African Scientific Journal
ISSN : 2658-9311
Vol : 3, Numéro 20, Octobre 2023

WTO Trade Facilitation Agreement in Morocco: Evidence using performance indicators analysis.

Auteur 1 : CHEKROUNI Anas
Auteur 2 : EZ-ZAROUKI Mohamed

CHEKROUNI Anas, (PHD Dr. In Economics and Management)
Moulay Ismail University / Faculté des sciences juridiques, économiques et sociales, Meknès, Morocco

EZ-ZAROUKI Mohamed, (PHD Dr. In Economics and Management)
Moulay Ismail University / Faculté des sciences juridiques, économiques et sociales, Meknès, Morocco

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Pour citer cet article : CHEKROUNI .A & EZ-ZAROUKI .M (2023) « WTO Trade Facilitation Agreement in Morocco: Evidence using performance indicators analysis », African Scientific Journal « Volume 03, Numéro 20 » pp: 891 – 916.

Date de soumission : Septembre 2023

Date de publication : Octobre 2023

DOI : 10.5281/zenodo.10935508
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African Scientific Journal
ISSN : 2658-9311
Vol : 3, Numéro 20, Octobre 2023

Abstract

This article conducts an in-depth analysis of Morocco's trade facilitation performance within the framework of the Trade Facilitation Agreement (TFA). Utilizing a meticulously chosen set of indicators, this study addresses a significant gap in the existing literature, as there is a scarcity of research focusing on trade facilitation measures at the national level in Morocco, particularly concerning this groundbreaking agreement. The examination incorporates indicators assessing both the outcomes of trade facilitation measures and their contributions to policy. Regarding the former, the findings affirm Morocco's success in reducing export times and costs, as evidenced by the favorable results from the Trading Across Borders (TAB) indicators. However, this conclusion lacks support from microeconomic indicators, as demonstrated by the World Bank Enterprise Surveys (WBES), International Trade Centre (ITC), and Haut Commissariat au Plan (HCP) surveys. On a different note, better consistency is shown using OECD Trade Facilitation Indicators (TFIs) and United Nations Regional Commissions' Global Survey on Trade Facilitation and Paperless Trade Implementation (GSTF-PTI). Despite positive trends, a detailed review of the trade facilitation sub-indicators reveals progress, delays and identified areas for improvement. In examining the numerous indicators, the authors contend that the OECD TFIs stand out as exemplary indicators, meeting the criteria of robustness by being rooted in the TFA and offering policy-relevant insights. The authors advocate augmenting this study with in-depth econometric analysis to more properly determine the real impact of TFA on Morocco's trade costs and export performance. In particular, the adoption of OECD TFIs would make it easier to discern the effects of the various measures included in the TFA.

Keywords

Trade facilitation, trade facilitation agreement, trade costs, trade facilitation indicators, export performance, Morocco.

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Introduction

Entering into force on 22 February 2017, having been ratified by two-thirds of WTO members, the Trade Facilitation Agreement (TFA) represents the first multilateral trade agreement successfully negotiated in the WTO era. Against a backdrop of fragmentation in the regulation and conduct of international trade (Bonciu & Moldoveanu, 2014), the TFA embodies a unique example of successful multilateralism. For the first time in the history of the WTO, the commitments of developing and least-developed countries are directly linked to their capacity to implement them. Taken as a whole, the TFA aims to speed up the release and clearance of goods, including goods in transit, to improve cooperation between actors at the border, and to provide technical assistance and capacity building.

Recognition of this considerable community of interest, as well as the additional benefits arising from full implementation of the TFA, led Morocco to ratify its provisions on 14 May 2019, notifying 91.2% of the TFA measures under Category A, containing provisions that Morocco will designate for implementation upon entry into force of the TFA. A small proportion, representing 0.8%, has been assigned to Category B, benefiting from a five-year transition period. The remaining 8% were notified by Morocco as Category C commitments, requiring technical assistance and capacity building support.

This implementation rate is not the result of chance, but rather the outcome of a long process of reforms in this area. Efforts to increase trade facilitation began as early as 1986, with the introduction of a national commission for the rationalisation of foreign trade procedures as part of reforms to Morocco's trade regime. During the 2000s, Morocco concentrated on modernizing its port system in order to boost its worldwide competitiveness. In 2006, Morocco adopted its first national plan for simplifying trade procedures. The year 2019 marked the culmination of the dematerialisation of customs procedures.

However, a review of previous literature highlights the almost complete absence of studies looking at trade facilitation measures, specifically in relation to this novel agreement. In an attempt to fill this gap, this paper focuses on the analysis of Morocco's trade facilitation performance, using a battery of carefully selected indicators. The primary objective is to thoroughly examine Morocco's trade facilitation reforms within the framework of the TFA, using diverse indicators to assess and compare the resulting outcomes. The study encompasses an analysis of indicators measuring contributions to policies as well as those evaluating policy outcomes.

However, given the number of existing indicators, we have focused on those that have been frequently used in the economic literature to assess the economic impact of trade facilitation

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reforms, as well as those that are specifically related to the provisions of the TFA. In the process, we also compare the indicators (from narrow customs indicators to broader regulatory and infrastructure indicators) that have been developed to measure trade facilitation and try to identify those that best estimate the economic benefits of TFA for Morocco. This comparison will ultimately lead to a choice of the most appropriate indicators for the econometric models used in future empirical work.

The subsequent sections of this paper follow this structure: Section 1 conducts a review of pertinent formal literature. Section 2 delineates the employed methodology, providing insights into the selection of the battery of indicators. In Section 3, we present our principal findings and engage in a comprehensive discussion. Finally, we succinctly summarize the key conclusions.

1. Literature review

1.1.Trade facilitation concept: Lack of consensual definition

Various definitions of Trade Facilitation have been proposed by international organisations and the academic field. However, the approaches used are far from uniform in terms of a common understanding of how Trade Facilitation can be defined (Nguyen et al., 2016). For example, the WTO report on TFA has eleven different definitions of the concept (Magwape, 2018). Similarly, (Grainger 2008) listed eighteen general concepts that seem to be in the minds of most trade facilitation partisans.

Admittedly, there are different perspectives on what can be considered as trade facilitation. However, it is possible to categorise the use of the term in economic literature and by international organisations according to at least three criteria: the scope of the measures (narrow or broad), including soft or hard infrastructure, and whether they entail a change in trade procedures or simply a more efficient implementation of existing procedures(Yadav, 2014).

While the narrow-spectrum perspective sees Trade Facilitation as encompassing border-related issues such as customs efficiency, documentation requirements and the logistics of moving goods across borders, the broad-spectrum advocates believe that trade is not simply limited to borders (customs issues), but that the process starts before the border, within the exporting country, extends to the border and even beyond, encompassing the importing country (Rippel, 2011).

Under the broader spectrum, Trade Facilitation involves the streamlining of policies and procedures required for the transportation of products from a single nation to another in order to make cross-border trade faster, less expensive and more predictable, while maintaining that

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it is secure and safe (Sakyi et al., 2017). In the narrow sense, trade facilitation focuses on operational aspects of international trade and, as such, is defined by the proponents of this disciplinary field as "*measures whose aim is to simplify and harmonise administrative procedures at the border*" (Jarhamn & Svensson, 2020, p. 8). This refers to the "*quality, transparency and efficiency of a country's border administration*" (Ramasamy & Yeung, 2019, p. 1674), and to activities that make the movement of goods and related documents in cross-border transactions more efficient.

1.2.Economic benefits of trade facilitation: Empirical evidence

Empirical research on the economic impact of trade facilitation has produced a large body of evidence arguing for the need to undertake corresponding reforms in order to unlock international trade potential. Regardless of the level of analysis considered, whether macroeconomic, sectoral or microeconomic, the size of the firms studied or the economic sector considered, the available econometric evidence confirms the beneficial economic impact of trade facilitation in reducing trade costs and improving export performance.

