



Royaume du Maroc



## **UNCEBTS 7th meeting, and Meeting of the Task Team on International Trade Statistics**

**24-27 September 2024,**

**Geneva, Switzerland**

**v.18 Manual on Principal Indicators for Business and Trade Statistics**

**Volume. 2**

[Ouljour@oc.gov.ma](mailto:Ouljour@oc.gov.ma)  
[Ying.Yan@wto.org](mailto:Ying.Yan@wto.org)

Manual on Principal Indicators for Business and Trade Statistics (Goods and Services)  
Volume. 2

❑ **Introduction;**

- ✓ Objectives
- ✓ Target audience

❑ **Work done:**

- ✓ structure of the manual: main chapters
- ✓ core chapter: indicators (examples)

❑ **Next steps**

# objectives

- The UN Committee of Experts on Business and Trade Statistics (UNCEBTS) has identified the need to develop Volume 2 of the Manual on Principal Indicators for Business and Trade Statistics (MIBTS, Vol 2).
- Goal of the Manual includes meet policy needs and providing an easier and better reading of foreign trade data.
- These indicators should be designed to meet the needs of users in terms of better quality and analysis of statistics on trade in goods and services

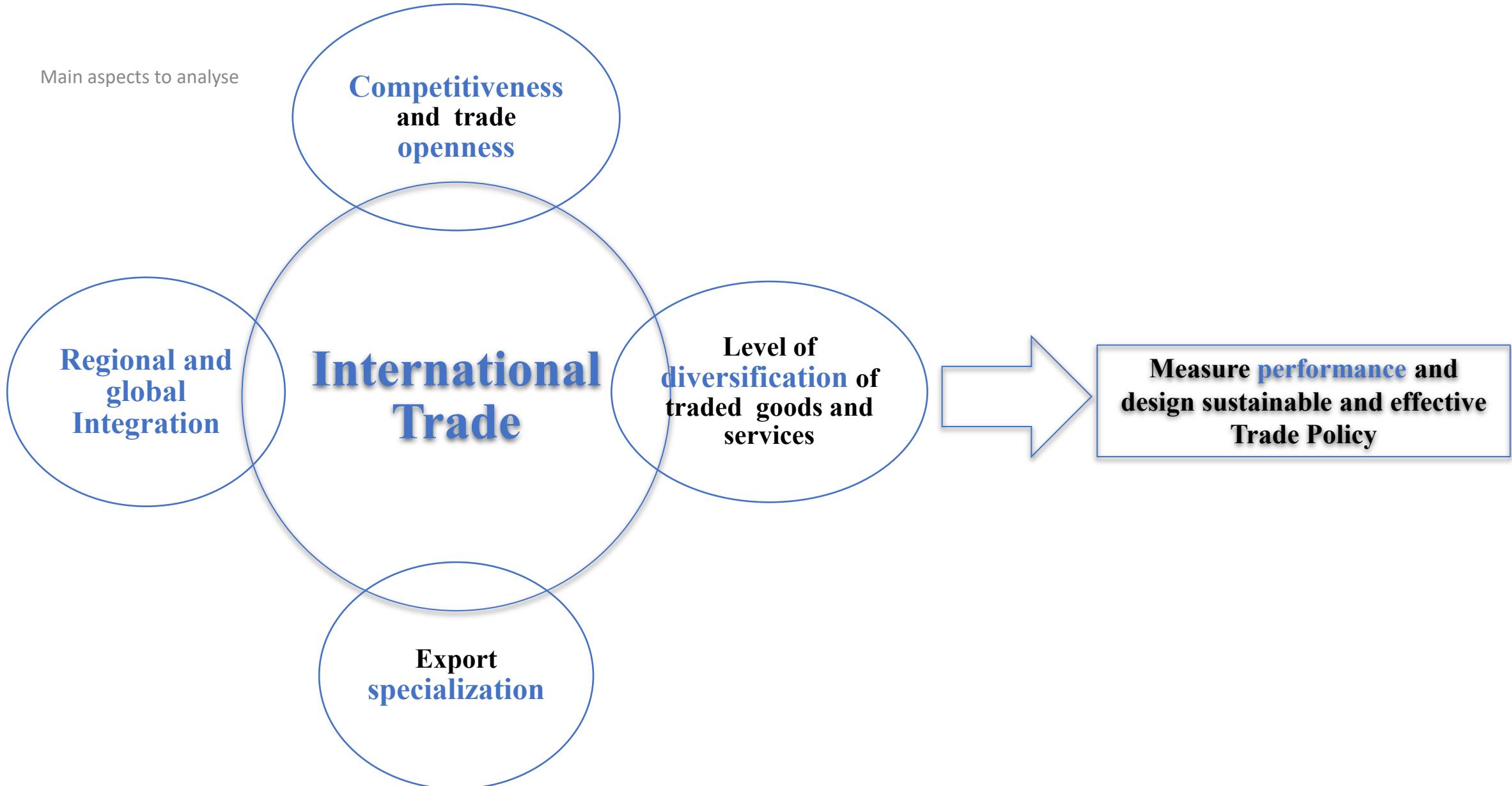
# Use of trade data

- Statistics on trade in goods and services are used by policy makers to:
  - Formulate economic policies;
  - Assess degree of integration of national economy into the global economy;
  - Monitor national and international economic situation;
  - Study external balances with a view to formulate policy to correct imbalances;
  - Make projections;
  - Develop/monitor trade agreements;

## An Overview of International Trade



# The analysis of trade indicators: what for?



# Target audience

The main target audience for this manual are :

- primarily statisticians who are responsible for compiling and disseminating statistics on international trade in goods and services in the various statistical institutions.
- other compilers from other areas, such as those within institutions in charge of balance of payments and national accounts statistics may also be involved in the collection and compilation of the data needed to produce these indicators and therefore benefit from using this manual.
- Furthermore, in addition to the compilers, data users such as researchers and study managers within public administrations or private institutions will gain enhanced insights into the interpretation and utilization of the principal indicators provided. Additionally, they will benefit from a comprehensive understanding of the data sources and methodologies employed in the calculations.

