

## **A STUDY ON LOGISTICS PERFORMANCE AND TRADE RELATIONS OF MOROCCO AND ITS TRADING PARTNERS IN THE MEDITERRANEAN AND AFRICA**

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### **Abstract**

Logistics play a decisive role in the development of world trade. Infrastructure, such as logistics management, are key to facilitate trade, reduce costs and ensure quality of service for international trade. Logistics may constitute a competitive factor for a country; both a vector of cooperation with its trading partners. While Morocco continues its opening and development of external trade policy, it is important to track logistics performance with a view to assessment, diagnosis and management, placing this performance against trends global and regional.

This article focuses on the analysis of the logistics performance of Morocco while comparing it to those of its main trading partners, in particular those in Africa and the Mediterranean. Different aspects of this performance will be the subject of this analysis to identify components that require strengthening or consolidation and also to locate the Morocco within its African and Mediterranean environment and detect the potential of logistics development bilateral trade.

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The methodology is based primarily on the use of statistics developed by international institutions including the World Bank and the International Bank for Reconstruction and Development IBRD.

**Keywords: Commercial trade; Logistics performance index; Competitiveness; Partnership.**

## **1. Introduction**

Logistics continues to gain strategic importance. This concerns not only companies but also countries where the logistics competitiveness is converted into a goal, often major, to position on supply chains in a constant process of globalization and promoting their attractiveness and facilitating their trade in 'international.

In this sense government policies have a weight of influence on logistics performance since they can affect the quality of infrastructure, simplification and agility of administrative procedures and facilitating cross-border trade (Arvis et al., 2014). For any country, the steering these policies requires the availability of information on the different elements as well as one's own performance as those of its partners and competitors. It is in this perspective that the Logistics Performance Index, published regularly as part of the series of reports "Connecting to compete" under the aegis of the World Bank, acquires its importance in providing an assessment tool and comparison.

In this article we focus on the data for this index, and its six components, in the case of Morocco to situate it in relation to a set of economic and commercial partners met in three block: (1) Arab countries southern Mediterranean, (2) some countries of the northern shore of the Mediterranean and (3) its major sub-Saharan partners including, especially, those in West Africa.

Thus, the first section highlights the role of trade in economic development and the importance of logistics for the flow of trade. The second section focuses on the case of Morocco, describing its trade relations with key partners in sub-Saharan Africa and the Mediterranean. The index of logistics performance is presented in the third section succinctly ensuring delivering the essentials necessary for comparison and Morocco's performance analysis and its partners objects

of this study that the fourth section is dedicated . The conclusion highlights key lessons learned from this study and suggests some future research directions.

## **2. Logistics and international trade**

International trade plays a crucial role in the economic development of countries. It is especially important for the economies of developing countries since, giving them access to international markets, it provides a valuable growth potential. In addition, it allows to integrate the economies of these countries into the global supply chain, making it possible to benefit from opportunities to diversify suppliers to enter new markets and achieve economies of scale (World Bank, 2012). The effectiveness and efficiency in the context of logistics door on the triptych: time, cost and quality are key factors when it comes to economic and commercial activity. This is particularly important in the case of international trade, given the complexity of operations, the geographical extent, the diversity of stakeholders and the weight of red tape, among others.

Different authors confirm, in fact, the close relationship between bilateral trade and logistics (Limao and Venables, 2001, Djankov et al., 2006). Thus, Behar and Manners (2008) conclude that the logistics performance of exporting and importing countries are important for bilateral exports and thus trade. Similarly, in a study on sub-Saharan Africa it is estimated that a reduction of export costs by 10% by improving the efficiency of business processes would increase 4.7% exports (Wilson et al ., 2004)

For its part, the report "Trading across Borders, 2012" cites various factors that may affect the flow of trade by highlighting the importance of infrastructure, port operations, customs and administrative procedures and inspections and audits. The report also noted that if infrastructure improvements needed is not a sufficient one; it must be accompanied by adequate policy and regulations and reliable logistics services.

Furthermore, the report points out that the information is at the heart of the supply chain, the implementation of electronic data interchange systems (EDI) is an important tool in international trade. This implementation should consider some key success factors identified of adapting the

regulatory framework to develop technological infrastructure and to improve the skills of stakeholders in information technology.