Firstly, trade facilitation has a considerable potential to lower trade costs. This effect has been measured by a number of empirical studies (Alaamshani et al., 2022; Hillberry & Zhang, 2015; Moïsé & Sorescu, 2013; OECD, 2018) that use the methodology of (Novy, 2013) to determine trade costs from the observed pattern of production and trade between nations. By way of illustration, (Moïsé & Sorescu, 2013) shows that trade facilitation under the TFA would reduce the trade costs of OECD economies by around 10%. A subsequent study by (OECD, 2018) found that the reduction in trade costs resulting from the implementation of the WTO's TFA would be between 10% and 18%, with greater cost reductions for low-income groups, depending on whether economies implemented the agreement in full or only sought to meet the binding minimum requirements.

Second, both globally and differentially, the empirical literature also confirms a beneficial effect of trade facilitation on key export performance indicators such as export growth (Arvis et al., 2018; Hufbauer & Schott, 2013; Huong et al., 2023; Portugal-Perez & Wilson, 2012; Zaki, 2014), export diversification (Bourdet & Persson, 2014; Dennis & Shepherd, 2011; Kurul, 2023; Lee & Kim, 2012; Persson, 2013; Phelicean & Philemon, 2023), as well as the probability and propensity of exporting firms to export (Hendy & Zaki, 2021; Hoekman & Shepherd, 2015; Seck, 2017; Shepherd, 2013).

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1.3.Measuring trade facilitation: Absence of a single indicator

As a result of the growing importance of Trade Facilitation over the last fifteen years, numerous composite indicators have been constructed by international organisations and in the academic literature to reflect its diverse nature and scope. By way of illustration, (Orliac, 2012) has quantified the existence of more than 12 Trade Facilitation indicators, reflecting the complexity and difficulty of measuring the concept in its essence. The various indicators related to Trade Facilitation vary considerably in nature and scope, depending on the adoption of a broad or narrow definition of the concept as well as their particular objectives. As a result, indicators frequently overlap and it is not straightforward to categorise them exhaustively.

From a broader perspective, which involves reducing the costs associated with international trade, a number of indicators can be used to measure trade facilitation: indicators linked to customs procedures and other trade regulations, such as the World Bank's Doing Business Survey (DB) and its Trading Across Borders (TAB) indicators, plus the World Bank's Logistics Performance Index (LPI), the World Economic Forum's Enabling Trade Index (ETI) and relevant indicators from the World Bank Enterprise Surveys (WBES).

From a narrow perspective, all focused on the implementation of specific trade facilitation measures rather than the provision of performance indicators in terms of time or cost, the OECD Trade Facilitation Indicators (TFI) provide a detailed overview of the implementation of TFA. Similarly, the UN Survey on Trade Facilitation and Paperless Trade also provides information on the status of implementation of various paperless trade measures.

2. Methodology: Selection of indicators

As it is not possible to mobilise all the indicators, we focus on those that are linked to the provisions of the TFA and on those that have been frequently used in the economic literature. These include, in particular, the Trading Across Border indicators of the World Bank Group's DB (TAB), the World Bank's Logistics Performance Index (LPI), the OECD's Trade Facilitation Indicators (TFI), the World Economic Forum's (WEF) Enabling Trade Index (ETI); the United Nations Regional Commissions' Global Survey on Trade Facilitation and Paperless Trade Implementation (GSTF-PTI) and the World Bank Enterprise Surveys (WBES).

However, it should be noted that these indicators differ in their major purposes. As an illustration, while the World Bank's LPI and TAB databases incorporate metrics that assess nations' supply chain performance, the OECD's TFI and the WEF's ETI analyze a larger variety of factors that contribute to successful trade facilitation (Peterson, 2017). Similarly, it may be important to distinguish between indicators that measure contributions to policies, such as the OECD TFI or the GSTF-PTI, those that measure policy outcomes, such as the DB Index, and

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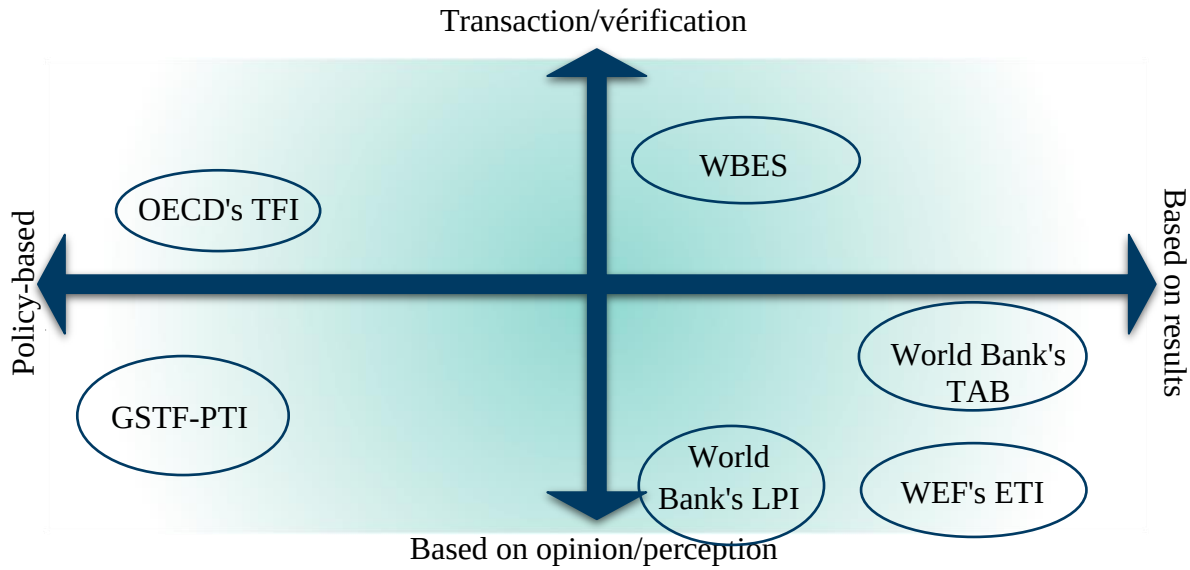
those that combine both approaches, such as the LPI and the ETI (OMC, 2015). The following figure maps the indicators used according to their nature and scope.

This mapping is divided into four quadrants, where data collection initiatives are positioned on the vertical axis according to their level of detail (primary or transaction-level data vs. data based on perception and opinion) and on the horizontal axis according to their objective (policy/environment vs results/performance).

Figure N°1 : Overview of trade facilitation indicators used



Source : Authors

Despite this significant difference, our analysis will undoubtedly have to consider both categories, given their complementary nature. Indeed, in our examination, we will be interested both in the results of trade facilitation and in the search for policies conducive to achieving the desired results.

It is important to emphasize that majority of the indicators investigated in our analysis are composite indicators, meaning that they group together multiple sub-indicators. These sub-indicators systematically yield statistical ratings for the economy as a whole, frequently accompanied by economic rankings. In some circumstances, the scores and rankings of the sub-indicators are also accessible. The Table N°1 outlines the essential elements of these composite indicators.

