THE ARAB MAGHREB UNION: REGIONALIZATION WITHOUT INTEGRATION

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Photo by Victor Puente/Pexels

Chapter 6

INTRODUCTION

The 2014 Malabo Declaration is a recommitment to the Comprehensive Africa Agriculture Development Programme (CAADP) principles adopted by African Union Heads of State and Government. It calls for tripling intra-African trade in agricultural goods and services through improved trade integration at the regional level. In view of the important role of Africa's regional economic communities (RECs) in promoting intra-African trade, each year the Africa Agriculture Trade Monitor (AATM) features one of the RECs and analyzes the structure of its trade, its partners, and how to improve its integration. In 2019, the featured REC was the Common Market for Eastern and Southern Africa (COMESA), and in 2020, the Southern African Development Community (SADC). This year, the AATM focuses on the Arab Maghreb Union (AMU), which includes five countries — Algeria, Libya, Mauritania, Morocco, and Tunisia.

The AMU is interesting for several reasons. First, despite a long history of regional agreements, integration among the AMU countries is rather low (Kahouli and Maktouf 2015). The Union was established in 1989 and a larger trade agreement, the Pan-Arab Free Trade Agreement (PAFTA),[1] was signed in 1998. However, trade and investment flows between the countries of AMU and PAFTA remain low. Second, despite their geographic proximity and cultural similarities, AMU countries have failed to become deeply integrated (Abdullah et al. 2014). Third, some of the AMU countries are involved in other trade agreements (such as the Agadir Agreement, the European Association Agreements, and COMESA) that create additional trade costs because of differing regulations, regimes, and standards (referred to in the trade literature as a "spaghetti bowl"). Given this complexity, it is important to investigate whether such agreements are complementary to the AMU agreement, or displace it.

Against this background, this chapter has three objectives. First, it analyses the composition and structure of export flows from the AMU countries, by product and by partner, with a special focus on agricultural products (including agrifood products). Second, it attempts to assess the untapped export potential for products and for destination markets. Third, it analyses factors that help explain why the AMU regional bloc has not led to deep integration.

The remainder of the chapter is organized as follows: The next section provides a historical overview of the AMU. This is followed by an analysis of the region's trade flows (intra- vs. extra-regional trade flows). We then explore the untapped potential of the AMU's main markets and export products. The following section discusses the factors that have hindered the integration of the AMU countries, and the final section concludes.

HISTORICAL BACKGROUND

The Maghreb is the Arabic name for the northwest part of Africa, generally including Algeria, Libya, Mauritania, Morocco, and Tunisia. It comprises almost 6 million square kilometers and 100 million people. The Maghreb countries are strategically located, with the dynamic European countries across the Mediterranean Sea to the north and emergent African economies to the south. The Maghreb countries have common historical, cultural, and language ties but are diverse in terms of economic and political structures. Some are labor-poor and resource-rich (Libya), others are both labor-abundant and resource-rich (Algeria), or labor-abundant but resource-poor (Morocco, Tunisia, Mauritania). They have a variety of political systems, with a kingdom in Morocco, democracy in Mauritania, a decade of ongoing political reforms moving toward a strong democracy in Tunisia, and a decade of political unrest and continued conflict in Libya. However, they face common threats including climate change, water scarcity, and terrorism, among others.

1 PAFTA includes 17 Arab countries.

Interest in creating a free trade agreement among Maghreb countries emerged in the post-independence period, when the nationalist parties in Morocco and Tunisia, together with the National Liberation Front of Algeria, held the 1958 Maghreb Unity Congress in Tangier. In 1964, the first Conference of Maghreb Economic Ministers took place in Tunis and established the Permanent Consultative Committee of the Maghreb including Algeria, Libya, Morocco, and Tunisia. The Committee was charged with coordinating and harmonizing the development plans of these countries and their intraregional trade and relations with Europe (Finaish and Bell 1994). At the first Maghreb summit, held in 1988, the five Maghreb countries — Algeria, Libya, Mauritania, Morocco, and Tunisia — met to discuss forming an economic union. Also in 1988, the leaders of the Maghreb countries created the Maghreb High Commission with the declaration of Zeralda as well as various specialized commissions to help achieve unity in the region.

These five countries signed the Marrakech treaty to establish the AMU in 1989, with the aim of boosting cooperation and dialogue and improving economic growth in the region.[2] The treaty's 19 articles aim to increase the integration of AMU in economic, cultural, and defense areas. In particular, the treaty defined a series of steps for deepening trade relations: first, the establishment of a free trade area with the dismantlement of tariff and nontariff trade barriers among member countries; second, the creation of a customs union with a common external tariff vis-à-vis the rest of the world; and finally, the creation of a common market with free movement of factors of production across national borders of member countries. It is important to note that although the five countries have signed more than 30 multilateral agreements, all Union members participate in only five agreements. These are on trade and tariffs covering all industrial products; trade in agricultural products; investment guarantees; avoidance of double taxation; and phytosanitary standards.

The large gains foreseen from AMU economic integration have not materialized. As of 2020, intraregional trade among AMU countries still accounted for less than 5 percent of AMU's total trade, for several reasons. First, all AMU decisions must be unanimously agreed upon and implemented. Second, political divergence on some issues, such as the Western Sahara conflict between Algeria and Morocco, halted AMU meetings in 1994. The Union's goals have also been undermined by conflicts and terrorism threats since the treaty was signed, including the "Black Decade" in Algeria in the 1990s, a decade of political transition resulting in the disruption of the state in Libya in the 2010s, and ongoing political and social unrest in Tunisia since 2010. Together these have led to mediocre growth in the region.

AMU integration is also held back by several economic factors, including restrictive trade and investment policies, tariffs and nontariff barriers, and low infrastructure connectivity among AMU countries (Kireyev et al. 2018). Nontariff barriers are quite significant, with border compliance costs for exports and imports among the highest in the world. Moreover, regional infrastructure and logistics for intraregional trade are poor. For instance, although all AMU countries have ports, there are few intraregional commercial shipping lines. These countries have looked toward Europe in shaping their trade regimes and are better connected to Europe than to other AMU countries, as is described in this chapter. The theoretical explanation for this has been highlighted by Anderson and van Wincoop (2004) who argue that relative trading costs matter more than absolute ones, and countries surrounded by large trading economies, such as European economies in the case of AMU countries, will trade less between themselves than if they were geographically isolated.

In overlooking their own intraregional trade potential, the AMU countries have missed significant opportunities. As a result, the possibility of becoming a value-chain hub for trade and investment between Europe and Africa remains a dream. This lack of regional integration is, in turn, reducing their integration in global value chains (Kireyev et al. 2018).

2 See the AMU official website, https://maghrebarabe.org/

Interestingly, while complex trade regulations hinder formal trade among AMU countries, they are also fueling informal intraregional trade. Price differences across countries resulting from various distortions have created opportunities that informal entrepreneurs are seizing (Timmis 2017).

TRENDS AND STRUCTURE OF AGRICULTURAL TRADE

Overview of AMU agriculture and trade

A well-functioning agriculture and agrifood sector is of paramount importance for developing countries — it not only ensures food security but also provides a source of national income. Trade in agricultural products can contribute to regional integration and the development of regional value chains. Participation in value chains, in turn, contributes to the growth of the entire agriculture and agrifood sector, and thus increases national income.

Over the period 2000–2019, the average contribution of the agriculture sector to GDP in AMU countries ranged from 2.7 percent in Libya to 19.1 percent in Mauritania (Figure 6.1a). For the industrial sector, the highest share has been in Libya (79 percent), reflecting its large energy sector, and the lowest in Morocco (25.9 percent). The contribution of services to GDP stands at around 50 percent for all countries. Focusing on the contribution of agriculture to GDP for the AMU countries, Figure 6.1b shows that during the 2003–2019 period, the share of the agriculture sector in the GDP of Algeria, Morocco, and Tunisia varied between 10 and 15 percent. In contrast, in Mauritania, where the industrial sector is underdeveloped, agriculture's contribution ranged between 15 and 25 percent. These results also show that the industrial and service sectors play a more important role than agriculture in the AMU economies. For this reason, according to the Global Food Security Index, established by the Economist Intelligence Unit, these countries have an index of around 62 (classified as "good"), meaning that they are relatively food secure but still face some risks. Indeed, because of the region's water stress, these countries perform relatively poorly in terms of food availability and resilience (Figure 6.2). They perform slightly better in terms of food quality and safety as well as affordability.

Figure 6.1a Sectoral contributions to GDP, 2000–2019 average (%)

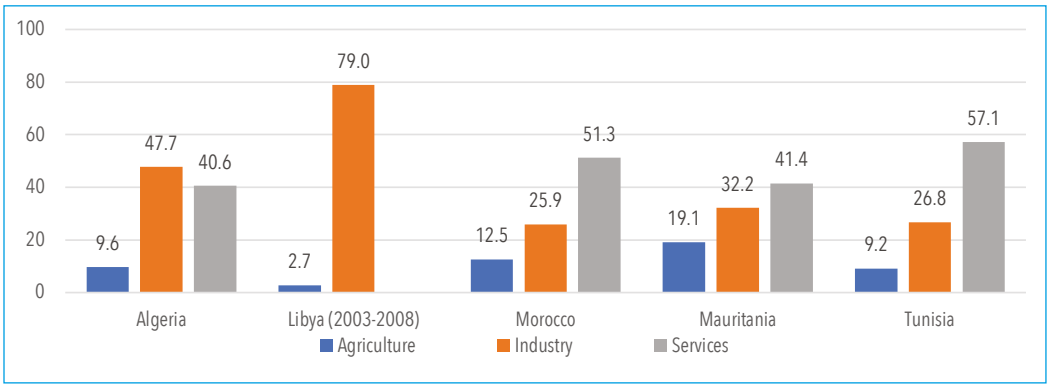
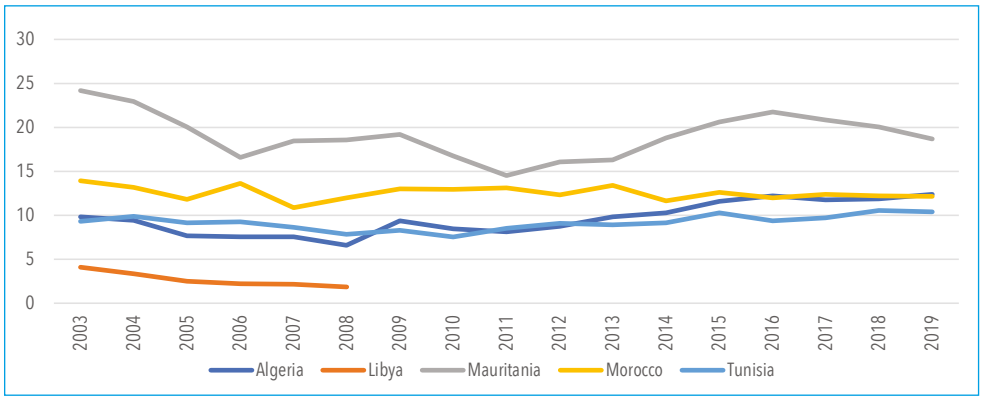
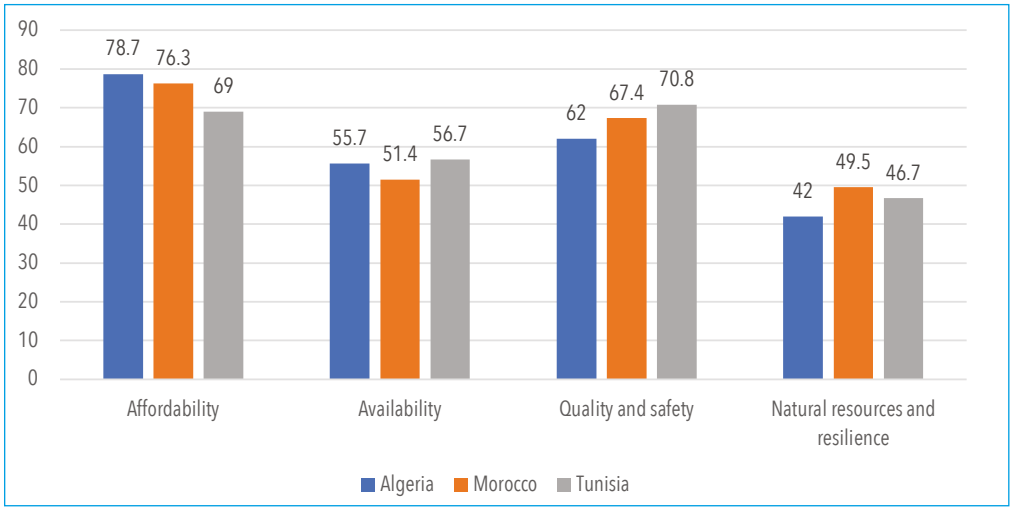


Figure 6.1b Agriculture value added, 2003–2019 (% of GDP)



Source: Based on World Development Indicators data.

Figure 6.2 Global Food Security Index, 2019



Source: Constructed using the Global Food Security Index dataset.
Note: (i) Affordability measures the ability of consumers to purchase food, their vulnerability to price shocks, and the presence of programs and policies to support customers when shocks occur. (ii) Availability measures the sufficiency of the national food supply, the risk of supply disruption, national capacity to disseminate food, and research efforts to expand agricultural output. (iii) Quality and Safety measures the variety and nutritional quality of average diets, as well as the safety of food. (iv) Natural Resources and Resilience assesses a country's exposure to the impacts of a changing climate and natural resource risks and how the country is adapting to these risks that affect food security. (v) The higher the index, the more food secure a country is. The ranges of the index are as follows: very good (80–100), good (60–79.9), moderate (40–59.9), weak (20–39.9), and very weak (0–19.9) (https://foodsecurityindex.eiu.com/Home/Methodology).

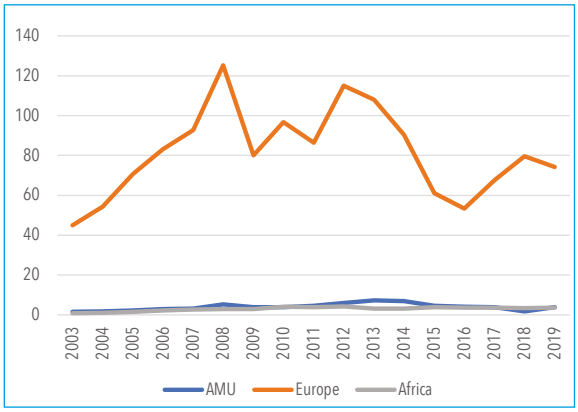
Figure 6.3 shows AMU trade flows to its main partners: Europe[3] (its largest trading partner), Africa (excluding AMU countries), and AMU countries. Panel (a) shows export values from the AMU countries to partner regions from 2003 to 2019. AMU exports to Europe are substantially larger than both exports to African countries (excluding AMU countries) and AMU intraregional exports. Exports to Europe rose steadily from 2003 to a peak in 2008 of US$120 billion,[4] and then rose again after 2009, but without reaching the pre-2008 levels. This drop-off in exports to Europe reflects the long-term consequences of the 2008–2009 financial crisis. AMU exports to Africa and within the AMU remained relatively stable but low during the 2003–2019 period, never exceeding $10 billion.

