



Methodology for calculating the Africa Regional Integration Index (ARII)



United Nations
Economic Commission for Africa

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I. Introduction

Indices are an aggregated measure that combine relevant indicators to describe the performance of an institution, region or economic sector.¹ Other terminology exists: it is also possible to speak of scores, composite (summary) indicators or aggregate indices.

According to the European Commission Joint Research Centre (JRC)² *"Composite indicators are based on sub-indicators that have no common meaningful unit of measurement..."*

In the development field, (economy, education, health, technology, etc.) there is strong demand for summary indicators and many international initiatives have been taken to respond to it. Over 300 reports are evaluated that present composite indicators currently developed by international organisations.³ For example, the United Nations ranks countries on the Technology Achievement Index and the Human Development Index, on the basis of Sen's work⁴ and the World Bank publishes an international ranking with an aggregate score of governance indicators.⁵ This demand can be generally explained by the need to have information that is simple, easy to remember or communicate and that enables comparisons to be made of the rankings of countries or regions.

In the field of regional integration, in the developing regions and in Africa in particular, there is no such standardised, internationally recognised tool to track the progress made by countries and regions towards regional integration.

It is to fill this gap that the three continental institutions of Africa (AfDB, UNECA and AUC) have developed an **Africa Regional Integration Index (ARII)**, the subject of this methodological note.

The ARII is based on five main dimensions of regional integration: (i) Trade integration; (ii) Regional infrastructure; (iii) Productive integration; (iv) Free movement of people; (v) Financial integration and macroeconomic convergence. These components are divided into 16 indicators selected on the basis of the availability of data and their sensitivity – direct or indirect – to African regional integration.

The following sections present the main objectives of the ARII and the methodology for the calculation of the ARII.

1. International Institute for Sustainable Development (2000)

2. Saisana M. and Tarantola S., *State-of-the-art Report on Current Methodologies and Practices for Composite Indicator Development*. Ispra, Italy, European Commission, 2002.

3. JRC. *An information server on composite indicators (methodologies and case studies)*, January 2009. <http://composite-indicators.jrc.ec.europa.eu/>

4. United Nations. *Human Development Report*. August 2009, www.undp.ORG

5. Kaufmann D et al. *Governance Matters VIII: Aggregate and individual Governance Indicators of 1996-2008*. The World Bank, 2009