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Table N°1 : Trade facilitation indicators: specificities and characteristics

Indicators	Agency	Frequency /Coverage	Data period	Ranking, score, or both	Level of aggregation	Scope of application
OECD TFIs	OECD	Biennial-164 countries	2017, 2019	Score	National	Covers eleven sub-indicators, with governance and impartiality being an additional indicator that does not fall within the scope of the TFA.
The TAB of the EODB index	World Bank	Annual-190 countries	2010–2020	Ranking and score	National	Covers twelve areas of business regulation, ten of which are used to estimate ease of doing business scores.
LPI	World Bank	Biennial-160 countries	2010–2018	Ranking and score	National	Measures six dimensions of trade: customs efficiency and border management; trade and transport infrastructure quality; competitive shipment pricing accessibility; logistics service competence and quality; shipment tracking ability; and shipment timeliness and reliability.
ETI	WEF	Annual-136 countries	2010–2016	Ranking and score	National	Using a broader set of indicators than the World Bank's LPI, the ETI also measures countries' ease of trade and includes data on market access restrictions.
GSTF-PTI	United Nations	Biennial-143 countries	2019,2021	Score	National	Covers four primary themes through a survey comprising forty-seven questions relating to trade facilitation and the adoption of paperless trade.
WBES	World Bank	Biennial-154 countries	2004,2007 2013,2019	Objective/subjective data	Enterprise	Covers issues relating to the average time taken to clear direct exports through customs, and the percentage of companies identifying customs and trade regulations as a major constraint.

Source : Authors

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3. Results and Discussion

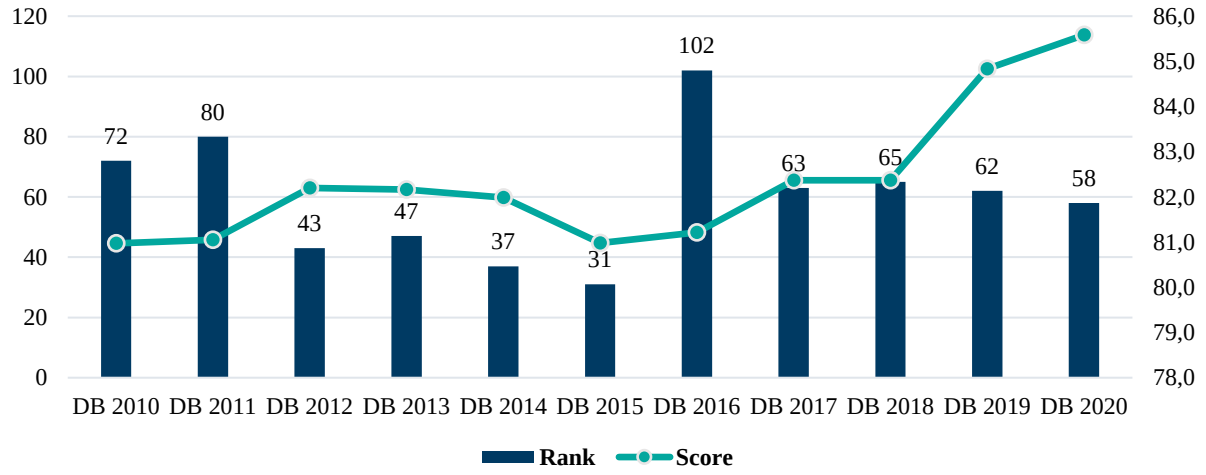
3.1. Morocco's performance measured by international composite indicators

In this first block of analysis, we examine Morocco's performance as measured by five international composite indicators, which are produced by different agencies with varying periodicity and which concern the national level of aggregation. Another block will deal later with indicators derived from microeconomic data.

3.1.1. The "Doing Business" cross-border trade indicators: the results of a decade

Given the wide coverage of data, this first analysis will focus on the period 2010-2020, a reflection on a decade. The figure below shows the time series of Morocco's TAB rank and score. The overall trend reflects a gradual improvement in Morocco's rank and score since 2016 and a remarkable improvement since 2018, which coincides with the period when TFA's efforts gained momentum.

Figure N°2 : Rang et score du Maroc pour les indicateurs TAB (2010-2020)



Source : Authors

Using the TAB indicator as a measure of the facilitation of foreign exchange, Morocco recorded a significant improvement in 2020 compared to 2018, moving from 65th to 58th place globally, an improvement of 7 places. In terms of TAB score, Morocco's performance improved by 3.2 points, from 82.4 in 2019 to 85.6 in 2020, which is the fastest rate over the period. Over the last ten years, Morocco has moved up 14 places in the indicator to rank 58th in the world.

Nevertheless, it should be noted that since the 2016 edition of the DB, when a substantial change was made to the methodology, negatively impacting Morocco's ranking, which marked an exceptional and abnormal fall of more than 70 places (from 31st place in 2015 to 102nd place in 2016) compared with the positive trend over the period 2011-2015. Significant efforts have been made to simplify and dematerialise reforms and to correct data by the various

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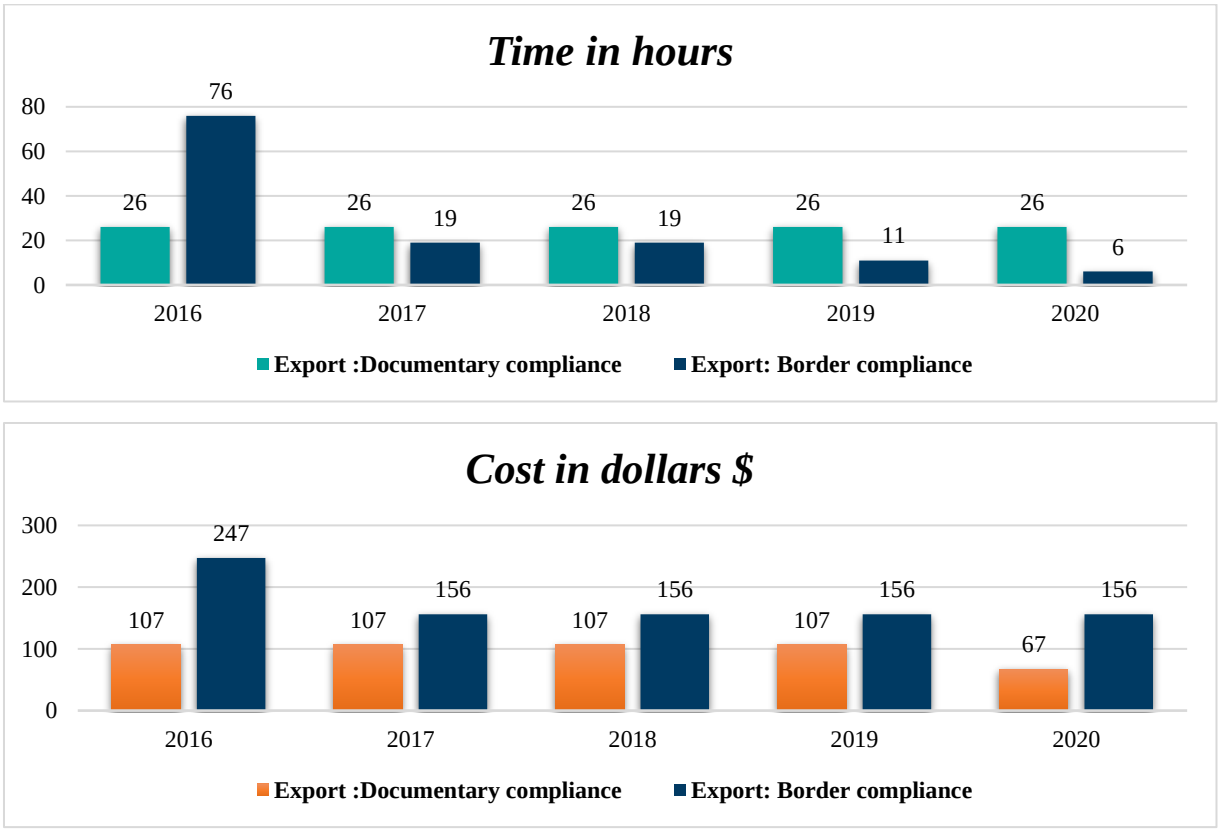
administrations involved in the import and export process. These efforts have helped to restore Morocco's ranking, which jumped 44 places between the 2016-2020 editions to 58th place from 102nd.