3 Most AMU countries have signed free trade agreement with the European Union (EU). In 2019, data from the International Trade Center show that 59 percent of AMU's goods exports go to the EU.

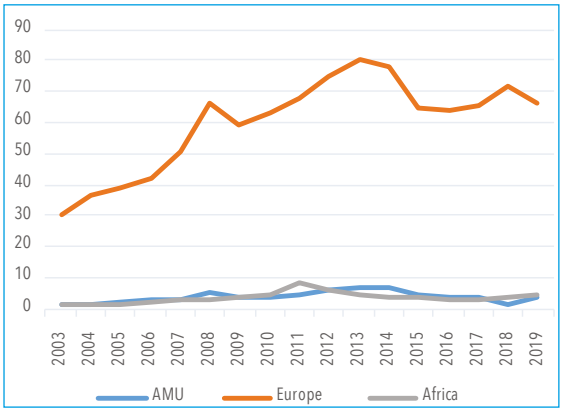
4 Throughout this chapter, "$" refers to US dollars unless otherwise noted.

Figure 6.3 AMU trade flows of goods by region

(c) AMU exports (current US$ billions)



(b) AMU imports (current US$ billions)



Source: Constructed from 2021 AATM database.

Panel (b) shows import values for AMU countries from 2003 to 2019. Imports from Europe are higher than those from Africa (excluding AMU countries) and higher than those from intra–AMU trade. Imports from Europe increased during the 2003–2019 period, while imports from Africa (excluding AMU) and from within AMU remained stable.

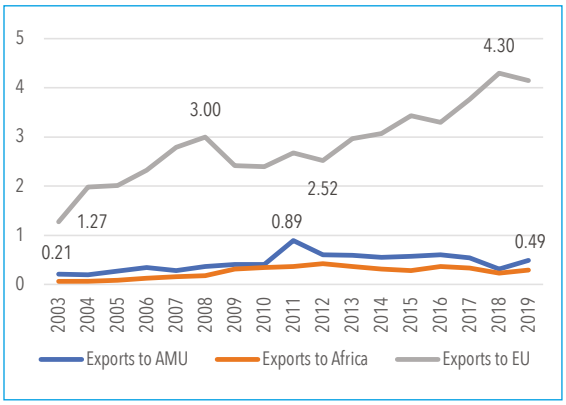
Intraregional and extra-regional flows

Intraregional vs. extra-regional trade flows

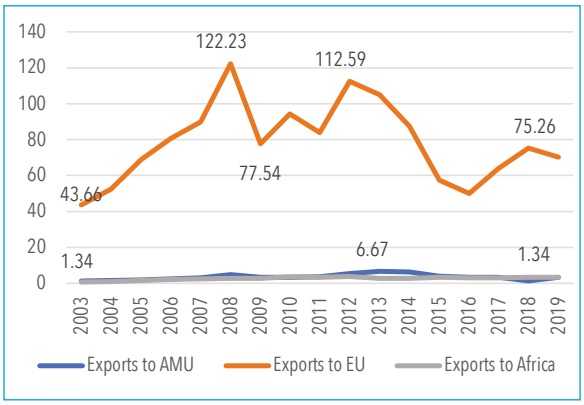
Figure 6.4 presents the evolution of agricultural and nonagricultural exports from the five AMU countries to the main trading bloc partners, namely the AMU, Africa (excluding the AMU countries), and the European Union (EU). Exports to the EU account for the largest share of total AMU exports (both agricultural and nonagricultural products). The various Association Agreements and free trade agreements signed between the EU and each of the AMU countries have made the EU the main destination for AMU exports. Moreover, AMU exports of agricultural products to the EU grew fairly steadily, from $1.27 billion in 2003 to $4.30 billion in 2019.

Figure 6.4 Evolution of AMU countries' exports of agricultural and nonagricultural products, 2003–2019 (US$ billions)

(a) Agricultural products



(b) Nonagricultural products

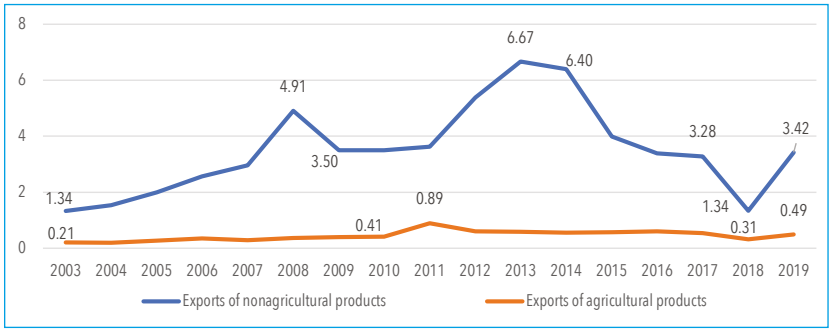


Source: Constructed from the 2021 AATM database.

Analysis of all intra–AMU trade flows (Figure 6.5) shows that, within the AMU, trade of nonagricultural products is larger than trade of agricultural products. Although the agriculture and agrifood sectors comprise 10 to 20 percent of GDP in the region, regional agricultural trade flows remain rather limited. Moreover, the volume of intraregional trade in both agricultural and

nonagricultural products has been unsteady. Fluctuations in agricultural exports are positively related to the annual harvest in the country of origin and negatively related to that of the country of destination. For example, the reduction in Tunisia's olive oil exports from US$784.2 million in 2018 to $466.5 million in 2019 is related to the poor harvest in that year, while a better harvest put Tunisia first among olive-oil exporting countries (by volume) in 2020.

Figure 6.5 Evolution of trade among the AMU countries, 2003–2019 (US$ millions)



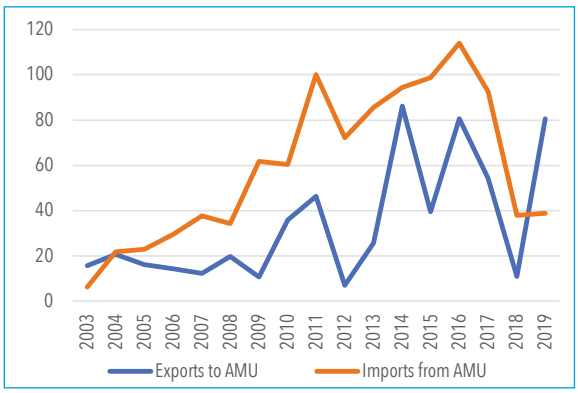
Source: Constructed from the 2021 AATM database.

Heterogeneity of AMU Members

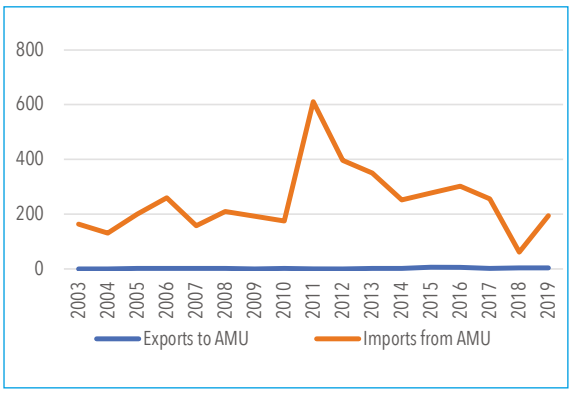
The analysis of agricultural trade among the five AMU countries (Figure 6.6) shows national variations. Within the region, Libya and Mauritania are primarily importers, Algeria and Morocco both export and import agricultural products, and Tunisia is primarily an exporter. However, while this pattern is consistent, the volume of imports and exports for each country is volatile, related to the success of annual harvests in each country as well as to productivity. While Libya and Mauritania mainly import agricultural products, their exports to the other AMU countries are negligible; Algerian exports of agricultural products are also quite low. Morocco and Tunisia are the only AMU countries exporting agricultural products within the region. In terms of trade balances, Tunisia is the only country that had a positive trade balance with the AMU throughout the 2003–2019 period. Morocco's intraregional exports began to exceed imports only in 2012. Of note is that Tunisia's exports of agricultural products exactly track Libya's imports from 2003 to 2019, confirming that Libya imports agricultural products almost exclusively from Tunisia. Similarly, the evolution of Morocco's exports appears to be correlated with Mauritania's imports.

Figure 6.6 Intra–AMU trade in agricultural products, 2003–2019 (US$ millions)

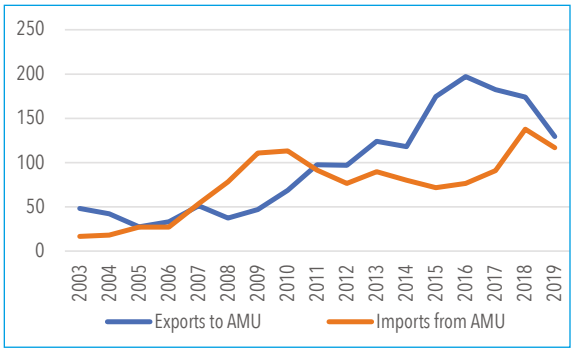
(a) Algeria



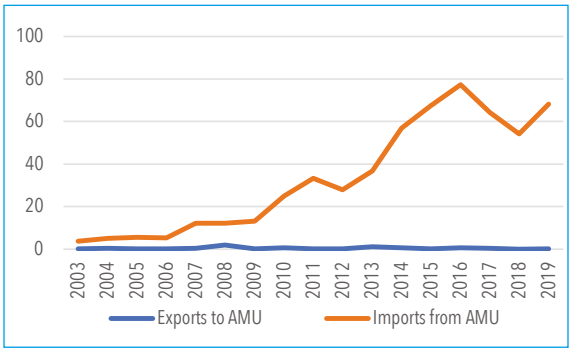
(b) Libya



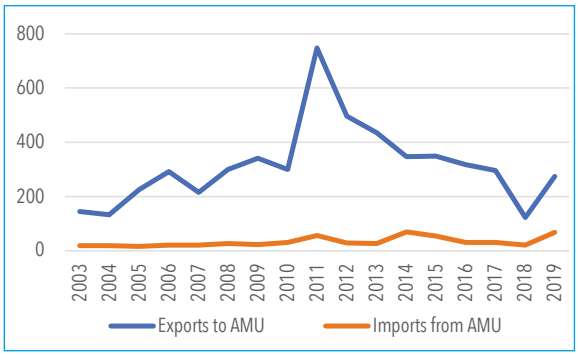
(c) Morocco



(d) Mauritania



(e) Tunisia



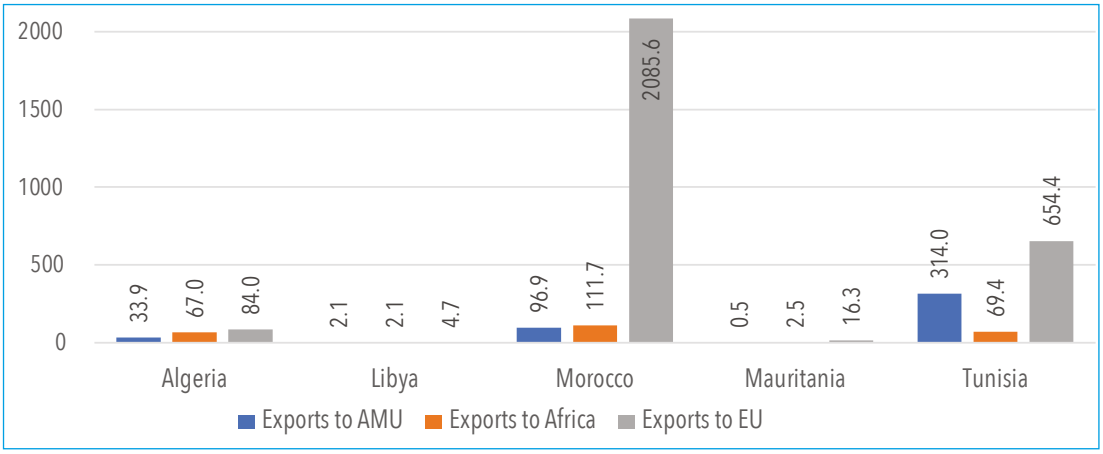
Source: Constructed from the 2021 AATM database.

To better understand the agricultural trade among the AMU countries, we use the average of exports and imports for the period 2003–2019; the average is preferred because annual production, and consequently exports of agricultural products, are quite variable and subject to rainfall and climatic conditions. Looking at the individual AMU country averages of agricultural exports and imports (Figures 6.7 and 6.8) to the main regional blocs (AMU, Africa, and the EU) shows that:

- Tunisia and Morocco are the main exporters of agricultural products; and their exports are mainly destined to the EU.
- Tunisia is the main exporter of agricultural products to other AMU countries, particularly to its neighbor Libya.
- The agricultural products trade of the five countries within the AMU is comparable to that with all other African countries.

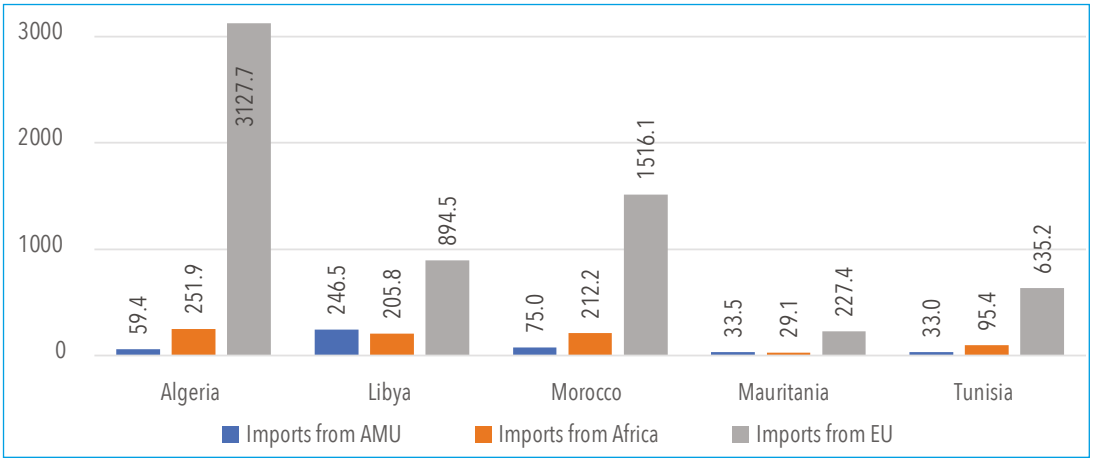
- Algeria, Morocco, Libya, and Tunisia import agricultural products primarily from the EU.
- Apart from Tunisia's exports to Libya, agricultural products trade among the AMU countries is quite low. The EU is the main destination for AMU countries' exports of agricultural products and their imports are also mainly from the EU.

Figure 6.7 Agricultural exports to AMU, Africa, and EU, 2003–2019 average (US$ millions)



Source: Constructed from the 2021 AATM database.
Note: Africa excludes the AMU countries.

Figure 6.8 Agricultural imports from the AMU, Africa, and EU, 2003–2019 average (US$ millions)



Source: Constructed from the 2021 AATM database.
Note: Africa excludes the AMU countries.

