

Statistical annex

The *African Economic Outlook* includes a set of statistical tables of indicators related to economic and social development in Africa. The African Development Bank compiled Tables 1-19 and 21 and the OECD Development Centre Tables 20 and 22-26 for the purposes of informing the analyses contained within this volume. What follows is a complete list of indicators contained in each table, as well as some definitions of concepts and explanations of methodologies used to create these data. The aggregate figures for Africa, when reported, do not include countries whose data are unavailable. Figures are reported on a calendar-year basis, except in Table 4 (see below) and except for the macroeconomic indicators for Egypt and Eritrea in Tables 1-6 that are reported for years starting in July and ending in June.

The tables are published online on the *African Economic Outlook* website (www.africaneconomicoutlook.org/en/statistics) and can also be downloaded in Excel® format using the following links.

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Table 1 - Basic indicators

Population (thousands)

Land area (thousands of km²)

Population density (pop. / km²)

GDP based on PPP valuation (USD million): The purchasing power parity (PPP) valuation refers to the adjustment of GDP estimates to eliminate the effect of differences in consumer price levels between countries on the differences in GDP estimates. This creates a theoretical value of GDP in US dollars in each country in the case where a US dollar has the same purchasing power in every country.

GDP per capita (PPP valuation, USD)

Annual real GDP growth (average over several years): Average growth in GDP adjusted for inflation.

Table 2 - Real GDP growth rate

Real GDP growth rate

Table 3 - Demand composition and growth rate

Final consumption (% of GDP) (private vs public)

Gross capital formation (% of GDP) (private vs public)

External sector (exports and imports, total and real percentage growth)

Table 4 - Public finances*Total revenue and grants**Total expenditure and net lending**Overall balance*

Where indicated, the figures are reported on a fiscal-year basis. The fiscal year for Egypt, Eritrea, Ethiopia, Kenya, Liberia, Malawi, Rwanda, South Sudan, Tanzania and Uganda begins in July of the previous year and ends in June. For Botswana, Lesotho, Namibia, South Africa and Swaziland, the fiscal year begins in April and ends the following March. In 2015, Mauritius went from reporting its finances on a calendar-year basis to a July-June fiscal year.

Table 5 - Monetary indicators*Inflation (%)**Exchange rate (LCU / USD)**Broad money (LCU billion) (level, % of GDP, growth)**Reserves, excluding gold (USD million) (stock at year-end, equivalent months of imports)***Table 6 - Balance of payments indicators***Trade balance (USD million)**Current account balance (USD million, as a % of GDP)***Table 7 - Exports***Three main exports by country, along with their market shares**Number of products accounting for more than 75% of exports*

The table is based on a complete disaggregation of total exports by country in the UN Comtrade dataset at the six-digit level of the commodity codes for the 2002 *Harmonised System*.

Table 8 - Diversification and competitiveness

Diversification indicator: measures the extent to which exports are diversified. It is constructed as the inverse of the *Herfindahl-Hirschman Index* (HHI) of exports reported on the UN Comtrade dataset at a four-digit level of disaggregation on the 2002 *Harmonised System* commodity code. The HHI is calculated as a sum of the squares of total exports for each product as a percentage of all exports (expressed as fractions). By construction, the diversification indicator is therefore always positive and non-zero and attains its minimum when there is only one export product. A higher index indicates more export diversification.

Annual export growth over previous five years

Competitiveness indicator: has two aspects: the sectoral effect and the global competitiveness effect:

1. **The sectoral effect:** the growth rate of a country's exports attributed to sectoral market dynamics. This is the average of the differences between the growth rates of each export sector – measured at the global level – and the overall growth of world trade, weighted by each sector's share of the country's total exports.



2. *The competitiveness effect*: total country export growth rate minus global export growth rate and minus the sectoral effect. This measures the contribution of changes in sectoral market shares to a country's export growth.

Table 9 – International prices of exports, by year

The following global commodity prices are reported in this table:

Aluminium; Bananas (US); Coal (Australia); Cocoa; Coffee (Arabica); Coffee (Robusta); Copper; Cotton; Fish meal; Gold; Groundnut oil; Iron ore; Lead; Logs (Cameroon); Maize; Oil (crude); Palm oil; Phosphate (rock); Rubber (US); Sugar (EU); Sugar (World); Sugar (US); Tea (Average of 3 auctions); Tea (Mombasa) and Tobacco (US import).