Table 1. Africa Regional Integration Index (ARII) Components and Indicators

Composite index / (indicator by component)	Indicator	
I. Composite indicator Trade integration (4)	I.a Level of customs duties on imports	This indicator measures the weighted average of tariffs actually applied as a percentage of the total of intra-regional imports for all the products identified using the six-digit harmonised system (HS-6).
	I.b Share of intra-regional goods exports (% GDP)	This indicator measures the value of intra-regional goods exports as a percentage of the country's GDP. The indicator, expressed in relation to GDP, can be calculated per year per country.
	I.c Share of intra-regional goods imports (% GDP)	This indicator is defined as the value of intra-regional imports as a percentage of GDP. It can be calculated per year per country and is expressed in relation to GDP.
	I.d Share of total intra-regional goods trade (% total intra-REC trade)	This indicator is defined as the country's intra-regional trade as a proportion of the total intra-regional trade of the REC. It can be calculated per year per country and is expressed in relation to GDP.
II. Composite index Regional infrastructure (4)	II.a Infrastructure development index	This indicator is based on four main categories: Transport; electricity; ICT; water and sanitation. These categories are divided into 9 indicators having a direct or indirect impact on productivity or economic growth. The indicator is calculated by African Development Bank
	II.b Proportion of intra-regional flights	The number of intra-regional flights arriving or departing as a percentage of the the total international flights (departures and arrivals) of the country.
	II.c Total regional electricity trade (net) per capita (absolute value)	This indicator measures the annual volume of regional electricity imports minus the annual volume of regional electricity exports, as an absolute value.
	II.d Average cost of roaming	Average cost of mobile communications, using the main operators in the country, from the country to other countries of the REC, per minute, in dollars.
III. Composite productive integration index (3)	III.a Share of intra-regional intermediate goods exports (% total intra-regional goods exports)	Percentage of intra-regional exports of intermediate (semi-finished) goods compared to the total of intra-regional goods exports.
	III.b Share of intra-regional intermediate goods imports (% total intra-regional goods imports)	Percentage of intra-regional imports of intermediate (semi-finished) goods compared to total intra-regional goods imports.
	III.c Merchandise trade complementarity index	This indicator is calculated by UNCTAD. It measures the total in absolute value of the difference between the share of imports and the share of exports compared to other member states of a REC.
IV. Composite index of free movement of people (4)	IV.a Ratification by the country of REC protocol on free movement of people	This qualitative indicator measures whether or not the country has ratified the protocol on the free movement of people in the REC of which it is a member. Ratification: Yes = 1; No = 0
	IV.b Proportion of REC member countries whose national do not require a visa for entry:	Number of other member countries whose citizens do not require a visa, as a percentage of the total number minus one of member countries of the REC.
	IV.c Proportion of REC member countries whose nationals may obtain a visa on arrival	Number of other countries whose nationals may obtain a visa at the country's airport, as a percentage of the total number minus one of member countries.
V. Composite index of financial integration and convergence of macroeconomic policies (2)	V.a Regional convertibility of national currencies	This indicator measures the number of countries of the region with which the country shares a common currency or with which its currency is convertible.
	V.b Inflation rate differential (based on Harmonised Consumer Price Index (HCPI))	The inflation rate differential is the difference between the inflation rate of the country and the annual regional average, on the basis of the harmonised consumer price index.

2. Why do we need an Africa Regional Integration Index?

The ARII is both a snapshot and a means of action and proaction. As such, it is characterised by a dual dimension: an analytical dimension that tries to establish as accurately as possible the state of regional integration at country and REC (regional economic community) levels, and an operational dimension to enable stakeholders to act or react to promote regional integration for development in Africa. This index is designed to provide policymakers at all levels (national, regional and international), enterprises and other stakeholders working towards regional integration in Africa with reliable and independent information that enables them to:

- Assess the degree of regional integration of each country and REC
- Identify the strengths and weaknesses of the integration process through and analysis of dimensional profiles
- Track trends over time

The ARII is intended to become a complete, pragmatic, practical and motivating⁶ index of economic and commercial regional integration in Africa.

Complete: The selection and aggregation of indicators composing the dimensions make it possible to achieve an index that gives a vision that is both over-arching and dimensional of economic and Trade integration in Africa. Nevertheless, the ARII is intended to be a developing indicator, receiving successive improvements as applicable in later publications of the annual report.

Pragmatic: The ARII should enable an intra- and inter- REC comparative analysis that takes account of the heterogeneity (in terms of priorities and pace of programme agendas) of integration processes in Africa. The dimensional approach will enable a REC with a lower overall ARII ranking to highlight its strengths (and its weaknesses as well) in the profile analysis of regional integration dimensional indices.

Practical: The ARII and its components will be presented on a dashboard, in the form of tables and profile graphs. A first table will present the ranking (scores and ranks) for a country-by-country analysis while a second table will present a regional analysis by REC. These tables will be complemented by profile graphs: one to present an overall appreciation of the position of countries and RECs in the regional integration process, and a second graph showing the dimensional profile for spatial and temporal comparisons. Their annual update will enable changes over the years (progress or regression) to be more closely tracked.

Motivating: ARII is intended to be a decision-making tool. It is designed to encourage stakeholders in economic and Trade integration in Africa to reflect and ask themselves questions in order to act and react.

The development of an Africa Regional Integration Index is both a scientific problem (exploration of possible solutions) and a political problem (potential use of this indicator for the establishment or revision of integration strategies and for building the capacities of regions).