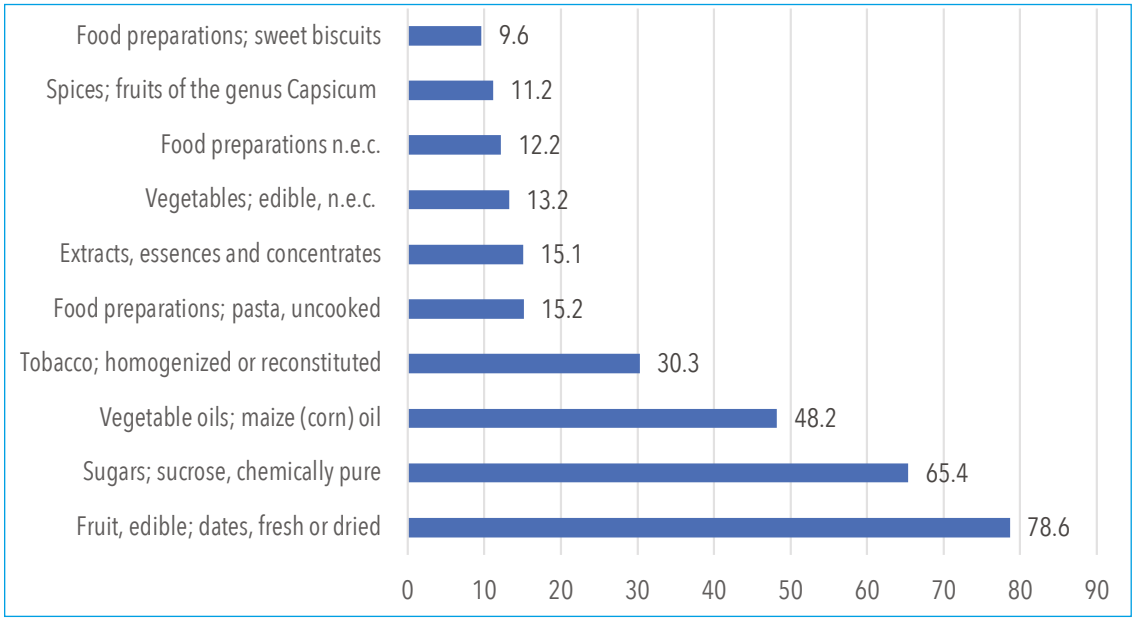
In summary, for all Maghreb countries, trade in agricultural products is carried out mainly with EU countries. Trade between Maghreb countries remains rather limited. Indeed, the various association and free trade agreements signed between the EU and the Maghreb countries have been a driving force for the development of agricultural trade, despite their primary focus on nonagricultural products. Similarly, constraints related to transport infrastructure and logistics chains appear to be an obstacle to the development of agricultural trade among Maghreb countries (discussed in depth later in this chapter). Logistics and infrastructure bottlenecks are more important for South–South trade than for North–South trade.

Agricultural products exported and imported by AMU members

Top 10 exported and imported agricultural products

Intraregional flows refers to trade flows within the AMU region. In intraregional trade, the top 10 traded agricultural products (at the HS6 level) from AMU countries are dates (fresh and dried), followed by sugar, maize oil, tobacco, and pasta (Figure 6.9). Average exports of dates reached $78.64 million in 2003–2019, and dates appear to be one of the top two exported agricultural products for Algeria and the top exported agricultural product for Tunisia, Mauritania, and Libya. Sugar is Algeria's top export and among the top three products exported by Morocco and Tunisia.

Figure 6.9 Top 10 agricultural products traded within the AMU, average exports 2003–2019 (current US$ million)

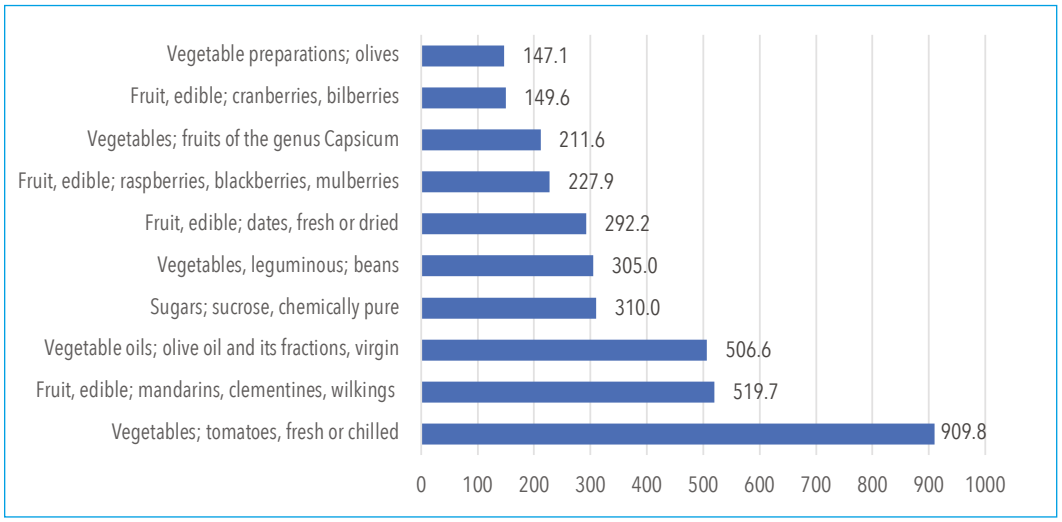


Source: Constructed from the 2021 AATM database.

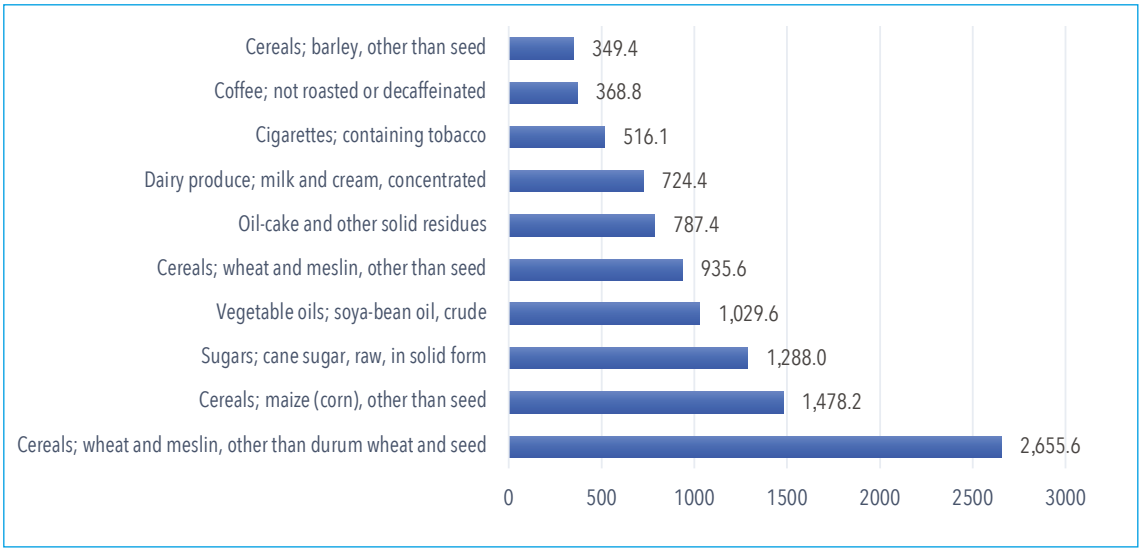
Extra-regional flows refers to trade flows between the AMU countries and the rest of the world. Figure 6.10a shows the top 10 agricultural products exported from AMU countries to other regions. Tomatoes are the largest extra-regional agricultural export, followed by mandarins and olive oils. The top 10 agricultural products imported by AMU countries from non-AMU countries are wheat and meslin, maize, cane sugar, and soybean oils.

Figure 6.10 Top 10 agricultural products traded by AMU countries with extra-AMU countries

(a) Average exports 2003–2019 (current US$ million)



(b) Average imports 2003–2019 (current US$ million)



Source: Constructed from the 2021 AATM database.

UNTAPPED POTENTIAL

The data presented above show that there are opportunities to develop trade in agricultural products both among the five AMU countries and with other trade partners.

To determine the export potential for each country, we use the export potential indicator constructed by Decreux and Spies (2016). This helps to identify the exporter's unrealized potential export value for a given product in a given target market as follows:

$$Unrealized\ potential_{ijk} = EP_{ijk} - \min(v_{ijk}, EP_{ijk})$$

where EP is the export potential from country i of product k to country j, and v corresponds to observed exports from exporter i of product k to market j. In case of $v_{ijk} \geq EP_{ijk}$, the unrealized potential equals zero. It is important to note that the EP variable is estimated using a gravity model that takes into consideration supply characteristics of the exporting country, demand characteristics in the importing country, and ease of trade between the two countries i and j.

The top 10 destinations that have an untapped potential are chiefly either European countries or the United States (Table 6.1). A few exceptions can be observed: Tunisia has a modest potential in Libya ($181 million), in Algeria ($198 million), and in Morocco ($187 million); Libya has some potential in Morocco ($8 million) as does Algeria ($31 million); and Algeria has export potential in Tunisia ($22 million). However, for Morocco and Mauritania, none of the AMU countries appears among the top 10 destinations with an export potential. Thus, while Morocco could be a potential market for other AMU countries, Tunisia has the most potential as an exporter within the region.

Compared to the untapped potential for exports to European countries, the potential for expanding exports to AMU counties is clearly low, given the countries' existing structural characteristics. If these countries are to boost their intraregional trade flows, structural reforms are needed to better link trade policy to industrial policy, to improve the competitiveness of exports, and to facilitate intraregional flows of foreign investment.

Table 6.1 Actual and untapped export potential by destination (US$ millions)

	Tunisia		Libya		Mauritania		Morocco		Algeria	
Actual	France	4400	Turkey	42	Spain	303	France	5700	France	286
Untapped		*1900*		*19*		*42*		*2000*		*172*
Actual	Germany	1800	Italy	30	Côte d'Ivoire	136	Spain	6600	Spain	242
Untapped		*1100*		*15*		*90*		*1400*		*88*
Actual	Italy	2200	Egypt	25	China	90	USA	1200	Brazil	164
Untapped		*809*		*6*		*122*		*1100*		*40*
Actual	Spain	548	France	18	Japan	130	Germany	1000	USA	116
Untapped		*293*		*18*		*101*		*654*		*51*
Actual	USA	354	USA	17	Cameroon	72	Italy	1100	Italy	80
Untapped		*263*		*14*		*34*		*685*		*49*
Actual	Libya	454	Malta	10	Ghana	71	India	728	Tunisia	62
Untapped		*181*		*10*		*27*		*368*		*22*
Actual	Algeria	384	Spain	11.5	Turkey	34	UK	763	Morocco	52
Untapped		*198*		*8*		*50*		*493*		*31*
Actual	Belgium	243	Norway	8.5	Nigeria	41	Brazil	741	Nether-lands	43
Untapped		*255*		*6*		*35*		*234*		*46*
Actual	Morocco	212	Morocco	11	Angola	66	Nether-lands	552	Germany	40
Untapped		*187*		*8*		*3*		*496*		*33*
Actual	Nether-lands	201	Japan	8	Rep. of Korea	34	Turkey	564	Portugal	37
Untapped		*208*		*10*		*28*		*401*		*41*

Source: Export Potential dataset developed by the International Trade Centre (2019).
Note: (i) The Export Potential Indicator identifies the potential export value for any exporter in a given product and target market based on a gravity model that combines the exporter's supply with the target market's demand, market access conditions, and the bilateral links between the two countries. (ii) The calculations are made for all products (agriculture and nonagriculture).

At the sectoral level, the International Trade Centre shows also that, among the 10 most important sectors, there are some agriculture sectors that have export potential (ITC 2019). For instance, fish and shellfish is a key sector for all AMU countries except Tunisia. In the case of Mauritania, fishing accounts for 4 to 10 percent of GDP, depending on the year, and for 35 to 50 percent of exports (Marti 2018). In Morocco, fisheries contribute 2.3 percent to GDP, with an estimated 3 million people who depend on fisheries for their livelihoods. Among the other sectors, fruits rank second for Algeria, Libya, Morocco, and Tunisia, and food products rank third for Tunisia. While this untapped potential is low in oil-dependent countries (notably Algeria and Libya), it is significantly higher in Tunisia and Morocco. Sectors with potential (such as sugar and fruits in Algeria and fish and fruits in Libya) merit a more detailed analysis to help make them more competitive at the global level.

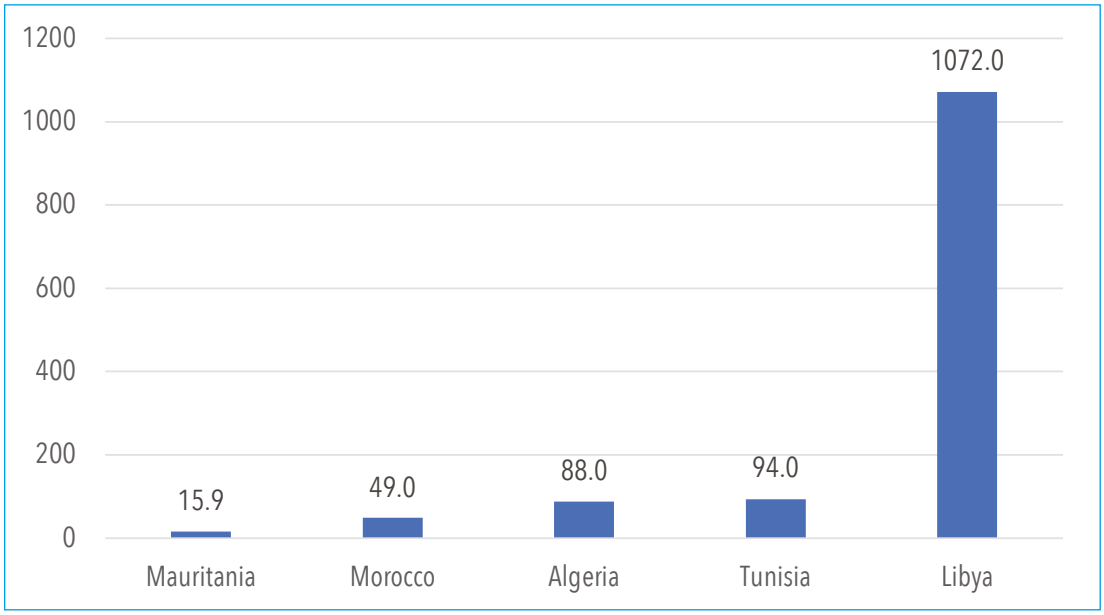
It is important to note that the untapped export potential should be perceived as a dynamic process. Indeed, several products depend on water availability and an adequate climate. Given the water stress and climate change impacts that North Africa is facing, these countries may need to change and/or adapt their specialization. Indeed, the level of water stress in these countries, while heterogeneous (ranging from 15.9 in Mauritania to 1072 in Libya, see Figure 6.11), is generally high compared with other agricultural countries such as Brazil (whose index is 1.32) and China (29.8). The availability of freshwater has decreased in the region by 60 percent over the past 40 years, and the poor maintenance of the water network and inadequacy of wastewater treatment plants may affect the specialization of AMU countries. Given these challenges, hydroponic production may be a good option in the future, since it requires 90 percent less water than conventional agriculture (Pandey et al. 2009).

