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The diversification of the Moroccan exportable offer through the analysis of its revealed comparative advantages

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Abstract

Structural transformation for a given country can be reflected in the diversification of exports into new products and trading partners as well as in the improvement of the quality of existing products. Indeed, the analysis of the export structure makes it possible to identify whether a country's economy is undergoing a process of structural transformation and integrating an increasing degree of technology in its supply to external markets. In other words, the migration of productive resources from agriculture to industry and services.

For Morocco, the challenge of the competitiveness of the economy and the improvement of its positioning in the global chain have pushed it to undertake a certain number of reforms in order to prepare a favorable climate for investment and the attraction of foreign direct investment (FDI). These reforms have enabled it to rank 53rd in the doing business index in 2020.

The process of technological catching up with the industrialized countries appears in the degree of sophistication of its exportable offer, which may be possible if the country is able to take advantage of the synergy of its national territory with the free territories, created within the framework of the national strategy of the revival of its industry.

In this research work, we will verify the existence and identify changes in the structure of Moroccan trade with the rest of the world, during the period studied, from the year 2005 to 2018. In other words, we will study the structure of Moroccan trade in order to verify whether the positive growth rate of Moroccan export activities reflects a new configuration of the country's export map and a real gain in competitiveness on the world market.

Keywords: Export; Structural transformation; Import; Comparative advantage; competitiveness.

Résumé

La transformation structurelle pour un pays donné peut se traduire par la diversification des exportations vers de nouveaux produits et partenaires commerciaux ainsi que par l'amélioration de la qualité des produits existants (Cadot et al, 2011).

En effet, l'analyse de la structure des exportations d'un pays permet de relever si son économie est en plein processus de transformation structurelle et d'intégration d'un degré de plus en plus important de technologie dans son offre vers les marchés extérieurs. Autrement dit, la migration des ressources productives de l'agriculture vers l'industrie et les services.

Pour le Maroc, le défi de la compétitivité de l'économie et l'amélioration du positionnement dans les chaines des valeurs mondiales (CVM), l'ont poussé à entreprendre un certain nombre de réformes afin de préparer le climat favorable à l'investissement et à l'attrait des investissements directs étrangers (IDE). Ces réformes lui ont permis de se classer selon l'Indice Doing Busines, en 53^{e} position en 2020.

Le processus de rattrapage technologique par rapport aux pays industrialisés apparait dans le degré de sophistication de son offre exportable, qui peut être possible si le pays est capable de tirer parti de la synergie de son territoire national avec les territoires francs, créés dans le cadre de la stratégie nationale de relance de son industrie.

Dans le présent travail de recherche, nous allons vérifier l'existence et identifier les changements dans la structure des échanges marocains avec le reste du monde, au cours de la période étudiée, de l'année 2005 à 2018. Autrement dit, nous étudierons cette structure des échanges marocains, afin de vérifier si le taux de croissance positif qu'enregistrent les activités exportatrices marocaines reflète une nouvelle configuration de la carte des exportations du pays et un réel gain en compétitivité au niveau du marché mondial.

Mots clés : Exportations, importations, avantage comparatif, compétitivité.

Introduction

The openness of a country's economy marks the degree of its integration into the world economy, its exports to the world market constitute sales to satisfy additional external demands. It is a means of accelerating growth through its various impacts on the country's economy. Indeed, export sales offer an opportunity for firms to grow in a larger market than the local one, since the expected gains from the global market are more attractive to companies than in a small market.

Like other developing countries, Morocco has adopted a policy of opening its economy to the outside world. Which has been implemented progressively since the signing of the World Trade Organization (WTO) agreements in 1995 and the signing of several bilateral and multilateral agreements, and recently, completed by its return to the African Union, and the ratification of the Agreement establishing its Continental Free Trade Area, in march 2022.

Moreover, concerning the financing of economic activities, the Moroccan economy is faced with an insufficiency of domestic resources, especially in a period of rising oil prices and recession in the raw materials sector. Also, the contributions of the tourism sector and Moroccan residents abroad are limited and fluctuate from one period to another (DEPF, 2018)[1]. Recourse to international credits is limited and costly, and the aid distributed by international development assistance organizations remains insufficient. Consequently, the development of exports is a real path to development.

The purpose of this research work is to verify whether the boom in Moroccan export activities has given rise to a new configuration of the country's export map, focusing on the study of the structure of Moroccan trade with the world. It is not a question of trying to evaluate Moroccan industrial policy, but rather to identify the pillar sectors of Morocco's exportable offer, and also to analyze the evolution of the positioning of these export sectors at world level. In other words, it is a question of verifying, through the available statistical data, whether the Moroccan economy has competitive sectors, taking into account the market shares held by its competitors on the world market.

The present research work is structured in such a way as to present, in the first place, a review of the literature relating to the subject of the research concerning the analysis of its comparative

[1] (DEPF, 2018) Rapport de la direction des études et prévisions financières du ministère de l'économie et des finances 2018.

advantages as well as the context of the study and the adopted hypotheses. Secondly, we detail the approach adopted and the theoretical model on which the research work is based, and following its application we present the results obtained which we will discuss for the case of Morocco, as well as for the two countries selected for the comparison.

We base ourselves on the method of the analysis of its revealed comparative advantages (RCA), which will allow us to detect the position of the Moroccan exportable offer in relation to the rest of the world, this study is enriched by two important parts, and it is about:

- Firstly, the introduction of the variable of imports to see if there are really world market shares in Moroccan exports, and;
- Secondly, a comparative approach with respect to the countries of the region with practically the same aspirations of development through exports, namely Tunisia and Egypt.

1. Review of the literature and development of hypotheses

The level of trade of a country with other countries expresses its capacity to meet an external demand for its products. This capacity depends on its level of development and competitiveness.

United Nations Industrial Development Organization (UNIDO) recommends that countries seek to increase their capacity to compete in the international market and in the local market by developing industrial sectors and activities with high added value and high technological intensity (OUNDI, 2002)[2]. Since the more country exports less processed products with a low technological level, the less competitive it will remain on the world market. Indeed, competitive countries are found among exporters of high value-added products especially when their exports incorporate a high level of technology.

Studies on the mechanisms of structural transformation of agrarian economies into industrial economies have been carried out by several economists such as Lewis (1954), Myrdal (1957), Hirschman (1958), Rostow (1959), Gerschenkron (1962), Kuznets (1966), Kaldor (1967) and Chenery and Taylor (1968)[3]. In his study of industrial transformation, the author Kuznets (1955)[4] explained that it takes place in the form of a migration of resources from agriculture to industry and services and then, from agriculture and industry to services, it is a reallocation of factors of production to the most productive sectors. In this context, the United Nations states that developing countries have undergone a “significant transformation of their economies and has posed the question of the processes that should guide these structural changes” (UN, 2013)[5].