3. Methodology for development of the Africa Regional Integration Index (ARII) and method of classification of countries

Construction of a composite index is not carried out using a single methodology, but depends on the data available and the objective pursued by the proponent. Therefore, no model is necessarily better than another.⁷ This, no doubt, explains why the use of composite indicators has always been a source of controversy.⁸ The following seven steps were used to calculate the ARII.

- Selection of dimensions and indicators
- Procedures for normalisation of indicators
- Calculation of dimensional indices and the ARII
- Calculation of composite indices for RECs
- ARII stress test
- ARII classification modes
- Country classification representation modes

STEP 1: Selection of dimensions and indicators

The indicators used for the calculation of the ARII are drawn from the architecture of the system of indicators jointly developed by AfDB, AU and UNECA (see method diagram). The architecture comprises seven dimensions identified in comparison with the aims and objectives of the reference frameworks for regional integration in Africa: The Abuja Treaty (1994) and its operational framework (AU MIP) and the AfDB strategic framework for regional integration with the NEPAD programme. These dimensions are divided into sub-dimensions and 76 indicators mainly selected with reference to their regional relevance and to SMART criteria (see methodological guide note to indicators). Given the limited availability of source data, calculation of the ARII is based on five of the seven dimensions of the System (free movement of persons; regional integration; productive integration; financial integration and macroeconomic convergence; and regional infrastructure) for which a total of 16 indicators are collected (Table 1). However, for reasons related to the correlation of variables, the calculation of the "share of total intra-regional goods trade" indicator is not taken into account.

6. These are four criteria proposed by the Forum for a new World Governance (FnWG) for a composite operational index.

7. "No index can be better than the data it uses. But this is an argument for improving the data, not abandoning the index" (UN, 1992).

8. Nardo M. et al. *Handbook on constructing composite indicators: Methodology and user guide*, Italy, Organisation for Economic Co-operation and Development, European Commission (JRC), 2008.

Data for calculation of the index are collected from countries but are complemented by public sources, in light of the insufficient rate of collection by national and regional focal points dedicated to this task. The index, in this pilot stage, covers all the member countries of the eight RECs recognised by the AU. Even so, data collection by national and regional focal points only involved three of the eight RECs, for which the integration process is considered relatively more advanced: COMESA, UNECA and SADC. For the other RECs, collection was limited to data from public sources.

For the calculation of the ARII, the following changes were made to the indicator architecture:

- **The indicator architecture is reduced to a dimensional level.** Given the lack of data, the sub-dimensions initially selected for calculation of the index proved no longer relevant. It was a case of sub-dimensions without indicators or with just one indicator;
- **The regional infrastructure dimension has been adjusted:** The Africa Infrastructure Development Index (AIDI), developed by AfDB, was used instead of the three indicators originally selected (proportion of length; electricity production capacity and international Internet bandwidth). This index has a broader coverage, taking account of the areas of transport, electricity, communications and water and sanitation. These areas are divided into 9 indicators having a direct or indirect impact on productivity or economic growth.

STEP 2: Normalisation of base indicators

As the base indicators are expressed in different units, they are normalised in order to put them all on the same scale before they are able to be meaningfully combined to arrive at the composite index. The approach used is similar to that used by UNDP in the establishment of its Human Development Index. That is, the final result is expressed on a scale of 0 (the worst possible result) to 1 (the best possible result). The normalisation process used is Min-Max. This method is the simplest and consists of performing a linear transformation of the data while preserving the relationships between the original values. Furthermore, it allows comparisons between African countries, in line with the request of the seventh AU-ECA Conference of Ministers.

Use of the Min-Max approach for calculation of the ARII has, however, been adapted in line with the direction of change of each indicator (see annexes I and II for the detail of the methods of calculation).