In this sense, there are vast areas of cooperation not least that relating to the harmonization of procedures and regulations, both those affecting the flow of information and financial ones. The report "Trading across Borders, 2012" cites the example of Mali, a landlocked country that has signed a transit agreement on the border with Senegal to harmonize trade documents which reduced the checkpoints between Dakar and Bamako 25 to 4.

### **3. Trade flows between Morocco and its African and Mediterranean partners**

Morocco has registered clearly opening internationally as a strategic choice for its economic development. If longstanding, Morocco counted the Mediterranean countries, and especially those west of the north shore, as the main economic and trade partners, it has also begun in recent years decided on opening sub-Saharan Africa .

#### **3.1. Morocco's relations with its African partners \***

Africa has a huge potential to take advantage of emerging dynamics and actively participate in a positive way for its economy and its people, the process of globalization. In this context, and its privileged geo-strategic location, Morocco has the potential to form themselves into a regional hub and a bridge between Europe and the rest of Africa. As highlighted in the report of the Directorate of Studies and Financial Forecasts (DPEF, 2014 p.2), "this African vocation has taken a new dimension by registering as part of a long-term vision that s' based on the virtues of South-South cooperation and on the imperative of human development, in establishing fair and balanced equitable economic relations. "

Indeed, various commercial agreements linking Morocco to African partners. These agreements are of three types:

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\* This is section based in the main on data and analysis of the report "Relations between Morocco and Africa: the ambition of a new frontier," as in September 2014 by the Directorate of Studies and Financial Forecasts (DPEF) of the Moroccan Ministry economy and Finance.

- Bilateral trade agreements based on Most Favoured Nation (MFN): they concern the 14 countries of sub-Saharan Africa including 8 countries of West Africa and six Central African countries;
- Commercial and tariff agreements which provide for reciprocal tariff preferences for certain products (Guinea, Senegal, Chad);
- Agreement on the Global System of Trade Preferences: Morocco is one of 33 African countries have signed the protocol, a total of 48 countries.

Regarding Morocco's trade with African countries, the statistics reported in the study by the Directorate of Studies and Financial Forecasts (2014) reflect an overall net increase in imports and exports over the period 2003-2013.

Thus, in this decade, Morocco's exports to sub-Saharan Africa have marked an average annual growth of 18% to 11.7 billion dirhams in 2013 against 2.2 billion dirhams in 2003. This represents 6.3% of Morocco's total exports in 2013 against 2.7% in 2003. Imports from sub-Saharan Africa have not suffered the same fate and remain limited. They totaled 2.8 billion dirhams in 2013 after reaching a maximum of 4.5 billion dirhams in 2010. While they represented 1.8% of Morocco's total imports in 2003 this figure barely exceeded 0.7% in 2013.

Regarding the destinations of Moroccan exports, the main SSA customers of Morocco are Senegal (with a share of 17% in 2013), Mauritania (10%), Côte d'Ivoire (8.1%), Guinea (8%), Nigeria (7.7%), Ghana (7.3%), Angola (4.8%) and Equatorial Guinea (3.9%). Senegal is the country whose share has experienced the largest increase (+6.4 percentage points), followed by Guinea (+4.7 points) and Ghana (+3.4 points).

Regarding the Moroccan imports from sub-Saharan countries, Morocco's main suppliers are South Africa (with a share of 23.2% in 2013), Nigeria (22.6%), Ghana (7%), the Gabon (6.6%), Côte d'Ivoire (6.2%) and Guinea (4.3%).

The same report of Studies and Financial Forecasts Directorate cites several factors that penalize trade. Thus, in addition to high tariffs and non-tariff barriers, such as the multiple tax regimes,

trade is made difficult due to the virtual absence of direct lines of land or water, resulting in extra costs and reduced significantly the competitiveness of products traded.

### 3.2. Morocco's relations with its Mediterranean partners

The European Union-Morocco Association Agreement is the framework within which was established gradually since March 2000, the free trade area between Morocco and the European Union. The European Union has concentrated in 2014 a large part of trade of Morocco. Specifically, it represented 51% (126,6Mds DH) of total exports and 63.3% of Morocco (197,1Mds DH) of its imports.