The Directorate of Studies and Financial Forecasting (DEPF, 2013) conducted a study in May 2013, under the title: "*Competitiveness of Moroccan exports: what assessment*?", it assessed the competitiveness of exports through the analysis of their evolution compared to that prevailing on the global level, based on a portfolio of the twenty main groups of products exported by the country, and ranked according to the average value of exports during the period 2006-2010. The study concluded that the Moroccan exportable offer is concentrated on a few sectors and a few countries, and that it is composed of two types of products:

[2] (OUNDI, 2002), Organisation des Nations Unies pour le Développement Industriel « organisation des nations unies pour le développement industriel » p3-4. Vienne, 2002.
[3] (Pauline Lectard, 2016). Thèse : « Les déterminants de la transformation productive soutenable dans le contexte des chaînes de valeur globales : une application aux pays en développement ». Economies et finances. Université de Bordeaux. Français. FFNNT : 2016BORD0353.
[4] KUZNETS, S., 1955. Economic Growth and Income Inequality. American Economic Review, 65, 1–28
[5] (UN, 2013) UN Report 2013, p.1.

- Champion products: characterized by strong growth in international trade and market share gains for Morocco:
  - Equipment for electricity distribution;
  - Inorganic chemical products and;
  - Fertilizers which are among the medium and high-tech products according to the OECD, and for which Morocco has gained significant market share in recent years.
- Non-performing products: are characterized by strong growth in international trade and market share losses for Morocco due to strong competition in the international market:
  - Some agricultural products, such as vegetables and fruit;
  - Some seafood products, such as fish.

1.1 Context of the study

In recent years in Morocco, the question of the development model to be followed is subject to revision, and development through the revival of exports is a choice adopted by the country following the example of other developing countries, which have chosen to liberalize their economies.

The diversification of exports is sought through the notion of Morocco's global trades, which are sectors identified as strategic, and in which the country seeks to acquire a strategic advantage and, consequently, to be more competitive at the global level.

This being the case, in return for exports, the inflow of foreign currency is supposed to strengthen the capacity of companies to improve their productivity (importing equipment, accessing new technologies, recruiting ...).

1.2 Development of hypothesis

Table n°1 about the average evolution of exports and imports of Morocco of Morocco compared with some neighbouring countries, presents the situation of the trade balance deficits and the rate of coverage of imports by exports[6] for three developing countries that are seeking to increase their market share through the development of exports: Morocco, Tunisia and Egypt.

Analysis of the data in the above table shows that for all three countries, annual exports do not cover their imports.

[6] The rate of coverage of imports by exports is calculated according to the formula: Coverage rate = Exports/Imports

For the three countries, we note that imports are still growing faster than exports and the coverage rate is decreasing, which results in a trade deficit that has continued to grow during the period studied. Indeed, during the period 2015–2018, exports did not cover imports, thus recording trade deficits that vary from one economy to another, imports have experienced an evolution that reached 138.74% in the Egyptian case.

In the case of Morocco, we note that its economy is characterized by a structural deficit in the balance of trade, hence the existence of a rate of coverage of imports by exports, less than 1, which has evolved in a downward trend. According to the Office of Foreign Exchange, trade in goods recorded a worsening of the trade deficit of more than 2.994 billion MAD at the end of December 2019[7]. However, this observation is historically known, and it is necessary to observe the structure of imports, and also exports of products constituting the exportable offer of Morocco, if they have recorded a positive or negative evolution over time.

The study of the evolution of exports of the main sectors of the Moroccan economy as detailed in Table 2, on the evolution of exports of the main Moroccan sectors, shows that there is an increase in the total values of Moroccan exports from 200,808 million dirhams in 2014 to 282,057 million dirhams in 2019. The table in question includes these strategic sectors which constitute the global trades of Morocco and in which, the country has counted on the achievement of an international competitiveness thanks to the "ecosystems" set up[8].

The evolution is noted at the level of several sectors such as automobile, agriculture, phosphate and its derivatives, textile and aeronautics ... etc., indeed, some economic sectors have recorded positive results, while others have doubled their shares.

To this end, although this evolution of the value of overall exports and by sector of Moroccan activity is positive, in the first place: it will be appropriate to verify whether it reflects a real competitive advantage over the world market. And, secondly, to take into account Moroccan imports and their evolution over time to study the structure of exports and to verify if there are export market shares for Morocco, and also if they really exist when the variable of imports is introduced. Also, what are the sectors generating a competitive advantage for the Moroccan economy.

It is this research aspect that constitutes the object of the present academic research topic. In other words, are we in the presence of a structure of Moroccan exports which is really, competitive on the world market and that the Moroccan offer accapare a privileged position

[7] (OC, 2019) Rapport de l'Office des Changes marocain, 2019.
[8] Notions that were introduced as part of the Moroccan industrial acceleration plan.

globally, or this rise of Moroccan exports in time reflects only a positive evolution taking advantage of a buoyant and temporary conjuncture for the world economy.

Our study of the structure of Moroccan exports is carried out in a comparative framework between the three countries: Morocco, Tunisia and Egypt, in order to better situate the case of the national economy. We will also base our study on the United Nations Conference on Trade and Development (UNCTAD) data for these countries.

2. Research Methodology

The exports presented by sectors of activity show that they are progressing over time, and the objective pursued in this study is to verify whether Morocco has acquired a sustainable competitive position in these sectors, and also, how its trade structure has evolved on the world market.

Our research model of the study of the structure of Morocco's trade with the world is based on the analysis of the RCA of the Moroccan exports. This model will allow us to answer in an empirical way, the questions relating to the place of Moroccan exports in the world trade. Has the strategy of promoting Moroccan exports allowed the country to gain market share on a global scale?

In this sense, it is necessary to identify:

- What are the products for which Morocco has a competitive advantage?
- If Moroccan exports concern new tariff lines, instead of those which traditionally constitute the exportable offer of Morocco?
- Have Moroccan exports gained in competitiveness compared to world exports? (i.e. can we speak of specialization for Moroccan world trades?)
- Introduce the variable imports and verify whether there is a Moroccan specialization for certain products, based on an empirical study.

The comparison with the two cases of countries in the region will allow us to situate the Moroccan case in relation to Tunisia and Egypt. The results obtained will allow us to verify whether the conclusions that are most often put forward concerning the new "global trades of Morocco", they really constitute the basis of the Moroccan competitive offer.

2.1. Research model

In international trade, when studying comparative advantage, two main theories are cited, namely the Ricardian theory[9] and the Heckscher-Ohlin (H-O) theory[10]. Indeed, unlike Adam Smith[11], for whom a country resorts to trade when it generates an absolute advantage, the classical and neoclassical models of international trade (Ricardo in 1817 and Ohlin in 1933), inform us that countries have an interest in exporting products for which they have a competitive advantage over other exporting countries and they also have an advantage in importing products for which they have a disadvantage over other countries.

The comparative advantage that a country has for a given product is explained by the existence of a cost advantage and therefore a certain specialization in that product, thus explaining its important share in exports.

It is possible to determine whether an exporting country has a competitive advantage or a competitive disadvantage compared to its competitors by calculating the comparative advantage index. Indeed, the comparative advantage makes it possible to evaluate the trade trends and the specialization of countries in the goods for which they have a competitive advantage (Prasad, 2004)[12].

In order to answer the questions posed above, we will adopt an approach based on the index introduced by the author Balassa (1965), who was the first to use the concept of RCA.