Table 10 - Foreign direct investment

Foreign direct investment (FDI) inflows, outflows and as % of gross fixed capital formation (GFCF)

Inward Potential Index: produced by UNCTAD, based on 12 economic and structural variables measured by their respective scores on a range of 0-1 (raw data are available at www.unctad.org/wir). It is the unweighted average of the following scores: GDP per capita, the rate of growth of GDP, the share of exports in GDP, telecom infrastructure (the average number of telephone lines per 1 000 inhabitants and number of mobile phones per 1 000 inhabitants), commercial energy use per capita, share of R&D expenditures in gross national income, share of tertiary students in the population, country risk, exports of natural resources as a percentage of the world total, imports of parts and components of electronics and automobiles as a percentage of the world total, and inward FDI stock as a percentage of the world total.

Table 11 - Aid flows

Official development assistance (ODA) net total (all donors, from DAC countries and multilateral)

The members of the Development Assistance Committee (DAC) of the OECD are Australia, Austria, Belgium, Canada, Czech Republic, Denmark, European Union, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Korea, Luxembourg, The Netherlands, New Zealand, Norway, Poland, Portugal, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, the United Kingdom and the United States.

Table 12 - External debt indicators

Total external debt outstanding, at year end (million USD)

Total external debt outstanding, at year end, as % of total (multilateral, bilateral, private)

Total external debt outstanding (as % of GDP)

Debt service (as % of exports of goods and services)

Table 13 - Demographic indicators

Total population (thousands)

Urban population (% of total)

Sex ratio (males per 100 females)

Population growth rate (%)

Infant mortality rate (per 1 000): the number of child deaths under the age of one for every thousand live births per year.

Total fertility rate (per woman): the projected average number of children per woman.

Mortality under 5 (per 1 000): the probability that a new-born infant will die before the age of five.

Distribution by age (% aged 0-14, 15-64, 65+)

Table 14 - Poverty and income distribution indicators

Population below the poverty line (%) (rural, urban and national): the percentage of the population below the poverty line corresponding to the value of consumption necessary to satisfy minimum subsistence needs. It is set at two-thirds of average consumption.

Population below the International Poverty Line: the number of people below the absolute poverty line, corresponding to a level of income or consumption of USD 1.90 or USD 3.10 per day.

Gini coefficient: an index measuring the intensity of inequality in income or consumption expenditure distribution. Perfect equality leads to a Gini index of zero and maximum inequality to a Gini index of 100.

Share of consumption (%): the share of total consumption by the lowest and the highest deciles of the population, defined by level of consumption.

Table 15 - Access to services

Main telephone lines per 100 inhabitants

Mobile lines per 100 inhabitants

Internet users per 100 inhabitants

Electricity consumption (KWh - millions)

Water supply coverage (%) (total, urban, rural): the percentage of the population with access to improved water supply (household connection, public standpipe, borehole, protected dug well and protected spring or rainwater collection).

Sanitation coverage (%) (total, urban, rural): the percentage of the population with access to improved sanitation technologies (connection to a public sewer, connection to a septic system, pour-flush latrine, simple pit latrine or ventilated improved pit latrine).

Table 16 - Basic health indicators

Life expectancy at birth (years): the average number of years a new-born infant would live under the hypothesis that, during his or her life, the conditions of mortality remain the same as observed at birth.

Life expectancy at birth (years) - with AIDS: the estimated average number of years a new-born infant would live under the hypothesis that, during his or her life, the conditions of mortality remain the same as observed at birth, and that in particular, the current effect of AIDS on mortality are taken into account.

Life expectancy at birth (years) - no-AIDS scenario: is the estimated number of years a new-born infant would live under the hypothesis that he/she does not contract AIDS during his/her life.



Prevalence of undernourished in total population (%): the proportion of the population that is suffering insufficient food intake to meet dietary energy requirements continuously.

Food availability (Kcal/person/day): the available nutritious food for human consumption expressed in kilo-calories per person per day (note that the recommended daily caloric intake for an active healthy life is 2 100 calories).

Total health expenditure (as % of GDP, USD per capita)

Total health expenditure - Public (%): calculated by defining public health expenditure as current and capital outlays of government, compulsory social security schemes, extra-budgetary funds dedicated to health services delivery or financing, and grants and loans provided by international agencies, other national authorities and commercial banks.

Total health expenditure - Private (%): calculated by defining private expenditure as private insurance schemes and prepaid medical care plans, services delivered or financed by enterprises, outlays by non-governmental organisations and non-profit institutions serving mainly households, out-of-pocket payments, and other privately funded schemes not elsewhere classified, including investment outlays.

