Di Scienze Sociali* 104 (2).

Caves, R. (1996), *Multinational Enterprise and Economic Analysis*, Cambridge University Press, Cambridge.

Chauffour, J.-P. and L. Stemitsiotis (1998), "The Impact of the Euro on Mediterranean Partner Countries", *Euro paper* 24, European Commission, June.

Chemingui, M. and S. Dessus (1999), *La libéralisation de l'agriculture tunisienne et l'union européenne: une vue prospective*, Document technique n° 144, OECD Development Centre, Paris.

Deardorff, A. and R. Stern (1994), "Multilateral Trade Negotiations and Preferential Trading Arrangements", *in* A. Deardorff and R. Stern (eds.), *Analytical and Negotiating Issues in the Global Trading System*, University of Michigan Press, Ann Arbor.

Decaluwé, B. and M. Souissi (1996), "L'accord de libre-échange entre la Tunisie et l'Union européenne : le cas du secteur agricole", *mimeo*, Laval University, Quebec.

De Janvry, A., E. Sadoulet and M. Fafchamps (1992), "Structural Adjustment and the Peasantry in Morocco: A Computable Household Model", *European Review of Agricultural Economics* 19.

De Kleine, A. and M. Riordan (1995), "Lessons from the Experience of Portugal, Spain and Greece's Accession to the European Union", *mimeo*, International Economics Department, Analysis and Prospects Division, World Bank, Washington, D.C.

De Melo, J. and S. Robinson (1989), "Product Differentiation and the Treatment of Foreign Trade in Computable General Equilibrium Models of Small Economies", *Journal of International Economics*, 27.

Dessus, S. and A. Suwa-Eisenmann (1998), *Trade Integration with Europe, Export Diversification and Economic Growth in Egypt*, Technical Paper No. 135, OECD Development Centre, Paris and *CEPR Discussion Paper* 1938, London.

Dessus, S. and A. Suwa-Eisenmann (1999), "Trade Integration with Europe and Labour Reallocation in the Southern Mediterranean Countries: The Case of Egypt", *Economic Research Forum Working Paper* 9918, Cairo.

Economist Intelligence Unit (1997), *Morocco: Country Profile 1997-98*, London.

Economist Intelligence Unit (1998), *Morocco: Country Report. Second quarter*, London.

El-Erian, M. and S. Fischer (1996), "Is MENA a Region?" *IMF Working Paper* 96/30, International Monetary Fund, Washington, D.C.

EL-IMAM, M.M. (1997), "Arab Common Market in Light of the Recent International and Regional Developments" (in Arabic), *Journal of Arab Economic Union* 14, Year 10, May-June 1997.

ERF (ECONOMIC RESEARCH FORUM FOR THE ARAB COUNTRIES, IRAN AND TURKEY) (1998), *ERF Indicators: Economic Trends in the MENA Region*, Cairo.

EUROPEAN COMMISSION (1997), "Agenda 2000" — Agriculture, Commission Policy Orientation, Brussels.

EUROPEAN OBSERVATORY FOR SMES (1996), *Fourth Annual Report*, The Netherlands.

FATÁS, A. (1997), "EMU: Countries or Regions? Lessons from the EMS Experience", *European Economic Review* 41.

FAWZI, S. (1998), "The Business Environment in Egypt: Constraints to Private Sector Development", presented at the Mediterranean Development Forum, Marrakech, Morocco, September.

FERNANDEZ, R. and J. PORTES (1998), "Returns to Regionalism: An Analysis of Non-traditional Gains form Regional Trade Agreements", *World Bank Economic Review* (12): 2.

Financial Times, 25 September 1997, p. 8.

FISCHER, S. (1993), "Prospects for Regional Integration in the Middle East" *in* J. DE MELO and A. PANAGARIYA (eds.), *New Dimensions in Regional Integration*, CEPR, Cambridge University Press, Cambridge.