Regarding the countries of the southern shore of the Mediterranean, Morocco is united through the Agadir Agreement with Tunisia, to Egypt and Jordan. But it is Algeria, which is both the first customer and the first African-Mediterranean provider of Morocco. It represents 2.9% of Morocco's imports (mainly energy products), followed by Egypt and Tunisia. Regarding exports, Algeria represents 0.8% of those in Morocco, followed by Mauritania, Egypt and Tunisia.

## 4. The Logistics Performance Index (LPI)

Provide a statement that what is expected, as stated in the "Introduction" chapter can ultimately result in "Results and Discussion" chapter, so there is compatibility. Moreover, it can also be added the prospect of the development of research results and application prospects of further studies into the next (based on result and discussion).

From 2007 the report "Connecting to Compete: Trade Logistics in the Global Economy" was issued every two or three years by the International Bank for Reconstruction and Development and the World Bank. Despite having evolved through the 2007 editions, 2010, 2012 and 2014, the report maintains headlight elements the Logistics Performance Index (Logistics Performance Index (LPI)) which measures the field efficiency of supply chains commercial and logistics performance of a wide range of countries. The 2012 edition covers a total of 155 countries.

International LPI index measuring logistics performance of countries according to the following six components, classified by the authors (Arvis et al. 2014) in two categories:

- a. The field of inputs relating to regulations and government policies that includes:
  - The efficiency of customs clearance process (Customs);
  - The quality of the commercial infrastructure and related transport infrastructure (infrastructure);
  - Competence and quality of logistics services (skills and quality of services).
- b. The field of outputs related to the performance of the service which includes:
  - Ease of organizing shipments at competitive prices (shipments organization of facilities);
  - Monitoring capacity and traceability of consignments (traceability);
  - The frequency with which shipments reach the recipient on time ( "timeliness").

The index is calculated from a survey of logistics professionals, responsible for the movement of goods around the world, and reflects their perceptions of the logistics of a country according to the components specified above. The notation is from 1 to 5; the highest score representing the best performance. Despite some limitations of the validity domain recognized by the authors (Arvis et al., 2012), inherent in any investigation or due to the choice of the types of respondents, the Logistics Performance Index remains a source of aggregate data allowing comparisons between country.

In addition to the index, and thus encrypted data on logistics performance, the report provides analysis that, in the edition of 2014, lead to the following conclusions:

- It is observed -lente- convergence of logistics performance;
- If the service is low in good physical connectivity is not sufficient to compensate;
- Trade facilitation and reforms of border management are important for a more reliable supply chain;
- A growing complexity requires coherent action plans and coordination between different actors (public and private).

## **5. The logistics performance of Morocco and its partners**

The availability of data on the logistics performance of Morocco and its Mediterranean and sub-Saharan partners an opportunity to compare the performance and extracting lessons that can guide decision making regarding development policies that affecting them.

### **5.1 Morocco and its southern Mediterranean partners**

In This block of countries we have included Mauritania, since it is part of both the Arab Maghreb and the dialogue group 5 + 5 Western Mediterranean and the Jordan to be linked to Morocco by the Agadir Agreement (in most of Tunisia and Egypt).

The first observation concerns the differences between the logistics performance of these countries (see Table 1). Indeed, their world ranking of the 155 included in the 2012 report, will rank 41 held by Tunisia to the rank of 137 Libya. Morocco occupies the 50th place, just ahead of Egypt which is 57th.

A second finding even more interesting is the fact that in this group, Tunisia is a benchmark that leads to important lessons. It is still necessary to note that the political situation in Tunisia during the past three years has affected the competitiveness of Tunisia as evidenced by his LPI score of 2014. This analysis is in fact carried out on the basis of 2012 data ( latest LPI available for Morocco). In addition, Morocco outperforms all countries in this group, other than Tunisia, on all six dimensions component LPI. Compared with Tunisia, Morocco is more efficient on some dimensions and less effective on other, resulting in a more interesting analysis.