Table 6.2 Actual and untapped export potential by sector (US$ millions)

		Sector 1		Sector 2		Sector 3	
Algeria	Actual	Sugar	230	Fruits	87	Fish and shellfish	23
	Untapped		*87*		*84*		*23*
Libya	Actual	Fish and shellfish	30	Fruits	2.9	Skins, leather and products	5.5
	Untapped		*40*		*5.8*		*4.6*
Mauritania	Actual	Fish and shellfish	1000	Veg. residues, animal feed	150	Fish products	63.4
	Untapped		*500*		*110*		*40.2*
Morocco	Actual	Fish and shellfish	1300	Fruits	1300	Fish products	800
	Untapped		*1100*		*800*		*520*
Tunisia	Actual	Vegetable oils and fats	670	Fruits	310	Food products	150
	Untapped		*560*		*270*		*160*

Source: Export Potential dataset developed by the International Trade Centre (2019).
Note: (i) The Export Potential Indicator identifies the potential export value for any exporter in a given product and target market based on a gravity model that combines the exporter's supply with the target market's demand, market access conditions, and the bilateral links between the two countries.
(ii) Sectors are ranked based on their observed exports.

Figure 6.11 Level of water stress, 2014



Source: World Development Indicators.
Note: Level of water stress is measured by freshwater withdrawal as a proportion of available freshwater resources.

WHY HAS THE AMU NOT ACHIEVED ITS OBJECTIVE?

The AMU's main objective is to promote regional integration, but its success has been limited. Table 6.3 presents the scores from the Africa Regional Integration Index (ARII) for 2019. The Index considers 16 indicators, grouped by five dimensions (trade integration, productive integration, macroeconomic integration, infrastructural integration, and free movement of people), to measure how well each country and region in Africa is integrated with its neighbors. ARII also measures the state of regional integration for the continent as a whole.

Table 6.3 AMU scores on the Africa Regional Integration Index, 2019

	Algeria	Libya	Mauritania	Morocco	Tunisia	Average AMU
ARII - AMU	0.547	0.307	0.255	0.550	0.780	0.488
Performance	average	low	low	average	high	
Scores by dimensions of regional integration						
Trade integration	0.507	0.390	0.253	0.465	0.790	0.481
Productive integration	0.604	0.211	0.000	0.632	0.795	0.449
Macroeconomic integration	0.404	0.167	0.667	0.998	0.623	0.571
Infrastructural integration	0.550	0.561	0.000	0.526	0.906	0.509
Free movement of people	0.665	0.000	0.750	0.111	0.665	0.438

Source: Constructed from the Africa Regional Integration Index Report 2019.
Note: Scores are calculated on a score of 0 (low) to 1 (high).

The AMU is moderately integrated, with an average score of 0.488. In comparison with other RECs, it is relatively weak on the "free movement of persons" dimension but performs relatively well in terms of integrative macroeconomic policies. The AMU trade score (0.481) is moderate, reflecting low intra–AMU exports. The AMU average score for "productive integration" is 0.449, but the scores of member countries vary considerably, ranging from close to zero for Mauritania to 0.796 for Tunisia. Tunisia is also the AMU leader in "infrastructure integration" (0.906), with good air-links in the region. In contrast, Algeria, Morocco, and Libya are grouped around a score of 0.550, and Mauritania gets a score of zero. In summary, Tunisia and Morocco are the best performers in terms of regional integration, and Mauritania and Libya are the poorest performers.

Five main constraints, discussed below, hinder AMU integration. These include trade policy factors (tariffs and nontariff measures), institutional factors, and behind the borders factors.

The spaghetti bowl of North African agreements

The main objective of the AMU free trade agreement is to promote intraregional exchanges and to strengthen the region economically. Nevertheless, current intra–AMU trade (Figures 6.6 and 6.7), as well as export potential among AMU countries, is limited in comparison with its trade with other regions. One factor behind the limited regional trade development is that, in parallel with the AMU free trade agreement, most AMU countries — Tunisia, Morocco, Mauritania, and Algeria — also signed multiple bilateral, regional, and multilateral economic cooperation and free trade agreements (Table 6.4). These various agreements are in addition to their membership in the World Trade Organization (WTO). Because these multiple bilateral and regional agreements overlap, they have been dubbed a "spaghetti bowl."

Given the specific provisions and measures for agricultural products in each agreement (including phytosanitary control, procedures, and so on), as well as tariff and nontariff measures, management of parallel agreements becomes complex and time-consuming. Countries that are party to each free trade agreement agree on a reduced internal tariff to be applied among themselves; at the same time, each member can levy its own tariff on imports from nonmember countries. Because of this, the concept of "rules of origin" comes into play to distinguish products from one country from those from another. It can be difficult for producers to comply with all the rules of origin simultaneously, especially when these differ substantially across these free trade agreements. For countries with limited institutional capacity for compliance, dealing with rules of origin can be particularly onerous. Thus, the spaghetti-bowl effect of trade agreements tends to increase trade costs, resulting in a slowing down and diversion of trade in both agricultural and nonagricultural products among AMU countries. Many empirical studies (Sorgho 2016; Baldwin 2006) show that, rather than promoting trade, the multiplication of regional trade agreements may instead result in trade diversion effects, because of higher transaction costs caused by a tangle of overlapping rules.

Table 6.4 Major free trade agreements of the AMU countries

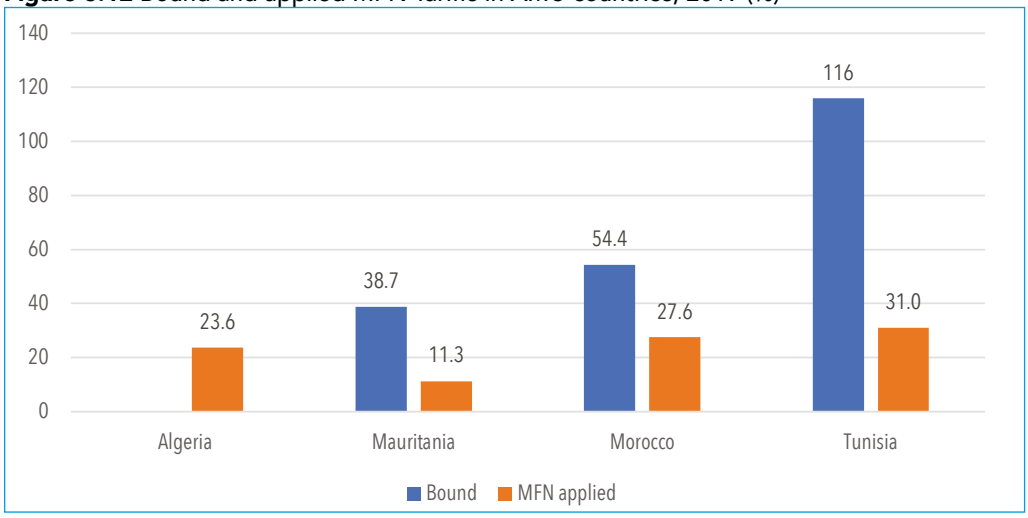
Country	Bilateral free trade agreement	Regional free trade agreement – within Africa	Regional free trade agreement – outside Africa
Algeria	Jordan, Mauritania, Tunisia	AMU, AfCFTA	EU-Algeria Association Agreement, PAFTA
Libya	Jordan, Morocco, Tunisia	AMU, COMESA, AfCFTA	PAFTA
Morocco	China, Egypt, United Arab Emirates, Jordan, Libya, Tunisia, Turkey, USA	AMU, AfCFTA	EU-Morocco Association Agreement, PAFTA, Agadir Agreement
Mauritania	Algeria, China, Gambia, Kuwait, Morocco, Qatar, Tunisia, Turkey, Sudan	AMU, AfCFTA	Economic Partnership Agreement with the EU
Tunisia	Algeria, Egypt, Iraq, Jordan, Kuwait, Libya, Mauritania, Morocco, Palestine, Senegal, Syria, Sudan, Turkey	AMU, AfCFTA, COMESA	EU-Tunisia Association Agreement, PAFTA, Agadir Agreement

Source: Constructed using the databases of the Ministries of Commerce of the different AMU countries.
Note: AfCFTA = African Continental Free Trade Area; AMU = Arab Mahgreb Union; COMESA = Common Market for Eastern and Southern Africa; PAFTA = Pan-Arab Free Trade Area.

Tariff structure

Generally, there is a large gap between bound tariffs (the highest tariffs permitted) and the applied most favored nation (MFN) tariffs for all AMU countries in the agriculture sector. Figure 6.12 shows that the bound tariff of Tunisia is the highest (116 percent), followed by Morocco (54.4 percent) and Mauritania (38.7 percent). MFN tariffs are lower (31 percent, 27.6 percent, and 11.3 percent, respectively). Clearly, this large gap between the bound and applied rates (called the binding overhang) makes a country's trade policies less predictable, which affects trade performance.

Figure 6.12 Bound and applied MFN Tariffs in AMU countries, 2019 (%)



Source: WTO Tariff Profile 2019.
Note: Libya is not included in this figure because its tariff rate is zero. MFN = most favored nation.

Figure 6.13 shows tariffs faced and imposed by AMU countries. Several characteristics should be noted. First, tariffs imposed on the agriculture sector are generally higher than those imposed on nonagriculture sectors. Second, when comparing AMU countries to the world's large agricultural producers, it is obvious that the tariff faced by Algerian and Libyan exports, especially in the EU and China, is higher than the one they impose on imports from these countries. The United States (US) seems open to imports from AMU countries. By contrast, tariffs imposed by Tunisia, Morocco, and Mauritania are higher than those imposed by the US, EU, and China. Third, despite the fact that AMU was initially conceived as a free trade agreement, Algeria imposes a tariff of 19.5 percent on other AMU members, Mauritania 13.6 percent, Tunisia 0.3 percent, and Morocco 0.2 percent. Libya is the only country whose tariff is zero. Moreover, all agricultural imports within the AMU face a tariff of 1.2% (Algeria), 3.9% (Libya), 10.8% (Morocco), 10.9% (Tunisia), and 16.2% (Mauritania). Lower tariffs are observed for the manufacturing sector. This finding makes it clear that the first step toward trade integration has not been achieved.

Several national differences are worth highlighting. Libya's tariffs are generally either low or zero (Figure 6.13b). Yet, it faces a tariff of 4 percent in AMU members, 6 percent in Africa, 5 percent in the EU, and 4 percent in the US. These figures are higher for Algeria, which faces a tariff of 23 percent in Africa, 41 percent in the EU, and 18 percent in the US (Figure 6.13b). The EU and US seem to be slightly more open to Tunisia, on which the US imposes a tariff of 7 percent and the EU imposes a 2 percent tariff; and to Morocco, on which the US imposes a tariff of 3 percent and the EU imposes no tariff (Figure 6.13d and e).

Clearly, although the AMU was conceived as a free trade area, tariffs still impede its intraregional trade. A closer look at the product level (Table 6.5) shows that the top products enjoying protection within the AMU are tobacco (18 percent); meat and fish (17.5 percent); dairy and other animal products (15.8 percent); meat and edible meat offal (15.7 percent): and cocoa and its preparations (13.8 percent).

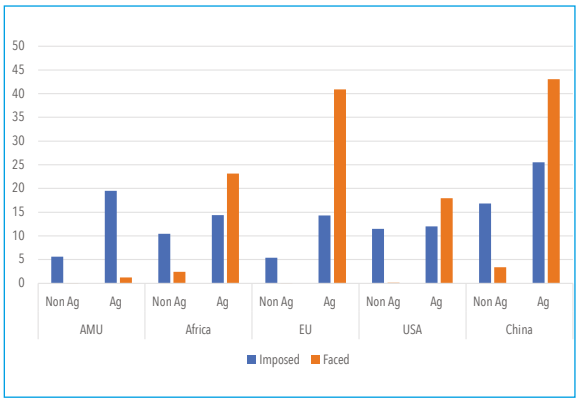
Table 6.5 Top 10 intra–AMU tariffs at HS2 level, 2016 (%)

HS code	Label	Tariff
24	Tobacco and manufactured tobacco substitutes	18.0
16	Meat, fish or crustaceans, mollusks or other aquatic invertebrates; preparations thereof	17.5
04	Dairy produce; birds' eggs; natural honey; edible products of animal origin, n.e.s.	15.8
02	Meat and edible meat offal	15.7
22	Beverages, spirits and vinegar	13.8
18	Cocoa and cocoa preparations	13.8
08	Fruit and nuts, edible; peel of citrus fruit or melons	13.2
11	Products of the milling industry; malt, starches, inulin, wheat gluten	12.5
19	Preparations of cereals, flour, starch or milk; pastrycooks' products	12.4
20	Preparations of vegetables, fruit, nuts or other parts of plants	10.7

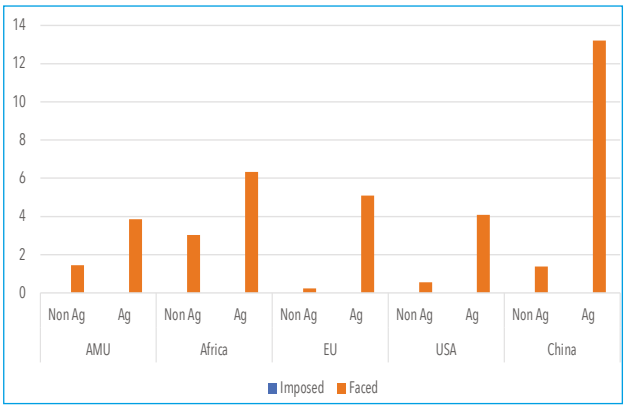
Source: Elaborated using MAcMap-HS6 (2016).

