
Updating the Maghreb Project: The Case of Food Industries

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Does the Maghreb integration project have value in the context of globalization and a Euro-Mediterranean free trade zone? If so, what should be done in the short-to-medium term to propel the project forward? This chapter analyzes these issues from the vantage point of the Maghreb's food processing industries, which account for a large share of employment, trade, and consumer expenditure in North African economies. The first part briefly explores theoretical concepts. The second part presents some stylized facts about the region's food industry and trade. The chapter concludes with a short list of recommendations.

The conventional trade diversion approach is still the dominant analytical framework for both politicians and scholars thinking about regional integration in Maghreb countries. This approach is, however, obsolete; the region offers huge trade-creation potential due to globalization and Euro-Mediterranean initiatives. This potential—which arises from geographical proximity, similar resource bases, and common consumption patterns—is particularly important in the food industries. Proximity reduces the costs of vertical and horizontal integration as well as discovery processes, which are all engines of trade. Trade figures, while incomplete, show interesting trends that confirm the potential for gains from horizontal and vertical integration. Meanwhile, agricultural production

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Table 12.1 Traditional and new trade theories related to determinants of trade

	Traditional theories			New trade theory	
Determinants	Factor endowments	Productivity differences	External economies of scale	Internal economies of scale	
Trade patterns	Interindustry trade			Vertical differentiation	Horizontal differentiation
Specialization	Along comparative advantage		Through agglomeration	Along the quality spectrum	In varieties
Adjustment	Important		Potentially important		Weak
Costs	Change in factors prices among industries within countries		Potential income divergence among countries		

can create spillover effects among Maghreb countries for regional public goods, such as water, health, and biodiversity.

We identify five entry points as opportunities to develop a Maghreb integration project in the food sector. As political economic theory teaches, regional integration is a multiactor building process. Not only stakeholders but also public opinion and lobbying activities from external bodies are crucial.

Theoretical Framework

From a conventional point of view, regional integration in the Maghreb has low value because of trade diversion effects. However, a debate over Maghreb integration must account for trade creation effects based on economies of scale and proximity factors as well as regional public goods and their spillover effects.

Economies of Scale and Proximity as Engines of Integration

Scale economies and intraindustry trade are considered to be the new engines of growth in evaluating regional integration processes. Intraindustry trade of similar products—that is, horizontal trade—between countries with comparable economic structures and endowments of production factors is a phenomenon outside the familiar Heckscher-Ohlin model (Helpman and Krugman 1985). Such horizontal trade encourages the exchange of varieties. Table 12.1 captures the traditional and the new theory arguments related to trade determinants.

Regional Public Goods and Cooperation

A public good is defined essentially by three characteristics. First, it is a commodity or service that can be consumed by one person without diminishing the amount available for consumption by another person (nonrivalry). Second, it is available at zero or negligible marginal cost to a large or unlimited number of consumers (nonexclusiveness). Third, it does not bring about disutility to any consumer now or in the future (sustainability).

A regional public good is an international public good that displays spillover benefits to countries in the neighborhood of the producing country. Countries can benefit greatly from cooperating in the production of regional public goods when they share common resources such as rivers, fishing grounds, hydroelectric power, rail connections, or the environment. In the presence of economies of scale or neighborhood externalities, market solutions are generally suboptimal; failing to cooperate can be very costly. Regional cooperation is not the same as regional integration, though integration may foster cooperation.

Food Industries

Evidence collected from the literature and the data shows that food industries are highly sensitive to both economies of scale and the presence of regional public goods. This is because agriculture is a multifunctional activity that plays a triple role: It is an economic process, a way of life, and a provider of environmental services (World Bank 2007b).

The food industry in the Maghreb is affected by a complicated assortment of factors. Horizontal trade is mainly promoted by multinational firms operating in the region. Economies of scale characterize intraregional direct investments in the food industry. Trade based on consumer demands for variety in food products has flourished thanks to informal networks among Maghreb countries. Overuse of coastal resources, water shortages, destruction of pasture land and habitats, and recent animal pandemics are common issues for Maghreb food and agricultural activities. Collaborative regional action offers the best response to all of these concerns, especially as the environmental and health effects spill across borders.