Table 1: Logistics Performance Index (LPI) and its components for countries South of the Mediterranean (2012)

Country	LPI	Customs	Infra-structure	Skills and quality	Expeditions	traceability	Timeliness
<b>Morocco</b>	3,03	2,64	3,14	2,89	3,01	3,01	3,51
<b>Algeria</b>	2,41	2,26	2,02	2,13	2,68	2,46	2,85
<b>Egypt</b>	2,98	2,60	3,07	2,95	3,00	2,86	3,39
<b>Jordan</b>	2,56	2,27	2,48	2,17	2,88	2,55	2,92
<b>Libya</b>	2,28	2,08	1,75	2,25	2,63	2,38	2,51
<b>Mauritania</b>	2,40	2,33	2,34	2,28	2,52	2,28	2,60
<b>Tunisia</b>	3,17	3,13	2,88	3,13	2,88	3,25	3,75
<b>Average</b>	<b>2,69</b>	<b>2,47</b>	<b>2,52</b>	<b>2,54</b>	<b>2,80</b>	<b>2,68</b>	<b>3,08</b>

Source: Connecting to compete 2012 (World Bank)



Indeed, we note that despite a lower score than that of Morocco regarding infrastructure (2.88 against 3.14 for Morocco) and organizing expeditions (2.88 against 3.01 for Morocco) Tunisia gets to have a better overall score with better performance in customs services (3.13 against 2.64 for Morocco) and skills and quality of services (3.13 against 2.89 for Morocco). Tunisia performs better than Morocco as in the case of monitoring and "timeliness".

It is interesting, therefore, that the infrastructure advantage has a mixed impact if it is not combined with a performance on the same level human skills, fluidity of administrative procedures (eg customs) and quality logistics services.

## 5.2 Morocco and its Sub-Saharan partners

South Africa stands alone among the group of African countries, ranking 23th globally (see Table 2). She manages indeed to rise to similar levels of logistics performance to those of European countries such as Spain (20th worldwide) and Italy (24th). She did better than the three best performing countries in northern Africa (Morocco, Egypt and Tunisia) on all components of LPI.

Table 2: Logistics Performance Index and its components for sub-Saharan Partners in Morocco (2012)

Country	LPI	Customs	Infra-structure	Skills and quality	Expeditions	traceability	Timeliness
<b>South Africa</b>	3,67	3,35	3,79	3,56	3,50	3,83	4,03
<b>Angola</b>	2,28	2,33	2,48	2,00	2,26	2,00	2,59
<b>Ivory Coast</b>	2,73	2,31	2,31	2,73	2,90	2,69	3,36
<b>Gabon</b>	2,34	2,00	2,00	2,40	2,40	2,20	3,00
<b>Ghana</b>	2,51	2,33	2,05	2,68	2,81	2,31	2,76
<b>Guinea</b>	2,48	2,42	2,34	2,59	2,67	2,33	2,50
<b>Nigeria</b>	2,45	1,97	2,27	2,52	2,60	2,35	2,92
<b>Senegal</b>	2,49	2,46	2,31	2,55	2,72	2,10	2,74

<b>Average<sup>†</sup></b>	2,47	2,26	2,25	2,50	2,62	2,28	2,84
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Source: Connecting to compete 2012 (World Bank)

Besides the fact that South Africa is listed as "outlier" among the group of sub-Saharan trading partners of Morocco, regarding logistics performance, trade between the two countries suffered a drastic decline and we therefore invite to focus the analysis on other partners.

Of these, it is to highlight the case of Côte d'Ivoire and Senegal, two key countries in Morocco's opening strategy on African countries, which respectively occupy ranks 83 and 110 logistics performance. Gabon, another important partner of Morocco is in the bottom quartile of the world rankings occupying the 131st rank.

The three countries are making logistics performance below those of Morocco, Tunisia and Egypt virtually on all components. For Senegal, the Ivory Coast and Gabon the following components: customs procedures and infrastructure are highly dependent regulation drafts authorities. This, points to the need for these authorities to boost infrastructure development -and therefore to find formulas to finance these projects-and especially reform of administrative services, and to improve procedures.