# Work done

- Identification and discussion of a set of indicators that may be recommended for countries as a reference list for trade statistics.
- detailed sheets on trade indicators are drafted;
- Chapters I, II, III drafted;
- Chapters IV ongoing;
- Practical cases elaborated.

# Draft structure: outline

<b>Chapter</b>	<b>Questions to be addressed</b>
1. Introduction	
2. Role of international trade statistics	<ul style="list-style-type: none"><li>• What can international trade statistics contribute?</li><li>• Which questions and problems can it help to solve?</li><li>• Which are its limitations?</li><li>• Which are its specific constraints and resources?</li><li>• How is international trade statistics connected with other domains?</li></ul>
3. Core indicators	<ul style="list-style-type: none"><li>• Which are recommended indicators that can be constructed from international trade statistics alone?</li></ul>
4. Aspirational (cross-cutting) indicators	<ul style="list-style-type: none"><li>• How can international trade statistics benefit from integration with other domains?</li><li>• Which recommended indicators can be constructed based on that integration?</li></ul>
Annex: indicator sheets	

# Draft structure: annotated

- 1. Introduction
  - A. Background
  - B. Structure of the manual
  - C. Process of preparing the manual
  - D. Target audience
- 2. Role of international trade statistics
  - A. Purposes and uses
  - B. Conceptual aspects
  - C. Data environment and compilation frameworks
- 3. Core indicators
  - A. Introducing thematic areas
  - B. Trade and national economy (area 1)
  - C. Trade structure (area 2)
  - D. Regional integration and Global Value Chains (area 3)
- **4. Aspirational indicators / integrating trade statistics with other domains**
  - A. Business
  - B. Productivity, well-being, income and gender inequality
  - C. Environment
  - D. Digitalization
- **Annex: Indicator sheets**

## More details on chapter 2

### 2. Role of international trade statistics

Main questions: How can international trade statistics be used to inform policies? What are its limitations? How is it connected to other domains?

#### 2.A. Purposes and uses

- Understanding a country's position in the global economy
- Understanding the role of trade in a country's economy
- Monitoring external balances
- Preparation of trade agreements

## More details on chapter 2

### 2. Role of international trade statistics

#### 2.B. Conceptual aspects

Focus on territories (usually countries) or their resident populations as units of analysis

Relation with other domains, such as national accounts and BOP

#### 2.C. Data environment and compilation frameworks

- Well-established data collections in place, based on customs records, ITRS, enterprise and household surveys, administrative data, etc
- Availability of mirror data for cross-validation and filling data gaps
- Involvement of different national agencies in data compilation
- Benefits from cooperation between countries (to solve asymmetries)
- Emerging data sources (e.g., vessel tracking, digital payment)
- Main data quality challenges

## More details on chapter 3

### 3. Core indicators

Main question: Which are recommendable indicators that can be constructed from international trade statistics alone?

3.A. Introducing three thematic areas

3.B. Area 1: Trade and national economy

3.C. Area 2: Trade structure

3.D. Area 3: Regional integration and Global Value Chains

Indicators on global trade	1 Trade balance		Indicators on globalization	19 Revealed Comparative Advantage
	2 Foreign trade coverage ratio			20 Export Specialization Index
	3 Trade balance in goods and services as a percentage of GDP			21 Intra-industry trade by sector (Grubel-Lloyd Index)
	4 Normalised balance of exports and imports			22 Trade Intensity Index
Indicators on degree of integration in the global economy	5 Trade to GDP ratio			23 Trade Complementarity Index
	6 Export propensity			24 Export Market Concentration Index
	7 Import ratio			25 Import Market Concentration Index
	8 Import penetration ratio			26 Intra-regional trade intensity Index
	9 Trade per capita			27 Export dependence rate of the GDP
	10 Trade share			28 Export dependence rate of employment
	11 Export share			29 Import dependence rate
	12 Import share			30 Import dependence of final consumption expenditure
	13 Terms of trade			31 Import dependence of gross fixed capital formation
	14 Herfindahl index of geographical concentration			32 Import dependence of exports
	15 Hirschman-Herfindahl Index			33 Marginal Propensity to Import
	16 Export Diversification (or Concentration) Index			34 Backward GVC participation
Indicators on the level of diversification / concentration	17 Export Product Concentration Index			35 Forward GVC participation
	18 Import Product Concentration Index			
	19 THEIL Index			
		Indicators on bilateral trade and regional integration		

## More details on chapter 4

Aspirational indicators - integrating trade statistics with other domains

Main questions:

How can international trade statistics benefit from integration with other domains?

Which recommendable indicators can be constructed based on that integration?