Food Market Context Analysis

Globalization and Euro-Mediterranean initiatives are the main factors affecting regional markets. This context offers both threats and opportunities. The threats have to do with global price uncertainties and asymmetrical liberalization of trade with the European Union. The opportunities are related to special features of the Mediterranean diet and the presence of EU companies in the Maghreb area.

Regional Effects of Globalization

Uncertainties are rising on many fronts, among them the future of the international trade regime for agriculture, genetically modified foods, climate change, high energy prices, the impact of biofuel production on food prices and the environment, and the ability to contain human, animal, and plant diseases. Chinese and Indian growth affect nearly a third of the world's population directly and many more indirectly. China is the largest net importer of grains and oils. As Maghreb countries also are net importers of basic foodstuffs, a rise in food prices threatens the region.

Globalization promotes a diffusion of the Mediterranean diet all over the world, in particular for olive oil, wines, vegetables, and spices. This creates a great opportunity for Maghreb farmers and food industries, but to take advantage of it, Maghreb countries need a dynamic and market-driven new agriculture led by high-value activities. Other important factors include institutional and technological innovations as well as more efficient forms of agricultural production, whether by the state, powerful private actors, or civil society organizations.

Regional Effects of Euro-Mediterranean Initiatives

In 1995 the Barcelona Conference paved the way for the creation of a free trade zone between the European Union and its Mediterranean partners. Tunisia, Morocco, and Algeria signed bilateral association agreements with the European Union in 1995, 1996, and 2002, respectively.

The modalities of liberalization are scheduled in lists of products and gradual timetables for dismantling trade barriers.¹ The European Union committed itself to maintaining existing preferences toward North African countries, but without improving in any significant way access to Europe's market. Algeria, Morocco, and Tunisia agreed to eliminate existing barriers to market access on the majority of nonagricultural products from the European Union. All three countries chose to dismantle tariffs gradually over a maximum period of 12 years. Some highly sensitive products were scheduled in negative lists and are not subject to tariff elimination. However, the association agreements specify that these negative lists are to be reviewed regularly.

The association agreements do not mention any calendar for tariff elimination across the agricultural sector; the concessions deal more with

1. All the agreements signed by the European Union have the same structure. The first component concerns political and security cooperation, the second component deals with trade and covers the main commitments of the partners, and the third component addresses economic and cultural cooperation.

quantitative restrictions than tariffs. Significant increases in quotas have been granted to the North African economies on products such as olive oil and cut flowers. The association agreements initially mentioned that agriculture would be further liberalized five years after the agreement came into force, but the increase in quotas is still under negotiation in most North African economies. The positive side of the association agreements lies more in attracting foreign direct investment (FDI), especially from EU countries, an aspect that is not easily modeled but nevertheless could be quite important.

Main Characteristics of Regional Markets

In agriculture and the food industries the World Bank (2006) includes the Maghreb countries in their category of transforming countries, which covers most of Asia, the Middle East, North Africa, and parts of Europe and Central Asia. In this group of countries economic growth is rapid in some sectors, but a large share of poor households remain in rural areas. These countries need to increase the pace of growth in agriculture and related rural nonfarm sectors both to reduce poverty and to confront rising rural-urban income disparities.

In Tunisia in recent years the agricultural sector has enjoyed a stable share of GDP in terms of value added (13 percent), employment (16 percent), export revenues (10 percent), and investment (10 percent). In Morocco agricultural activities represent around 15 percent of GDP and around 20 percent of exports. The sector employs about 40 percent of the total labor force, but around 78 percent in rural areas. In Algeria agricultural activities represent close to 12 percent of GDP and around 2 percent of exports. The sector employs around 22 percent of the total Algerian labor force. Major exports include dates, wine, and potatoes, which amount to around \$200 million. Of course, oil and gas account for 98 percent of Algerian exports (World Bank 2007b).