FONTAGNÉ, L. and M. FREUDENBERG (1997), "Intra-industry Trade: Methodological Issues Reconsidered", *CEPII Working Paper* 97-01, Paris, January.

FONTAGNÉ, L. and M. FREUDENBERG (1998), "Endogenous (A)Symmetric Shocks in the Monetary Union", CEPR meeting, Lund, August.

FONTAGNÉ, L., M. FREUDENBERG and D. ÜNAL-KESENCI (1996), *Analyse statistique des échanges CE de produits intermédiaires*, Eurostat, Series 6 D.

FRANÇOIS, J. (1997), "External Bindings and the Credibility of Reform", *in* A. GALAL and B. HOEKMAN (eds.), *Regional Partners in Global Markets: Limits and Possibilities of the Euro-Med Agreements*, CEPR, London and ECES, Cairo.

FRANKEL, J.A. and S.J. WEI (1993), "Trade Blocks and Currency Blocks", *NBER Working Paper* 4335, Cambridge.

FFRENCH-DAVIS, R. (1997), "Comment" *in* S. BURKI, G. PERRY and S. CALVO (eds.), *Trade: Towards Open Regionalism*, Proceedings of the Annual World Bank Conference on Development in Latin America and the Caribbean, Washington, D.C.

FREUDENBERG, M. and F. LEMOINE (1998), "CEECs in the International Division of Labour in Europe", paper presented for the final workshop on "Trade Between the European Union and the Associated States: Prospects for the Future", ACE Research Programme 1996 (Project number P96-6148R).

FREUDENBERG, M. and F. MÜLLER (1992), "France et Allemagne: quelles spécialisations commerciales ?", *Economie prospective internationale* 52, 4th quarter.

GALAL, A. and B. HOEKMAN (1997*a*), "Egypt and the Partnership Agreement with the EU: The Road to Maximum Benefits", *in* A. GALAL and B. HOEKMAN (eds.), *Regional Partners in Global Markets: Limits and Possibilities of the Euro-Med Agreements*, CEPR, London and ECES, Cairo.

GALAL, A. and B. HOEKMAN (1997*b*), *Regional Partners in Global Markets: Limits and Possibilities of the Euro-Med Agreements*, CEPR, London and ECES, Cairo.

GALAL, A. and S. TOHAMY (1998), "Toward an Egypt-U.S. Free Trade Agreement: An Egyptian Perspective", *in* GALAL, A. and R. LAWRENCE (eds.), *Building Bridges: An Egypt-U.S. Free Trade Agreement*, Brookings Institution Press for The Egyptian Center for Economic Studies, Cairo and the John F. Kennedy School of Government, Harvard University.

GAMO, P., S. FENNELL and K. SAKR (1997), "Adjusting to New Realities: MENA, the Uruguay Round and the EU-Mediterranean Initiative", Middle East Department, *IMF Working Paper*, International Monetary Fund, Washington, D.C., January.

GHOSH, B. (1997), *Gains from Global Linkages*, Macmillan Press, New York, N.Y.

GOLDIN, I. and D. ROLAND-HOLST (1995), *Economic Policies for Sustainable Resource Use in Morocco*, Cambridge University Press, Cambridge.

GOLDIN, I., O. KNUDSEN and D. VAN DER MENSBRUGGHE (1993), *Trade Liberalisation: Global Economic Implications*, OECD Development Centre, Paris.

GROSH, M. (1994), *Administering Targeted Social Programs in Latin America: From Platitudes to Practice*, World Bank, Washington, D.C.

GRUBEL, H.A. and P.J. LLOYD (1971), "The Empirical Measurement of Intra-Industry Trade", *Economic Record* 47 (120).

GRUBEL, H.A. and P.J. LLOYD (1975), *Intra-Industry Trade: The Theory and Measurement of International Trade in Differentiated Products*, John Wiley and Sons, New York, N.Y.