- Business
- Productivity, well-being, income and gender inequality
- Environment
- Digitalization

## Productivity

1. Contributions of labour and capital inputs to growth, by trading status and industry
2. Labour productivity levels by trade openness of countries
3. Productivity in small and medium enterprises and large firms by trading status

## Wellbeing

1. Product diversity of imports
2. Share of cultural goods and services in imports
3. Share of imported goods and services in consumption, by household type

## Income and gender inequality

1. Employment and types of jobs by trading status, age, gender, skills, education, ethnicity, rural/urban, firm size, firm ownership and industry
2. Income inequality by trading status, age, gender, skills, education, ethnicity, rural/urban, type of job, employment status, firm size, firm ownership and industry
3. Trade participation of women-/men-owned businesses by firm size and trading status

## Environment

1. Share of plastics trade in total trade
2. Share of biotrade in total trade

## Digitalization

1. Digitally ordered export intensity
2. Digitally delivered export intensity

## More details on annexes

Annexes:

Indicator sheets

Other considerations:

Elements to be included throughout the book (e.g., using boxes):

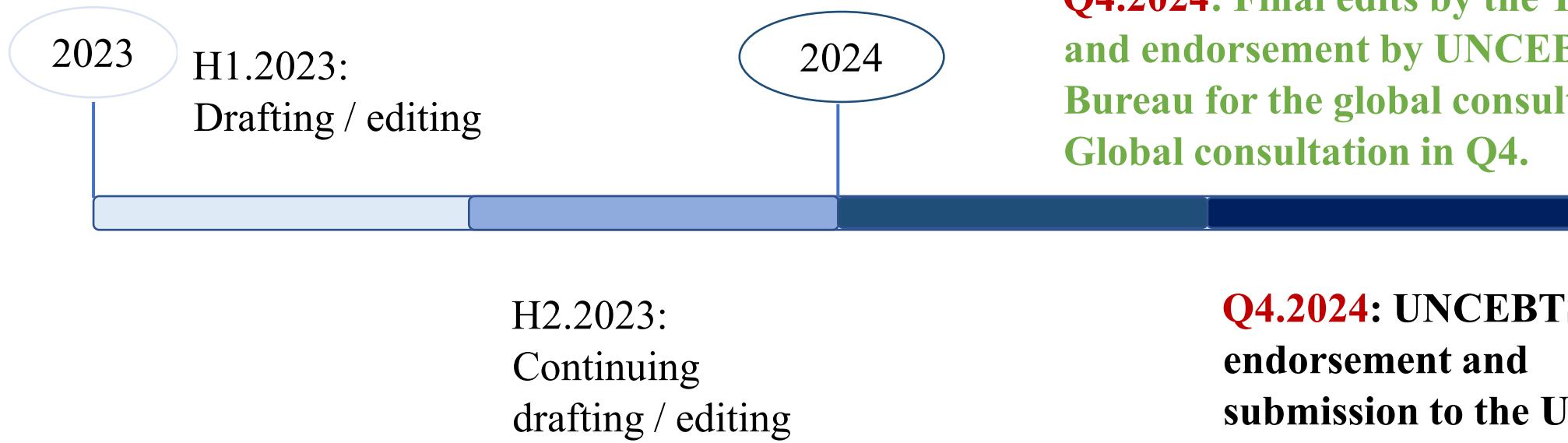
- Country experiences
- Illustrations of application cases

## Next steps and timeline

- finalizing all chapters
- First draft by end October 2024
- Global consultation in November 2024

## ❑Next steps

### Timeline



**Thank you for your attention**

# TRADE INDICATORS

practical calculation  
cases

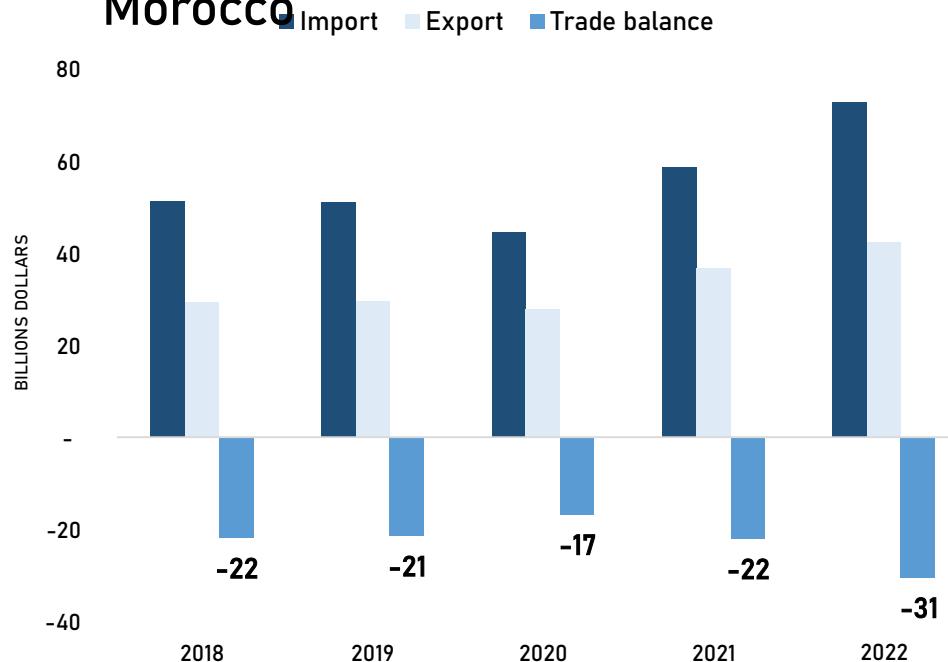
# TRADE INDICATORS N°1 : TRADE BALANCE

Metadata	
Name of the indicator	Trade balance
Definition:	The difference in value over a period of time between a country's imports and exports and imports of goods and services.
Mathematical formula:	$TB = X - M$
Economic interpretation:	If the exports of a country or area exceed its imports, the country is said to have a trade surplus. Conversely, if the imports exceed its exports, the country has a trade deficit.
Data sources:	BoP, ITS
Associated classifications:	EBOPS, HS, SITC