Figure 6.13 Tariffs faced and imposed by AMU countries, 2016 (%)

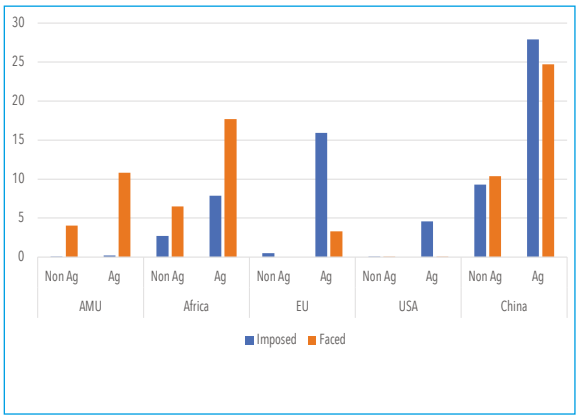
(a) Algeria



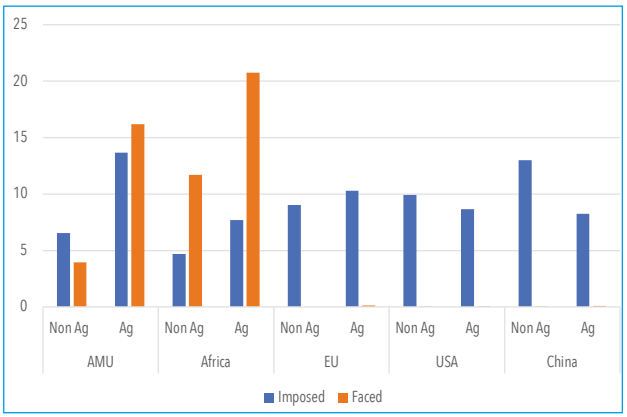
(b) Libya



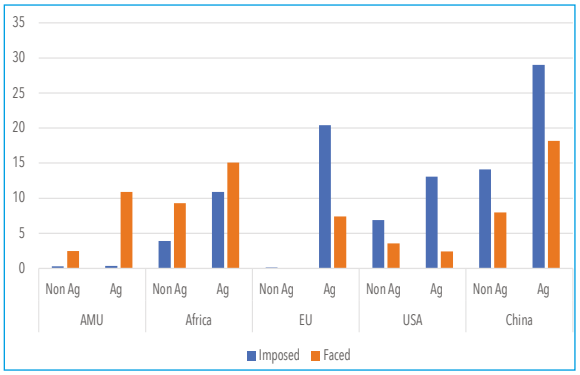
(c) Mauritania



(d) Morocco



(d) Tunisia



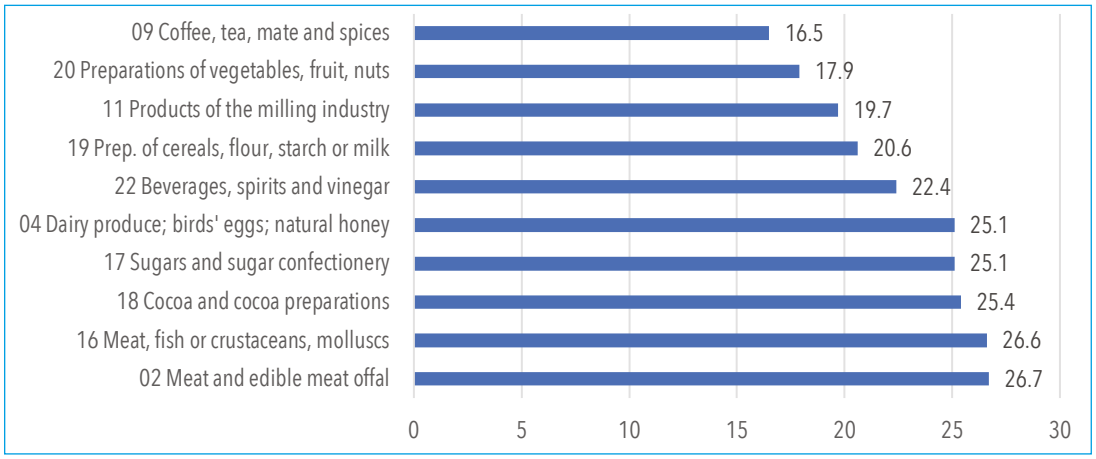
Source: Authors' elaboration using the MAcMap-HS6 dataset.
Note: Ag = Agriculture; Non Ag = Non Agriculture; AMU = Arab Maghreb Union; EU = European Union; CHN = China.

In addition to the intraregional protection, AMU members face varied tariff levels in other destinations. Figure 6.14 shows the 10 highest tariffs imposed by Africa, the EU, and US on AMU countries. Generally, the EU imposes the highest tariffs, followed by Africa and then the US. In Africa, the most protected products are meat (26.7 percent), followed by cocoa, sugar, dairy, beverages, and cereal preparations. In contrast, the EU imposes a significantly higher tariff

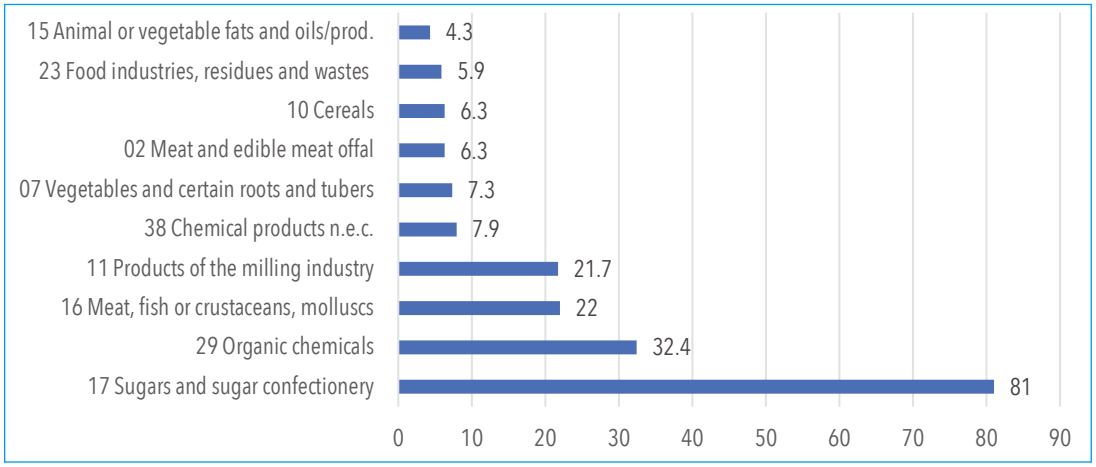
of 81 percent on sugar, followed by organic chemicals, meat, fish and crustaceans, and milling industry products (malt, starches, inulin, wheat gluten). Sugar is also highly protected in the US (29.3 percent), but other products face an average tariff of 2 percent. In a nutshell, tariffs remain an impediment to trade both intra- and extra-regionally, which erodes the competitiveness of AMU countries.

Figure 6.14 Highest tariffs imposed by main trade partners on AMU countries, 2016 (%)

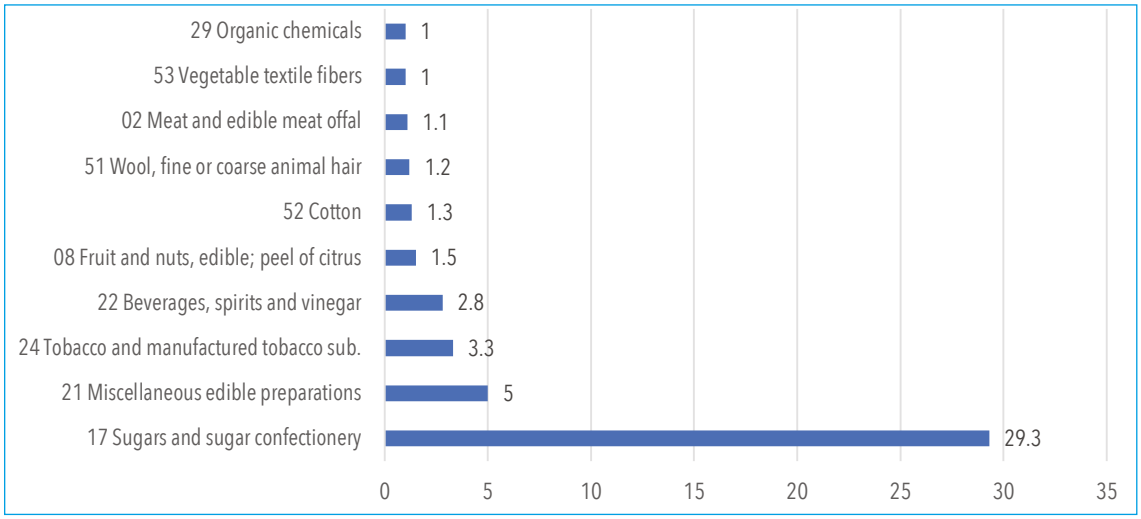
(a) Tariffs imposed by Africa on AMU



(b) Tariffs imposed by EU on AMU



(c) Tariffs imposed by US on AMU

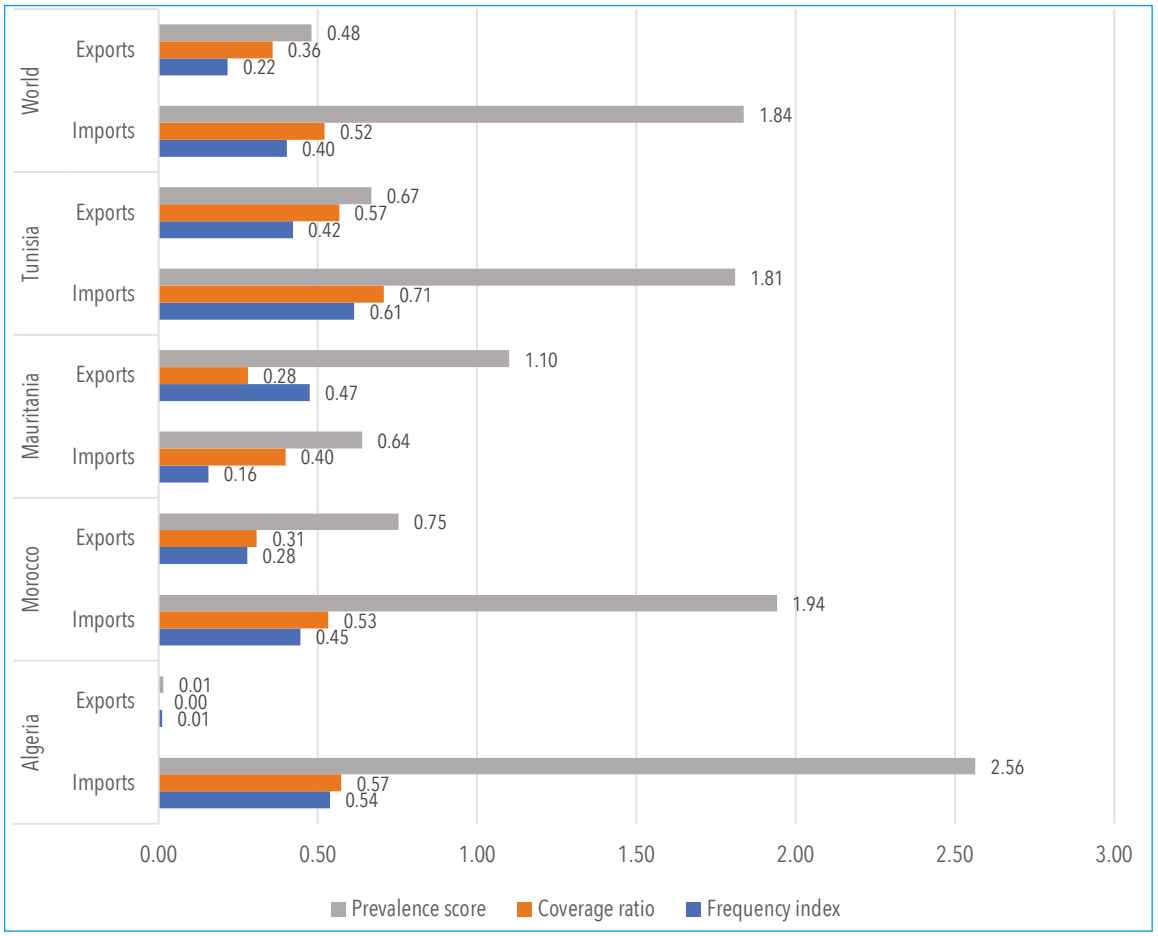


Source: Elaborated using MAcMap-HS6 (2016).
Note: Each label is preceded by the HS2 chapter number.

Nontariff measures

While tariffs have not been fully removed within the AMU, several nontariff measures (NTMs) also hinder the integration of these countries (Augier, Cadot, and Dovis 2013; Walsh and Boustati 2020). Figure 6.15 shows both the *frequency* index, which captures the share of products of a certain country covered by NTMs, and the *coverage* ratio, which is the share of trade subject to NTMs for a certain country. These indexes range between 0 and 1. Generally, the AMU coverage and frequency indicators are higher for imports than for exports; and the coverage ratio is greater than the frequency index, meaning that the share of trade subject to NTMs is greater than the share of products subject to NTMs. Figure 6.15 also shows the *prevalence* score, which counts how many NTMs apply to a given product. The prevalence indicator is high for Algeria, Morocco, and Tunisia.

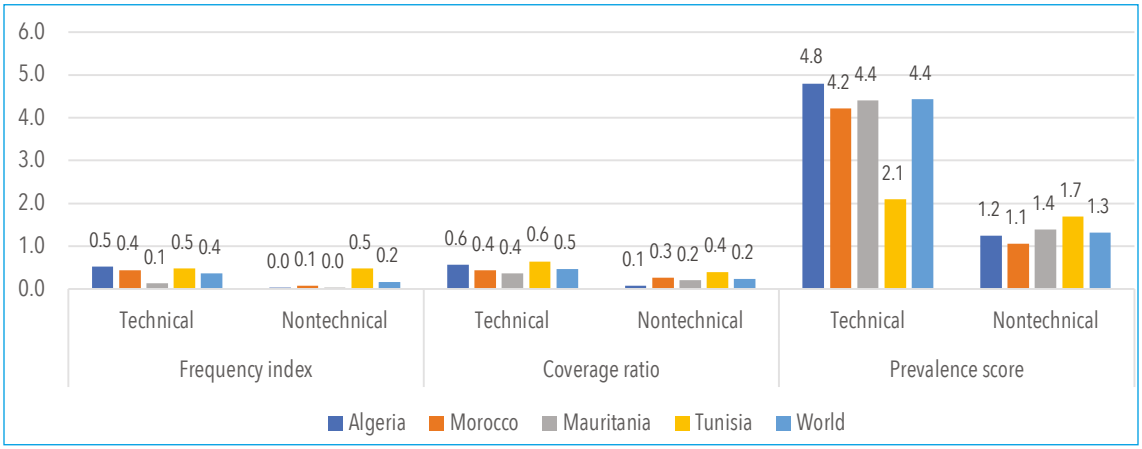
Figure 6.15 Nontariff measures on exports and imports in AMU countries, 2017



Source: UNCTAD 2017.
Note: (i) The frequency index captures the share of products of country i covered by NTMs. (ii) Coverage ratio is the share of trade subject to NTMs for a country i (or for a region), or a group of products. (iii) Prevalence counts how many measures apply to a given product. (iv) Coverage ratios and frequency indexes range between 0 and 1. The higher the indicator, the higher the incidence of a nontariff measures.

Yet, as argued by Maertens and Swinnen (2009) and Odjo and Zaki (2020), there are important distinctions among NTMs. Some NTMs are technical (including sanitary and phytosanitary measures and technical barriers to trade) and others are nontechnical (including contingent trade measures, quantitative restrictions, price controls, and finance measures). For all AMU countries, both the frequency index and the coverage ratio are higher for technical measures than for nontechnical measures, indicating that standards and norms remain an issue for AMU countries. Furthermore, the frequency index for technical measures is lower than the coverage ratio, which confirms this conclusion. Indeed, the share of trade subject to NTMs is higher than the share of products (Figure 6.16). It is important to note also that, for technical measures, Tunisia and Algeria have frequency indexes and coverage ratios above the world average.

Figure 6.16 Technical vs. nontechnical nontariff measures in AMU countries, 2017



Source: UNCTAD 2017.
Note: (i) The frequency index captures the share of products of country i covered by nontariff measures (NTMs). (ii) Coverage ratio is the share of trade subject to NTMs for a country i (or for a region), or a group of products. (iii) Prevalence counts how many NTMs apply to a given product. (iv) Coverage and frequency indexes range between 0 and 1. The higher the index, the higher the incidence of NTMs. (v) The prevalence score does not have a specific range since a specific product can experience more than one NTM.

A more detailed look at the types of NTMs imposed in AMU countries shows that they are chiefly technical barriers to trade, followed by sanitary and phytosanitary measures, pre-shipment inspections, and export-related measures (see Table 6.6). Interestingly, some countries are characterized by nontechnical measures (which is the case of pre-shipment inspection in Algeria and Tunisia, price controls in Morocco, Mauritania, and Tunisia, and quantitative restrictions in Algeria, Mauritania, and Tunisia).