Starting from a country's export data, we can measure its comparative advantage in a certain sector or product. The RCA corresponds to a country's share of exports of a product (A) in relation to its total exports, divided by the share of that country's exports in relation to the total exports of a given reference area (regional or world market, etc.). And from this, construct an index called the Balassa index.

The given country would have a revealed comparative advantage in an industry or product when its ratio of exports of the industry or product to its total exports of goods exceeds the ratio of

[9] (David Ricard, 1817), "On the Principles of Political Economy and Taxation, 1817".
[10] (Heckscher-Ohlin, 1919), ouvrage "La structure des échanges internationaux, 1919".
[11] (Adam Smith, 1776), ouvrage "la richesse des nations, 1776".
[12] (Prasad, Raymond N. 2004). "Fiji's Export Competitiveness: A Comparison with Selected Small Island Developing States". Economic Department, Working Paper. 2004/06 Reserve Bank of Fiji, 10. 1-40.

world exports of the industry or product to total world exports of all goods, the formula is as follows:

$$\textbf{Balassa Export Index (RCA)} = \frac{\text{Exports country branch}}{\text{Total exports of the country}} \Big/ \frac{\text{Exports branch of the world}}{\text{Total World Exports}}$$

The Balassa index is greater than 1 (RCA> 1), when the country has a revealed comparative advantage in a given industry or product. In other words, a country is a competitive exporter of that product compared to the world average. The higher the value of a country's RCA, the more competitive its exports are.

Furthermore, the Balassa comparative advantage analysis is one approach among others to assess the competitiveness of an industry or product on world markets.

The measurement of RCAs through the comparative coverage rate is a modified variant of the RCA index. Indeed, the approach for measuring RTAs through the comparative coverage rate incorporates the import variant.

2.3. Study area and description

According to the author David Ricardo, in the context of trade, each country will have an interest in specializing in the production of products where it has a "comparative advantage" over other countries. The H-O theory suggests that technologies are the same in all countries. It attributes comparative advantage to cost differences that result from differences in factor prices between countries.

In what follows, we use the Blassa model to examine the evolution of exports from three countries: Morocco, Tunisia and Egypt. This approach will allow us to study in a comparative way the structure of the trade of these countries, i.e. the evolution of their comparative advantages in the whole of the exported products. Our study relates to a comparative evolution of a situation in 2018 compared to an initial situation in 2005.

Morocco exports its products to different countries of the world, hence, in our analysis, we consider the rest of the world as our reference area. The calculations will be made for each exported product in relation to total Moroccan exports, and then the result obtained is reported by adopting the same calculation for a selected reference region.

In order to study the change in the composition of Moroccan exports, the criterion adopted is the degree of technology incorporated in Moroccan exports to the rest of the world between 1995 and 2018, by tariff line of all exported products. It will also be appropriate to carry out a comparative study with other countries in the region. The countries concerned by the study are Morocco, Tunisia and Egypt.

The RCA will be calculated for all the products for the three countries and then the results will be grouped for each country, according to the technological degree of each group of products, in order to analyze their evolution.

This approach will allow us to highlight the change in exports by group of lines that constitute a family of products with the same degree of technology incorporated in the products.

For our study, products are grouped into eleven categories according to their natural resources and technological content based on the United Nations Industrial Development Organization (UNIDO) methodological classification. The data used for the analysis are taken from the United Nations Conference on Trade and Development (UNCTAD-Stat) database.

For Morocco, the world trades are characterized by their degree of technology, in other words, they constitute the ecosystems set up within the framework of Morocco's industrial strategy.

We have therefore adopted the following tariff classification of exported products:

- Classification

1. Primary products
2. Manufactured goods from natural resources (agri-food)
3. Manufactured articles from other natural resources
4. Low-technology manufactured articles (textiles, clothing and footwear)
5. Low-technology manufactured articles (other products)
6. Medium-technology manufactured goods (Automotive)
7. Medium-technology manufactured goods (Processes)
8. Medium-technology manufactured articles (Engineering)
9. High-tech manufactured articles (electronic and electrical)
10. High-tech manufactured and semi-manufactured goods (other)

99. Unclassified products

Once the RCAs are calculated, for some new sectors we should see their appearance over time and their emergence as well, for others already existing, we expect a remarkable growth.

We also expect the comparative coverage rates to reveal Morocco's success in gaining real market share globally compared to some of its neighbors through the role of the Industrials Acceleration Zones (IAZ) in industrial emergence.

3. Results and discussion

According to Hausmann et al. (2007)[13], the structure of a country's exports by product impacts its development characteristics. The main reasoning is to reason in terms of the emergence of new and complex products instead of limiting oneself to the total value of the quantities exported.

3-1- Empirical analysis of the RTAs of the exports of Morocco, Tunisia and Egypt

Our study of export RTAs by country (Morocco, Tunisia and Egypt) will refer to the analysis of the tables in the Appendix:

- Table N° 3. The evolution of the structure of exports classified according to the RCA by degree of technology, by country;
- Table 4. Average Balassa index of the four countries.

Indeed, in these tables, we have presented the RCA indicators measuring the specialization of the three countries: Morocco, Tunisia and Egypt. The descriptive study of the typical evolution of the four countries reveals that there are strong and weak points between 2005 and 2018 for each country.

It emerges from the analysis of the situation in Morocco that the structure of RCA over the period studied from 1995 to 2018, has undergone a change in its composition that we can present in three cases:

- Sectors for which the RCA have remained practically stable, such as manufactured goods from natural agro-food resources;
- Sectors in which the RCA have progressively grown, such as the automobile and mechanical sectors,
- Sectors in which Morocco has suffered a loss of market share at the end of the period studied, such as the textile sector.

Thus, the characteristics of Moroccan foreign trade have changed little since the mid-nineties, its industrial trade has maintained its level of competitiveness in the following items: Primary

[13] Hausmann, R., J. Hwang, and D. Rodrik. 2007. "What you export matters. Journal of Economic Growth".

products and manufactured items from natural resources, Agri-food. It has achieved a certain specialization in manufactured goods from other natural resources.

The change observed is the tendency towards a specialization based on the automobile sector and manufactured articles of medium technology processes, this last decade.

It must be said that the specialization of Morocco in the automobile sector is marked by the expansion of the automobile activity thanks to the industrial acceleration zones. It remains in expansion throughout the period 2013–2018, which corresponds to the emergence of industrial acceleration zones dedicated to this sector.

Table 5. Exports of medium technology manufactured goods in 2018: Automotive

Country	Total value of exports	World ranking
Morocco	3 052 644	33
Tunisia	476 348	56
Egypt	100 182	72

Source: Prepared by the authors based on UNCTAD data.

Table 6. Medium-technology manufactured articles: Automobile

- [[781] Motor vehicles for passenger transport;
- [782] Automatic vehicles, freight transport, special purpose;
- [783] Road vehicles, not elsewhere specified;
- [784] Parts of groups (Tractors, Motor vehicles for passenger transport, Automatic vehicles, freight transport, special purpose and road vehicles);
- [785] Motorcycles and cycles.

With regard to the data relating to Egypt, it should be noted that:

- Egypt has a strong point compared to the other countries studied which is the extent of the exportable offer for which it holds a comparative advantage, indeed the number of Egyptian tariff lines is more important than its neighbors;
- Withdrawal for certain products;
- Strong competitiveness in items related to unclassified products.