In the figure below, we have extracted the export time and cost taken for border and documentary compliance at the port of Tangier from the 2016 EODB report (2015 data). Given that it is likely that the documentation and border compliance process will take place at the same time, it would not be reasonable to add together the time and cost required for the two process steps. Therefore, the reference year considered is 2015 (2016 edition of the report), when a new methodology was adopted in the DB report that separates the cost and time to export for the two processes, something that was not possible with editions prior to 2016.

Figure N°3 : Time and costs associated with border and document compliance



Source : Authors

Morocco's trade facilitation efforts have made a major contribution to reducing export times and costs in recent years. Indeed, the time required to complete export procedures has been reduced to 6 hours (76 hours in 2015), a reduction of 70 hours compared with the reference. However, the time taken to compile the documentation required for export has stagnated at 26 hours, unchanged from 2015. It should be noted that before 2015, Morocco had invested heavily in reducing the number of documents required for export, from 6 in 2005 to 4 in 2015. In terms

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of costs, those associated with export document compliance fell to $67 from $247 in 2016 (a reduction of $40). On the other hand, the cost of completing export procedures fell to $156 ($247 in 2015), a drop of $91 compared with the reference.

Taking into account the results of this analysis, it appears that Morocco has improved its border compliance more than documentary compliance. As shown in the table below, Compliance with cross-border trade procedures, especially its components relating to customs clearance and inspections required by the customs authorities and to handling in ports or at borders, showed a marked improvement between 2018 and 2020, particularly execution time, which fell to 4 hours (14 hours in 2018) and 2.5 hours (11 hours in 2018) respectively.

Table N°2 : Evolution of Border Compliance Components

Components of border compliance	2018		2019		2020	
	Execution time (hours)	Associated costs ($)	Execution time (hours)	Associated costs ($)	Execution time (hours)	Associated costs ($)
Customs clearance and inspections required by the customs authorities	14.0	85.8	7.0	85.8	4.0	85.8
Customs clearance and inspections required by authorities other than Customs	0.0	0.0	0.0	0.0	0.0	0.0
Port and border handling	11.0	70.0	7.0	70.0	2.5	70.0

Source : Authors

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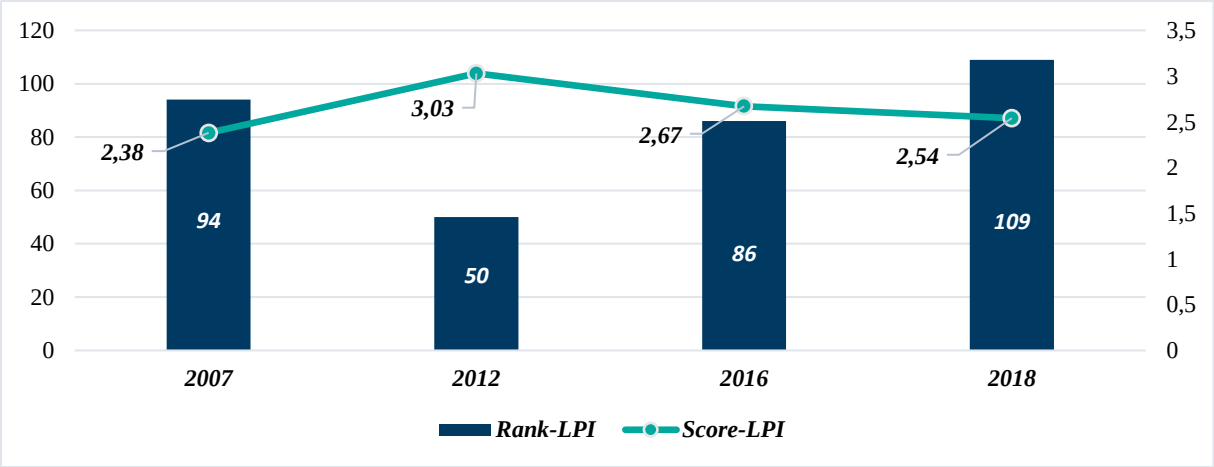
3.1.2. The World Bank's Logistics Performance Index (LPI)

In 2018, the latest edition of the LPI available for Morocco, the data covered 160 countries and the survey was administered to 869 logistics professionals in 108 countries. In the figure below, we summarise Morocco's LPI ranking and average score for the period 2010-2018.

Unlike the TAB analysis, Morocco's ranking according to the LPI reflects a real setback for the Kingdom in terms of trade facilitation in the broadest sense. According to the latest edition of the index (2018), Morocco ranks 109th in the world out of a list of 160 countries, with a score of 2.54. The country thus lost 23 places and 0.33 points compared with its 2016 ranking (86th and 2.67 in 2016).

Based on a method that minimizes random variations between surveys, allowing for comparison across 167 countries, The World Bank's 2018 report includes, in its Annex 1, the aggregated international LPI results across four editions (2012, 2014, 2016, and 2018). Notably, Morocco ranks 87th out of 167 countries, with an average LPI score of 2.67.

Figure N°4 : LPI ranking and score for Morocco



Source : Authors

To clarify and pinpoint the causes behind the decrease in both rank and score from 2016 to 2018, we illustrate the time series score for each of the six sub-indicators (Figure N°5). Comparing the components of the 2016 LPI score with the latest version of the report, it should be noted that Morocco has lost efficiency in most of the sub-components of the index, with the exception of the parameters relating to customs clearance and border crossing efficiency, and tracking and tracing of shipments, which explains the drop in the LPI index.

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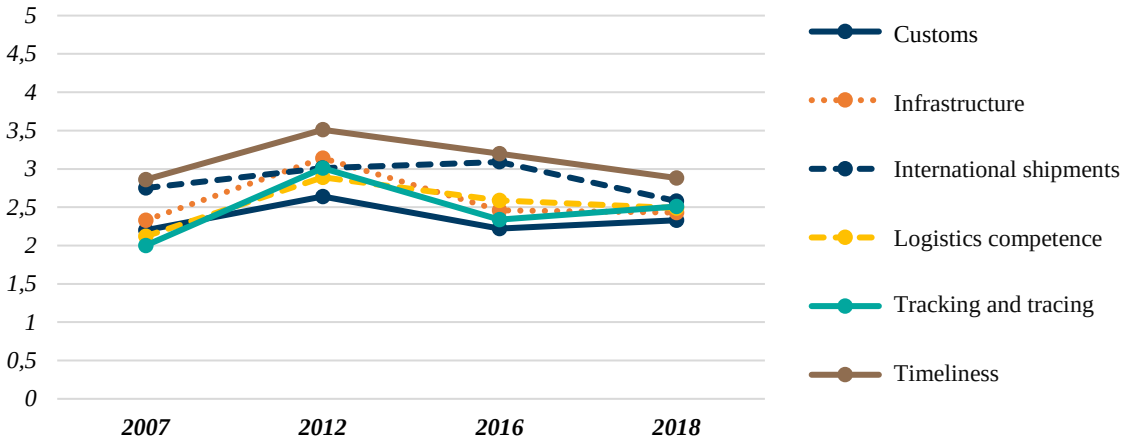
Figure N°5 : Moroccan scores for LPI sub-indicators



Source : Authors

In particular, the kingdom recorded a decline in the quality of infrastructure (from 2.46 in 2016 to 2.43 in 2018), the ease of international shipments (from 3.09 in 2016 to 2.58 in 2018), the competence and quality of logistics services (2.49 in 2018 compared with 3.59 in 2016) and compliance with deadlines (2.88 in 2018 compared with 3.20 in 2016).