Table 6.6 Types of nontariff measures in AMU countries, 2017

	Algeria		Morocco		Mauritania		Tunisia	
Rank	Coverage	Frequency	Coverage	Frequency	Coverage	Frequency	Coverage	Frequency
1	TBT	TBT	TBT	TBT	Export	Export	TBT	TBT
	0.54	*0.47*	*0.41*	*0.41*	*0.28*	*0.47*	*0.57*	*0.42*
2	SPS	Pre-Ship	Export	Export	TBT	SPS	Export	Export
	0.19	*0.18*	*0.31*	*0.28*	*0.25*	*0.12*	*0.57*	*0.42*
3	Pre-Ship	SPS	Price	SPS	Price	TBT	Pre-Ship	Price
	0.15	*0.07*	*0.26*	*0.10*	*0.17*	*0.02*	*0.26*	*0.38*
4	Quantity	Quantity	SPS	Price	Pre-Ship	Quantity	Quantity	Finance
	0.07	*0.02*	*0.20*	*0.07*	*0.16*	*0.02*	*0.22*	*0.22*
5	Other	Other	Pre-Ship	Pre-Ship	Other	Price	Price	Pre-Ship
	0.04	*0.02*	*0.07*	*0.06*	*0.16*	*0.01*	*0.19*	*0.15*

Source: UNCTAD 2017.
Note: (i) The frequency index captures the share of products of country i covered by NTMs. (ii) Coverage ratio is the share of trade subject to NTMs for a country i (or for a region), or a group of products. (iii) Coverage and frequency indices range between 0 and 1. The higher the index, the higher the incidence of a nontariff measure. (iv) Numbers in italics show the corresponding index value of each measure. (v) TBT stands for technical barriers to trade, SPS for sanitary and phytosanitary measures, Export for export-related measures, Price for price controls, Pre-Ship for pre-shipment inspection, Quantity for quantity restrictions, Finance for finance measures, and Other for other measures.

Table 6.7 shows that, generally, the frequency index is higher than the coverage ratio, indicating that the share of products that is subject to NTMs is higher than the corresponding share of trade subject to NTMs. Second, these indexes are higher for countries' imports than exports, highlighting the protectionist effect of these measures. Yet, there is some heterogeneity at the sectoral and country levels. First, all the indexes are zero for Algeria's exports. In terms of prevalence scores, in Algeria imports of vegetables face the highest number of NTMs; the same is true in Morocco. However, for imports to Mauritania and Tunisia, the highest prevalence score is in the animal sector. For exports, Tunisia has the highest values for both the frequency index and coverage ratio for animal, vegetable, and food sectors, followed by Morocco and Mauritania.

Table 6.7 Nontariff measures in agriculture sectors of AMU countries, 2017

		Imports			Exports		
		Frequency index	**Coverage ratio**	**Prevalence score**	**Frequency index**	**Coverage ratio**	**Prevalence score**
Algeria	Animal	0.92	0.93	10.57	0.00	0.00	0.00
	Vegetable	1.00	1.00	11.12	0.00	0.00	0.00
	Food	0.97	0.81	10.71	0.00	0.00	0.00
Morocco	Animal	0.89	0.67	10.65	0.82	0.67	3.95
	Vegetable	0.93	0.59	11.73	0.94	0.93	2.69
	Food	0.97	0.72	8.33	0.80	0.85	2.19
Mauritania	Animal	0.89	0.93	4.12	0.73	0.72	1.71
	Vegetable	0.90	0.51	3.72	0.00	0.00	0.00
	Food	0.90	0.80	3.99	0.19	0.04	0.46
Tunisia	Animal	1.00	1.00	11.39	1.00	1.00	3.13
	Vegetable	1.00	1.00	6.16	1.00	1.00	2.58
	Food	0.94	0.85	4.46	0.99	0.99	2.81

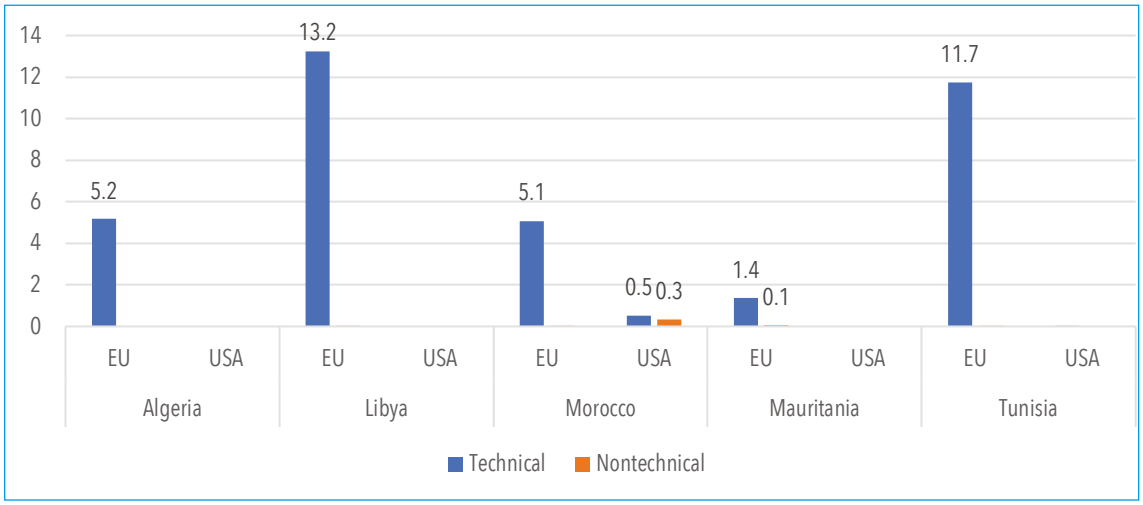
Source: UNCTAD 2017.
Note: (i) The frequency index captures the share of products of country i covered by nontariff measures (NTMs). (ii) Coverage ratio is the share of trade subject to NTMs for a country i (or for a region), or a group of products. (iii) Prevalence counts how many NTMs apply to a given product. (iv) Coverage and frequency indexes range between 0 and 1. The higher the index, the higher the incidence of NTMs. (v) The prevalence index does not have a specific range since a specific product can experience more than one NTM.

It is important also to look at the domestic support provided to the agriculture sector. We focus on Tunisia and Morocco, since Algeria and Mauritania have not notified any domestic support programs at the WTO and Libya is not a WTO member. According to the *Trade Policy Review of Morocco* (2015), the Moroccan government provides some subsidies and long-, medium-, and short-term concessional loans, as well as technical and material assistance, to help agriculture-sector workers improve their competitiveness. Several activities are eligible, such as providing farms with new tractors and agricultural equipment; hydro-agricultural development and land improvements for farms (well-digging, irrigation equipment); increasing livestock production; genetic improvement of cattle, sheep, and goats; and building and equipping cooperative milk collection operations. In Tunisia, most support is through either the WTO Green Box (research, pest and disease control, and infrastructural services) or development programs (investment subsidies granted under the country's investment code and intended for integrated projects).

Ad valorem equivalents of NTMs, calculated by the World Bank, that are imposed by the AMU's main trade partners are shown in Figure 6.17. Technical measures imposed by the EU

are particularly impeding for AMU countries, reaching 13.2 percent for Algeria, 11.7 percent for Tunisia, 5.2 percent for Algeria, 5.1 percent for Morocco, and 3.2 percent for Mauritania. In contrast, the technical measures applied by the US do not have a significant impact on AMU exports, except a small impact on Morocco's exports. Nontechnical measures applied by both the EU and the US on AMU exports likewise do not have a significant impact, except in the case of Morocco's exports to the US.

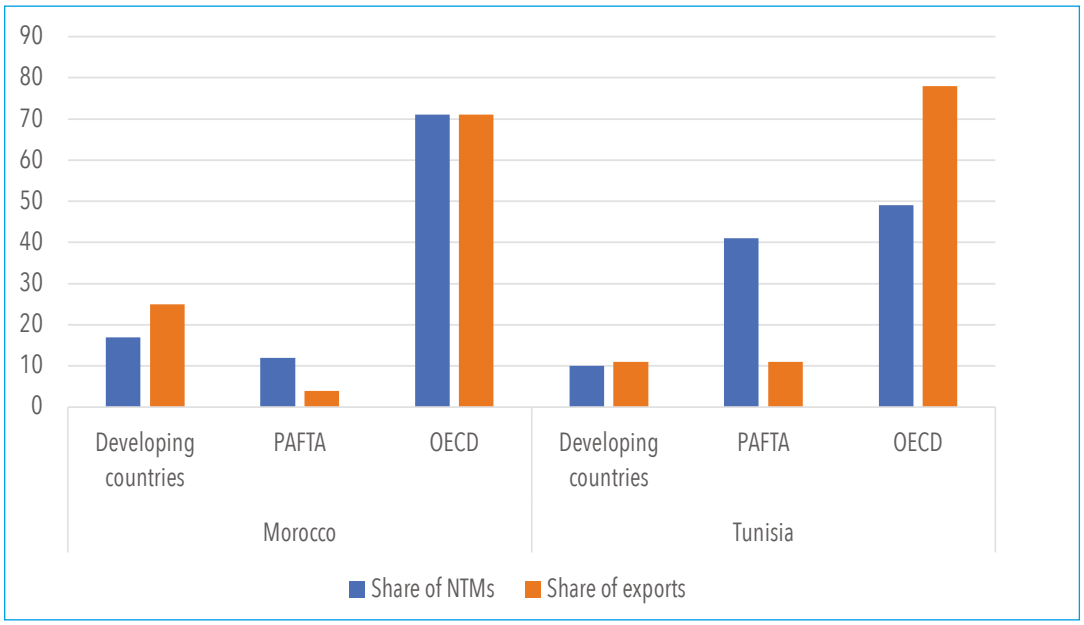
Figure 6.17 Ad valorem equivalents of technical and nontechnical measures faced by AMU exports to the EU and US, 2016 (%)



Source: World Bank 2019.

Clearly, the OECD countries impose the lion's share of NTMs (in terms of number of measures) on the AMU (71 percent for Morocco and 49 percent for Tunisia) (Figure 6.18). Yet, 12 percent and 41 percent of NTMs are faced by Morocco and Tunisia, respectively, in other Arab countries, while their exports to these countries are 4 percent and 11 percent respectively. These costly measures thus continue to impede intra–Arab (including AMU) exports.

Figure 6.18 Number of nontariff measures faced by AMU countries in different destinations (%)



Source: International Trade Centre 2013.
Note: Data for Libya, Mauritania, and Algeria are not available. PAFTA = Pan-Arab Free Trade Area. Data for Tunisia are for 2012; data for Morocco are for 2011.

Trade logistics

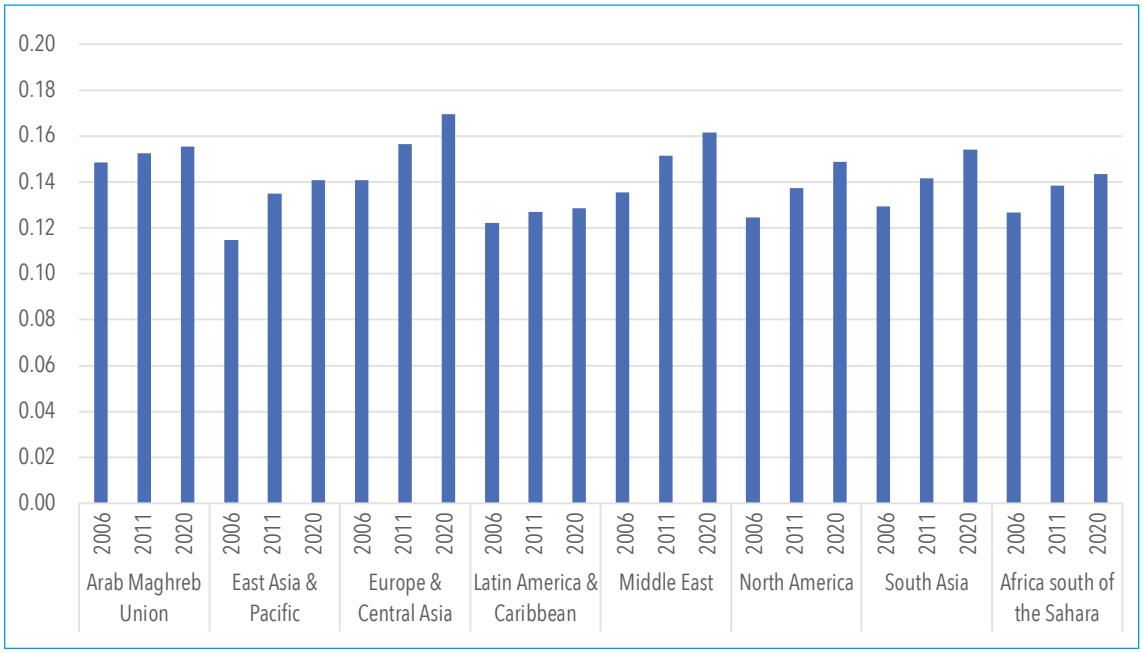
To assess trade barriers beyond tariffs and nontariff barriers, this section looks at trade facilitation measures. Poor transport connectivity continues to be a major barrier constraining developing country connections to global markets. Maritime transport accounts for 80 percent of global trade by volume and more than 70 percent by value, and is one of the main transport modes used by developing countries (UNCTAD 2017). For this reason, we focus on maritime transport here. However, since transport by ship is not preferred for highly perishable agricultural products, we also consider time to export, time to import, and cost to export and cost to import. We also take into consideration quality of infrastructure, including air transport, roads, ports, electricity, and telephone systems, to approximate costs for other modes of trade transport.

To compare AMU countries to other regions of the world in terms of trade facilitation measures, we use the Liner Shipping Bilateral Connectivity Index (LSBCI) as an indicator of maritime connectivity. This index captures the overall quality of a shipping connection between a pair of countries using data from UNCTAD on the number of transshipments, competition level among shipping services, direct connections between country pairs, and ship sizes.

The LSBCI indicates that AMU connectivity to Europe and the Middle East is greater than its own intraregional connectivity. Intra–AMU connectivity is comparable to AMU connectivity to Africa south of the Sahara, the Middle East, and distant regional blocs such as South Asia and North America (Figure 6.19a). The connectivity of AMU countries, along with Africa south of the Sahara, is the lowest in the world (Figure 6.19b). Notably, Morocco now has exceptional maritime connectivity compared with other AMU countries, having improved its connectivity substantially since 2006 (Figure 6.19c). Furthermore, the region displays the highest cost to trade of the world followed by Africa south of the Sahara (see Figure 6.21a). Morocco has also performed exceptionally in cutting its costs and time to import and to export since 2015 (Figure 6.20a and Figure 6.20b). Morocco's infrastructure, and ports in particular, are on a par with European and North American quality levels, highlighting the country's significant progress. However, apart from Morocco, the quality of ports and railroads is generally poor in the AMU region, which increases their trading costs (Figure 6.21c). These results make it clear that trade logistics are one of the biggest obstacles to intraregional trade.

