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Opportunities for Logistical Improvements through Maghreb Integration

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The sobering failure of North African countries to deal peacefully with their differences is only too obvious on either side of the Algerian-Moroccan border. Closed frontier checkpoints, unused rail tracks leading nowhere, and unfinished motorways celebrate the failed dream of the Arab Maghreb Union (AMU) launched in Marrakech 19 years ago. What might convince people to stand up for an ambitious project to integrate the region? Have the many years in which AMU countries pursued their own path undermined the rationale for true integration? At the borders—more so on the Algerian-Moroccan border, less so on the Algerian-Tunisian one—many age-old trade and family links have now faded away to be replaced by smuggling.

Meanwhile, ever stronger north-south ties have blossomed, as Algeria, Morocco, and Tunisia have vied to strengthen their ties with important European partners and countries beyond. New roads, harbors, and railroads following a north-south logic have profoundly changed the economic landscape of North Africa, opening the question of whether such developments have rendered the AMU concept obsolete. We concentrate

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on regional infrastructure, transport, and logistics, using economic analysis to assess opportunities for cooperation and common development.

Numerous papers and studies have looked at the relationships between infrastructure and development in the context of economic integration (e.g., Agenor and Moreno-Dodson 2006, Calderon and Serven 2004, Tanzi 2005 and 2006). The literature addresses two issues: the nature of infrastructure as a network, in which the value of the service provided is proportional to the number of feasible connections created, and the intensity of use as a measure of the actual economic payoff. An empty road or an idle port is a bad investment, but greater use multiplies its social benefits.

This chapter focuses on the changing transportation landscape in Algeria, Morocco, and Tunisia resulting from regulatory reform designed to improve competitiveness. A brief summary of the milestones of the process illustrates the progress made and what remains to be done. Although the countries concerned diverge in how much they export and hence their logistical performance, all three have modernized their institutional frameworks for port operations and road, rail, and air transport. Those reforms were motivated by the need to improve efficiency through both competition and public-private partnerships. The increased use of containers, logistical platforms, and integration into global value chains has contributed to modernizing the transportation sector.

Good logistics entail the proper use of transport networks to ensure well functioning supply chains. The logistics concept encompasses transport by all modes, management of storage facilities, information networks to process documents quickly and efficiently, and customs and banking services. A strong logistical chain coupled with the efficient use of infrastructure offers great potential to reduce costs, as logistics account for 18 to 20 percent of GDP in Mediterranean countries. Cost reductions of 25 percent through proper management are quite common. Such reductions result from using transport lines optimally, relying on logistical platforms to group and distribute, exploiting transshipment to secure the best routes and costs, and relying on information processing for electronic data interchange (EDI).

There are numerous opportunities to optimize infrastructure usage and logistical cost through Maghreb integration, but these have little relevance without meaningful trade volumes among Maghreb countries. There can be no serious logistical cost reductions when trade is virtually blocked because of closed borders. How much would trade increase if borders were opened? Achy (2006) suggests a tenfold increase; the World Bank (2006) predicts a much smaller gain. Contrasting views on the potential trade growth among North African countries agree on one point, however: Trade between North Africa and Europe will remain key. The sheer size of Europe's market, its proximity, the trade concessions it has granted to North African countries, and the cooperation and investments it offers all suggest a sustained expansion of north-south trade. This explains the initial question concerning the relevance of the AMU project. In a globalized environment, with trade routes, infrastructures, and logistics dictated by the needs of Euro-Mediterranean trade, does a Maghreb integration project still make sense?

Transport Reforms in the Region

When the North African countries became independent more than a generation ago, they inherited an institutional framework that regulated transport and infrastructure modeled on the French system. This model assumed that competition was a recipe for failure and a waste of resources.

In air transport, national carriers shared the benefits of a duopoly with a fixed grid of supply and prices. Public agencies supplied and managed airports and air services and were financed through monopoly taxes or direct public subsidies.

In road transport, governments set up a public monopoly of freight forwarding. All requests for road freight were processed by public agencies that allocated freight to licensed transporters without regard for quality and punctuality. Each route had its own licensed operators; the official agency set prices. Fears of destructive competition were used to justify this extensive state intervention: Governments were eager to avoid price wars and overinvestment in capacity by the private sector and thus imposed licenses and quotas to regulate supply. Roads were planned, built, and maintained by governments and financed by the central budget.