# TRADE INDICATORS N°1 : TRADE BALANCE

For the case of Morocco, the trade balance of goods indicator is as follows :

## Trade Balance Evolution of Morocco



DATA SOURCES : TRADE MAP – CONCEPTION : OFFICE DES CHANGES

Indeed, Morocco's trade balance goes from -22 billion dollars in 2018 to -31 billion dollars in 2022,

+9%

Average annual growth rate of the trade balance  
2018-2022



## Case of Morocco's neighboring countries

+3,4%

Average annual growth rate of the trade balance  
2018-2022

(-7,1 Billion \$ at the end of 2018 to -8,1 Billions \$ at the end of 2022)

-12,1%

Average annual growth rate of the trade balance 2018-2022 (-53 Billion \$ at the end of 2018 to -31,6 Billions \$ at the end of 2022)

+11,1%

Average annual growth rate of the trade balance 2018-2022 (-21,5 Billion \$ at the end of 2018 to -32,7 Billions \$ at the end of 2022)

+18,7%

Average annual growth rate of the trade balance 2018-2022 (-55,1 Billion \$ at the end of 2018 to -109,5 Billions \$ at the end of 2022)

DATA SOURCES : TRADE MAP – CONCEPTION : OFFICE DES CHANGES

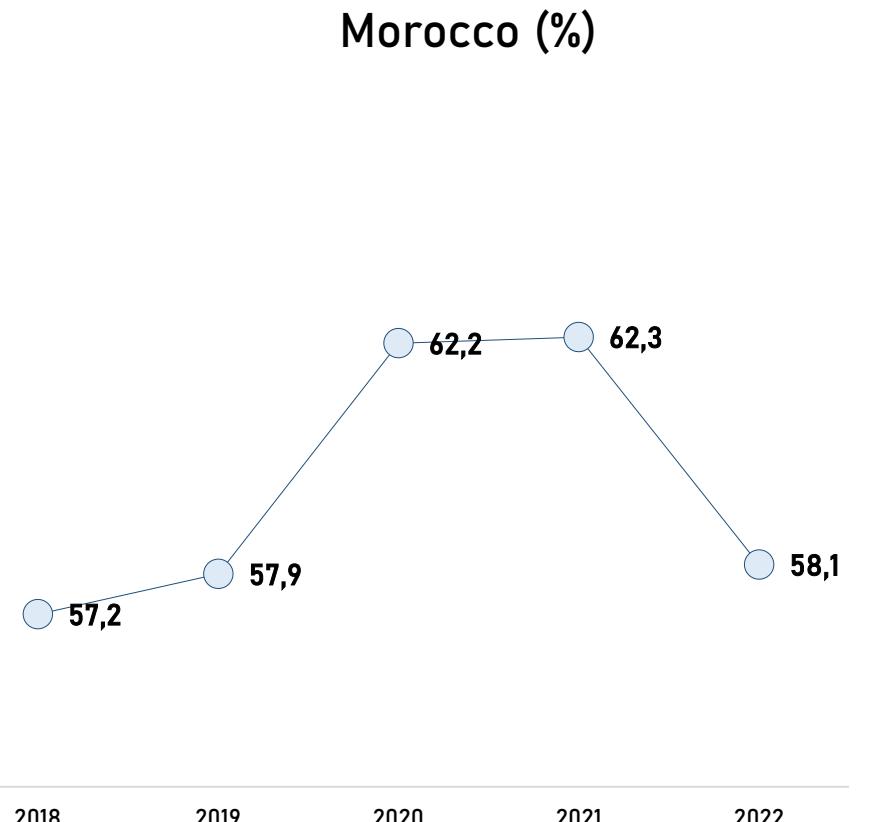
## TRADE INDICATORS N°2 : FOREIGN TRADE COVERAGE RATIO

Metadata	
Name of the indicator	Foreign trade coverage ratio
<b>Definition:</b>	The foreign trade coverage ratio is the ratio between the value of exports and of imports between two countries (or two zones). It may concern a product or a set of exchanges of products (goods and services).
<b>Mathematical formula:</b>	$CR = \frac{Exports}{Imports} * 100$
<b>Economic interpretation:</b>	It shows the extent to which exports earnings finance imports, and thus illustrates the position of the balance of trade in terms of its components rather than their difference. A percentage higher than one means a balance surplus and lower than one means a deficit.
<b>Data sources:</b>	BoP, ITS
<b>Associated classifications:</b>	EBOPS, HS, SITC

## TRADE INDICATORS N°2 : FOREIGN TRADE COVERAGE RATIO

For the case of Morocco, the foreign trade coverage ratio indicator is as follows :

### Foreign trade coverage ratio evolution of



DATA SOURCES : TRADE MAP – CONCEPTION : OFFICE DES CHANGES

In fact, the coverage rate increases from 57.2% in 2018 to 58.1% in 2022,

### Case of Morocco's neighboring countries



+1,1 point  
(68,4% at the end of 2018 to 69,5% at the end of 2022)



+24,6 point  
(35,8% at the end of 2018 to 60,4% at the end of 2022)



