# Methodological note on Trade Competitiveness

## What is trade competitiveness?

Trade competitiveness refers to a country's ability to export goods in international, continental and regional markets and participate in value chains. The assessment of trade competitiveness requires a benchmark, allowing comparisons between a country's performance and that of another country, region, or group. The West African Competitiveness Observatory focuses on the West African countries - the 15 <u>ECOWAS Member States</u> and Mauritania - but allows comparison to other regions in Africa and with the African continent as well.

Trade competitiveness is driven by several internal and external factors. The West African Competitiveness Observatory offers a comprehensive approach to monitor trade competitiveness by distinguishing between trade competitiveness drivers and performance.

## Trade competitiveness drivers and performance

**Trade competitiveness drivers** encompass key underlying factors that determine the trade competitiveness of a country, region or sector. The **trade competitiveness performance** reflects different aspects of a country's exports that qualify its trade as competitive.

Detailed indicators on trade competitiveness drivers and performance are first aggregated into components and second into high-level indices, allowing to summarize complex information in few key numbers.

On **trade competitiveness drivers**, the Observatory computes four indices, each regrouping related components:

- 1. *Trade policy* includes two components:
  - i. Trade facilitation
  - ii. Trade and investment policies

Improvements in trade facilitation and market access reduce trade cost, stimulate trade flows and enhance trade competitiveness.

- 2. *Infrastructure* includes three components:
  - i. Information and communication technologies (ICTs)
  - ii. Transportation and logistics services
  - iii. Other infrastructure such as electricity and irrigation systems

Well-developed soft and hard infrastructure systems enhance connectivity, improve production, reduce transportation and trade costs and enhances productive capacity and trade competitiveness.

- *3. Economic environment* includes two components:
  - *i.* Macroeconomic environment
  - ii. Access to financial services

A stable and supportive economic environment supports business activity and production, and fosters trade and investment.

4. Sustainable development includes four components:





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- *i.* Innovation
- *ii.* Natural resources management
- *iii.* Policy, governance and security
- *iv.* Human capital

Sustainable development enhances resilience and inclusivity, fosters a responsible management of natural resources and enhances long-term trade competitiveness.

On trade competitiveness performance, the Observatory presents three indices:

- 1. *Competitiveness in global markets* refers to the ability of competing in international markets.
- 2. *Competitiveness in continental markets* refers to the ability of competing in the African market
- 3. *Competitiveness in regional markets* refers to the ability of competing in the West African market

These three indices are based on the same components and indicators, computed using data on exports to the world, exports to Africa and exports to West Africa, respectively.

Each trade competitiveness performance index consists of four components:

- i. Trade
- ii. Diversification
- iii. Value addition
- iv. Stability

Together, they represent competitive trade that is not only characterized by high export values, but also resilient, economically sustainable and supportive to the local economy.

## Selection of indicators

Competitiveness indices are composed of components, which themselves comprise a set of indicators.

Indicators are selected based on existing literature and ITC methodologies and validated through expert discussion. Indicators are inserted in the model when available for at least 6 West African countries. Some trade-related indicators were developed specifically for the Competitiveness Observatory to capture its focus on trade competitiveness. Currently, the analysis incorporates 70 indicators as drivers of trade competitiveness and 42 indicators to measure trade competitiveness performances. These numbers might change as new indicators will be added in the future.

The full list of indicators, including the data sources, can be found in the <u>resources section</u>.

## *Computation of scores*

Indicators are presented in different units. To make the information comparable and allow for aggregation, the Observatory computes scores indicating how well a country is doing in a particular







area. Scores range from 0 to 100 (best)<sup>1</sup>. For each indicator, the country in Africa with the lowest value in the period monitored by the Observatory<sup>2</sup> gets a score of 0. Conversely, the country in Africa with the highest value in the period monitored by the Observatory gets a score of 100. The score for each West African country is, then, determined relative to its position between the minimum and the maximum. The sample used for this normalization includes all African countries with sufficient data coverage (less than 35% of missing values).

#### Figure 1. Scores



Scores can be used to compare a region or country to a benchmark. Figure 2 compares the regional export competitiveness of the West African region to that of the African region. In this example, the score for West Africa in exports per capita is 10 points higher than the score for Africa region, meaning that West Africa is more competitive than Africa when exporting goods to the West African market.

#### Figure 2 Example of scores for West Africa



<sup>&</sup>lt;sup>1</sup> Indicators that are negatively correlated with trade competitiveness are reversed, such that the score can be interpreted as "the higher, the better". For instance, a high value for the indicator called "inflation" means that the country has low inflation rate, which is better for trade competitiveness.

<sup>&</sup>lt;sup>2</sup> The minimum and maximum are not computed for each year, but for the entire period covered by the Observatory. This is to ensure that a country that improves in an indicator over time always receives a higher score in the later year. (If minimum and maximum were revised each year, the country could be assigned a lower score despite improving in a situation where the top-performing country progressed even more.)





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Some indicators present outliers or extreme values that might affect the sensitivity of the results. Such indicators are turned in a logarithmic scale if the following applies:

- The indicator does not follow a normal distribution and it is right-skewed
- The indicator is strictly positive
- The normality of the distribution improves when taking logs

Once individual scores are computed, indicators are aggregated using a weighted average to obtain the score for each component. These scores are, then, aggregated once more to obtain the scores for each index. Equal weights are used, as we consider that all indicators have the same importance within their respective component. Regional scores for West Africa are, then, computed by aggregating the scores of all West African countries. The same procedure is applied for computing the scores of other African regions or Africa as a whole.

For indicators where this is possible, the module also presents trade data broken down by sector and sub-sector. We consider 32 sub-sectors and 9 sectors grouping sub-sectors that belong to the same economic activity. In this case, the rescaling is done for every sector and sub-sector. This means that the score of 0 (100) is assigned to the country in Africa with the lowest (highest) value in a specific sector. The score for each West African country is, then, computed relative to its position between the minimum and the maximum for all African countries.

#### Missing observations

The trade competitiveness module includes indicators with less than 10 missing observations for the West African countries. Data may be missing if they are not provided by the original data source. For example:

- **Transport and logistic component:** The score is missing for Cabo Verde as it is not included in the World Bank's Logistic Performance Indicators.
- <u>Competitiveness in global/continental/regional markets</u>: Scores are missing when countries do not report their own trade statistics, and mirror data are insufficient for calculating export values. Specifically, this occurs when the export value computed using mirror data represents less than 90% of the average export value over the past 5 years.

We will include the information as soon as it becomes available. If you are aware of a more complete source of data, please <u>contact us</u>.