Where maritime transport was concerned, state companies operated lines connecting their main ports to French ports in pool conferences, sharing capacity and setting prices. In Morocco, the Office Chérifien des Phosphates set up Marphocean for specialized phosphoric acid transport; in Algeria, Sonatrach had its own fleet of liquefied natural gas tankers. Chartered ships were used for bulk and general cargo. As with roads, state agencies built, maintained, and managed ports that were financed by the central budget. Dockers worked in closed shops. Stevedores were in charge of handling, loading, and unloading. Such systems did not look kindly on innovations such as roll-on-roll-off container terminals or specialized quays.

Finally, rail transport was characterized by public monopoly. State bodies were in charge of the railways' infrastructure development, finance, maintenance, and management.

By the beginning of the 1980s the shortcomings of the rigid transport framework were becoming increasingly obvious. In Morocco's road transport sector a large number of informal private transporters took over the sclerotic Office National des Transports organization and handled more than 90 percent of traffic. The result was increased fragmentation, weak quality control, and equipment that was ill adapted to needs. Many large industrial companies set up their own fleets to insure quality, increasing fragmentation further. More or less the same situation prevailed in Algeria with the dominance of its transport authority. In Tunisia, until liberalization in the 1980s, the authorities set up regional monopolies that created a fragmented sector with many small suppliers and no large-scale operators. In Europe and Asia, improved logistics were regarded as a strategic means to leverage competitiveness. Countries on the southern Mediterranean shores, however, found themselves unable to adapt to the new paradigm.

In air transport, national carriers operated with high costs, high tariffs, and low rates of utilization, which negatively affected tourism. As for maritime transport costs, cartel pricing, poor management of ports, and long delays in customs inspections combined to make trans-Mediterranean transport one of the most expensive in the world.

In the 1990s the poor state of affairs in transport finally led the authorities to initiate sweeping reforms. Tunisia and Morocco led the way; Algeria followed with a short lag.

Railway Transport

Encouraged by the World Bank, governments adopted the new standard model of providing railway services by separating infrastructure from transport, administratively speaking, and allowing for competition. Governments tried to use public-private partnerships to extend the railway network but with little success.

Road Transport

The governments of Algeria, Morocco, and Tunisia liberalized freight and imposed a licensing scheme to improve technical and managerial practices. Though protracted, these reforms encouraged competition, even if they did not address the fragmented nature of the market and the poor quality of service. As multinationals began operations in Morocco in the 1990s, they brought with them second-, third-, and fourth-party logistics firms. New cross-docking platforms reinforced large-scale distribution in Morocco.

International road transport is vital for exports such as garments or fresh fruits and vegetables as it allows door-to-door delivery and small shipments. It also fits with the supply chain requirements of large-scale distribution and allows exports to benefit from geographical proximity. The resilience of the textile industry in North Africa as it faced the end of the Multi Fiber Arrangement and new competition from Asia owes much to the flexibility and punctuality of semitrailers. However, even after due recognition of the importance of local firms, governments have been unable to increase their share in total road transport above 10 percent.

Air Transport

Morocco entered an open skies agreement with the European Union in 2004. This agreement was a cornerstone of a Moroccan policy that aims to attract 10 million tourists by 2010. It allowed an impressive expansion of the number of airlines operating in Morocco and a sharp reduction in travel costs. The increase in air traffic gave fresh impetus to airport authorities and the national carrier to turn Casablanca Mohammed V Airport into a hub for northern and western Africa.

Port Management

Important steps toward liberalizing ports have been taken in the Maghreb. The state monopoly in Morocco was dismantled and ownership and commercial operations were separated. This reform allowed the Moroccan government to set up Tangiers-Med, a project that included plans for a transshipment harbor, a multimodal logistical center, and a very large industrial zone. In Algeria, port services are now open to private operators and each port is run individually by either the Chamber of Commerce or a state company. A container terminal has been built in Bejaia, Algeria, in partnership with Protek, the Singapore port operator. Dubai Ports World has expressed interest in managing container terminals in Algiers. Tunisia has followed the same course, as the government has looked for private partners to develop a cruise port in La Goulette through a build-operate-transfer arrangement and proposed different concessions to adapt the capacity of ports in Rhades, Zarzis, and Gabès.

Shipping Companies

State shipping companies have been restructured and some privatized, as was the case for Comanav in Morocco. National authorities promoted some competition and the share of goods transported through national carriers dropped significantly. The three countries are involved in the European Motorways of the Sea initiative to define heavy-duty sea lines and simplify the process of transport through EDI and a global positioning system–based tracking mechanism.