HALL, R. and C. JONES (1998), "Why Do Some Countries Produce So Much More Output per Worker than Others?", Department of Economics, Stanford University, processed.

HARRISON, G.W., R. JONES, L. KIMBELL Jr. and R. WIGLE (1993), "How Robust is Applied General Equilibrium Modeling?", *Journal of Policy Modeling*, 15.

HAVRYLYSHYN, O. (1997), *A Global Integration Strategy for the Mediterranean Countries: Open Trade and Market Reforms*, Middle Eastern Department, International Monetary Fund, Washington, D.C., August.

HAVRYLYSHYN, O. and P. KUNZEL (1997), "Intra-Industry Trade of Arab Countries: An Indicator of Potential Competitiveness", *IMF Working Paper*, International Monetary Fund, Washington, D.C, April.

HOEKMAN, B. (1995*a*), "The WTO, The EU and The Arab World: Trade Policy Priorities and Pitfalls", *CEPR Discussion Paper* 1226, London.

HOEKMAN, B. (1995*b*), "The World Trade Organization, the European Union and the Arab World", *World Bank Policy Research Paper* 1513, World Bank, Washington, D.C.

HOEKMAN, B. and S. DJANKOV (1997*a*), "Towards a Free Trade Agreement with the European Union: Issues and Policy Options for Egypt", *in* A. GALAL and B. HOEKMAN (eds.), *Regional Partners in Global Markets: Limits and Possibilities of the Euro-Med Agreements*, CEPR, London and ECES, Cairo.

HOEKMAN, B. and S. DJANKOV (1997*b*), "Effective Protection and Investment Incentives in Egypt and Jordan: Implications of Free Trade With Europe", *World Development* 25.

HOEKMAN, B. and S. DJANKOV (1998), "Catching up with Eastern Europe? The European Union's Mediterranean Free Trade Initiative", *in* SAFADI, R. (ed.) *Opening Doors to the World: A New Trade Agenda for the Middle East*, IDRC Press, Canada.

HOEKMAN, B., D. KONAN and K. MASKUS (1998), "Economic Incentives and Effects", *in* GALAL, A. and R. LAWRENCE (eds.), *Building Bridges: An Egypt-U.S. Free Trade Agreement*, Brookings Institution Press for The Egyptian Center for Economic Studies, Cairo, and the John F. Kennedy School of Government, Harvard University.

HOEKMAN, B. and A. SUBRAMANIAN (1997), "Egypt and the Uruguay Round Agreements on "New" Issues: Laying the Groundwork for the Future", *in* Hana'a Keir El Din (ed.), *Implications of the Uruguay Round on the Arab Countries*, Dar Al-Mostaqbal Al Arabi, Cairo.

HUFBAUER, G. (1999), *World Trade After Seattle: Implications for the United States*, Policy Brief, Institute for International Economics, Washington D.C., December.

INTERNATIONAL MONETARY FUND (1994), *Government Finance Statistics Yearbook*, Washington, D.C.

INTERNATIONAL MONETARY FUND (1997*a*), *Exchange Arrangements and Exchange Restrictions*, Annual Report, Washington, D.C.

INTERNATIONAL MONETARY FUND (1997*b*), Morocco — Selected Issues: *Staff Country Report* 97/6, Washington, D.C.

INTERNATIONAL MONETARY FUND (1998), "Exit Strategies", *Occasional Paper* 168, Washington, D.C.

INTERNATIONAL MONETARY FUND, *International Financial Statistics*, various issues, Washington, D.C.

JAFFEE, S. (1992), "Exporting High-Value Food Commodities", *World Bank Discussion Papers* 198, Washington, D.C.

KANAAN, T. (1998), "The Business Environment in Jordan", Mediterranean Development Forum, Marrakech, Morocco, September.

KARSHENAS, M. (1994), "Structural Adjustment and Employment in the Middle East and North Africa", *Economic Research Forum Working Paper* 9420, Cairo.