In the case of Tunisia, we note that:

- Tunisia has managed to perform well compared to other countries, in:
- High technology manufactured articles: electronic and electrical;
- Medium-technology manufactured goods engineering;
- In parallel, we notice that there is a decline in exports made up of primary products and the emergence of exporting activities of manufactured articles of medium technology Engineering, in which, it managed to be competitive;
- Since 2003: at the level of the automobile sector, for Tunisia, the corrected RCA was carried out at the level of the Part, spare parts line of [784]:
    - Tractors (722) ;
    - Motor vehicles for passenger transport (781);
    - Automatic vehicles, freight transport, special purpose (782) and Road vehicles (783).

3.2 Comparative measurement of trade RTAs by the comparative coverage rate

In the following, we shall proceed to measure RTAs by the comparative coverage rate, in order to overcome the problems posed by the Balassa 1965 indicator. This involves relating the result it gives on the export side to the result it gives on the import side.

$$\text{Comparative coverage rate} = \frac{\dfrac{\text{Country's branch exports (x)/Country's total exports (x)}}{\text{World industry exports/World total exports}}}{\dfrac{\text{Country's industry imports (x)/Country's total imports (x)}}{\text{World industry imports/World total imports}}}$$

The study of exports with reference to the above-mentioned rate will enable us to verify whether the four countries have experienced a structural transformation of their exports over time and also to identify the families of exported products for which they have a market share at the world level.

In order to improve the model, the author Balassa considers that for a country to be able to claim to be a specialist in a product even though its average relative to the world average is

greater than 1, it is necessary to take into account its imports, hence the interest in taking them into consideration in our study by measuring RTAs through the comparative coverage rate.

The study of the data of the above-mentioned tables, relating to the four countries, shows us that the integration of imports for the calculation of the rate of comparative coverage for each country, changes the results compared to the study by the indicator of the revealed comparative advantages. Indeed, in our study by the comparative coverage rate, the four countries have experienced an identical very weak evolution in the structure of their exports.

The three countries (Morocco, Tunisia, and Egypt) have experienced a slight shift from exports based essentially on primary products to different products according to the economic specificities of each country. Although traditionally, for Morocco and Tunisia, the export structures only reflect the choices of sectors developed historically: agro-food and fertilizers, phosphates in Morocco and textiles for Tunisia and hydrocarbons[14].

For Morocco, the results of this study of comparative advantages make it possible to return to the place of the automobile sector within the sectors constituting the exportable offer of Morocco and the emergence of a specialization. Its activities, especially in the automobile sector, dedicated to export, are installed in the industrial acceleration zones such as Tangier Med, Tangier Automotive City, Casablanca and Kenitra. The question that arises is whether, in the face of an increasingly integrated world market, Morocco is making net gains in exports, and whether there is a Moroccan specialization in these activities. It must be said that the figures observed in the automobile sector claim a breakthrough in the international market. Indeed, Morocco has managed to draw a real comparative advantage over the other three countries.

A relative competitiveness of Moroccan exports especially in sectors with low technological content and by raw materials, primary products. This characteristic has lasted over time.

According to Morocco's Balassa Adjusted Index: Since the early 2000s, thanks to strong export growth, Morocco has gained significant market share in low-tech manufactured goods other than textiles and footwear, and also in automobiles.

[14] (Abdelkader SID AHMED, 1993) ''Les relations économiques entre I 'Europe et IC Maghreb'' Revue Tiers Monde. t. XXXIV, no 136. octobre- décembre 1993, p.761.

Tableau N° 6

Number of export items for which the country has a RCA, adjusted by imports

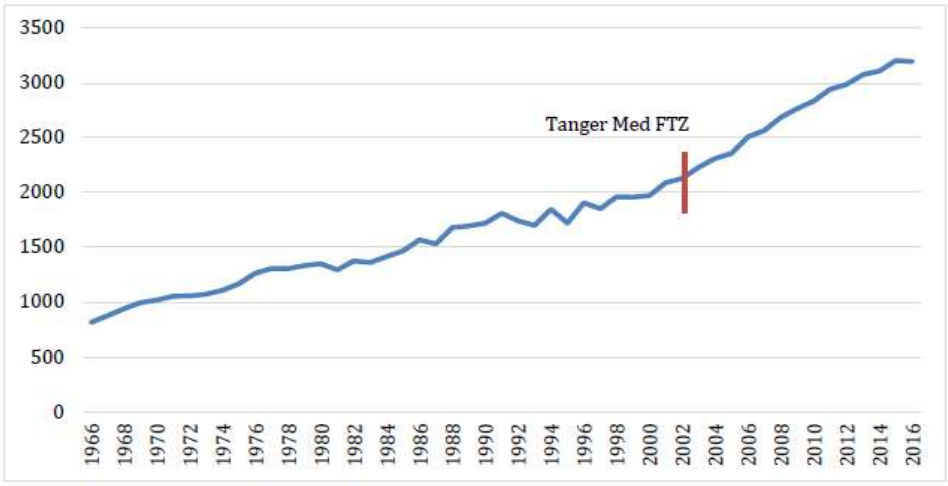
	Morocco		Tunisia		Egypt	
	1995	2018	1995	2018	1995	2018
Primary Products	18	19	13	18	18	19
Manufactured articles from natural resources (Agri-food)	10	11	11	14	12	16
Manufactured articles from natural resources (others)	11	12	8	9	8	11
Low-technology manufactured goods (Textiles, clothing and footwear)	12	5	11	11	13	10
Low-technology manufactured goods (other products)	4	4	8	10	7	10
Medium-technology manufactured articles (Automotive)	1	1	0	1	0	0
Medium-technology manufactured goods (Processes)	1	6	5	4	5	9
Medium-technology manufactured articles (Engineering)	11	18	5	7	3	4
High-tech manufactured articles (Electronic and electrical)	4	2	2	5	3	1
High-tech manufactured and semi-finished goods (others)	1	1	0	2	0	0
Unclassified products	2	3	1	0	0	2
Total	74	82	65	82	69	82

For Morocco, in addition to a predominance of a structure composed mainly, by the exports of raw materials, of manufactured articles coming from agri-food or other natural resources, the increase in the number of manufactured articles of medium technology (processes and engineering), remains relatively weak, over the period studied.