Similarities in Supply Constraints

Supply conditions are constrained by one major factor in the region: water shortage. Table 12.2 shows the intensity of this constraint, particularly in Tunisia and Algeria. The water situation in Morocco seems less dramatic, though it is still a concern. Morocco has a water self-sufficiency ratio of nearly 70 percent, which means that the country has more than two-thirds of the water it needs to feed its people and irrigate its land. This translates into a larger share of agriculture in GDP and exports. However, water scarcity remains a problem in the Maghreb as a whole.

Table 12.2 Agricultural indicators in the Maghreb region

Indicator	Algeria	Tunisia	Morocco
Share of agriculture in GDP (percent)	12.7	12.6	16.7
Water withdrawal by agricultural sector (billions of cubic meters)	3.9	2.2	11
Total virtual imported water embedded in food imports (billions of cubic meters)	10.9	4.1	5.8
Self-sufficiency ratio in water (percent)	34	38	68
Irrigation efficiency ratio (percent)	37	54	37
Share of irrigated land (percent)	6.8	7.5	14

Source: World Bank (2007a).

Similarities in Consumption Patterns

Maghreb food markets are changing from ingredients for traditional meals, intensive in female labor, to processed food preparations, intensive in services and industrial inputs. Several factors are altering global food consumption patterns worldwide, including in the Maghreb: higher income, urbanization, improved transportation, and consumer perceptions regarding product quality and safety. Table 12.3 reveals that the three countries share basic consumption habits. It also shows that Tunisia, with higher levels of urbanization and female participation in the labor force, leads the way in the consumption transition process, while Morocco lags behind.

Still, Moroccan industries are adjusting to new demand conditions, as illustrated in table 12.4 on processed food growth in Morocco.

Domestic Policies

In domestic food policies, Algeria, Morocco, and Tunisia are similar in two ways: They all support farm investment through a variety of subsidies and they all have distorting price subsidies at the consumer level. Consumer price policies differ between countries that tax at the import level and subsidize at the processing stage, as Morocco does, and countries that tax imports less but provide large subsidies for local production, storage, and marketing, as Algeria does.

Extraregional Food Trade

Algeria, Morocco, and Tunisia all heavily rely on foreign supplies and each runs a deficit in agricultural trade balances. However, substantial

Table 12.3 Structure of food intake, 2006 (total per capita kilograms)

Category	Algeria	Morocco	Tunisia
Alcohol (including beer and wine)	10	15	6
Animal fats and products	2	8	3
Beverage crops	10	3	8
Cereals and products, excluding beer	620	613	566
Eggs and products	11	7	20
Fish, seafood and products	9	9	30
Fruits and products (excluding wine)	155	87	233
Meat (slaughtered) and products	50	36	72
Milk and products	314	78	280
Offals edible	3	5	4
Oilcrops (excluding products)	2	3	12
Pulses and products	16	10	20
Spices	1	2	6
Starchy roots and products	112	31	81
Sugar and sweeteners	84	76	88
Treenuts and products	3	1	9
Vegetable oils and products	41	19	57
Vegetables and products	235	113	504

Source: Food and Agriculture Organization FAOSTAT database.

Table 12.4 Value of local production of selected processed food industries in Morocco
(millions of dirhams)

Processed food activity	1990	2005
Meat preparations	20	500
Sugar-based products	500	1,600
Drinks	500	2,200

Source: Conseil Général du Développement Agricole, *Situation de l'Agriculture Marocaine*, 2008.

differences exist among them. In 2006 Algerian food exports represented only 2 percent of Algerian food imports, whereas Moroccan and Tunisian food exports represented 62 and 88 percent of food imports, respectively, in the two countries.²

2. Figures are from the United Nations Commodity Trade (COMTRADE) Statistics Database, available at comtrade.un.org (accessed July 22, 2008). Moroccan and Tunisian ratios computed with different databases can yield opposite rankings, but the overall situation indicated by these figures is quite robust.