Maritime connectivity between AMU countries and other regions increased from 2006 to 2020, as measured by the LSBCI (Figure 6.19a). AMU–Europe is now the best-connected regional pair. After Europe, AMU is best connected to Central Asia and then to the Middle East. Moreover, AMU connectivity to these regions is higher than maritime connectivity within AMU countries. While intra–AMU maritime connections are important, connectivity did not improve much from 2006 to 2020.

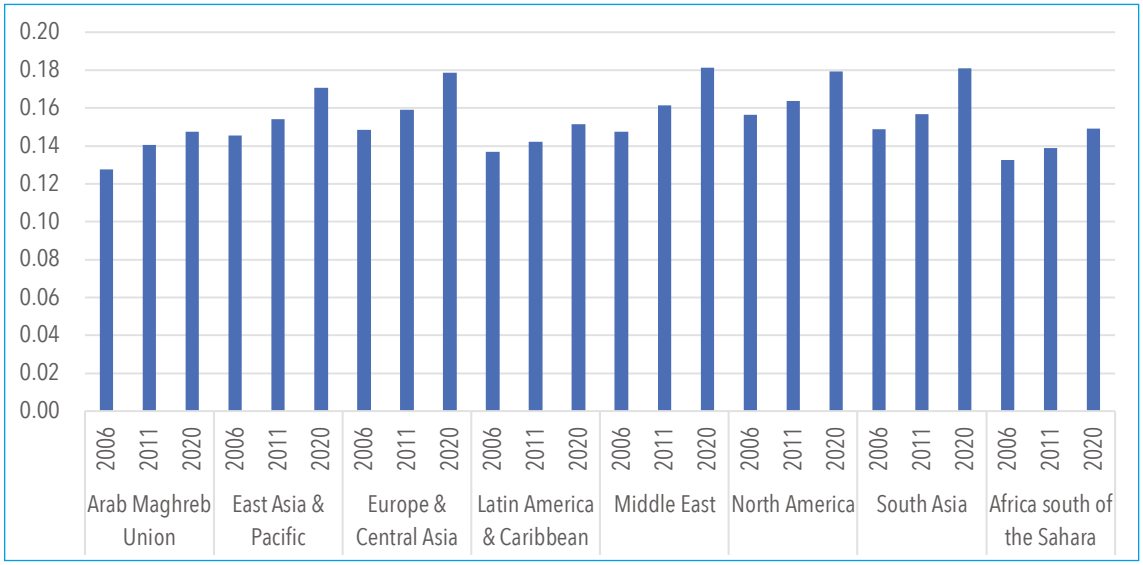
Figure 6.19a Maritime connectivity between the AMU and other regions



Source: Constructed from UNCTAD data (2017).

For all regions, measures of maritime connectivity to the rest of the world have improved substantially since 2006 (Figure 6.19b). As of 2020, the Liner Shipping Connectivity Index (LSCI) is approximately equal for Europe, Central Asia, the Middle East, North America, and South Asia. Maritime connectivity levels for the AMU region are lower, and close to the level of Africa south of the Sahara.

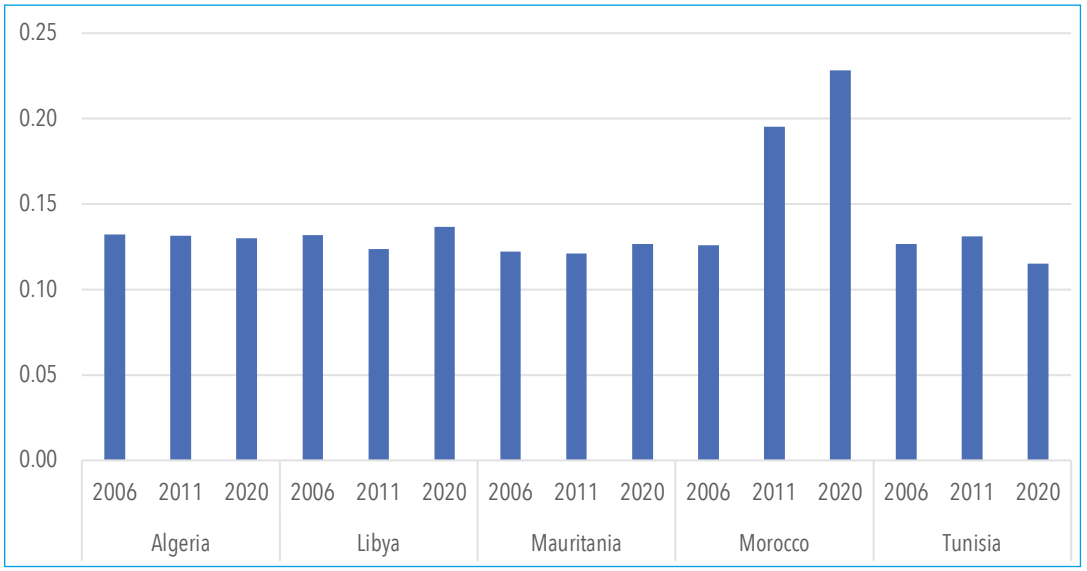
Figure 6.19b Maritime connectivity to the world by region



Source: Constructed from UNCTAD data.

Maritime connectivity by AMU country to all other countries in the world, including other AMU countries, is shown in Figure 6.19c. Compared with the other AMU countries, Morocco has the strongest liner shipping connections. In 2020, the LSCI for Morocco reached 0.23. However, the LSCI for Algeria and Tunisia decreased between 2006 and 2020.

Figure 6.19c Maritime connectivity to the world, by AMU country



Source: Constructed from UNCTAD data.

The World Bank's Doing Business database provides indicators related to cross-border trading, including time and cost measures of exporting and importing goods from a logistical perspective. Time is measured in hours and costs are reported in US dollars. Those measures consider documentary compliance (meeting documentary requirements of government agencies) and border compliance (customs regulations, mandatory inspections for clearance) in the process of exporting or importing a shipment. In the following analysis, we use four indicators:

2) Time to export/import associated with documentary compliance.

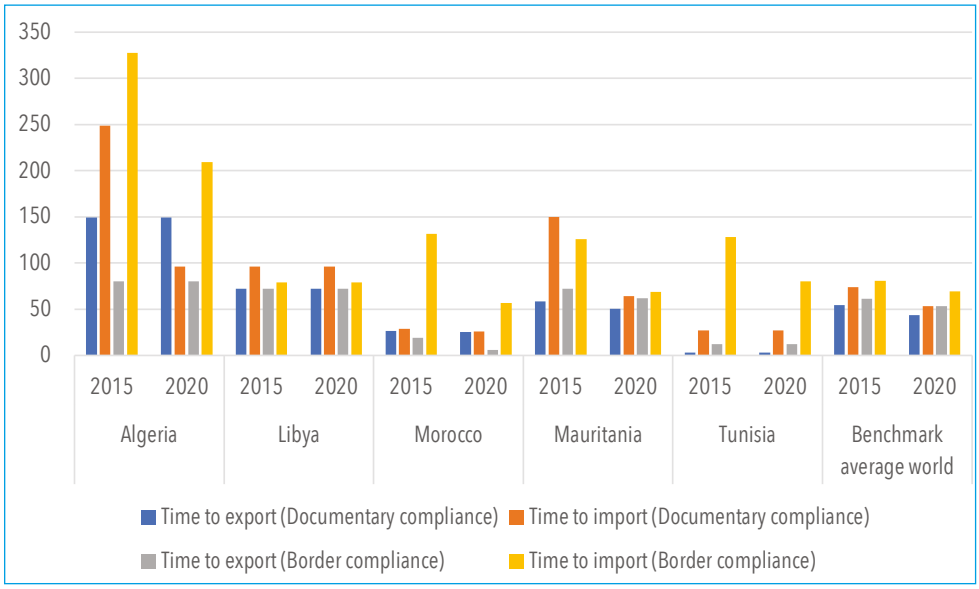
3) Time to export/import associated with border compliance.

4) Cost to export/import associated with documentary compliance.

5) Cost to export/import associated with border compliance.

Figure 6.20a shows that time to import is higher than time to export for AMU countries. Additionally, the time needed for documentary compliance when importing is generally less than the time needed for border compliance, with the exception of Libya. Morocco shows the best performance compared to both other AMU countries and the world average. Morocco has decreased both the time to export and, more dramatically, the time to import since 2015. Algeria has the highest time to export and to import compared to other AMU countries and to the world average.

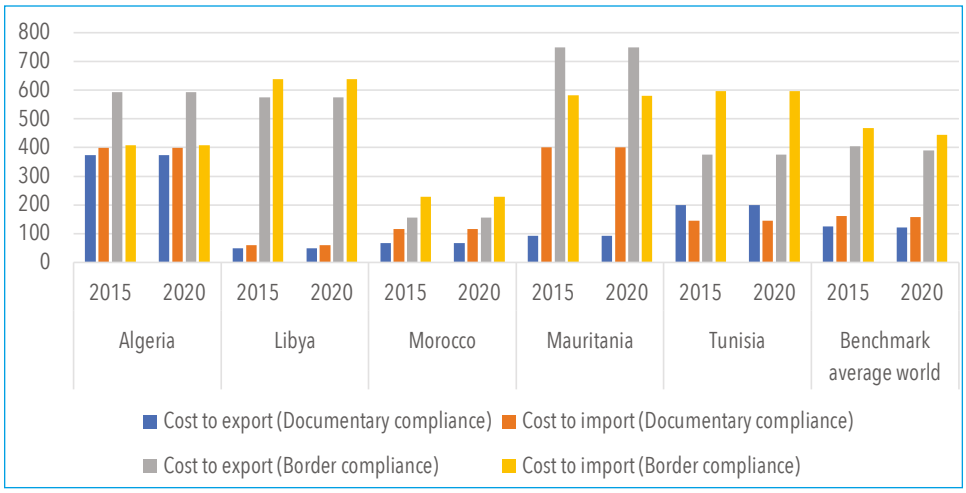
Figure 6.20a Time to export/import by AMU country (hours)



Source: Constructed from data from the World Bank Doing Business Project.

Figure 6.20b illustrates cost to export/import by AMU country. Interestingly, costs to export and to import were stable between the years 2015 and 2020 for all AMU countries. Furthermore, border compliance costs have been higher than documentary compliance costs. Cost of border compliance for imports are among the highest costs reported, particularly for Libya and Tunisia, where they are above the average world cost. In 2020, border compliance costs are high for Mauritania and low for Morocco, while documentary compliance costs for exports are highest for Algeria and lowest for Libya. Notably, all of Morocco's costs are below average world costs.

Figure 6.20b Cost to export/import by AMU country (US$)

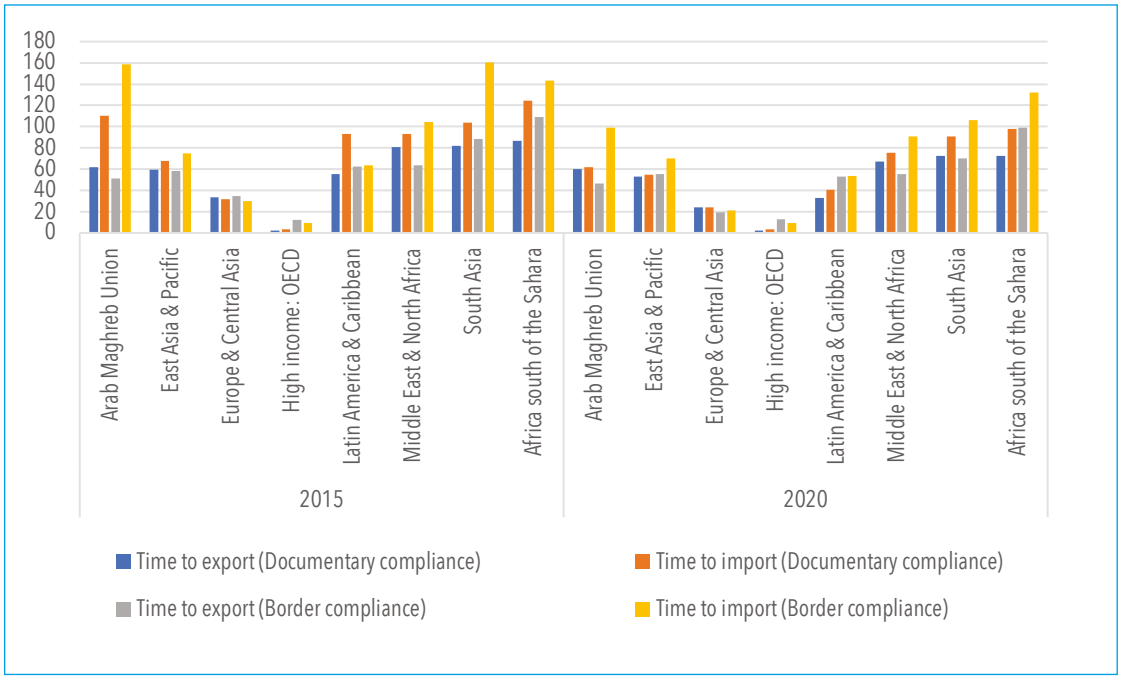


Source: Constructed using data from the World Bank Doing Business Project.

At the regional level, the time required for border compliance to import is among the highest for AMU countries in 2020, behind sub-Saharan African countries and South Asian countries (Figure 6.21a). Time related to documentary compliance for exports is also relatively high for AMU, though less than sub-Saharan African countries, South Asian countries, and the Middle East and North African (MENA) countries. However, AMU border compliance for imports takes more time than both documentary compliance and time to export in all regions. Overall, time to import and

time to export decreased slightly for all regions between 2015 and 2020, most notably for AMU, Europe and Central Asia, and Latin America.

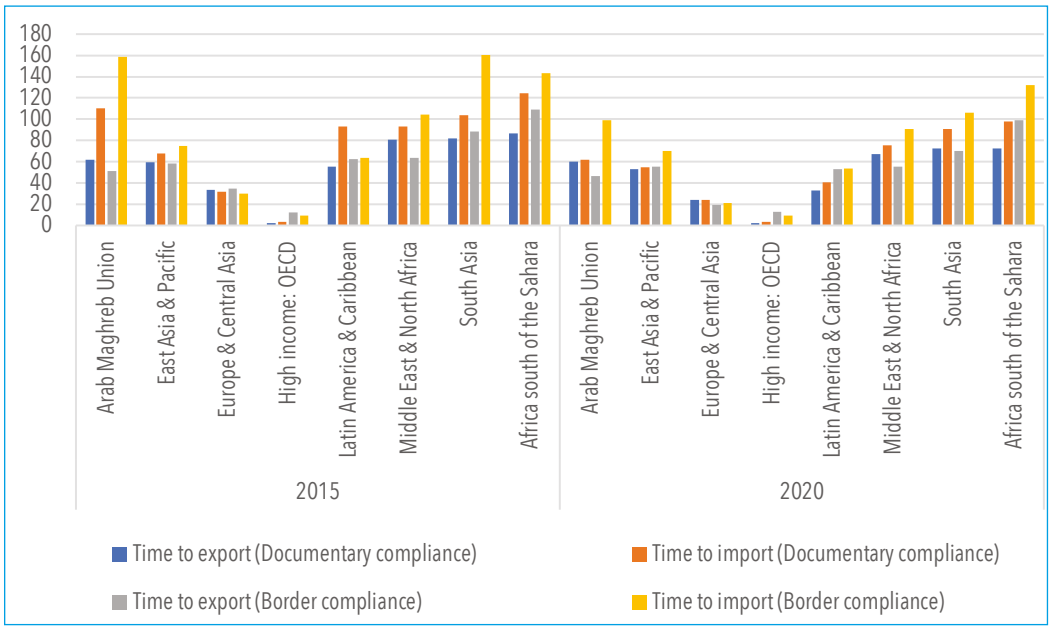
Figure 6.21a Time to export/import by region in 2020 (hours)



Source: Constructed from data from the World Bank Doing Business Project.