- **Role of the Moroccan Industrial Acceleration Zones in the revival of exports**

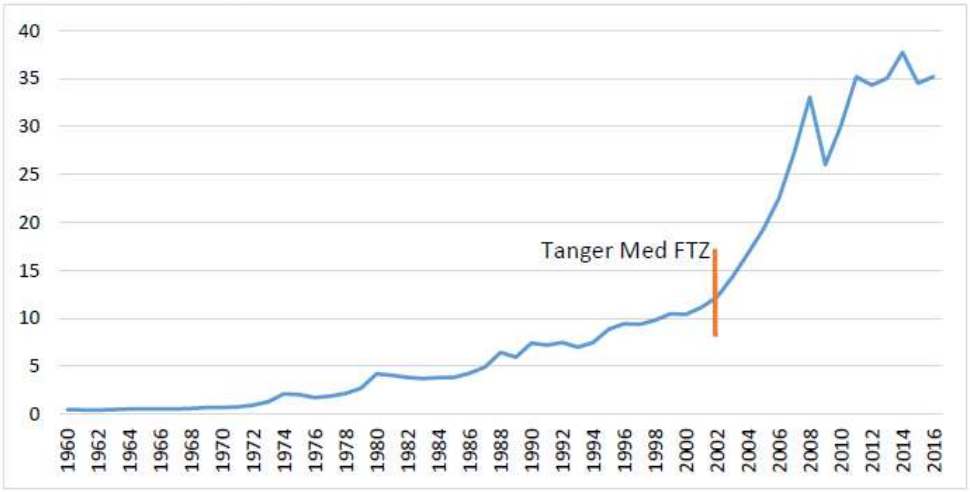
We note that the activities with RCA are those named the country's world trades, and whose industrial acceleration zones constitute locomotives for their development, especially for sectors such as the Automobile. In other words, instead of a country being limited to growth driven by domestic consumption, the existence of free trade zones by their very nature can open the way to international demand, and it is FDI whose activities are dedicated to the global market that provides an additional gateway to export. Consequently, increasing the volume of trade for the host country's companies is the very purpose of the strategy to multiply these zones.

Graph N° 1. GDP (Gross domestic product) per capita - Morocco (constant $)



Source: World Bank (2017) World Bank Open Data. Available from: https://data.worldbank.org/

Graph 2. Value of Moroccan exports (billion dollars)



Source: World Bank (2017) World Bank Open Data. Available from: https://data.worldbank.org/

In Figure 1, we see that GDP per capita has improved significantly since the creation of the Tangier Med zone. In addition, Graph 2 shows that exports have also increased over the same period, hence the catalytic role of the industrial acceleration zones in improving Morocco's trade with the rest of the world.

- In order to open up the national economy, Tunisia has created two free zones. The free zone of Bizerte located at the crossroads of the main Mediterranean Sea routes in the North, and the park of Zarzis, in the South, near the Libyan market. Knowing that in March 2022, the country launched the creation of a free zone in Ben Guerdane, on the Libyan border. The role of these zones to boost trade and logistics activities to encourage exports, it remains weak given that the comparison of the number of high-tech products is low, compared to the competitiveness of the country at the level of primary products or manufactured items from natural resources Agri-food.
- Egypt has two types of free zones: the public ones, often located on one of its sea, land or airports, and are defined by fences to separate them from the rest of the state territory. It has nine public free zones geographically divided into Alexandria (Ameriya), Cairo (Nasr City), Port Said, Suez, Ismailia, Damietta, the October 6 media zone, Shabin al-Kum (Manoufia governorate) and Qaft al-Hurra (Qena governorate). A second type of free zones are special ones that are limited to a single project if the nature of the project requires it, e.g. proximity to sources of raw materials, or the nature of the exported product (sensitive)...etc.

  As of March 2017, total commodity exports amounted to about $2,027 billion, however, the contribution to export expansion is limited, as a large portion of these exports targeted the domestic market rather than external markets, resulting in a risk that may expose domestic products to unequal competition with free zone products (إيمان مرعى، 2019)[15].

3.3. Some limits of the model used

In 1966, Balassa presented a new model to improve the measurement of RTAs, which was limited to quantifying the role of intra-industry trade. He sought to measure the influences of inter-industry and intra-industry trade by comparing net trade (Exports -Imports) with total trade (Exports + Imports) of industry (i) of a country. Other authors have tried to develop this work, such as Grubel and Lloyd (1975), and the work of the "Centre d' Etudes Prospectives et

[15] (إيمان مرعى، 2019) "المناطق الحرة في مصر... قراءة نقدية " 2017.12.19 ، رؤى مصرية - مركز الأهرام للدراسات السياسية والاستراتيجية

d'Informations Internationals" (CEPII), by trying to integrate the variants that constitute the limits of the model:

- The impact of cyclical imbalances in the country's trade balance ;
- The appreciation or depreciation of a country's currency on the foreign exchange market, which could lead to a trade deficit in all exporting branches;
- Specialisation is linked to the relative advantages of production costs thanks to the comparative differences in productivity and factor endowments;
- The competitiveness of the branch is also impacted by the evolution of domestic demand.

Conclusion

According to UNCTAD: "Structural transformation is not a spontaneous phenomenon, it requires proactive action that facilitates the transition to new sectors and new activities with higher productivity and greater added value, while promoting sustainable and equitable development" (UNCTAD 2018)[16].

In addition, in its study on the overall performance of Moroccan exports, the Directorate of Studies and Financial Forecasting (DEPF, 2013)[17], presented in the theoretical part of this research work, concluded that the profile of the Moroccan exportable supply is characterized by the emergence of new export engines, it is the automotive sector and the aerospace industry. In our research work, we found partial confirmation of this conclusion. Indeed, Morocco has positioned itself mainly on the world map of the automobile. Indeed, given the global market, it is difficult to argue that the structure of Moroccan exports has changed significantly, since through the study of RCAs of Moroccan exports and their evolution, it emerges that apart from the automotive sector, structural change remains low.

Also, we found the maintenance of the level of competitiveness in the items: Primary Products and manufactured items from natural resources Agro-food.

According to the author Hausmann and al. (2011)[18] state that generally the structural transformation process of a given economy follows a "path dependency", in the sense that each country transits to products that require similar or close to similar cognitive capacities and know-how as those required by the goods and services already produced at the national level, and that economies are rarely able to move directly to distant and much more complex products. It appears that Morocco is caught between increased competition from low-income countries in low-productivity, labor-intensive sectors and the difficulty of accelerating its pace of structural transformation towards higher value-added and technology-intensive activities. This situation is one of the reasons why the public authorities have sought to improve the Moroccan development model.

[16] (CNUCED, 2018), rapport sur l'investissement dans le monde "l'investissement et les nouvelles politiques industrielles" 2018.

[17] (DEPF, 2013), Direction des Etudes et des Prévisions Financières, « *Compétitivité des exportations marocaines : quel bilan ?* »,2013.

[18] Hausmann, R.; Hidalgo, C.A.; Bustos, S.; Coscia, M.; Chung, S.; Jimenez, J. 2011. The atlas of economic complexity: Mapping paths to prosperity. Cambridge, MA, Harvard University. Center for International Development. Harvard Kennedy School and Macro Connections. Massachusetts Institute of Technology.