Past political orientations in Algeria favored the development of non-agricultural sectors, which helps explain current trade patterns. For Morocco and Tunisia the trade gap is largely linked to climatic conditions and to a steadily increasing population. Most of the Maghreb countries produce staple goods, such as grains, raw edible oil, and raw sugar, but production levels are insufficient to meet demand; thus the need for imports from abroad.

In addition to staple goods, most of the Maghreb countries have large livestock production and some have well-developed fruit and vegetable sectors. These have been steadily improved by better technology. Currently fruits and vegetables constitute the larger share of Morocco's and Tunisia's agricultural exports.

For decades Maghreb agricultural exports were oriented toward a few EU countries, namely France, Italy, and Belgium, and more recently Spain and Portugal. EU reluctance to increase imports of some products from the Maghreb limits Maghreb exports, notably fresh tomatoes and strawberries. The situation has deteriorated further since the signing of bilateral trade preference agreements between the European Union and Chile and South Africa, the agricultural exports of which are similar to those of Maghreb countries.

To tackle the difficulties they face, Maghreb countries intend to reach beyond traditional markets. Product diversification lies at the heart of reforms, especially for highly prized products, such as fresh green peas, green beans, and melons. Market diversification within and outside the European Union is also on the agenda. More export volumes are now directed toward Africa and the Middle East as well as Canada and the United States. In some cases, trade conventions or agreements with trade partners have facilitated these options.

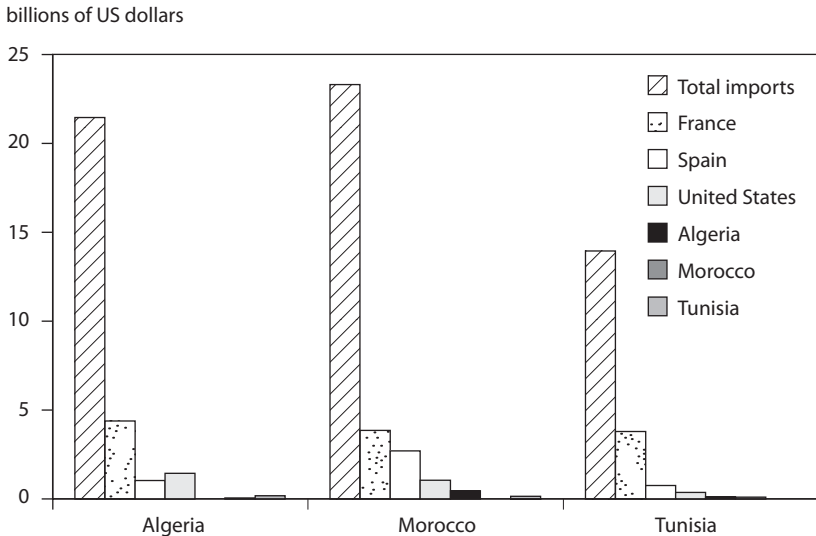
Maghreb countries have developed their food processing sectors significantly. This was initially in response to the need for staples such as flour, refined sugar, and refined edible oil; thus each country has a milling industry. Additional investments took place as international demand for processed fruit and vegetables increased and as domestic production expanded further. A new generation of processing industries has appeared, encouraged by the involvement of multinational companies, particularly in industries that rely on imported raw products, such as cheese, pasta, or dried foods.

In exports the share of global processed foods is about 20 percent for Morocco and a little less for Tunisia. However, the type of goods exported is different. Tunisia's main exports are processed tomatoes, pasta, and ice cream. Morocco's top exports are food preparations and canned olives.

Intraregional Food Trade

The high level of extraregional food trade contrasts with the low level of intraregional trade. There is a complete disconnect between the two mar-

Figure 12.1 Imports of Morocco, Algeria, and Tunisia by origin country, 2006



Source: United Nations COMTRADE Database.

kets. Bilateral trade among Maghreb countries as a share of their total trade is often less than 2 percent, despite attempts to boost regional trade through preferential trade agreements (see figure 12.1 and table 12A.1 in the appendix).