-5,9 point  
(77,5% at the end of 2018 to 71,6% at the end of 2022)



DATA SOURCES : TRADE MAP – CONCEPTION : OFFICE DES CHANGES

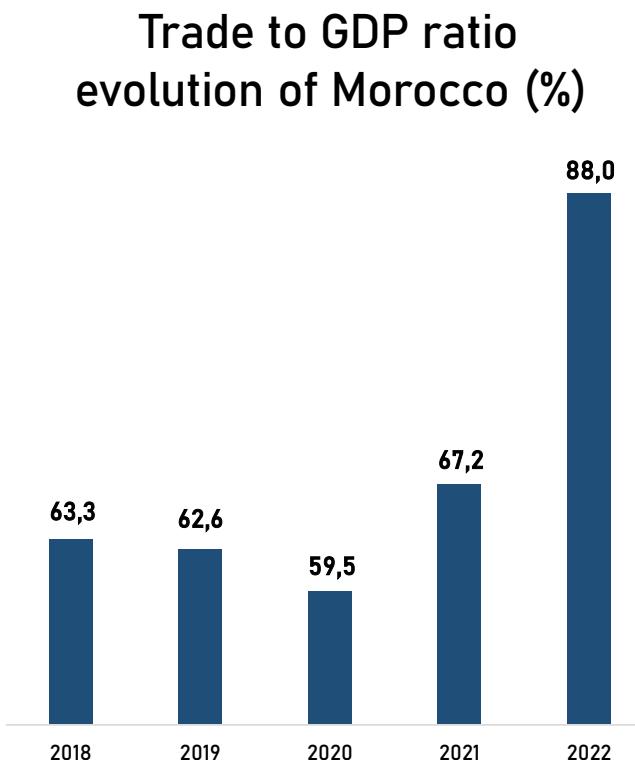
-5,4 point  
(75,3% at the end of 2018 to 69,9% at the end of 2022)

## TRADE INDICATORS N°3 : TRADE TO GDP RATIO

	Metadata
Name of the indicator	<b>Trade to GDP ratio</b>
<b>Definition:</b>	This indicator measures a country's openness or integration in the world economy. It represents the combined weight of total trade in an economy.
<b>Mathematical formula:</b>	$T = \frac{Imports+Exports}{GDP} * 100$
<b>Economic interpretation:</b>	This ratio measures the degree of the dependence of domestic producers on foreign demand and of domestic consumers on foreign supply.
<b>Data sources:</b>	BoP, ITS,
<b>Associated classifications:</b>	EBOPS, HS, SITC

## TRADE INDICATORS N°3 : TRADE TO GDP RATIO

For the case of Morocco, the trade to GDP ratio indicator is as follows :



In fact, the trade to GDP ratio increases from 63,3% in 2018 to 88% in 2022,

Case of Morocco's neighboring countries



+8,3 point

(89,5% at the end of 2018 to 97,7% at the end of 2022)



-15,8 point

(42,6% at the end of 2018 to 26,8% at the end of 2022)



+8 point

(70% at the end of 2018 to 78% at the end of 2022)



+18 point

(50% at the end of 2018 to 68% at the end of 2022)

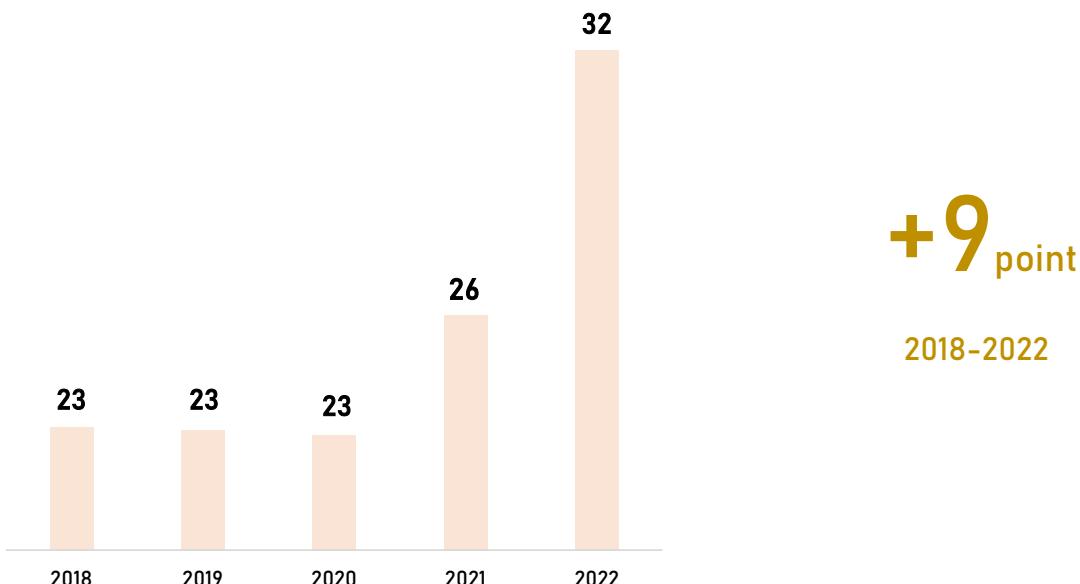
DATA SOURCES : TRADE MAP – CONCEPTION : OFFICE DES CHANGES

## TRADE INDICATORS N°4 : EXPORT PROPENSITY

Metadata	
Name of the indicator	Export propensity
Definition:	Export propensity ratio indicates the share of national production devoted to satisfying foreign demand.
Mathematical formula:	$XP = \frac{\text{Exports}}{\text{GDP}} * 100$
Economic interpretation:	This ratio measures the exports by the size of the GDP of a country.
Data sources:	BoP, ITS,
Associated classifications:	EBOPS, HS, SITC