However, an analysis of trade facilitation in Morocco based on this index must be made with caution, despite the trend, which appears negative. First of all, the LPI does not reflect the scope of the TFA, which takes a narrow rather than a broad view of trade facilitation. In fact, the sub-component relating to customs clearance and border crossing efficiency, which is closely linked to the TFA framework, recorded an improvement in 2018 compared with 2016 (2.33 compared with 2.22 previously), unlike the other components of the index.

Moreover, notwithstanding the fact that it is one of the most widely used data sources for determining ways to simplify international trade, the LPI has various notable shortcomings (Arvis et al., 2018; ESCAP & OECD, 2017).Several studies have also noted that the results of the LPI survey raise some doubts about their reliability, with strong jumps in indicators for some countries such as Kazakhstan, Kyrgyzstan (Zhanarys et al., 2017), Ukraine (Kurochkin, 2013) which has moved up more than 50 places in 2 years or the lack of rank movement for Russia despite the logistical improvements made in this country. The present doubts are supposed to be attributable to the highly subjective nature of the LPI, which is influenced more by social than economic factors, due to a systematic cultural bias, as shown by (Guner & Coskun, 2012) or (Stepanova, 2022).

In order to transcend the subjectivity inherent in the LPI, (Beysenbaev & Dus, 2020) have proposed an improved index called the Integrated Logistics Performance Index (ILPI). This index is based on the World Bank's LPI and offers an objective view, both qualitative and

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quantitative, of the logistics systems and sub-systems of 159 countries, based on international statistical data.

Table N°3 : Comparison of ILPI and LPI for Morocco

ILPI			LPI 2018	*Rank comparison*	
Country	*Score*	*Rank*	*Rank*		
Mexico	0.52	64	50	*-14*	↓
Moldova	0.51	73	115	*42*	↑
Mongolia	0.46	98	129	*31*	↑
Montenegro	0.51	74	76	*2*	↑
Morocco	0.48	90	108	*18*	↑
Myanmar	0.39	133	136	*3*	↑
Nepal	0.42	124	113	*-11*	↓
Netherlands	0.81	3	6	*3*	↑

Source : (Beysenbaev & Dus, 2020, p. 41), appendix A

Unlike the LPI's analysis, which reveals a downward trend in Morocco's performance, the ILPI shows a significant improvement in Morocco's ranking and score in 2018, with a rise of 18 places, which corroborates our analysis (Table N°3).

3.1.3. The World Economic Forum's Enabling Trade Index (ETI)

The figure below summarises Morocco's ranking and score in the ETI index for the period 2010-2016. The overall trend reflects a gradual and continuous improvement in the Kingdom's rank and score over the period. This improvement is reflected in a jump of 26 places (from 75th in 2010 to 49th in 2016) and a gain of 0.7 points (4.6 in 2016 compared with 3.9 in 2016) on an assessment scale that varies between 1 and 7, with a score of 7 indicating the best possible performance. Out of a list of 136 nations, Morocco was properly ranked 49th in the world.

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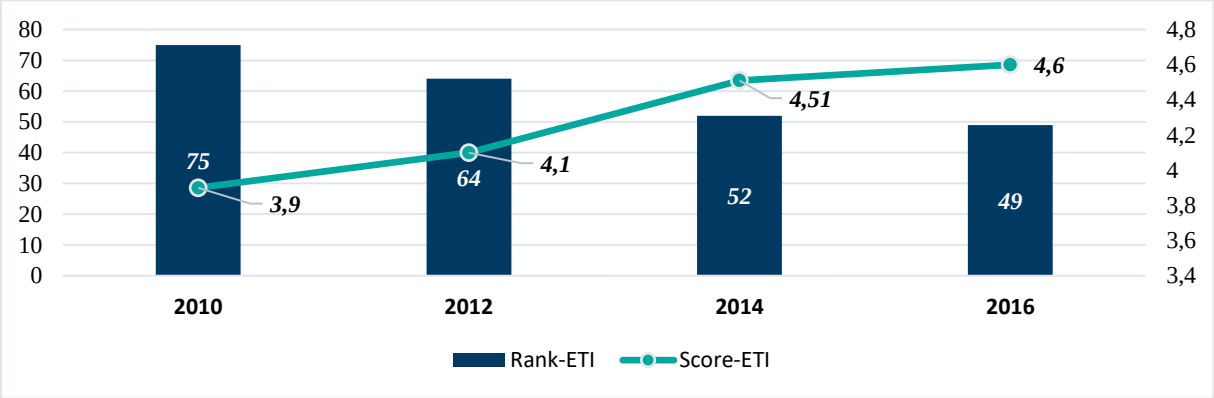
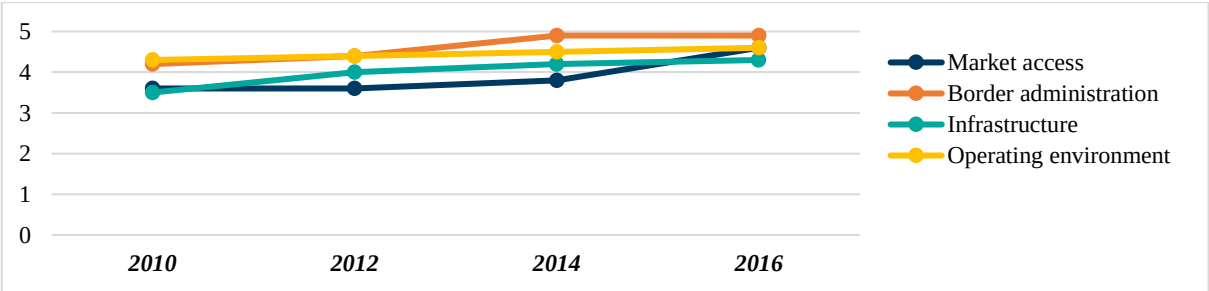
Figure N°6 : ETI ranking and score for Morocco



Source : Authors

To be able to explain and recognize the reasons for this performance, focusing on trade facilitation under the TFA, it should be noted that border management, although not the sole focus of the TFA, occupies an important place in its composition with 13 indicators. In fact, pillar 3 includes a number of indicators that take up concepts covered by the TFA.The constituent elements of this pillar are aggregated by sub-index B, which assesses the quality, transparency and efficiency of a country's border administration, which is consistent with the narrow conception of trade facilitation. From the figure below, which presents Morocco's score for each of the 4 sub-indices, it is clear that it performed best relative to the other components throughout the period of analysis.

Figure N°7 : Evolution of Morocco's scores for the ETI sub-indices



Source : Authors

In terms of score, Morocco's performance in border administration improved by 0.7 points, from 4.2 in 2010 to 4.9 in 2016.

The same conclusion can be drawn from an analysis by pillar. For the period 2014-2016[1], we compare Morocco's performance for each of the seven pillars of the ETI index with the average performance for the MENA region (Figure N°8). Once again, we can see that Morocco performs

[1] The choice of two versions, 2014 and 2016, is justified by the change in methodology from 2014, which prevented compatibility with the 2010 and 2012 versions, especially at the pillar level.