KENEN, P.B. (1969), "The Theory of Optimum Currency Areas: an Eclectic View", *in* R. MUNDELL and A.K. SWOBODA (eds.), *Monetary Problems of the International Economy*, University of Chicago Press, Ann Harbor.

KHEIR-EL-DIN, H. and H. EL-SAYED (1997), "Potential Impact of a FTA with the EU on Egypt's Textile Industry", *in* A. GALAL and B. HOEKMAN (eds.), *Regional Partners in Global Markets: Limits and Possibilities of the Euro-Med Agreements*, CEPR, London and ECES, Cairo.

KONAN, D. and K. MASKUS (1997*a*), "A Computable General Equilibrium Analysis of Egyptian Trade Liberalization Scenarios", *in* A. GALAL and B. HOEKMAN (eds.), *Regional Partners in Global Markets: Limits and Possibilities of the Euro-Med Agreements*, CEPR, London and ECES, Cairo.

KONAN, D. and K. MASKUS (1997*b*), "Joint Trade Liberalization and Tax Reform in a Small Open Economy: The Case of Egypt", manuscript, University of Colorado.

KONAN, D. and K. MASKUS (1997*c*), "Is Small Beautiful? Trade Shares and Trade Creation with Differentiated Products", manuscript, University of Hawaii.

KOWALCZYK, C. and R. WONNACOTT (1992), "Hubs and Spokes and Free Trade in The Americas", *NBER Working Paper* 4198, Cambridge, MA.

KRUEGER, A.O. (1993), "Free Trade Agreements as Protectionist Devices: Rules of Origin", *NBER Working Paper* No. 4352, National Bureau of Economic Research New York, April.

KRUGMAN, P. (1991), "Move Towards Free Trade Zones", Federal Reserve Bank of Kansas, *City Economic Review*, November-December, 5-25.

KRUGMAN, P. (1993), "Lessons from the Massachusetts for the EMU", *in* TORRES, F. and F. GIAVAZZI (eds.), *Adjustment and Growth in the European Monetary Union*, Cambridge University Press, Cambridge.

LAFAY, G. (1987), "La mesure des avantages comparatifs révélés", *Economie prospective internationale* 41. Reprinted as "The Measurement of Revealed Comparative Advantages", *in* M.G. DAGENAIS and P.-A. MUET (eds.), *International Trade Modelling*, 1994, Chapman and Hall, London.

LAHOUEL, M. (1998*a*), "The Business Environment in Tunisia", Mediterranean Development Forum, Marrakech, Morocco, September.

LAHOUEL, M. (1998*b*), "Competition Policies and Deregulation in Tunisia", *in* N. SHAFIK (ed.), *Economic Challenges Facing Middle Eastern and North African Countries*, Macmillan Press, London.

LAIRD, S. (1998), "Mercosur: Objectives and Achievements" *in* BURKI, S., G. PERRY and S. CALVO, (eds.), *Trade: Towards Open Regionalism*, Latin American and Caribbean Studies, World Bank, Washington, D.C.

LARAKI, K. (1989), "Food Subsidy Programs: A Case Study of Price Reform in Morocco," *LSMS Working Paper* 50, World Bank, Washington, D.C.

LAWRENCE, R. (1997), "Preferential Trading Arrangements: The Traditional and the New" *in* A. GALAL and B. HOEKMAN (eds.), *Regional Partners in Global Markets: Limits and Possibilities of the Euro-Med Agreements*, CEPR, London and ECES, Cairo.

LAWRENCE, R. (1998), "Toward an Egypt-U.S. Free Trade Agreement: A U.S. Perspective," *in* A. GALAL and R. LAWRENCE (eds.), *Building Bridges: An Egypt-U.S. Free Trade Agreement*, Brookings Institution Press for The Egyptian Center for Economic Studies, Cairo, and the John F. Kennedy School of Government, Harvard University.