# TRADE INDICATORS N°4 : EXPORT PROPENSITY

Export propensity evolution of Morocco (%)



DATA SOURCES : TRADE MAP – CONCEPTION : OFFICE DES CHANGES

Indeed, Morocco's export propensity indicator increases from 23% in 2018 to 32% in 2022,

Case of Morocco's neighboring countries



+4 point

Export propensity 2018-2022 (36% at the end of 2018 to 40% at the end of 2022)



-1 point

Export propensity 2018-2022 (10% at the end of 2018 to 11% at the end of 2022)



+1 point

Trade to GDP ratio 2018-2022 (31% at the end of 2018 to 32% at the end of 2022)



+6 point

Trade to GDP ratio 2018-2022 (22% at the end of 2018 to 28% at the end of 2022)

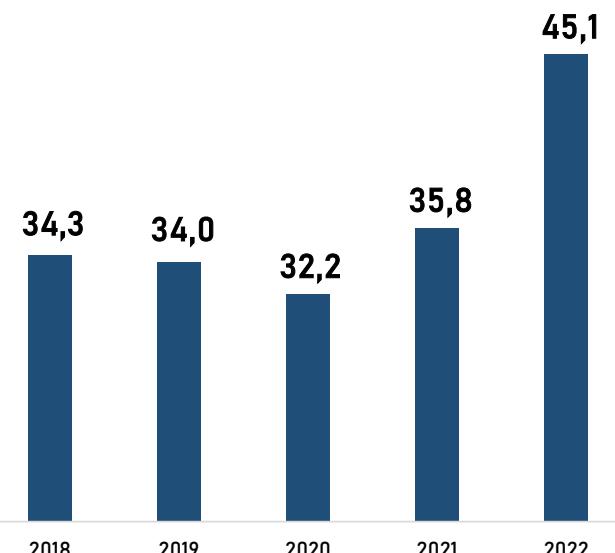
DATA SOURCES : TRADE MAP – CONCEPTION : OFFICE DES CHANGES

## TRADE INDICATORS N°5 : IMPORT PENETRATION RATIO

	Metadata
Name of the indicator	<b>Import penetration ratio</b>
Definition:	The import penetration ratio shows to what degree domestic demand is satisfied by imports.
Mathematical formula:	$IP = \frac{Imports}{GDP+Imports-exports} * 100$
Economic interpretation:	This indicator shows the extent to which the demand for goods or services is being met by foreign producers rather than from domestic production.
Data sources:	BOP, ITS,
Associated classifications:	EBOPS, HS, SITC

## TRADE INDICATORS N°5 : IMPORT PENETRATION RATIO

Import penetration ratio evolution of Morocco (%)



+10,8 point  
2018-2022

DATA SOURCES : TRADE MAP – CONCEPTION : OFFICE DES CHANGES

Indeed, Morocco's import penetration ration increases from 34,3% in 2018 to 45,1% in 2022,

Case of Morocco's neighboring countries



+3,5 point

(45,5% at the end of 2018 to 49% at the end of 2022)



-10,4 point

26,1% at the end of 2018 to 15,7% at the end of 2022



+3,8 point

(36,2% at the end of 2018 to 40% at the end of 2022)