On the other hand, the proper use of this method has required that a number of precautions be taken:

- **Missing values or outliers.** Due to an absence of data, certain indicators (e.g. in the infrastructure and financial integration dimensions) do not exist for some countries. In this case, neither the corresponding dimensional indices nor the overall index are calculated for these countries.
- **Relative ranking by the Min-Max method.** From a methodological point of view, this is a matter of the construction of a relative ranking, that is, one country's rank also depends on the performance of the other countries in the group. Even if a country's performance is poor, it could be that the performance of other countries has worsened much more, so that the relative position of the country improves in the end. Rank says nothing about the country's absolute performance. Countries' ranks should, therefore, be interpreted by taking them together with information provided by the dashboard, that is, the base indicators.

STEP 3: Calculation of composite indices by dimensions (dimensional indices) and the ARII index

A dimension's composite index is calculated as a simple average of the dimension's normalised indicators. This implicitly entails that equal weightings be given to indicators. The overall composite index is calculated using the normalised composite indices of the five dimensions and applying a simple arithmetic mean of these indices (see annex II).

In every case, the equal weighting advised here does not mean "no weighting" but implicitly entails that the weightings applied be equal. Dimensions using highly correlated indicators imply a double weighting in the composite ARII. The correlations of indicators have, therefore, been tested for each dimension (using the Pearson correlation coefficient) and choosing only indicators with low levels of correlation. The correlations obtained are relatively satisfactory except for the Trade integration dimension where there are strong correlations with the "share of total intra-regional goods trade as a % of total REC intra-trade". This was dealt with by removing this indicator from the calculation of the trade dimensional index.

STEP 4: Calculation of composite indices per REC

The composite index per REC is calculated in this pilot phase as a simple mean of the composite dimensional indices of member countries of the REC. Looking ahead, however, and to take account of the size effect of RECs, it would be possible to consider a weighted average of the dimensional indices for which the weighting variables could be selected as below: The size of the population for the “free movement of people” and “regional infrastructure” dimensions and the GDP used for the other three dimensions: “Trade integration”, “Productive integration” and “Financial integration and macroeconomic convergence”.

STEP 5: Mode of classification of countries at regional level

Once the dimensional and overall composite indices have been calculated, the results are presented as tables or graphs showing countries’ classifications in their RECs.

Classification of countries by rank

For each REC, countries are classified according to their respective ranks, based on their overall scores. But, to limit any bias of classification by rank that could be linked to fluctuations around the result for an indicator due to sampling (the lists of countries in our case)⁹ the analysis has been complemented by ranking countries by category or class of membership.

Classification of countries by class

Countries are compared by their class in their REC. Countries are placed in three classes on the basis of a 95% confidence interval:

-  If a country’s score is higher than the average for countries plus the confidence interval of 95%, then the country is rated as “green” and is in the “+” class (favourable position, deep integration with respect to other members of the REC).
-  If a country’s score is below the average of the countries minus the 95% confidence interval, then the country is rated as “red” and is in the “-” class (unfavourable position, less integrated).
-  Otherwise, the country is moderately well integrated and is in class “=”.

This classification by class is an essentially visual tool to quickly see where the country (or REC) is positioned compared to the average in its regional economic community.

Classification over time is also feasible

For this first edition of the report, the lack of data for all countries and for all indicators in the series has not permitted trend analysis. Future editions will take this edition as a baseline to appreciate the performance of countries and RECs over time, that is, by comparing the most recent data with the values in this first edition. In this way, arrows will be used to show, for each index, the direction of the most recent change (improvement, stagnation or deterioration).

Classification of the best performing countries

In each REC, an analysis of the best performing countries is conducted on the basis of overall and dimensional scores. The average of the results of the best performing countries in the regional economic community is calculated as follows:

- In the case of a regional economic community of more than six members, the average of the results of the four best performing countries is taken as the reference: Top 4 average will be used for ECOWAS, ECCAS, CEN-SAD, COMESA, IGAD and SADC.
- In the case of regional economic communities with fewer than six members, the average of the results of the two best performing countries will be taken. Top 2 average will be used for EAC and UMA.