Customs Reforms

Morocco and Tunisia have pursued customs reform with the aim of reducing the time spent for customs inspection. EDI systems have been set up in Tunisia (SINDIA Tradenet) and Morocco (SADOK) to reduce delays

Table 11.1 Logistics performance index country rankings, 2007

Indicator	Algeria	Morocco	Tunisia
Logistics performance index	140	94	60
Customs	148	101	39
Infrastructure	139	77	44
International shipments	139	64	55
Logistics and competence	139	119	88
Tracking and tracing	109	130	60
Domestic logistical cost	33	133	30
Timeliness	103	95	105

Source: Arvis et al. (2007).

in the paperwork accompanying imports and exports. The Tunisian system is the most ambitious, bringing together banks, freight forwarders, port authorities, customs, maritime agents, importers and exporters, the ministry of trade, and customs agents.

Measuring Logistics Performance

All the above reforms should have boosted logistical efficiency. However, international benchmarks show that a long road lies ahead to attain parity with other regions. Table 11.1 is an extract from a World Bank report on trade logistics in the global economy (see Arvis et al. 2007). The authors constructed a composite index of logistics performance (LPI) and ranked 150 countries accordingly. Tunisia takes the lead in North Africa: It is ranked 60th out of 150 countries. Morocco follows in the 94th position. Algeria is among the bottom 10 countries. Analysis of the individual components of the index shows that customs procedures are dragging down Algeria and Morocco, and to a lesser extent, Tunisia. Algeria's performance also reflects its reliance on oil and gas exports and the corresponding neglect of logistics for other exports as well as imports generally.

Opportunities for Integration

The closed border between Morocco and Algeria, which has been maintained for almost 25 years, has profoundly affected trade flows, trade routes, and logistics in the region. It pushed trade flows toward a north-south pattern, increasing reliance on the European market. Exporters now know more about the requirements of consumers in Europe than those of consumers in neighboring countries. Logistics firms are likewise more familiar with the norms and regulations governing customs and inspections in Spain and France than those in Algeria and Tunisia. When Maghreb governments consider investing in infrastructure, Europe takes precedence over neighbors. However, that North African countries are relatively ill informed about the regulations and procedures of their immediate neighbors does not imply an absence of opportunities to integrate; it simply underlines the obstacles ahead.

Infrastructure

A simple rule of thumb for infrastructure is that its value rises in proportion to its use and its use is dictated by its convenience. For transport infrastructure, extending the network is essential. Value and convenience are increased by the number of connections available and this network effect is unrelated to the cost of investment. From this point of view, closing a border is, in economic terms, a real disaster. Valuable rail infrastructure simply sits idle, reducing its utility to that of a cul de sac instead of a vector for increased trade and improved competitiveness.

The same logic applies to motorways. Morocco's national network stops at Oujda and the East-West Algerian motorway stops at Maghnia or Tlemcen. Algerian and Tunisian entrepreneurs cannot use any of the connections to Morocco and Spain and vice versa. Passengers bear some of the cost of this disruption, reducing their ability to use the road network.

To overcome the border's closure each country has invested in independent infrastructure, such as the ports of Nador in Morocco and Ghazaouet in Algeria. Oujda, the capital of eastern Morocco, lies 70 kilometers inland, but is closer to Ghazaouet than to Nador. Shipping goods from Oujda through Ghazaouet rather than Nador would have allowed for economies of scale and saved expenditure on new infrastructure.

Hub-and-Spoke Opportunities

Increasing connections and usage are a constant objective of harbor and airport managers. Following a hub-and-spoke model offers a solution for operators of small transport nodes: Instead of competing frontally to increase the number of network connections, small operators can connect to hubs and plan their shipping of containers and passengers. Using this model, even small harbors and airports can offer a large number of destinations and origins. The model also allows for economies of scale when the hub can accommodate quick transshipment and large ships, offering lower costs than a direct connection can.

Maritime Ports

The first transshipment harbor ready to receive ultra-large carriers (post-Panamax) located in a southern-rim Mediterranean country began to operate near Tangiers in 2007. It expects to attract traffic from around the world and respond to the logistical requirements of global value chains, thereby bringing foreign direct investment to Morocco. Renault-Nissan was the first major car company to commit to a spot in the industrial park, followed by parts manufacturers. Medhub, the largest logistical platform in the region, is very close and connected by rail and highway to the port.

Once connected by rail, sea feeders, and highways to Algeria and Tunisia, the new port could become a regional hub facility, improving the competitiveness of all firms that participate in global value chains. Developing national transshipment ports instead of using Tangiers-Med facilities would certainly imply less traffic in the region and higher logistical costs to firms.