+9,1 point

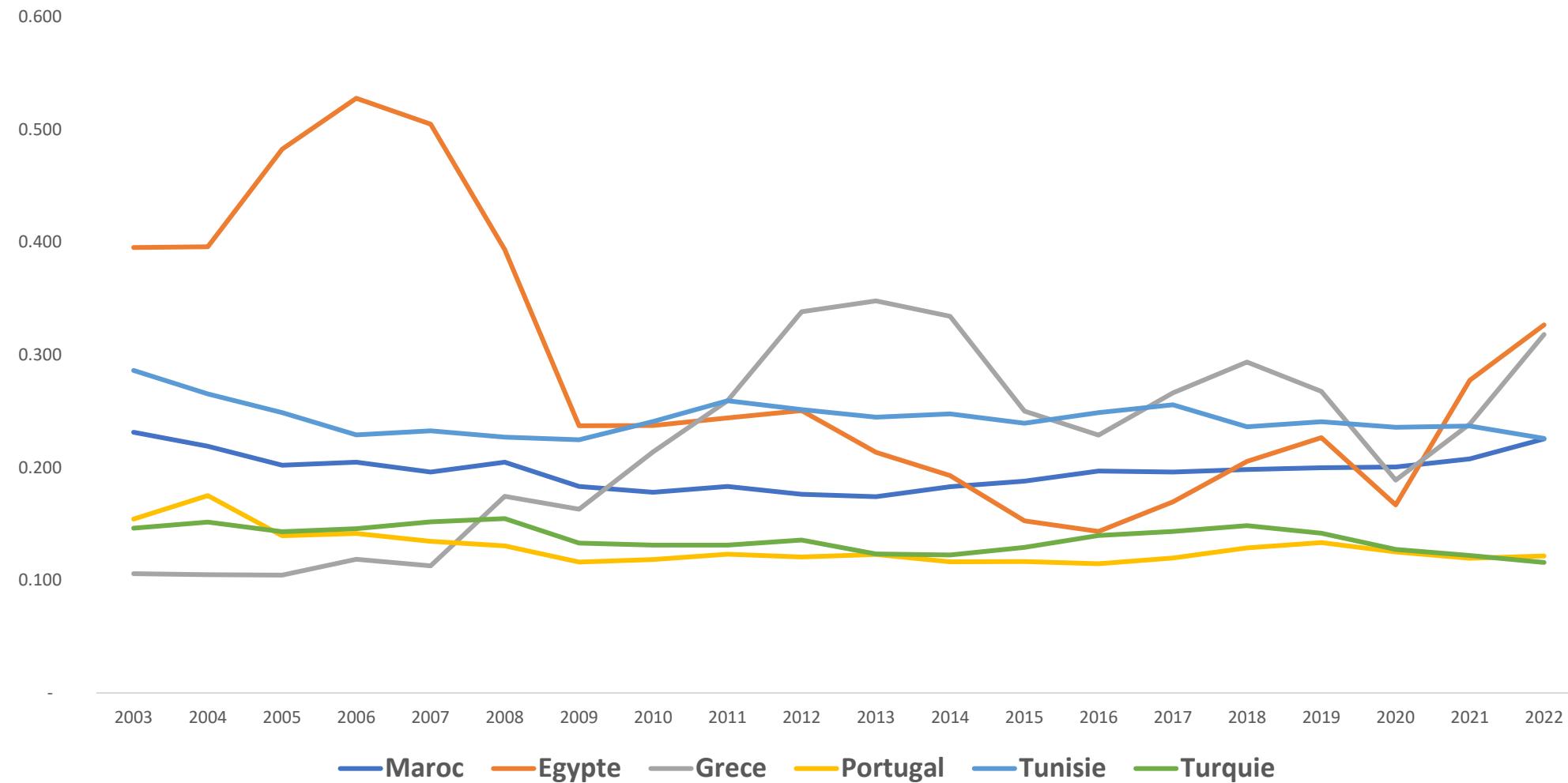
26,7% at the end of 2018 to 35,8% at the end of 2022

DATA SOURCES : TRADE MAP – CONCEPTION : OFFICE DES CHANGES

# TRADE INDICATORS N°6 : Export Product Concentration Index

Metadata	
Name of the indicator	Export Product Concentration Index
Definition:	This index measures, for each country, the degree of concentration of goods exported. It tells us if a large share of a country's exports is accounted for by a small number of commodities or, on the contrary, if its exports are well distributed among many products.
Mathematical formula:	<p>This indicator is defined as a normalized Herfindahl-Hirschmann index of the product concentration of merchandise exports at the country level. It is calculated according to the following formula:</p> $H_j = \frac{\sqrt{\sum_{i=1}^N \left(\frac{X_{i,j}}{X_j}\right)^2} - \sqrt{\frac{1}{N}}}{1 - \sqrt{\frac{1}{N}}}$ <p>Where:</p> <p><math>X_{i,j}</math> : exports of product i by country j.</p> <p><math>X_j</math> : total exports of country j.</p> <p>N: number of products exported at the three-digit level of the SITC Revision 3.</p>
Economic interpretation:	This index ranges from zero to one, with a larger value denoting a higher concentration of exports. This indicator can be used as a warning sign of low export diversification, with ensuing economic vulnerabilities. Its evolution through time can also give important signals about the changing productive structure of a country.
Data sources:	ITS
Associated classifications:	SITC, HS

## TRADE INDICATORS N°6 : Export Product Concentration Index



In the last two decades, we observe that in general the exports of Egypt was more concentrated in the early twenties and it becomes less concentrated since 2009.

## TRADE INDICATORS N° 7: Revealed Comparative Advantage

Metadata	
Name of the indicator	Revealed Comparative Advantage
<b>Definition:</b>	The RCA indicates whether a country is in the process of extending the products in which it has a trade potential, as opposed to situations in which the number of products that can be competitively exported is static. It can also provide useful information about potential trade prospects with new partners.
<b>Mathematical formula:</b>	$RCA = (X_{ij}/X_{wj})/(X_{i.}/X_{w.})$ <p>Where:</p> <p><math>X_{ij}</math> : Export value of country i in product j</p> <p><math>X_{wj}</math> : world export value of product j</p> <p><math>X_{i.}</math> : Export value of goods and services of country i</p> <p><math>X_{w.}</math> : world export value of goods and services.</p>
<b>Economic interpretation:</b>	A Country is said to have a revealed comparative advantage if the value is more than one ( $RCA>1$ )
<b>Data sources:</b>	CHELEM, ITS
<b>Associated classifications:</b>	SITC, CHELEM, SH

# Revealed Comparative Advantage

## Morocco

	2 003	2 008	2 013	2 018	2 022
Sel; soufre; terres et pierres; plâtres, chaux et ciments	17,95	39,63	24,98	15,59	14,25
Engrais	16,92	15,11	24,96	35,41	33,02
Légumes, plantes, racines et tubercules alimentaires	7,81	8,78	10,59	11,62	11,48
Sucres et sucreries	0,35	0,46	0,61	2,96	4,56
Voitures automobiles, tracteurs, cycles et autres véhicules terrestres, leurs parties et autres	0,06	0,13	1,05	1,66	2,28
Navigation aérienne ou spatiale	0,05	0,27	1,15	1,56	3,10
Plomb et ouvrages en plomb	14,97	10,23	2,28	0,27	0,00
Produits de la minoterie; malt; amidons et féculles; inuline; gluten de froment	3,95	1,73	3,52	0,27	0,14
Pâtes de bois ou d'autres matières fibreuses cellulosiques; papier ou carton à recycler (déchets)	1,70	1,07	0,16	0,03	0,08