In terms of regional trade, the costs related to border compliance for AMU imports and exports are lower than those of Africa south of the Sahara, Latin America, South Asia, and MENA (Figure 6.21b).

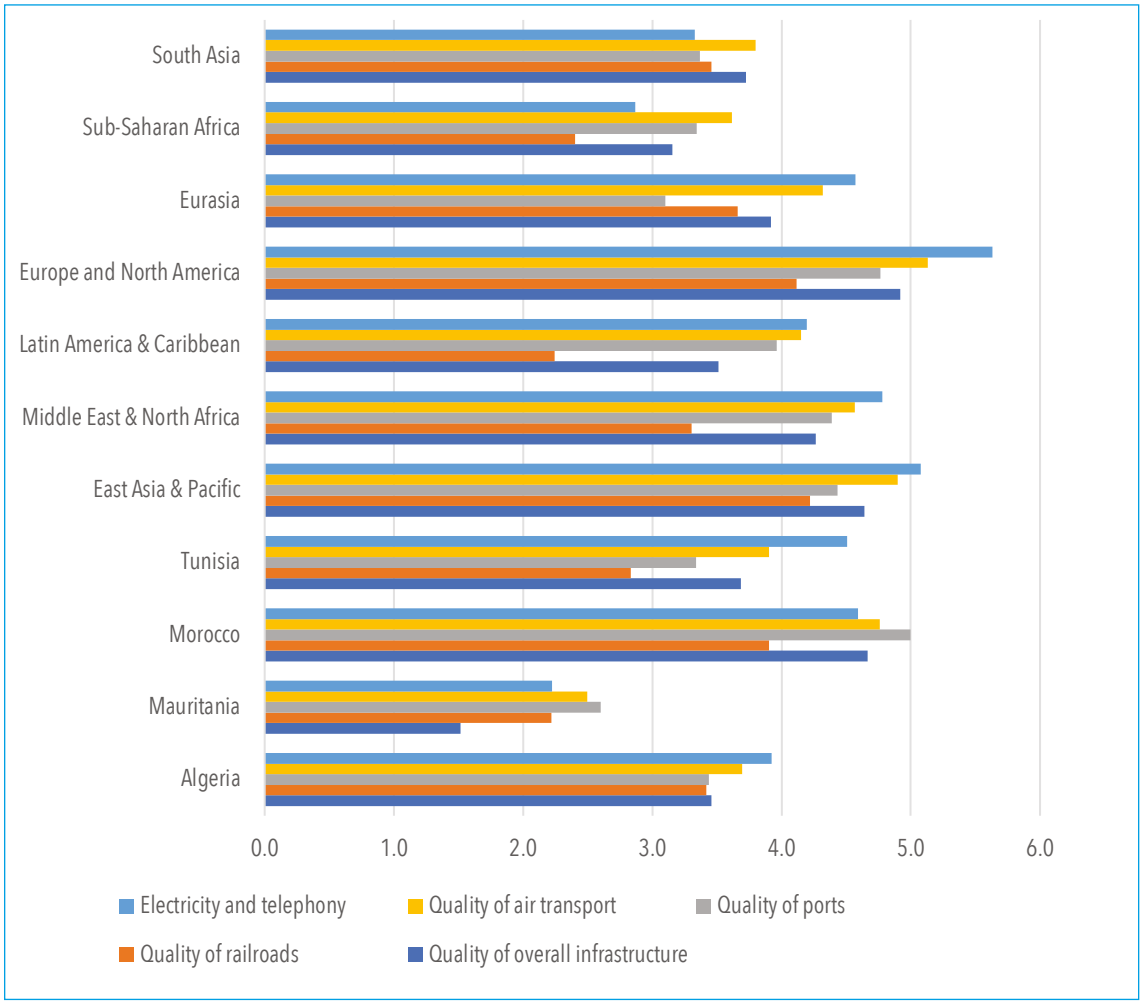
Figure 6.21b Cost to export/import by region in 2020 (US$)



Source: Constructed from data from the World Bank Doing Business Project.

Trade is also affected by the quality of infrastructure, including electricity, telephone connections, railroads, ports, and air transport (Figure 6.22). The Global Competitiveness dataset[5] provides a "quality of infrastructure" index, which shows that, generally, conditions are worse in Mauritania than in Algeria, Tunisia, and Morocco. While electricity and telephone connections are of good quality in Tunisia and Morocco compared to other regions, in Tunisia the quality of ports and railroads is relatively low. However, in Morocco, the quality of infrastructure, and in particular the quality of ports, is about equal to Europe and North America, highlighting the country's significant progress. Obviously, the poor quality of ports and railroads in AMU countries affects their cross-border trade. Improving the region's infrastructure is thus a priority for boosting trade in general and particularly trade in perishable (time-sensitive) agricultural products.

Figure 6.22 Quality of infrastructure in AMU countries, 2018



Source: Constructed using data from the Global Competitiveness dataset.
Note: The index range is from 1 (worst) to 7 (best).

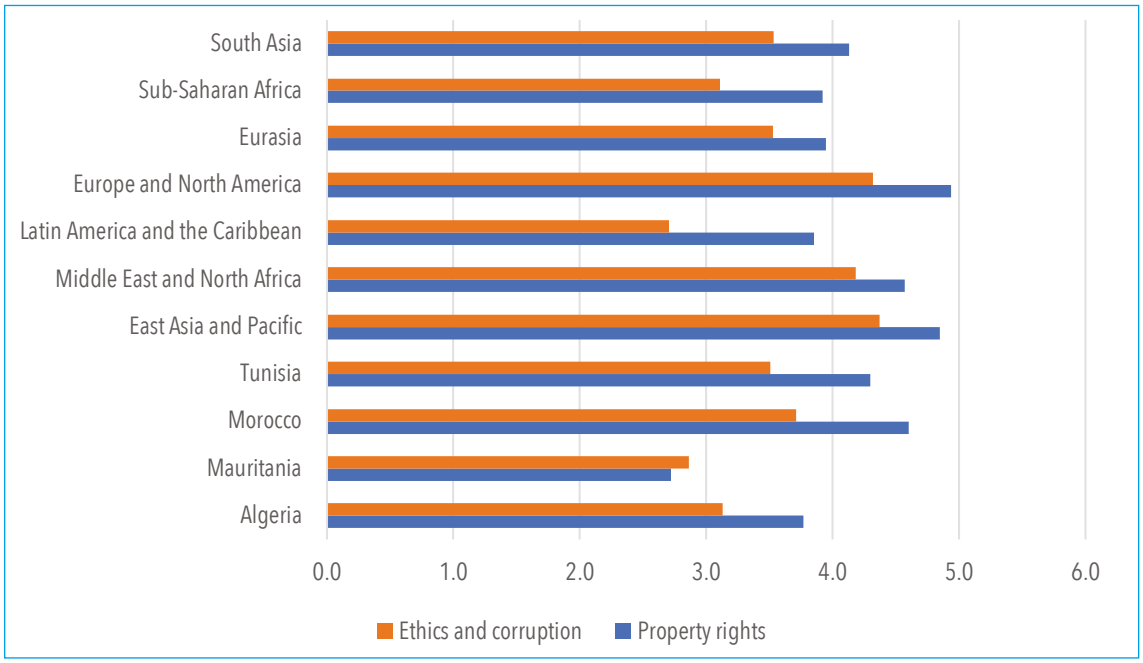
5 This indicator includes the following dimensions: (a) quality of overall infrastructure, (b) quality of roads, (c) quality of railroad infrastructure, (d) quality of port infrastructure, (e) quality of air transport infrastructure, (f) available airline seat kilometers, (g) quality of electricity supply, (h) fixed telephone lines, and (i) mobile telephone subscriptions.

Domestic institutions

The low level of integration among the AMU countries is not entirely explained by trade policy factors. Several domestic characteristics related to the quality of institutions shape their economies in a broad way, and thus affect trade in agricultural and nonagricultural goods. The literature shows that institutions matter for trade: Nunn and Trefler (2014) provide a comprehensive theoretical and empirical literature review on the effect of institutions on international trade through three main channels — labor market institutions (that affect labor market flexibility); financial institutions (that control access to external finance for firms with large fixed costs); and property rights (that can encourage or discourage investment). Costinot (2005) and Acemoglu, Antràs, and Helpman (2007) have developed theoretical frameworks to show how institutional differences can generate comparative advantages when contracts are imperfect.

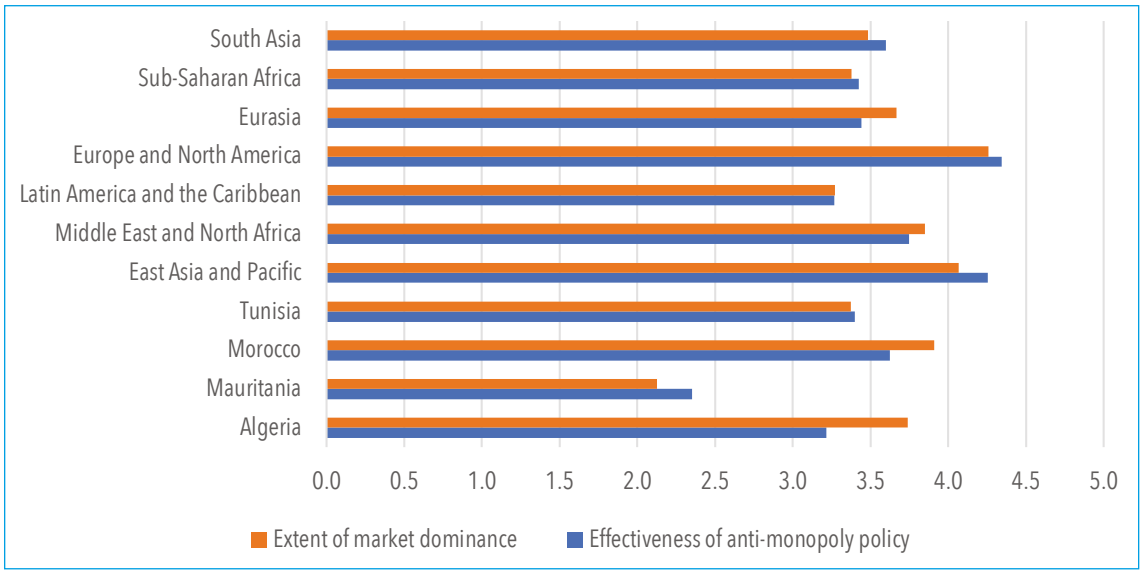
Two critical components of institutional quality — corruption and property rights (Figure 6.23a) and competition (Figure 6.23b) — are measured as part of the Global Competitiveness Index. For these indicators, higher values indicate greater quality. Considering corruption, all AMU countries not only have a lower index than developed regions, such as North America and Europe, but also than the average for some emerging regions, including MENA and East Asia and the Pacific. Among AMU countries, Mauritania and Algeria are performing more poorly than Tunisia and Morocco. For property rights, similar patterns are observed. When competition is taken into consideration (Figure 6.23b), AMU countries (except Morocco) have a lower index (meaning a higher level of market dominance) than the MENA region. Yet, in terms of the effectiveness of anti-monopoly practices, AMU countries are better positioned than Africa south of the Sahara but worse than MENA, Europe, and the US.

Figure 6.23a Corruption and property rights in AMU countries, 2018



Source: Constructed using the Global Competitiveness dataset.
Note: The index range is from 1 (worst) to 7 (best).

Figure 6.23b Competition in AMU countries, 2018



Source: Constructed using the Global Competitiveness dataset.
Note: The index range is from 1 (worst) to 7 (best).

CONCLUSION

This chapter has analyzed the composition and structure of agricultural trade flows of the AMU countries and estimated the untapped export potential, by both product and destination. It has also considered why the AMU has failed to achieve deep integration of the five countries. Our main findings show that, although agriculture is an important sector for the AMU countries, the industrial and service sectors play a larger economic role. Despite the multilateral and bilateral AMU free trade agreements, intra–AMU trade remains low compared to the region's trade with the EU. Within AMU, agriculture and agrifood sector exports and imports are limited for several reasons. These include trade-policy factors (spaghetti bowl agreements, tariffs, NTMs, administrative barriers to trade, and poor connectivity for logistics) and the domestic business environment (infrastructure, institutions, and competition). However, for agricultural products, the untapped potential for intra–AMU trade is relatively limited and will be highly dependent on water availability across the region, given the water stress that these countries are facing.

From a policy standpoint, several recommendations merit discussion. First, in terms of trade structure and untapped potential, a common vision for the agrifood sector could help to drive integration of the AMU countries. On the one hand, AMU countries face common risks of water scarcity and climate change. On the other, they have the means to sustain their food security by implementing a common agricultural policy. To do that, they will need to develop a joint vision and strategy. An approach involving several players and including both private and public stakeholders could be more sustainable than the current top-down decision-making (Aloui 2008). Furthermore, this new kind of cooperation could effectively address harmonization of standards, tariffs, and other market distortions. Thus, this platform could trigger a variety of investments, including for (i) *horizontal integration* in the food industry through multinational firms operating in the region and based on economies of scale, similar consumer preferences, and proximity; and (ii) *vertical integration* through local firms, based on complementarities in resources (Aloui 2018). A common agricultural policy mobilizing public–private partnerships that focus on building regional agricultural value chains also requires considerable mobilization of private investment. This could offer interesting opportunities for traditional partners such as European countries to invest in local firms or to adopt co-production schemes.

Second, in order to make the AMU more effective and better interconnected, regional integration of AMU countries should be viewed through a more comprehensive lens, linking trade policy with other policies, such as agricultural, industrial and competition policies. This could improve the trade performance of these countries. Tariffs are also an issue for AMU countries, as was demonstrated. Removing these tariffs entirely will help them increase their intraregional trade flows.

Third, improving infrastructure and working on common projects that connect AMU countries could boost their intraregional trade flows. Finally, one of the main challenges hampering AMU integration is the lack of political will (AfDB 2019). Country-level priorities have frequently undermined the regional integration process; few decisions taken at regional level are implemented at the national level (AfDB 2020). For example, as stated earlier, although the five countries signed more than 30 multilateral agreement protocols, only 5 of these include all Union members. Likewise, the fact that the AMU heads of state have not met since April 1994 points to the lack of political will that is essential to deep integration. Yet it is important to note that, although the AMU is moderately integrated, it has a regional integration index slightly higher than that of other regional blocs, including ECOWAS,[6] COMESA, SADC, ECCAS,[7] and others.

The region's prospects may be buoyed by membership of AMU countries in the AfCFTA, which brings together all African countries and may offer new opportunities for regional integration and trade development. The AMU, along with other regional blocs, should play a supporting role in the development of regional value chains in each subregion of the continent. However, the current COVID-19 crisis has slowed implementation of the AfCFTA and with it, regional integration.

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6 ECOWAS: Economic Community of West African States.

7 ECCAS: Economic Community of Central African States.

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