LIMAM, I. and A. ABDALLA (1998), "Inter-Arab Trade and the Potential Success of Arab Free Trade Area (FTA)" paper presented at the International Conference on New Economic Developments and their Impact on Arab Economies, Arab Planning Institute, Kuwait, Tunis, 3-5 June.

LINDERT, K. and L. TUCK (1996), *République de Tunisie: d'une subvention alimentaire universelle à un programme auto-cible*, World Bank, Washington, D.C.

LLUCH, C. (1973), "The Extended Linear Expenditure System", *European Economic Review*, Vol. 4.

LÖFGREN, H. (1994), "Elasticity Survey,", mimeo, Center for Egyptian Studies, Cairo.

LÖFGREN, H., M. EL-SAID and S. ROBINSON (1999), "Trade Liberalization and Complementary Domestic Policies: A Rural-Urban General Equilibrium Analysis of Morocco" *Discussion Paper* 41, Trade and Macroeconomics Division, IFPRI.

MASKUS, K. and D. KONAN (1997), "Trade Liberalization in Egypt", *Review of Development Economics* 1:275-73.

MATEUS, A. *et al*. (1988), "A Multisector Framework for Analysis of Stabilization and Structural Adjustment Policies: The Case of Morocco", *World Bank Discussion Paper* 29, Washington, D.C., June.

MCKINNON, R.I. (1963), "Optimum Currency Areas", *American Economic Review* 53.

MIMOSA TEAM (1996), "A New Version of Mimosa, A Macroeconomic Model of the World Economy", Document de travail CEPII/OFCE M-96-01, July, Paris.

MINISTRY OF ECONOMIC DEVELOPMENT (Tunisia) (1998), *Neuvième plan de développement économique (1997-2001)*, Tunis, April.

MOHIELDIN, M. (1997), "The Egypt-EU Partnership Agreement and Liberalization of Services" *in* A. GALAL and B. HOEKMAN (eds.), *Regional Partners in Global Markets: Limits and Possibilities of the Euro-Med Agreements*, CEPR, London and ECES, Cairo.

MORRISON, C. (1991), *Adjustment and Equity in Morocco*, OECD Development Centre Studies, Paris.

MUNDELL, R. (1961), "A Theory of Optimum Currency Areas", *American Economic Review* 657-665.

MUNDELL, R. (1964), "Tariff Preferences and the Terms of Trade" *Manchester School of Economic and Social Studies* 1(1).

NORTH, D. (1990), *Institutions, Institutional Change and Economic Performance*, Cambridge University Press, Cambridge.

OLSON, M. (1996), "Big Bills Left on the Sidewalk: Why Some Nations are Rich and Others Are Poor", *Journal of Economic Perspectives* 10:3-24.

ONEWORLD (1995), *The EU and the Mediterranean*, <http://www.oneworld.org/aprodev/eumed.html>. Accessed December 11, 1998.

OWEN, R. (1992), "Inter-Arab Economic Relations During the Twentieth Century: World Market Versus Regional Market?", Paper presented at the Seventeenth Annual Georgetown University Symposium on Arab Integration, Center for Contemporary Arab Studies, Washington, D.C.

PAGE, J. and J. UNDERWOOD (1997), "Growth, the Maghreb and Free Trade with the European Union" *in* A. GALAL and B. HOEKMAN (eds.), *Regional Partners in Global Markets: Limits and Possibilities of the Euro-Med Agreements*, CEPR, London and ECES, Cairo.

PANAGARIYA, A. (1996), *The Free Trade of the Americas: Good for Latin America*, University of Maryland, College Park.

PERRONI, C. and J. WHALLEY (1994), "The New Regionalism: Trade Liberalization or Insurance?", *NBER Working Paper* 4626, Cambridge.