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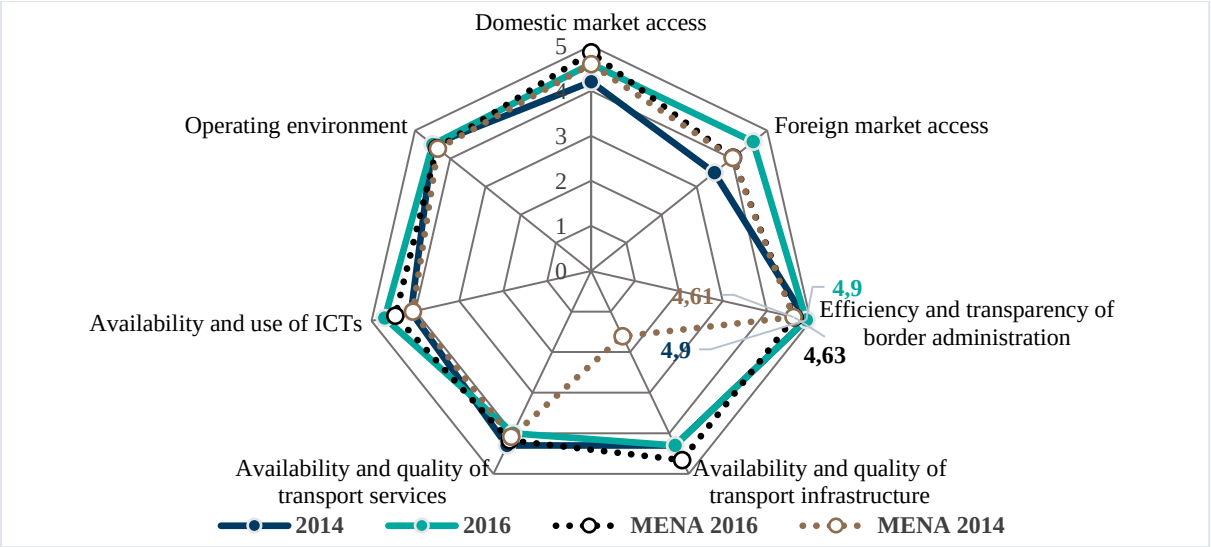
better than the MENA region average in the pillar relating to the efficiency and transparency of border administration. Indeed, Morocco's performance, which achieved a score of 4.9 in 2014 and 2016, exceeded that of the MENA region, which recorded average scores of 4.61 in 2014 and 4.63 in 2016.

Figure N°8 : Scores du Maroc pour les sous-indices de l'ETI



Source : Authors

Despite the relevance of the above analysis to date, it should be noted that the use of the ETI as a trade facilitation indicator in Morocco presents methodological problems. Like the World Bank's LPI and TAB indicators, this index has several drawbacks (Boumaaz, 2017; ESCAP & OECD, 2017). Apart from the timeliness of the data, which does not take into account the latest efforts made by Morocco, the ETI suffers from problems of comparability of results. For example, the 2016 results are not entirely comparable with the results published in 2014. The new data added to the WEF report represents only 36% of the ETI. Similarly, 22 indicators, representing 36% of the ETI, are taken from the WEF's Executive Opinion Survey, which is characterised by a high degree of subjectivity.

These methodological problems that characterise the evaluation indicators used to date have prompted us to mobilise other, more targeted and more reliable indicators for trade facilitation within the TFA framework. These include the OECD's TFIs and the GSTF-PTI.

3.1.4. OECD Trade Facilitation Indicators (TFIs)

In the figure below, we present Morocco's performance for each of the eleven WEI sub-indicators, for the period 2017-2019, based on the most recent data available. During this analysis period, the overall average trade facilitation performance improved by 0.15 points from 1.4 in 2017 to 1.56 in 2019. For all OECD WEIs, we find that Morocco's average cumulative

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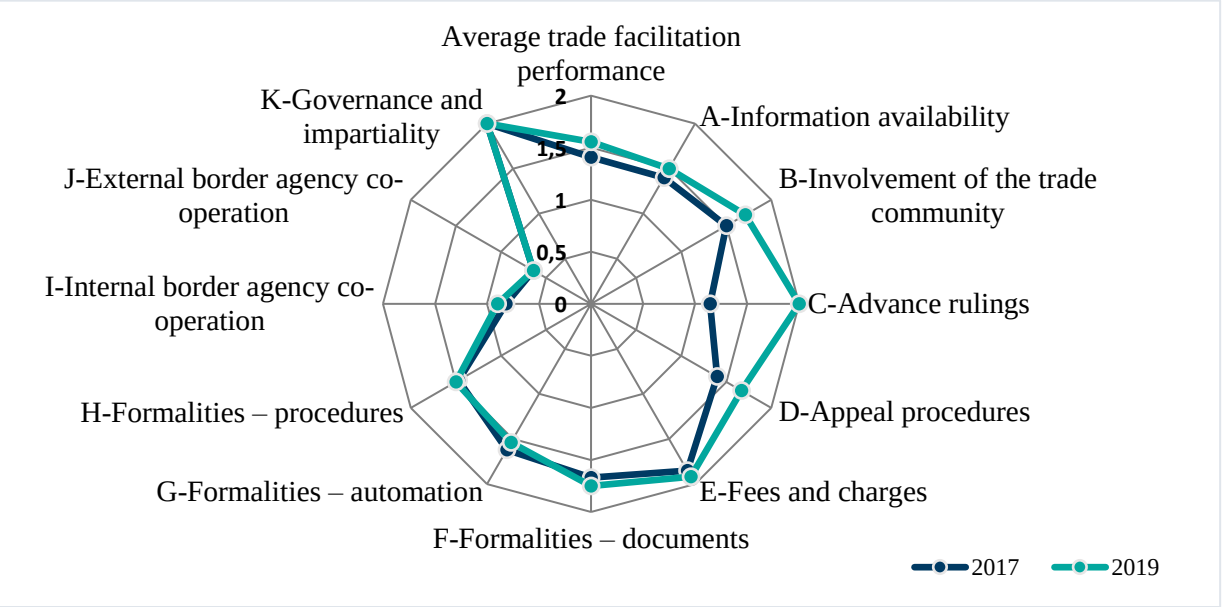
trade facilitation score in 2019 is 1.557 (in 2017 is 1.408), which is well above the global average of 1.19 (from 1.10 in 2017).

Figure N°9 : Evolution of Morocco's overall score in relation to the WEIs



Source : Authors

In terms of sub-indicators, we note that between 2015 and 2019, Morocco's performance improved for eight sub-indicators, namely availability of information, trader involvement, advance rulings, appeals procedures, fees and charges, formalities-documents and formalities-procedures, remained the same for two of them (external cooperation and governance and impartiality) and decreased slightly for one (formalities-automation). Performance in the other areas remained stable.

In general, the comparative situation shows that, taking into account the recorded performance, Morocco has improved its trade facilitation position over the period under consideration according to the time comparison criterion. We also consider that the scores recorded in the OECD WEIs are more associated with the anecdotal evidence about the progress of trade facilitation measures in Morocco, along with the other performance indicators addressed in this analysis. We believe that the evidence-based methodological process undertaken by the OECD has eliminated several inconsistencies in the reported scores for Morocco, as the TFIs data is more in line with the assessment of other performance indicators.

However, despite the positive trend recorded, which reflects its commitment to implementing the provisions of the TFA, an analytical reading of the sub-indicators makes it possible to identify several achievements, but also several delays and opportunities for progress. Analysis of Morocco's relative performance shows a wide disparity between the TFIs.

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While Morocco managed to record or come close to the best possible performance (a score of 2)[2] in areas such as advance rulings, governance and impartiality, and fees and charges. In other areas, however, there are glaring delays and significant gaps in relation to the top performance. This is particularly the case for indicators relating to internal and external cooperation (with scores of 0.9 and 0.64), which have not yet reached the stage of effective implementation or even the intermediate stage (a score of 1). The rest of the indicators, with intermediate performances (between a score of 1 and 2), meaning partial or ongoing implementation, can be divided into two groups. The first group shows more or less significant deviations (between 0.25 and 0.5) from the top performances, particularly in the case of formalities (documents, procedures and automation), while the second group is close to the top performances (less than 0.25 points), as in the case of trader involvement and appeal procedures.