## Greece

	2 003	2 008	2 013	2 018	2 022
Pelleteries et fourrures; pelleteries factices	32,51	30,52	14,43	12,50	10,78
Tabacs et succédanés de tabac fabriqués; produits, contenant ou non de la nicotine, destinés	12,16	9,76	6,25	6,14	6,81
Préparations de légumes, de fruits ou d'autres parties de plantes	10,62	10,84	9,94	9,25	8,53
Coiffures et parties de coiffures	0,22	0,33	0,21	0,23	2,12
Objets d'art, de collection ou d'antiquité	0,11	0,51	0,25	0,07	1,21
Ouvrages de sparterie ou de vannerie	0,11	0,07	0,03	0,05	1,12
Vêtements et accessoires du vêtement, en bonneterie	7,17	2,66	1,12	0,93	0,93
Autres articles textiles confectionnés; assortiments; friperie et chiffons	2,02	0,94	0,35	0,44	0,83
Tapis et autres revêtements de sol en matières textiles	1,98	1,57	0,45	0,43	0,42

## Egypt

	2 003	2 008	2 013	2 018	2 022
Légumes, plantes, racines et tubercules alimentaires	5,78	8,14	10,29	8,29	8,67
Engrais	4,51	5,56	11,74	15,43	8,82
Tapis et autres revêtements de sol en matières textiles	0,41	7,09	16,52	12,61	11,25
Cacao et ses préparations	0,04	0,34	1,32	1,65	1,76
Résidus et déchets des industries alimentaires; aliments préparés pour animaux	0,03	0,66	0,85	0,89	1,07
Filaments synthétiques ou artificiels; lames et formes similaires en matières textiles synthétiques	0,02	0,51	1,39	1,75	2,46
Céréales	4,67	1,21	1,09	0,04	0,04
Matières à tresser et autres produits d'origine végétale, non dénommés ni compris ailleurs	1,82	1,66	1,43	1,47	0,63
Café, thé, maté et épices	1,33	1,02	0,67	0,52	0,51

## Portugal

	2 003	2 008	2 013	2 018	2 022
Liège et ouvrages en liège	137,57	169,96	184,68	165,62	170,63
Pâtes de bois ou d'autres matières fibreuses cellulosiques; papier ou carton à recycler (déchets)	4,86	4,78	4,69	4,02	4,89
Animaux vivants	0,43	1,58	1,68	2,86	4,89
Étoffes de bonneterie	0,53	1,27	1,51	1,18	1,33
Plantes vivantes et produits de la floriculture	0,50	1,06	0,95	1,23	1,61
Plomb et ouvrages en plomb	0,31	0,57	0,62	0,92	1,05
Parapluies, ombrelles, parasols, cannes, cannes-sièges, fouets, cravaches et leurs parties	1,16	0,95	0,71	0,65	0,70

## Tunisia

	<b>2 003</b>	<b>2 008</b>	<b>2 013</b>	<b>2 018</b>	<b>2 022</b>
Vêtements et accessoires du vêtement, autres qu'en	18,16	12,56	10,84	9,57	9,32
Graisses et huiles animales, végétales ou d'origine	4,47	7,89	7,46	12,05	7,42
Autres fibres textiles végétales; fils de papier et tissus	3,20	3,85	5,32	6,08	7,14
Navigation maritime ou fluviale	0,08	0,27	0,31	0,72	1,23
Navigation aérienne ou spatiale	0,02	0,03	1,14	1,33	1,72
Instruments de musique; parties et accessoires de ces	0,01	0,13	0,67	1,39	1,21
Autres produits d'origine animale, non dénommés ni	4,11	3,10	2,22	0,83	0,29
Parapluies, ombrelles, parasols, cannes, cannes-sièges,	2,18	1,25	1,36	0,78	0,74
Poudres et explosifs; articles de pyrotechnie;	2,03	1,99	0,22	-	0,12

## Türkiye

	<b>2 003</b>	<b>2 008</b>	<b>2 013</b>	<b>2 018</b>	<b>2 022</b>
Tapis et autres revêtements de sol en matières textiles	6,44	9,53	15,96	15,80	16,12
Produits de la minoterie; malt; amidons et féculles;	3,16	5,31	6,74	7,10	6,56
Sel; soufre; terres et pierres; plâtres, chaux et ciments	5,84	5,78	6,92	6,35	5,60
Ouvrages divers	0,59	0,55	2,47	1,94	1,72
Extraits tannants ou tinctoriaux; tanins et leurs dérivés; pigments et autres matières colorantes; ...	0,50	0,81	1,11	1,07	1,55
Autres métaux communs; cermets; ouvrages en ces	0,03	0,03	0,27	0,15	1,19
Autres produits d'origine animale, non dénommés ni	1,93	0,66	0,71	0,61	0,84
Laine, poils fins ou grossiers; fils et tissus de crin	1,79	2,03	1,53	1,22	0,72
Ouvrages en cuir; articles de bourrellerie ou de sellerie;	1,78	1,10	0,69	0,45	0,49

These tables list the calculations of the revealed comparative advantage (RCA) index of exports of goods for the chosen sample.

- the top products that registered the highest RCA ( $RCA > 1$ )
- the products that had changed their profile from disadvantage to advantage
- the products that had changed their profile from advantage to disadvantage