Classification of countries according to the “depth” and “breadth” of economic integration in the REC

- The economic integration of a country is said to be “deep” if the country’s overall score within its REC is higher than the average (with the 95% confidence interval), that is, the score is classed as green.
- The economic integration of a country is said to be “broad” if the country is high-performing in at least three dimensions (dimensional score classed as green).
- Economic integration is “deep and broad” if both the above conditions are met.

Classification of countries by economic weight

Countries are assessed with regard to their economic weight within their regional economic community. Economic weight is measured by the GDP (Gross Domestic Product) of the country compared to the region’s GDP, averaged over 1970-2014. It is compared to the overall score of the country.

9. This observation remains true for composite indices and is even strengthened, since the literature shows that even when one has exhaustive data there is uncertainty around the composite score and resulting rank.

STEP 6: Mode of representation of countries' classification at regional level

Classification on the basis of the ARII gives an overview of the position of a country or REC in the integration process and does not enable **identification of the strengths and weaknesses** of a country or REC in this process. This assessment should, therefore, be complemented by a dimensional profile analysis. This is illustrated by graphical representations in the form of a polygon. Each vertex of this polygon represents one of the five dimensional indices (hexagon-shaped diagram). This approach takes account of the heterogeneity (in terms of priorities and pace) of the RECs in their regional integration process.

4. Calculation of normalized indicators and composite indices

Methods of calculation of the normalization of indicators

■ Trade integration dimension

Index: Level of customs duties on imports

The data used are from the UNCTAD online database. The rate of customs duty is the rate applied to the most-favoured nation (MFN) based on the harmonised system 6-digit code. The index is calculated from simple averages on the basis of imports from the REC. The higher the result for a country, the less the duty is liberalised. Therefore, deduct the result of the division from the value 1.

$$Index = 1 - \left(\frac{Country\ Result - MinResult}{MaxResult - MinResult} \right)$$

Index: Share of intra-regional goods exports

A country's share of intra-regional goods exports is the value of intra-regional goods exports expressed as a percentage of the country's Gross Domestic Product. The data used are drawn from the UNCTAD international trade database (Online database, <http://unctadstat.unctad.org/>). The index is calculated using the following formula:

$$Index = \left(\frac{Country\ Result - MinResult}{MaxResult - MinResult} \right)$$

Index: Share of intra-regional goods imports

A country's share of intra-regional goods imports is the value of intra-regional goods imports expressed as a percentage of the country's Gross Domestic Product. The data used are drawn from the UNCTAD international trade database (Online database, <http://unctadstat.unctad.org/>). The index is calculated using the following formula:

$$Index = \left(\frac{Country\ Result - MinResult}{MaxResult - MinResult} \right)$$

A country's "intra-regional goods trade" index is calculated by averaging the three indices in this category.

■ Regional infrastructure dimension

Index: Infrastructure development index

The data used are those of the African Development Bank. The first edition of the index was published in April 2011. The index is calculated using data on transport, electricity production, ICT and water and sanitation. The series of observations are based on the collection of data within the framework of the Africa Infrastructure Knowledge Program (AIKP). The result is presented as a scale from 0 (bad) to 100 (best). The index is calculated as follows:

$$Index = \left(\frac{Country\ Result - MinResult}{MaxResult - MinResult} \right)$$

Index: Proportion of intra-regional flights leaving from and arriving in the country

The data used are from the African Airlines Association, which publishes departing and arriving air connections for every country in Africa. The proportion of intra-regional flights and the number of departing and arriving intra-regional flights as a percentage of the total departing and arriving international flights in the country. The higher the country result, the stronger the regional integration of the country's air network. The index is calculated as follows:

$$Index = \left(\frac{Country\ Result - MinResult}{MaxResult - MinResult} \right)$$

Index: Total net regional electricity trade per capita (absolute value)