Ultimately, the improvement of the current situation is conditioned by the future efforts that Morocco must undertake in the areas in which it has not yet achieved its best performance, and which represent opportunities for progress. These are, firstly, internal and external cooperation and, secondly, areas relating to formalities (documents, procedures and automation), the involvement of traders and appeal procedures. In the other areas, where performance has improved, the challenge is to maintain and sustain this performance.

3.1.5. United Nations Regional Commissions Global Survey on Trade Facilitation and Paperless Trade Implementation (GSTF- PTI)

The latest indicator, at the macroeconomic level, that we consider is the GSTF-PTI, conducted jointly by the five United Nations regional commissions. In the figure below, we present the sub-indicator score for Morocco, highlighting the general pattern towards progress over time. We note that the government's initiatives to simplify customs procedures, digitise and reduce paper processes are leading to improved results, especially in terms of paperless trade (with a rate of 89%), formalities and transparency (with rates of 100%).

[2] Which means the full implementation of the measures and actions covered by this indicator.

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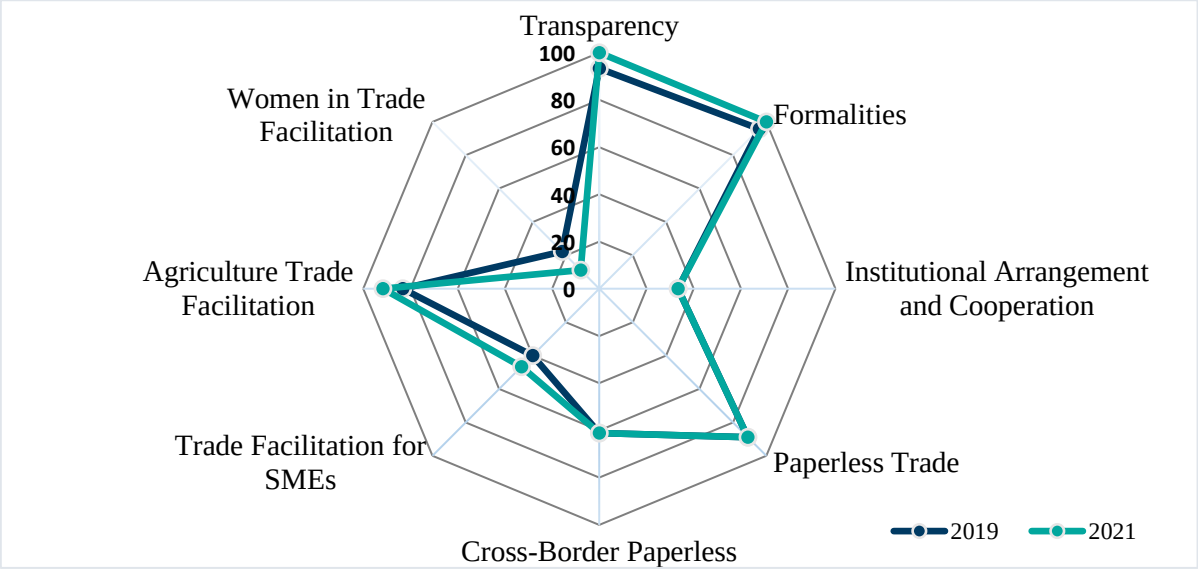
Figure N°10 : Score des sous-indicateurs GSTF-PTI du Maroc



Source : Authors

It can be noted that the GSTF-PTI is very similar to the OECD TFAs in terms of scope, frequency and data points. According to the OECD TEIs, Morocco's composite score improved from 1,408 in 2017 to 1,557 in 2019; according to the GSTF-PTI, Morocco's score showed an improvement from 80.65% in 2019 to 82.8% in 2021.

Nevertheless, given that the aim of this article is to measure performance, with the TFA at its heart, we select the measures directly related to the TFA (23 of 58 total measures) as performance measurement indicators. In addition, we find that they can be grouped by identifying five sub-indicators: (1) transparency; (2) formalities related to documentation and procedures; (3) automation; (4) cooperation and institutional arrangements; and (5) transit.

While Morocco managed to achieve the best performance (a score of 3) in measures relating to transparency, formalities and automation, those relating to cooperation and institutional arrangements, which are comparable to the OECD's TFIs "cooperation of internal border agencies" and "cooperation of external border agencies", are lagging behind and must be taken into account in the next reforms undertaken by Morocco.

This finding confirms that of the evaluation based on the OECD's TFIs. Indeed, the indicators of "availability of information", "involvement of traders", "advance rulings" and "appeal procedures", which correspond to the GSTF-PTI "transparency" indicator, have shown an improvement. The same is true of the "formalities (documents)", "formalities (procedure)" and "fees and charges" indicators, which are compared with the GSTF-PTI "formalities" indicator. On the other hand, the indicators relating to "internal cooperation of border agencies" and

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"external cooperation of border agencies", which correspond to the "cooperation and institutional arrangements" indicator of the GSTF-PTI, performed poorly.

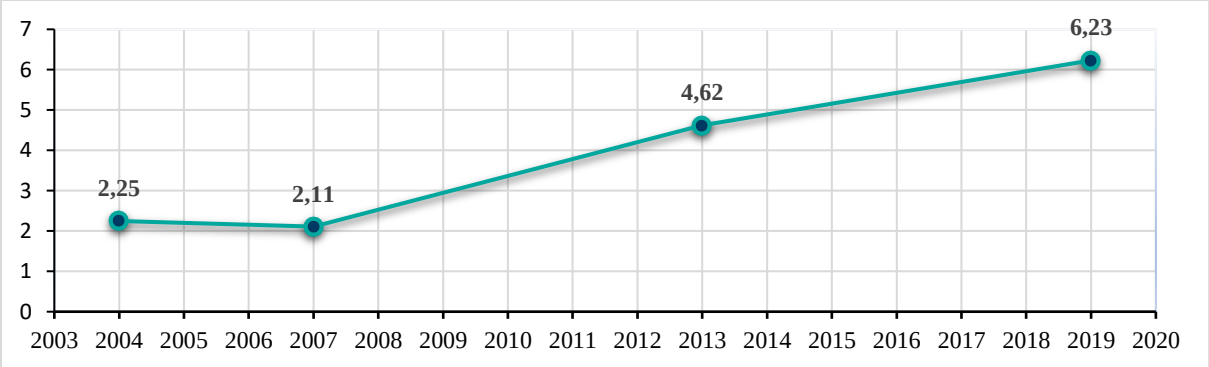
3.2. Trade facilitation VS the viewpoint of Moroccan exporting companies: An analysis using company surveys

Unlike the international composite indicators, the following analysis will deal with indicators derived from microeconomic data. Survey information available at the micro level provides an indication of the importance of border procedures for businesses relative to other perceived barriers to trade. Although these surveys are not directly comparable, due to differences in design and sampling strategies, they provide prima facie evidence on perceptions of different trade costs to business. This is a crucial feature that sets them apart from other macro-level assessment indicators, such as the TAB, ETI, LPI or TFI.

Based on two questions: the average number of days required to clear direct exports through customs and the percentage of companies identifying customs and trade regulations as a major constraint, we mobilise the data collected from the WBES surveys (which concerned 2,993 Moroccan companies surveyed over the period 2004-2019) to determine the efficiency of customs and border procedures as a narrow measure of trade facilitation. In the following figure, we present the evolution of the average time required to clear direct exports in days.

Contrary to the generally positive trend reflected by indicators at the macroeconomic level, the average time taken to clear direct exports through customs increased unusually during the period 2007-2019, when there was a great deal of inconsistency between data emanating from companies via their managers and TAB data, for example, which generally emanates from local freight forwarders or customs agents.