PETRI, P.A. (1997), *Trade Strategies for the Southern Mediterranean*, Technical Paper No. 127, OECD Development Centre, Paris.

PUGA, D. and A. VENABLES (1998), "Trading Arrangements and Industrial Development", *The World Bank Economic Review* 12 (21).

ROBINSON, J. (1947), *Essays in the Theory of Employment, Part III: The Foreign Exchanges,* Blackwell, London.

ROBINSON, S., A. CATTANEO and M. EL-SAID (1998), "Estimating a Social Accounting Matrix Using Cross Entropy Methods", *Discussion Paper* 33, Trade and Macroeconomics Division, International Food Policy Research Institute, Washington, D.C.

ROLAND-HOLST, D. (1996), SAMs for Morocco, 1990 and 1994 (in electronic form).

ROYAUME DU MAROC (1993), *Niveau de Vie des Ménages 1990/91*, various volumes, Direction de la Statistique, Rabat.

ROYAUME DU MAROC (1995), *Annuaire Statistique*, Direction de la Statistique, Rabat.

ROYAUME DU MAROC (1996), *Les Indicateurs Sociaux*, Direction de la Statistique, Rabat.

Royaume du MAROC (1997), *Annuaire Statistique*, Direction de la Statistique, Rabat.

RUTHERFORD, T. (1995), "Extensions of GAMS for Complementarity Problems Arising in Applied Economic Analysis", *Journal of Economic Dynamics and Control* 19 (8).

RUTHERFORD, T., E. RUSTRÖM and D. TARR (1993), "Morocco's Free Trade Agreement with the European Community," *Policy Research Working Paper* 1173, World Bank, Washington, D.C.

RUTHERFORD, T., E. RUSTRÖM and D. TARR (1995), *L'accord de libre-échange entre la Tunisie et l'Union Européenne*, Confidential final report, Tunis, March.

SADEH, T. (1997), "The Economic Desirability of Middle-Eastern Monetary Cooperation", *The World Economy* 20(6).

SADOULET, E. and A. DE JANVRY (1995), *Quantitative Development Policy Analysis*, Johns Hopkins University Press, Baltimore.

SCHIFF, M. and L.A. WINTERS (1998), "Dynamics and Politics in Regional Integration Arrangements: An Introduction", *The World Bank Economic Review* 12(2).

SCHOTT, J. (1989), "More Free Trade Areas?", *in* J. SCHOTT (ed.), *Free Trade Areas and U.S. Trade Policy*, Institute for International Economics, Washington, D.C.

SCHOTT, J. (1998), "NAFTA: An Interim Report", *in* BURKI, S., G. PERRY and S. CALVO (eds.) *Trade: Towards Open Regionalism*", Latin American and Caribbean Studies, World Bank, Washington, D.C.

SHAFIK, N. (1992), "Has Labor Migration Promoted Economic Integration in the Middle East?", *mimeo,* World Bank, Washington, DC.

SHAFIK, N. (1995), "Learning from Doers: Lessons on Regional Integration for the Middle East", *in* H. KHEIR-EL-DIN (ed.), *Economic Cooperation in the Middle East: Prospects and Challenges*, Dar AlMostaqbal Al Arabi, Cairo.

STAIGER, R. and G. TABELLINI (1987), "Discretionary Trade Policy and Excessive Protection", *American Economic Review* 77(5).

STALLARD, J. and D. ABDEL HADY (1996), "Working Side By Side: Small, Medium and Large Businesses Working Together in Egypt", mimeo, Cairo.

TAVLAS, G.S. (1993), "The 'New' Theory of Optimum Currency Areas", *The World Economy*, 16(6).

THISSEN, M. and H. LÖFGREN (1998), "A New Approach to SAM Updating with an Application to Egypt," *Environment and Planning Series* A, 30 (11): 1991-2003.

THOMAS, V. and Y. WANG (1997), "When Learning Makes Lending More Productive," *Working Paper*, Economic Development Institute, World Bank, Washington, D.C.