Airports and National Carriers

The three national fleets of Algeria, Morocco, and Tunisia are dwarfs in the global world of air transport, in relation to both established world airlines and emerging global alliances. For Air Algérie, Tunis Air, and, to a lesser extent, Royal Air Maroc, the size of their networks and markets made them feeders to global hubs, notably Emirates in Dubai and British Airways in Heathrow. Air France cannibalized part of their traffic by excluding the Maghreb carriers from its hub at Charles de Gaulle. Instead they use the second Paris airport, Orly, which has few international connecting flights. The net result is that transit passengers are channeled to Air France when they begin their journey.

For West African traffic, Royal Air Maroc has a stronger hand. Casablanca's location, connections to West Africa and North America, and dense network with Europe allowed the city to develop a hub for western and northern Africa, eventually challenging Paris's domination. An alliance that brings under the same wing all three Maghreb national airlines could—and should—use Casablanca to increase its market share on the North Atlantic route.

Multimodal Transport and Logistical Platforms

All North African countries lag in logistical development. Systems of local transport, storage, and distribution in Algerian and Moroccan internal markets are outdated and challenging to modernize. Tunisia stands in a somewhat better position. All three countries, however, need to pursue internal reforms to streamline production and distribution systems; logistical platforms should play an important role. A logistical platform is a tool to deal efficiently with space and time constraints and make supply-chain management more flexible. A platform could group or ungroup goods and mix product types and origins in shared containers, increasing the efficiency of transport and the quality of service.

Interconnection has the potential to improve the competitiveness of all three economies through an efficient distribution process and, more important, links among suppliers. A connected network of suppliers could more easily climb the value added chain, such as through higher quality automotive parts made in Tunisia, Morocco, and Algeria.

Logistics as Optimizer

Third-party logistics insure the optimization of supply chain costs by internalizing different functions: transport, storage, assembling, packing, customs processing, tracking, and document processing. They optimize by exploiting price differences related to underused capacities, such as empty seats, idle space, quays, and berths, and immobilized trucks. In so doing they are crucial to increasing the benefits of infrastructure development. We can draw on two individual and virtuous examples of such development in the recent history of the region. First, when ports were congested in Algeria, the Algerian National Office of Cereals relied on wheat imports unloaded in Casablanca and transported by rail to millers in Algeria. Second, the imbalance in general cargo trade in Algeria—high import demand, but low exports of general cargo—has led to a steady return of empty boxes and containers from Ghazaouet back to Morocco. Empty boxes are not expensive to fill, creating incentives for exports from Oujda if and only if the border is opened. These examples show the pervasive benefits that shared infrastructure offers through good logistics.

Concluding Remarks

As stated previously, there are no gains in logistics without trade. The essence of logistics is to lower transaction costs; without transactions there can be no cost reductions. Trade across the land border between Morocco and Algeria is currently proscribed. This closure has led to a curious state in which all exchanges between the two countries either transit through Spanish and French harbors or are smuggled. This precludes better knowledge of consumer needs in both countries and obstructs investment that could arise from the combination of talents and resources on both sides of the border.

Smugglers know how to play on the differences in subsidies ranging from foodstuffs to pharmaceuticals and gas. They know the moneychanger game of speculation and hoarding as well as the bureaucratic rules on foreign currencies. They are aware of the appeal of Moroccan caftans and accessories to the fashion cognoscenti in Algiers, Tlemcen, and Oran. They know which mechanical parts are in short supply in Morocco and how keen Moroccan palates are, leading to a high demand for confectionary goods in Morocco. These anecdotal examples support what gravitational models predict: huge opportunities for trade owing to common cultural values and consumer preferences. However, the models tell only half of the story. North African entrepreneurs spend a lot of time and money attempting to identify precise needs and opportunities for trade and investment. Because North African consumers have very similar tastes, this knowledge can fuel locally based development, trade, and investments. It could allow open economies—due to their commitments to the World Trade Organization, European Union, United States, and Arab League—to benefit from integration without resorting to the standard strategy of a customs union and the risk of trade diversion alongside trade creation. North African entrepreneurs could and should use their clout and knowledge to take advantage of increased market size resulting from open borders.

Two complementary tools can certainly help to link producers: clusters, with a shared pool of qualified workers and suppliers in design, engineering, equipment, and inputs, such as textiles in Tunis or agricultural products in Agadir; and networked firms, working for global value chains and leveraging gains in logistical development within the region along the lines outlined in this chapter. All these developments need good logistics, not the other way around.

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