The Arab Maghreb Union, the main goal of which was tariff elimination in the region, was never quite implemented because of incompatibilities among national regulations and because of protectionist fears and political tensions. At a bilateral level, several tariff preference agreements were also signed, as between Morocco and Algeria in 1990 and Algeria and Tunisia in 1991. A new agreement is under discussion between Tunisia and Algeria. At a wider level, almost all Arab countries signed the Greater Arab Free Trade Area (GAFTA), which sets tariff exemptions, though GAFTA did not explicitly enter into force in most countries because it lacks well-defined rules of origin. To boost trade flows among their countries, Tunisia, Morocco, Egypt, and Jordan have chosen to sign a new and more elaborated trade agreement, the Agadir Agreement, that entered into force very recently.

Despite the low level of intraregional trade, the potential exists for trade creation within the region, particularly through better integration. The different Maghreb countries, after all, trade different food products. Tunisia has a comparative advantage in domestic primary products such as

dates. Other food products are largely traded because local industries have undergone significant vertical integration, as has occurred with olive oil from Tunisia and processed foods from Morocco. The third category of products covers horizontal integration of processed foods based on imported raw material, such as Tunisian pasta and Moroccan cheese.

Recommendations

Food products have been given special treatment in every economic integration initiative worldwide. In some cases this has prompted countries to form a regional unified policy, such as the EU Common Agricultural Policy. Other situations resulted in agricultural exception clauses, such as those found in free trade agreements negotiated within Latin America or the Middle East and North Africa region. New opportunities in the Maghreb are based on proximity factors and regional public goods, but the possibilities are not reflected in trade figures, mainly because of intra-regional policy distortions.

In open economies, civil society and private actors influence the decision-making process, notably through lobbying, though this is more or less efficient depending on the country and type of government. A regional integration process cannot be a simple consequence of top-down decision making regarding tariff levels. It should be a multiactor building process that maximizes the Maghreb's potential to produce a common vision and a common strategy to reach this vision. Managing transitions depends crucially on the willingness and capacity of local stakeholders—notably private firms—to cooperate and create regional clusters, innovation systems, or regulatory bodies in the case of regional public-goods provision initiatives. Table 12.5 summarizes potential areas of cooperation among Maghreb countries.

The first area for potential cooperation lies in trading opportunities based on economies of scale, proximity, and similarities in consumption patterns. This entry point is already at work as multinational enterprises (MNEs), such as Unilever, Danone, Nestlé, or Kraft, create regional platform strategies (Van Witteloostuijn 2007). Regional food exports from Morocco to Algeria and Tunisia are exclusively MNE products. This kind of trade creation based on proximity and economies of scale is promoted by FDI and can be rapidly mobilized.

The second entry point offers vertical integration opportunities based on complementarities in factor endowments as much as on proximity factors. Olive oil trade among Tunisia, Morocco, and Algeria is a good example of this opportunity, with raw products coming from the most competitive producer and local firms adding value through their market information and networks.

Table 12.5 Potential areas of cooperation among Maghreb countries

	Entry point	Domains to be covered	Projects
Regional growth	Horizontal integration	Processed products sensitive to economies of scale	Regional FDI facility
	Vertical integration	Olive oil	Common FDI attraction
	Self discovery projects	Camel milk	Public-private partnership projects
	Coordination projects	Food safety Quality insurance Counterfeiting Smuggling	Policy coordination with EU support
Regional public good	Common pool resources	Water Biodiversity Ranges Coastal resources	Cooperation projects with multilateral funding and technical assistance

FDI = foreign direct investment.

The third entry point is based on the self-discovery potential of regional firms. Conducting innovation projects at the regional rather than individual level can reduce the costs and risks for local firms of launching new products and discovering new markets. Region-specific products, such as camel milk, are natural candidates for these projects, as their potential is untapped.