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APPENDICES

Table N 1: The average evolution of exports and imports of Morocco compared with some neighboring countries

Period (average over 4 years)	1995–1998	1999–2002	2003–2006	2007–2010	2011–2014	2015–2018
Morocco						
EXP	6 987 524	7 482 290	10 603 844	16 686 694	22 212 092	24 956 875
IMP	9 884 954	11 308 952	19 039 223	35 558 322	45 107 707	44 137 121
Evol. Of Exp (%)		7,08%	41,72%	57,36%	33,11%	12,36%
Evol. Of Imp (%)		14,41%	68,36%	86,76%	26,86%	-2,15%
Trade deficit	-2 897 430	-3 826 662	-8 435 380	-18 871 628	-22 895 616	-19 180 246
Coverage rate	70,69%	66,16%	55,69%	46,93%	49,24%	56,54%
Tunisia						
EXP	5 572 307	6 279 473	9 974 867	16 339 265	17 168 656	14 344 509
IMP	7 973 868	8 987 971	12 967 388	21 262 322	24 370 617	20 748 697
Evol. Of Exp (%)		12,69%	58,85%	63,80%	5,08%	-16,45%
Evol. Of Imp (%)		12,72%	44,27%	63,97%	14,62%	-14,86%
Trade deficit	-2 401 561	-2 708 498	-2 992 520	-4 923 057	-7 201 961	-6 404 188
Coverage rate	69,88%	69,87%	76,92%	76,85%	70,45%	69,13%
Egypt						
EXP	3 520 465	4 786 823	11 677 323	23 926 217	29 147 762	25 690 621
IMP	13 601 400	13 785 564	19 662 258	46 941 723	67 537 940	64 991 352
Evol. Of Exp (%)		35,97%	143,95%	104,89%	21,82%	-11,86%
Evol. Of Imp (%)		1,35%	42,63%	138,74%	43,88%	-3,77%
Trade deficit	-10 080 935	-8 998 740	-7 984 935	-23 015 506	-38 390 178	-39 300 731
Coverage rate	25,88%	34,72%	59,39%	50,97%	43,16%	39,53%

Source: Prepared by the authors based on UNCTAD data

Table N° 2 Evolution of exports of the main Moroccan sectors

Morocco's World Trades (Exports in MDH)	2014	2015	2016	2017	2018	2019
Automotive	44 919	54 094	60 874	67 042	75 793	80 207
Agriculture and food processing	39 036	45 942	50 109	54 437	58 447	61 524
Phosphates and derivatives	38 301	44 400	39 599	44 210	51 898	48 945
Textile and leather	33 528	33 064	35 291	36 968	37 915	36 943
Aeronautics	7 536	8 717	9 976	11 633	14 744	15 614
Electronics and electricity	7 386	7 317	7 454	8 334	9 158	10 404
Other mining	3 748	4 079	3 478	4 770	4 532	4 204
Other industries	26 354	20 427	18 870	21 447	22 863	24 216
Total	**200 808**	**218 040**	**225 651**	**248 841**	**275 441**	**282 057**

Source: Office des Changes, 2020

Table 3. The evolution of the structure of exports classified according to the RCA by degree of technology, by country (1)

Years	Primary Products			Manufactured articles from natural resources Agro			Manufactured articles from natural resources other		
	Morocco	Tunisia	Egypt	Morocco	Tunisia	Egypt	Morocco	Tunisia	Egypt
1995	2,51	0,74	2,61	0,82	0,83	0,18	2,43	1,53	3,05
1996	2,59	1,01	2,61	0,77	0,67	0,22	2,12	1,23	3,22
1997	2,65	0,84	2,50	0,83	1,18	0,20	2,46	1,34	3,73
1998	2,98	0,88	2,39	0,77	0,93	0,26	2,73	1,48	3,24
1999	3,04	1,02	2,19	0,96	1,36	0,38	3,29	1,20	3,54
2000	3,34	1,11	1,64	1,02	1,09	0,34	2,68	0,91	3,32
2001	3,00	0,97	1,40	0,92	0,90	0,42	2,27	0,84	3,95
2002	2,87	0,87	1,26	0,94	0,71	0,41	2,08	0,84	4,44
2003	2,74	0,85	1,25	1,04	0,77	0,34	1,14	0,84	4,48
2004	2,65	0,94	1,33	1,18	1,42	0,36	2,00	0,69	3,58
2005	3,13	1,03	1,53	1,16	1,25	0,37	2,10	0,67	2,96
2006	2,87	0,98	1,86	1,13	1,46	0,32	1,84	0,69	2,12
2007	3,25	1,12	1,64	1,04	1,19	0,41	1,65	0,76	2,60
2008	4,08	0,88	1,99	0,98	1,05	0,43	1,99	0,87	2,06
2009	3,07	1,10	2,11	1,12	1,04	0,61	1,17	0,89	1,42
2010	3,17	1,28	1,71	1,11	0,82	0,66	1,27	0,58	1,40
2011	2,90	1,18	1,56	0,87	0,89	0,53	1,16	0,43	1,08
2012	3,08	0,86	1,59	0,98	1,01	0,56	1,09	0,84	0,96
2013	2,89	0,75	1,79	0,98	1,10	0,71	1,13	0,77	0,93
2014	2,76	0,67	1,54	1,00	0,79	0,82	1,02	0,84	1,01
2015	2,95	0,60	1,51	0,92	1,64	1,00	0,86	0,60	1,00
2016	2,66	0,59	1,34	0,87	1,00	0,88	0,62	0,71	0,91
2017	2,58	0,56	1,20	0,81	0,95	0,88	0,51	0,61	0,98
2018	2,89	0,73	1,31	0,92	1,14	0,90	0,68	0,51	1,21

Source: Prepared by the authors based on UNCTAD data

Table 3. The evolution of the structure of exports classified according to the RCA by degree of technology, by country – (2)

Low-tech manufactured goods (textiles, clothing and footwear)			Low-tech manufactured goods Other products			Medium-technology manufactured articles: Automotive			Medium-technology manufactured articles Processes		
Morocco	Tunisia	Egypt	Morocco	Tunisia	Egypt	Morocco	Tunisia	Egypt	Morocco	Tunisia	Egypt
6,75	2,58	3,77	0,16	0,55	0,71	0,11	0,10	0,02	0,65	0,72	0,40
6,30	2,45	4,59	0,23	0,40	0,50	0,07	0,08	0,02	0,66	0,73	0,26
5,79	2,40	5,44	0,21	0,45	0,94	0,09	0,08	0,06	0,62	0,64	0,30
2,95	2,40	4,86	0,19	0,45	0,82	0,08	0,10	0,02	0,43	0,63	0,37
2,92	2,47	5,74	0,19	0,52	0,67	0,06	0,09	0,02	0,41	0,62	0,36
3,11	2,54	6,59	0,26	0,51	0,88	0,07	0,14	0,04	0,46	0,65	0,41
2,93	2,45	7,63	0,23	0,53	1,37	0,18	0,20	0,06	0,53	0,67	0,49
2,90	2,46	8,05	0,33	0,62	1,39	0,12	0,30	0,04	0,44	0,66	0,47
3,08	2,34	7,87	0,26	0,57	1,42	0,10	0,30	0,08	0,43	0,66	0,55
3,23	2,44	7,59	0,34	0,47	1,83	0,10	0,29	0,08	0,42	0,65	0,42
3,30	2,33	7,40	0,34	0,60	1,90	0,09	0,35	0,09	0,45	0,57	0,37
3,42	2,29	5,58	0,36	0,81	1,78	0,12	0,39	0,06	0,47	0,58	0,51
3,68	2,26	5,23	0,30	0,84	1,65	0,16	0,36	0,05	0,67	0,56	0,55
3,72	2,27	3,96	0,27	0,75	1,28	0,12	0,29	0,07	0,84	1,00	0,69
4,24	2,29	2,78	0,30	0,86	1,00	0,17	0,28	0,11	0,64	0,70	0,78
3,61	2,23	3,26	0,31	0,91	1,18	0,19	0,26	0,07	0,93	0,71	0,85
3,37	2,19	2,97	0,36	0,83	1,31	0,28	0,33	0,06	1,21	0,47	0,92
3,33	2,28	2,81	0,35	0,84	1,20	0,59	0,25	0,07	1,32	0,59	0,96
3,26	2,22	2,37	0,31	0,86	1,29	0,93	0,30	0,08	0,99	0,63	0,95
3,15	2,22	2,52	0,27	0,89	1,09	1,31	0,36	0,06	0,96	0,56	1,02
2,63	2,10	1,94	0,26	0,94	0,98	1,19	0,35	0,05	0,81	0,43	0,92
2,73	2,05	1,79	0,27	0,98	0,92	1,14	0,41	0,07	0,92	0,51	0,91
2,59	2,03	2,69	0,35	0,93	1,06	1,18	0,45	0,09	1,04	0,47	1,09
2,44	1,98	3,82	0,31	0,89	1,00	1,16	0,42	0,06	1,07	0,44	1,16