Figure N°11 : Average time taken to clear direct exports through customs (in days)



Source : Authors

As shown in the figure below, dissatisfaction with the efficiency of customs and border procedures is also reflected in the percentage of companies that identify customs and trade regulations as an obstacle. Out of a total of 2,993 companies surveyed between 2004 and 2019,

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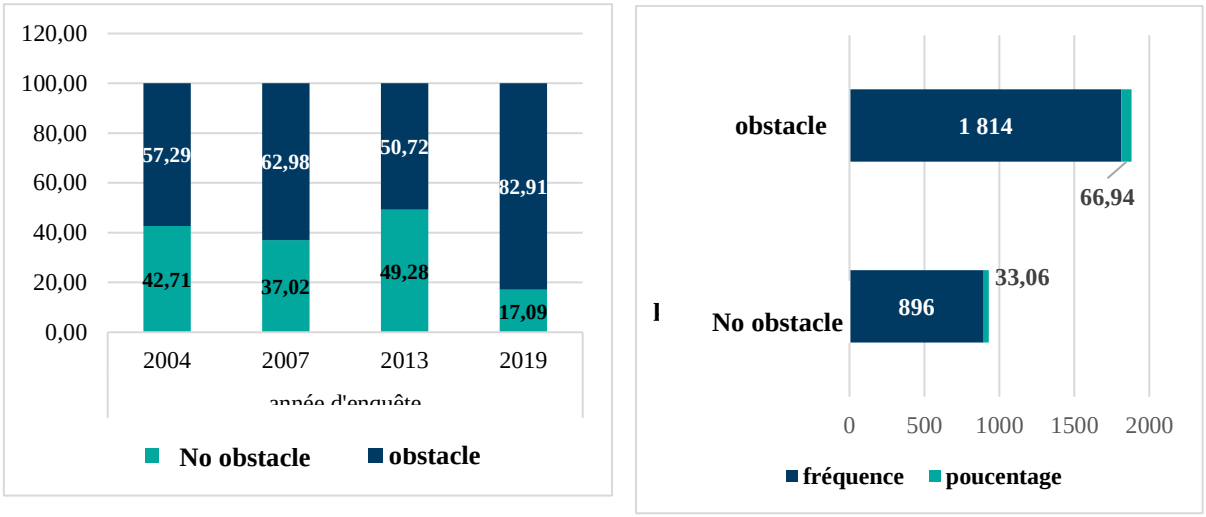
and 2,710 concerned by the question, 66.96% of companies identified customs and trade regulations as a constraint on the conduct of their commercial operations.

Figure N°12 : Percentage of companies identifying customs and trade regulations as a constraint



Source : Authors

This percentage increased especially in 2019 with a percentage of 81.92%, representing 825 companies out of a total of 995. This percentage coincides with the highest average clearance time during the period, at 6.23 days in 2019.

The results of the WBES are confirmed by other surveys of Moroccan exporting companies. These include the trade survey on Non-Tariff Measures (NTMs), conducted by the International Trade Centre (ITC) in collaboration with the Moroccan Ministry of Industry, Trade and New Technologies (Department of Foreign Trade), and the national business survey conducted by the Haut-Commissariat au Plan (HCP).

According to the ITC's first survey, which dates back to 2012, the main Moroccan entity involved in procedural barriers to export is Moroccan Customs, with a 42.4% share of total barriers. Of the 1,050 companies surveyed, 43% said they were affected by restrictive regulations. These obstacles relate mainly to export inspection requirements and export registration measures (ITC, 2012).

Admittedly, Morocco has made considerable progress from 2012 to the present day, but it seems that the situation is still relevant, if we consider the results of the HCP's national business survey. According to this survey, which covered 2,101 exporting companies in 12 regions of Morocco, customs regulations are among the main export-related difficulties raised by exporting companies, with a rate of 34% (HCP, 2019)

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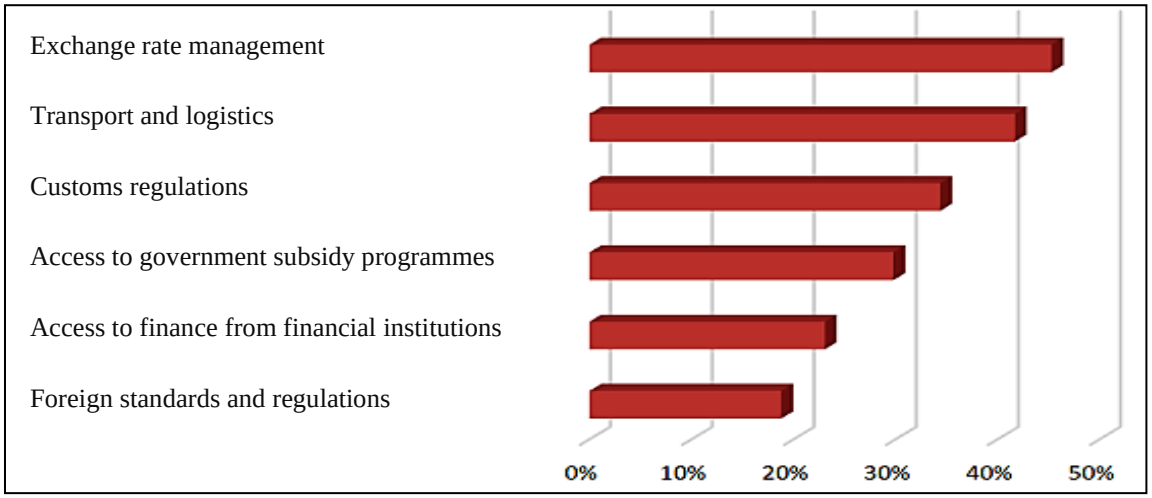
Figure N°13 : Difficulties associated to companies' export procedures



Source : (HCP, 2019, p. 17)

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Conclusion

This article analyses Morocco's trade facilitation reforms under the TFA, using a variety of indicators to assess and compare outcomes. The study examines both indicators that measure contributions to policies and those that measure policy outcomes. Although the method is complex, it has led to some fruitful and enlightening conclusions on the subject.

The first part of the study, based on the results of policies implemented by Morocco over the last decade, confirms that despite efforts to reduce export times and costs, as shown by TAB indicators, microeconomic data from surveys such as WBES, ITC and HCP do not confirm this improvement. Although this progress coincided with the focus on TFA, it was not possible to conclusively confirm the causal relationship between the implementation of TFA measures and the reduction in trade costs, highlighting the need for further econometric validation. However, we found much more consistent results using indicators specifically recommended by the TFA, such as the OECD's TFIs and GSTF-PTI. These indicators provide a reliable basis for assessing the effectiveness of the policies implemented by Morocco, signalling a firm commitment on its part. However, despite the positive trends, a detailed analysis of the TFI sub-indicators reveals progress made as well as delays and opportunities for progress.

It should also be noted that in the exercise to review the main evaluation indicators, it became apparent that it is crucial to choose indicators carefully in future research due to the inconsistencies observed in the results of the composite indicators used previously. Only the OECD WEIs and the GSTF-PTI meet the criteria of a good indicator, being based on the TFA and offering an accurate analysis of trade and economic effects. Our current analysis needs to be complemented by in-depth quantitative studies, using rigorous econometric models, to better understand the real impact of trade facilitation under the TFA on trade costs and export performance in Morocco. In particular, the use of OECD TFIs will allow us to differentiate the effects of the different measures covered by TFA. This research provides a solid basis for future studies aimed at deepening our understanding of the effectiveness of trade facilitation reforms in Morocco.

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