Although the political development of Morocco's economic relations with sub-Saharan partners, particularly those in West Africa, is based on various pillars, including foreign direct investment, increased trade remains an important component of this policy. This intensification is dependent, among others, the supply chain linking partners, south-south cooperation must be consolidated as to promote a comprehensive upgrade of logistics performance, through the transfer of knowledge and the sharing of experience and "best practices".

### 5.3 Morocco and its northern Mediterranean partners

In this group (see Table 3), it was Greece who became a "outlier" with a level closer to that of the countries of West Africa, as Côte d'Ivoire, as the Malta. An interesting finding is the fact that Malta is ranked higher than Morocco on all components in the LPI except infrastructure. Malta

<sup>†</sup> The logistics performance of South Africa is not included in the calculation of that average

and managed to catch up on a component "hard" among the inputs, infrastructure, thanks to an advantage on inputs "soft", customs and skills and quality of services.

Moreover, it is worthy to note that among this group two countries form part of the "top 20" world ranking of logistics performance. These include France, ranked 12th, and Spain, ranked 20th, and the first two are economic and trade partners of Morocco, not only at the Mediterranean level but also globally.

Table 3: Logistics Performance Index and its components for countries North of the Mediterranean (2012)

Country	LPI	Customs	Infra-structure	Skills and quality	Expeditions	Traceability	Timeliness
Spain	3,70	3,40	3,74	3,69	3,68	3,67	4,02
France	3,85	3,64	3,96	3,82	3,73	3,97	4,02
Greece	2,83	2,38	2,88	2,76	2,69	2,98	3,32
Italy	3,67	3,34	3,74	3,65	3,53	3,73	4,05
Malta	3,16	2,81	3,10	3,01	3,17	3,05	3,79
Portugal	3,50	3,19	3,42	3,48	3,43	3,60	3,88
<b>Average</b>	<b>3,45</b>	<b>3,13</b>	<b>3,47</b>	<b>3,40</b>	<b>3,37</b>	<b>3,50</b>	<b>3,85</b>

Source: Connecting to compete 2012 (World Bank)

This fact favors the fluidity of Morocco's trade with these countries, while providing a north-south cooperation field. For example, in port logistics, the concept of cooperation, introduced in corporate strategy, pick a behavior that could benefit Morocco and Spain. The cooperation would then create positive synergies improving competitiveness vis-à-vis third-party partners, while cohabiting with the competition with the same partners. The example of the ports of Tangier Med and Algeciras are a good example.

## 6. Conclusions

Morocco have a privileged geographical location, likely to make it a bridge between Europe and Africa, and provides an advantage in terms of trade and the potential to become an important player regionally and logistics globally. If the location has an impact on the facilitation of physical flows, it is no less when it comes to the Neighbourhood Policy and Morocco's strategic

choices in economic development in its international side. In fact, Morocco can only benefit from an aggressive win-win policy, with its Mediterranean and sub-Saharan partners. Logistics dimension offers great opportunities for both the North-South cooperation and South-South cooperation.

On the other hand, to take advantage of the infrastructure, one of the points that earn as Morocco, it is necessary that the reforms of the components "soft" accompany. The example is illustrative of Malta; although it less efficient infrastructure, she managed to surpass Morocco in all other components of LPI. This teaching is also valid for sub-Saharan partners of Morocco. Faced with difficulties to improve infrastructure at the desired pace, one of the report's findings "trading across borders (2012)" draws attention to the fact that "not all trade facilitation Reforms require heavy Spending. Initiatives Such as providing good training, clarifying and publicizing the rules and holding regular meetings with Exporters on the clearance process can make a difference ".

This section consisted of a reading and analysis of data relating to logistics performance of Morocco and a number of these partners within three blocks. He has illustrated that the information provided by LPI, and the level of detail offered by its six components, is an important contribution to guide countries in the design of policies for the development of their logistics capabilities and therefore facilitate international trade (Puertas et al., 2014). The application of models combining variables related to logistics, the LPI, and international trade in the African context, and by extension the southern shore of the Mediterranean, with all Arab countries in this sense can bring more depth understanding of the dynamics linking these areas of economic activity.

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