Source: Prepared by the authors based on UNCTAD data

Table 4. Average Balassa index for the three countries

Medium-technology manufactured articles Engineering			High-tech manufactured articles: electronic and electrical			High-tech manufactured and semi-manufactured goods: other			Unclassified products		
Morocco	Tunisia	Egypt	Morocco	Tunisia	Egypt	Morocco	Tunisia	Egypt	Morocco	Tunisia	Egypt
0,18	0,42	0,01	0,96	0,53	0,05	0,12	0,12	0,31	0,18	0,08	1,32
0,18	0,43	0,01	0,86	0,50	0,05	0,09	0,09	0,25	0,17	0,05	1,91
0,15	0,44	0,02	1,14	0,55	0,06	0,08	0,11	0,21	0,16	0,08	0,76
0,21	0,49	0,01	0,89	0,66	0,05	0,18	0,11	0,42	0,08	0,07	0,90
0,22	0,51	0,02	0,95	0,54	0,06	0,19	0,05	0,32	0,11	0,06	0,91
0,35	0,57	0,02	0,77	0,53	0,06	0,24	0,06	0,22	0,18	0,07	0,99
0,37	0,59	0,04	0,90	0,69	0,09	0,28	0,09	0,15	0,25	0,09	1,15
0,46	0,61	0,03	1,08	0,76	0,09	0,17	0,12	0,18	0,45	0,16	3,28
0,51	0,69	0,02	1,08	0,64	0,07	0,14	0,18	0,18	0,33	0,26	4,78
0,55	0,68	0,02	1,04	0,65	0,08	0,15	0,18	0,18	0,23	0,27	1,95
0,73	0,81	0,03	1,03	0,72	0,08	0,18	0,15	0,20	0,29	0,14	1,33
0,71	0,74	0,03	1,12	0,88	0,06	0,17	0,17	0,17	0,34	0,16	4,13
0,69	0,76	0,02	1,07	0,94	0,05	0,25	0,16	0,24	0,22	0,25	1,54
0,62	0,89	0,03	0,82	0,99	0,10	0,35	0,21	0,24	0,07	0,34	0,23
0,70	0,85	0,02	0,80	0,90	0,08	0,32	0,20	0,25	0,12	0,29	7,06
0,80	0,94	0,02	0,71	1,15	0,07	0,44	0,29	0,29	0,86	0,34	5,18
0,90	1,17	0,02	0,75	1,21	0,07	0,38	0,41	0,24	1,75	0,31	17,26
0,88	1,18	0,04	0,93	1,24	0,10	0,64	0,48	0,31	0,58	0,30	12,98
0,90	1,30	0,05	0,84	1,25	0,13	0,73	0,58	0,29	0,37	0,43	1,42
0,98	1,38	0,24	0,78	1,34	0,54	0,67	0,68	0,30	0,40	0,43	2,03
0,96	1,50	0,25	0,65	1,19	0,65	0,50	0,54	0,27	0,45	0,31	7,24
0,87	1,39	0,16	0,62	1,15	0,45	0,62	0,76	0,21	0,71	0,21	25,80
0,90	1,51	0,22	0,63	1,22	0,49	0,69	0,81	0,18	0,31	0,24	16,54
0,96	1,50	0,21	0,68	1,20	0,30	0,66	0,75	0,19	0,32	0,24	9,61

Source: Prepared by the authors based on UNCTAD data

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Table 5. Balassa Index Export/Import – Morocco

Classification	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total 1. Primary products	2,51	2,59	2,65	2,98	3,04	3,34	3,00	2,87	2,74	2,65	3,13	2,87	3,25	4,08	3,07	3,17	2,90	3,08	2,89	2,76	2,95	2,66	2,58	2,89
Total 2. Manufactured goods from natural resources Agro	0,82	0,77	0,83	0,77	0,96	1,02	0,92	0,94	1,04	1,18	1,16	1,13	1,04	0,98	1,12	1,11	0,87	0,98	0,98	1,00	0,92	0,87	0,81	0,92
Total 3. Manufactured articles from other natural resources	2,43	2,12	2,46	2,73	3,29	2,68	2,27	2,08	1,14	2,00	2,10	1,84	1,65	1,99	1,17	1,27	1,16	1,09	1,13	1,02	0,86	0,62	0,51	0,68
Total 4. Low-technology manufactures textiles, clothing and footwear	6,75	6,30	5,79	2,95	2,92	3,11	2,93	2,90	3,08	3,23	3,30	3,42	3,68	3,72	4,24	3,61	3,37	3,33	3,26	3,15	2,63	2,73	2,59	2,44
Total 5 Low-tech manufactured goods other products	0,16	0,23	0,21	0,19	0,19	0,26	0,23	0,33	0,26	0,34	0,34	0,36	0,30	0,27	0,30	0,31	0,36	0,35	0,31	0,27	0,26	0,27	0,35	0,31
Total 6. Medium-technology manufactured articles: Automotive	0,11	0,07	0,09	0,08	0,06	0,07	0,18	0,12	0,10	0,10	0,09	0,12	0,16	0,12	0,17	0,19	0,28	0,59	0,93	1,31	1,19	1,14	1,18	1,16
Total 7. Medium-technology manufactured goods: Processes	0,65	0,66	0,62	0,43	0,41	0,46	0,53	0,44	0,43	0,42	0,45	0,47	0,67	0,84	0,64	0,93	1,21	1,32	0,99	0,96	0,81	0,92	1,04	1,07
Total 8. Medium-technology manufactured articles: Engineering	0,18	0,18	0,15	0,21	0,22	0,35	0,37	0,46	0,51	0,55	0,73	0,71	0,69	0,62	0,70	0,80	0,90	0,88	0,90	0,98	0,96	0,87	0,90	0,96
Total 9. High-tech manufactured articles: electronic and electrical	0,96	0,86	1,14	0,89	0,95	0,77	0,90	1,08	1,08	1,04	1,03	1,12	1,07	0,82	0,80	0,71	0,75	0,93	0,84	0,78	0,65	0,62	0,63	0,68
Total 10. High-tech manufactured and	0,12	0,09	0,08	0,18	0,19	0,24	0,28	0,17	0,14	0,15	0,18	0,17	0,25	0,35	0,32	0,44	0,38	0,64	0,73	0,67	0,50	0,62	0,69	0,66