UNCTAD (1995), *Handbook of International Trade and Development Statistics*, UN, New York and Geneva.

UNCTAD (1998), *Word Investment Report 1998: Trends and Determinants,* United Nations, New York and Geneva.

UNITED NATIONS (1998), *COMTRADE database*, New York and Geneva.

VAMVAKIDIS, A. (1998), "Regional Integration and Economic Growth", *The World Bank Economic Review* 12(2).

VINER, J. (1950), *The Customs Union Issue*, Carnegie Foundation for International Peace, New York, N.Y.

WEI, S.J. (1993), "Open Door Policy and China's Rapid Growth: Evidence From City-Level Data", *NBER Working Paper* 4602, Cambridge, MA.

WHALLEY, J. (1996), "Why Do Countries Seek Regional Trade Agreements?" *NBER Working Paper* 5552, Cambridge, MA.

WHITE, H. (1980), "A Heteroskedasticity-Consistent Covariance Matrix Estimator and a Direct Test for Heteroskedasticity", *Econometrica* 48.

WILLIAMSON, J. (1994), *Estimating Equilibrium Exchange Rates*, Institute for International Economics, Washington, D.C.

WINTERS, A. (1996), "The EU's Mediterranean Agreements, A Comparative Analysis and Assessment", *mimeo*, World Bank, March.

WINTERS, A. (1997), *Lebanon's Euro-Mediterranean Agreement: Possible Dynamic Benefits*, Lebanese Center for Policy Studies, Beirut.

WORLD BANK (1994*a*), *East Asia's Trade and Investment: Regional and Global Gains from Liberalization*, Washington, D.C.

WORLD BANK (1994*b*), *Kingdom of Morocco: Poverty, Adjustment and Growth*, Volumes I-II. Report 11918-MOR, Washington, D.C.

WORLD BANK (1994*c*), "A Survey of SMEs in Lebanon", *mimeo*, Washington, D.C.

WORLD BANK (1995*a*), *Kingdom of Morocco: Towards Higher Growth and Employment*, Volumes I-II. Report 14155-MOR, Washington, D.C.

WORLD BANK (1995*b*), *Claiming The Future: Choosing Prosperity in the Middle East/ North Africa Region*, Washington, D.C.

WORLD BANK (1996), "Logistical Constraints on international trade in the Maghreb", *World Bank Working Paper* 1598, Washington, D.C,

WORLD BANK (1997*a*), RMSM Simulation data. *Mimeo,* Washington, D.C.

WORLD BANK (1997*b*), *World Development Indicators*, Electronic format (CD-ROM), Washington, D.C.

WORLD BANK (1997*c*), *Kingdom of Morocco: Rural Development Strategy. Integrating the Two Moroccos (1997-2010)*, Synthesis Report. Volumes II-III. Report 16303-MOR, Washington, D.C.

WORLD BANK, *World Debt Tables*, Washington, D.C.

YEATS, A. (1995), "Export Prospects of Middle Eastern Countries: A Post-Uruguay Round Analysis", presented in the Economic Research Forum Conference on Liberalization of Trade and Foreign Investment, Istanbul, 16-18 September 1995.

YEATS, A. (1998), "Does Mercosur's Trade Performance Raise Concerns about the Effects of Regional Trade Arrangements?", *Policy Research Working Paper* 1729, World Bank, Washington, D.C.

ZARROUK, J. (1998*a*), "Countervailing Charges and Taxes with Effects Similar to Customs Tariffs Levied on Arab Goods Imported from Arab Countries", Study prepared for submission to the Enforcement and Monitoring Committee for Establishing the Greater Arab Free Trade Area.

ZARROUK, J. (1998*b*), "Arab Free Trade Area: Potentialities and Effects", Paper presented at the Mediterranean Development Forum, 3-6 September 1998, Marrakesh, Morocco.

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