The fourth entry point is based on reducing the spillover effects of heterogeneous food norms and standards. These frictions encourage smuggling and counterfeiting; they also adversely affect food quality and health protection. The divergence in rules can be exploited by border mafias in rent-seeking activity that bridges the gap between low-standard countries and high-standard countries.

The fifth entry point relates to creating a common pool for regional resource conservation, for which border limits have no significance. This sort of project can benefit directly from the experience and support of international organizations, the European Union, and the United States.

These recommendations taken together can go a long way toward integrating the Maghreb's food and agriculture sectors. Granted, the Maghreb—like virtually every other region—faces obstacles to liberalizing what are

often sensitive and highly politicized sectors. But the potential gains to each country are worth overcoming these difficulties.

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Table 12A.1 Food trade between Algeria, Morocco, and Tunisia using Harmonized System classification, 2006 (millions of US dollars)

Product category	Importer country					
	Algeria	Morocco	Algeria	Tunisia	Morocco	Tunisia
	Partner country			Partner country		
	Morocco	Algeria	Tunisia	Algeria	Tunisia	Morocco
01 Live animals	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
02 Meat and edible meat offal	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
03 Fish, crustaceans, molluscs, aquatic invertebrates, nes	0.20	n.a.	0.00	1.29	n.a.	n.a.
04 Dairy products, eggs, honey, edible animal product, nes	2.34	n.a.	0.10	n.a.	n.a.	0.35
05 Products of animal origin, nes	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
06 Live trees, plants, bulbs, roots, cut flowers, etc.	0.04	n.a.	n.a.	n.a.	n.a.	n.a.
07 Edible vegetables and certain roots and tubers	0.03	n.a.	0.00	n.a.	n.a.	n.a.
08 Edible fruit, nuts, peel of citrus fruit, melons	0.00	1.45	0.05	n.a.	20.32	n.a.
09 Coffee, tea, mate and spices	0.03	n.a.	n.a.	n.a.	0.00	n.a.
10 Cereals	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
11 Milling products, malt, starches, inulin, wheat gluten	0.02	n.a.	0.01	1.44	n.a.	n.a.
12 Oil seed, oleagic fruits, grain, seed, fruit, etc., nes	0.00	n.a.	n.a.	n.a.	0.01	n.a.
13 Lac, gums, resins, vegetable saps and extracts, nes	0.00	n.a.	0.00	n.a.	n.a.	n.a.
14 Vegetable plaiting materials, vegetable products, nes	n.a.	n.a.	0.07	n.a.	n.a.	n.a.
15 Animal, vegetable fats and oils, cleavage products, etc.	n.a.	n.a.	3.04	0.32	1.78	n.a.
16 Meat, fish, and seafood food preparations, nes	0.26	n.a.	0.54	n.a.	n.a.	n.a.
17 Sugars and sugar confectionery	1.35	n.a.	1.65	1.73	0.00	3.47
18 Cocoa and cocoa preparations	0.02	n.a.	0.15	n.a.	0.02	n.a.
19 Cereal, flour, starch, milk preparations, and products	0.06	n.a.	5.18	n.a.	0.85	n.a.
20 Vegetable, fruit, nut, etc. food preparations	0.00	n.a.	4.71	n.a.	0.78	n.a.
21 Miscellaneous edible preparations	2.90	n.a.	2.61	n.a.	0.31	6.70
22 Beverages, spirits, and vinegar	0.12	n.a.	0.08	n.a.	0.22	1.70
23 Residues, wastes of food industry, animal fodder	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
24 Tobacco and manufactured tobacco substitutes	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
<i>Total food imports</i>	7.38	1.45	18.18	4.78	24.28	12.22
<i>Total merchandise imports</i>	49.88	445.80	171.58	106.00	133.85	92.00

nes = not elsewhere specified
n.a. = not available

Sources: United Nations COMTRADE Database; International Trade Center.