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semi-manufactured goods: other																								
Total 99. Unclassified products	0,18	0,17	0,16	0,08	0,11	0,18	0,25	0,45	0,33	0,23	0,29	0,34	0,22	0,07	0,12	0,86	1,75	0,58	0,37	0,40	0,45	0,71	0,31	0,32

Source: Prepared by the authors based on UNCTAD data

Table 6. Balassa Index Export/Import – Tunisia

Classification	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total 1. Primary products	0,74	1,01	0,84	0,88	1,02	1,11	0,97	0,87	0,85	0,94	1,03	0,98	1,12	0,88	1,10	1,28	1,18	0,86	0,75	0,67	0,60	0,59	0,56	0,73
Total 2. Manufactured goods from natural resources Agro	0,83	0,67	1,18	0,93	1,36	1,09	0,90	0,71	0,77	1,42	1,25	1,46	1,19	1,05	1,04	0,82	0,89	1,01	1,10	0,79	1,64	1,00	0,95	1,14
Total 3. Manufactured articles from other natural resources	1,53	1,23	1,34	1,48	1,20	0,91	0,84	0,84	0,84	0,69	0,67	0,69	0,76	0,87	0,89	0,58	0,43	0,84	0,77	0,84	0,60	0,71	0,61	0,51
Total 4. Low-technology manufactures textiles, clothing and footwear	2,58	2,45	2,40	2,40	2,47	2,54	2,45	2,46	2,34	2,44	2,33	2,29	2,26	2,27	2,29	2,23	2,19	2,28	2,22	2,22	2,10	2,05	2,03	1,98
Total 5 Low-tech manufactured goods other products	0,55	0,40	0,45	0,45	0,52	0,51	0,53	0,62	0,57	0,47	0,60	0,81	0,84	0,75	0,86	0,91	0,83	0,84	0,86	0,89	0,94	0,98	0,93	0,89
Total 6. Medium-technology manufactured articles: Automotive	0,10	0,08	0,08	0,10	0,09	0,14	0,20	0,30	0,30	0,29	0,35	0,39	0,36	0,29	0,28	0,26	0,33	0,25	0,30	0,36	0,35	0,41	0,45	0,42
Total 7. Medium-technology manufactured goods: Processes	0,72	0,73	0,64	0,63	0,62	0,65	0,67	0,66	0,66	0,65	0,57	0,58	0,56	1,00	0,70	0,71	0,47	0,59	0,63	0,56	0,43	0,51	0,47	0,44
Total 8. Medium-technology manufactured articles: Engineering	0,42	0,43	0,44	0,49	0,51	0,57	0,59	0,61	0,69	0,68	0,81	0,74	0,76	0,89	0,85	0,94	1,17	1,18	1,30	1,38	1,50	1,39	1,51	1,50
Total 9. High-tech manufactured articles: electronic and electrical	0,53	0,50	0,55	0,66	0,54	0,53	0,69	0,76	0,64	0,65	0,72	0,88	0,94	0,99	0,90	1,15	1,21	1,24	1,25	1,34	1,19	1,15	1,22	1,20
Total 10. High-tech manufactured and semi-manufactured goods: other	0,12	0,09	0,11	0,11	0,05	0,06	0,09	0,12	0,18	0,18	0,15	0,17	0,16	0,21	0,20	0,29	0,41	0,48	0,58	0,68	0,54	0,76	0,81	0,75
Total 99. Unclassified products	0,08	0,05	0,08	0,07	0,06	0,07	0,09	0,16	0,26	0,27	0,14	0,16	0,25	0,34	0,29	0,34	0,31	0,30	0,43	0,43	0,31	0,21	0,24	0,24

Source: Prepared by the authors based on UNCTAD data

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Table 7. Balassa Index Export/Import – Egypt

Classification	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total 1. Primary products	3,40	3,42	2,92	3,09	2,97	2,25	2,08	2,19	1,98	1,98	2,18	2,42	2,40	2,11	2,32	2,07	1,94	2,00	1,98	1,86	2,21	2,17	1,95	1,85
Total 2. Manufactured goods from natural resources Agro	0,38	0,40	0,38	0,48	0,65	0,61	0,76	0,74	0,64	0,62	0,65	0,55	0,68	0,77	0,95	1,18	1,10	1,07	1,28	1,35	1,49	1,34	1,26	1,18
Total 3. Manufactured articles from other natural resources	2,00	2,30	2,74	2,66	3,23	3,50	3,64	3,77	3,97	3,74	3,03	2,49	2,44	1,83	1,35	1,46	1,20	1,21	1,09	1,17	1,17	0,92	1,22	1,60
Total 4. Low-technology manufactures textiles, clothing and footwear	2,03	2,40	2,77	2,48	3,25	4,11	4,08	4,29	4,85	5,33	5,13	4,55	4,73	4,22	2,55	3,25	2,99	3,02	2,57	2,53	2,03	1,48	2,23	3,10
Total 5 Low-tech manufactured goods other products	0,59	0,43	0,67	0,64	0,52	0,67	0,96	0,97	0,95	1,20	1,11	1,08	0,99	1,05	1,05	1,06	1,01	0,95	1,05	0,90	0,87	0,82	0,91	0,82
Total 6. Medium-technology manufactured articles: Automotive	0,01	0,01	0,04	0,01	0,01	0,02	0,02	0,02	0,04	0,04	0,06	0,05	0,04	0,06	0,10	0,07	0,04	0,05	0,06	0,05	0,05	0,06	0,05	0,04
Total 7. Medium-technology manufactured goods: Processes	0,52	0,37	0,45	0,58	0,56	0,61	0,78	0,75	0,85	0,66	0,69	0,81	0,83	1,19	1,31	1,29	1,42	1,53	1,73	1,68	1,47	1,54	1,79	1,93
Total 8. Medium-technology manufactured articles: Engineering	0,02	0,02	0,02	0,02	0,03	0,03	0,04	0,04	0,03	0,03	0,03	0,03	0,02	0,03	0,03	0,02	0,02	0,03	0,04	0,20	0,23	0,16	0,20	0,17
Total 9. High-tech manufactured articles: electronic and electrical	0,02	0,02	0,02	0,02	0,03	0,02	0,04	0,04	0,03	0,03	0,03	0,03	0,02	0,04	0,03	0,03	0,03	0,03	0,05	0,23	0,25	0,17	0,21	0,18
Total 10. High-tech manufactured and semi-manufactured goods: other	0,31	0,26	0,29	0,35	0,25	0,26	0,21	0,22	0,19	0,17	0,17	0,14	0,18	0,13	0,15	0,17	0,16	0,19	0,21	0,21	0,18	0,16	0,16	0,13
Total 99. Unclassified products	0,25	0,40	0,35	0,36	0,35	0,31	0,56	0,77	1,06	0,47	0,53	1,18	0,47	0,33	1,61	1,76	2,44	1,56	0,94	1,13	1,14	4,22	3,30	2,82

Source: Prepared by the authors based on UNCTAD data