The electricity trade data are from the US Energy Information Administration (EIA) database. The variable used is the absolute value of the difference between the per capita annual import volume and export volume of electricity. The highest country result takes the value 1 (best energy integration) and the lowest takes the value 0 (low integration). The index is calculated as follows:

$$Index = \left(\frac{Country\ Result - MinResult}{MaxResult - MinResult} \right)$$

Index: Average cost of roaming

The data used are from UNECA. This is the average cost of mobile communications, using the main operators in the country, from the country to other countries of the REC, per minute, in dollars. The index is calculated as below:

$$Index = \left(\frac{Country\ Result - Minimum\ Result}{Maximum\ Result - Minimum\ Result} \right)$$

■ Productive Integration Dimension (Regional Value Chain)

Index: Share of intra-regional exports of intermediate goods

Data on the percentage of intermediate exports are from the Comtrade database (and from countries), which does not take capital goods into account, unlike the UNCTAD database. The index is calculated using the following formula:

$$Index = \left(\frac{Country\ Result - MinResult}{MaxResult - MinResult} \right)$$

Index: Share of intra-regional imports of intermediate goods

Data on the percentage of intermediate imports are from the Comtrade database (and from countries), which does not take capital goods into account, unlike the UNCTAD database. The index is calculated using the following formula:

$$Index = \left(\frac{Country\ Result - MinResult}{MaxResult - MinResult} \right)$$

Index: Merchandise trade complementarity index

The data used are calculated from the UNCTADstat database. The value of the index is from 0 to 1. A value of 0 indicates low complementarity and a value of 1 reflects a perfect match between a country's import structure and its partner countries' export structures. As country results are based on a scale of 0 to 1, no normalisation is necessary.

■ Free movement of persons dimension

Index: Ratification of the Protocol by the country

This qualitative indicator measures whether or not the country has ratified the protocol on the free movement of people in the REC of which it is a member. Ratification: Yes = 1; No = 0. As country scores are measured on the scale of 0 or 1, no normalisation is necessary.

Sub-index: Proportion of countries in region whose citizens can obtain a visa upon arrival to enter the country in question

Obtaining a visa on arrival is a less restrictive means of facilitating acquisition of an entry visa. Considering all the member countries of the REC, calculation of the index is performed in such a way that the country with the largest number of results (number of member countries with visa upon arrival as a percentage of the number of members of the REC) is given a score of 1 and a country with a result of 0 is given a score of 0. The calculation is as follows:

$$Index = \left(\frac{Country\ Result - Minimum\ Result}{Maximum\ Result - Minimum\ Result} \right)$$

Sub-index: Proportion of countries of the region whose nationals must obtain a visa upon departure to go to the country in question

Since it is a case of considering all the countries of the REC, calculation of the index was done so that the country that totalled the greatest percentage of countries was scored as 0 and the country with a zero percentage was given best score of 1. In this specific case, the calculation used differs from the method shown above. This was to take account of the fact that the maximum result reflected a poor performance while in previous cases the maximum result illustrated a good performance. It is, therefore, necessary to deduct the result of the division from the value 1.

$$Index = 1 - \left(\frac{Country\ Result - MinResult}{MaxResult - MinResult} \right)$$

Sub-index: Proportion of countries of the region whose nationals can go to the country without a visa

This category measures the least restrictive policy on visas. As all the countries of the REC are considered, the country with the best result is that in which citizens of other member countries can enter it without an entry visa. Calculation of the index is carried out in the same way as for IndexVA with a maximum reference value (MaxRef), total number of RMC and a minimum value (MinRef) of 0.

$$IndexSV = \left(\frac{Country\ Result - MinRef}{MaxRef - MinRef} \right)$$

The “Free movement of people” dimension index is calculated by the weighted sum of the four sub-indices. The weightings are established depending on the degree of openness of the measure:

Category	Weighting
Visa on departure	0
Visa on arrival	0.20
No visa	0.70
Protocol ratified	0.10

■ Financial integration and macroeconomic convergence dimension

Index: Regional convertibility of national currencies

The data used are taken from Investing.com (<http://fr.investing.com/currencies>), which publishes the exchange rates for African currencies. The indicator measures the number of countries in the region with which the country shares a common currency or with which its currency is convertible. The index is calculated with a maximum of 4 (South Africa) and a minimum of 0 (countries such as Burundi, Mauritius, etc.)

$$Index = \left(\frac{Country\ Result - Minimum\ Result}{Maximum\ Result - Minimum\ Result} \right)$$

Index: Regional inflation differential (HICP database)

The data used are from the AfDB statistical database on the harmonised consumer price index. The inflation differential is the difference between the country's rate of inflation and the regional average. The higher the result, the less the economy of the country contributes to the macroeconomic stability of the region. The index is, therefore, calculated by subtracting 1 from the formula.

$$Index = 1 - \left(\frac{Country\ Result - MinResult}{MaxResult - MinResult} \right)$$

STEPS IN THE CALCULATION OF THE ARII

Step 1: Construct a composite Africa Regional Integration Index

To calculate the composite index, the base indicators are standardised first. Each indicator i is transformed by the following formula by country j to time t .

$$Y_{ij}^t = \frac{X_{ij}^t - \min_i}{\max_i - \min_i}$$

The general principle is, thus, to evaluate each indicator relative to a range of historically observed or normatively fixed variations, or failing that, the highest and lowest historically observed over the period.

Step 2: Construct a dimensional composite ARII

The dimensional composite index C for a category (or dimension) k ($k=1, \dots, 5$) at moment t is calculated by an arithmetic mean of the sub-indices of this category in the new scale:

$$C_{kj}^t = \frac{1}{m} \sum_{i=1}^{m_k} y_{ij}^t$$

Step 3: Construct a final composite ARII

The regional integration index, ARII, is obtained by an arithmetic mean of these dimensional composite indices, meaning that the 5 dimensions are equally weighted.

$$IIRA_j^t = \frac{1}{5} \sum_{k=1}^5 C_{kj}^t$$

DEFINITIONS OF DIMENSIONS

Trade integration

Regional trade is one of the essential aspects of regional integration in Africa. The realities observed concern two sub-dimensions that are determiners of Trade integration: **tariff liberalisation** and intra-regional **trade** in goods.

Regional infrastructure

Infrastructure plays a key role in economic growth and poverty reduction, while being crucially important to regional integration. In Africa, it occupies a central place in the regional integration strategy of the Bank, of the NEPAD secretariat and of the AU. The realities observed concern the three sub-dimension included in the Programme for Infrastructure Development in Africa (PIDA): transport, communications and energy.

Productive integration

Economic integration is not limited to the mercantile; its development is also determined by the complementarity of the productive structures of member countries, in terms of production capacity. It is one of the concerns of RMCs (regional member countries) and RECs (regional economic communities), particularly in **regional value chains** in the agriculture and industrial sectors.

Free movement of people

The movement of people is now among the main topics addressed in dialogues on African regional integration policies. The facilitation of travel and the free movement of people across the continent are one of the essential components of integration in Africa. In spite of progress in the development of frameworks, laws, initiatives and mechanisms for the movement of people, there is still discrimination based on nationality and a number of other restrictions that seriously impede the movement of Africans around the continent. The realities observed cover two sub-dimensions: **Ratification of regional protocols** and **application of visas** between countries of the same REC.

Financial integration and macroeconomic convergence

There is a general consensus that regional financial integration could reduce transaction costs and increase the efficiency of financial institutions. But there is a serious lack of regional data in this field in Africa. To appreciate this aspect of regional integration, the realities observed concern the regional convertibility of national currencies (to address **monetary infrastructure**) and the inflation differential (to address the **convergence of macro-economic policies**).

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