Table 17 - Major diseases

Health personnel (per 100 000) (physicians, nurses and midwives)

Healthy life expectancy at birth (years) (total, male, female): the average equivalent number of years in full health a newborn infant would live under the hypothesis that, during his/her life, the conditions of mortality and ill-health remain the same as observed at his/her birth.

People living with HIV/AIDS: the estimated number of people living with HIV/AIDS whether or not they have developed symptoms of AIDS.

Adult prevalence of AIDS (% of population): HIV/AIDS adult prevalence is the estimate of the adult population (aged 15-49) living with HIV/AIDS.

AIDS deaths in adults and children (thousands)

Malaria (number of reported cases): cases of malaria reported from the different local case detection and reporting systems. These figures should be considered with caution because of the diversity of sources and probable underestimation.

Tuberculosis (number of new and relapse cases)

Measles (number of reported cases): the number of new cases of measles reported during the reference year.

Vaccination (%) MCV: percentage of population given the malaria (MCV) vaccination.

Vaccination (%) DTP3: percentage of population given a third dose of the diphtheria, tetanus toxoids and pertussis vaccine.

Table 18 - Basic education indicators

Estimated adult literacy rate, people over 15 (total, male, female)

Estimated youth literacy rate, people between 15 and 24 (total, male, female)

Public expenditure on education (as % of GDP)

Table 19 - School enrolment

Gross enrolment ratio (total, male, female) (primary, secondary school): the population enrolled in a specific level of education, regardless of age, expressed as a percentage of the official school-aged population count.

Primary school, net enrolment ratio (total, male, female) (primary, secondary school): the official school-age population enrolled in a specific level of education expressed as a percentage of the total population enrolled in that level.

Enrolment ratio in technical and vocational programmes (total secondary, lower secondary, upper secondary)

Table 20 - Employment and remittances

Unemployment rate (total, male, female): the proportion of the labour force that does not have a job and is actively looking for work.

Participation rate (aged >15, age 15-24): the measure of the proportion of a country's working-age population that engages actively in the labour market, either by working or looking for work. It provides an indication of the relative size of the supply of labour available to engage in the production of goods and services.

Inactivity rate (aged 15-64) (total, male, female): percentage of the population that is neither working nor seeking work (that is, not in the labour force).

Worker remittances, received (USD million)

Participation rates, unemployment rates and inactivity rates published in this table are projected figures produced by the International Labour Organization (ILO) based on their models of the labour forces. A description of the ILO projection and estimation models can be found at the following link: www.ilo.org/ilostat/content/conn/ILOSTATContentServer/path/Contribution%20Folders/statistics/web_pages/static_pages/EAPEP/EAPEP%20Methodological%20paper%202013.pdf.

Table 21 - Corruption Perception Index

The Corruption Perceptions Index (CPI): a composite indicator based on surveys of business people and assessments of country analysts. A background paper presenting the methodology and validity of the CPI is available on the Transparency International website: www.transparency.org/news/feature/corruption_perceptions_index_2016.

Table 22 - Public protest

Index of public protest: See note on AEO political indicators, below.

Table 23 - Civil violence by non-state actors

Index of violence by non-state actors: See note on AEO political indicators, below.

Table 24 - Political hardening

Index of political hardening: See note on AEO political indicators, below.

Table 25 - Demographic projections

The demographic trends are projected using the medium variant method.

Activity ratio: the ratio between working-age population (15-64 years old) and dependent-age population (less than 15 or at least 65 years old). It is the inverse of the dependency ratio.



Yearly cohort of new labour entrants: the size of the population entering working age (15 years old) each year. It is estimated by taking the population aged 15-24 and dividing by ten.

Total entrance inflow: the number of new entrants into the working-age population. This refers to the population that was less than 15 years old at the beginning of the period and between 15 and 64 at the end of the period.

Active population: the number of people that furnish the supply of labour for the production of goods and services during a given period.

Table 26 - Gender indicators

Africa Gender Equality Index (AfDB GEI) (also includes the following sub-components):

Economic opportunities

Human development

Laws and institutions

Social Institutions and Gender Index (SIGI) (also includes the following sub-components):

Discriminatory family code

Restricted physical integrity

Son bias

Restricted resources and assets

Restricted civil liberties

Gender Inequality Index (GII)

Gender Development Index (GDI)

Please see the note on the gender indicators below for a more detailed explanation of these indicators.

Methodological note: The AEO political indicators (included in Statistical Annex Tables 22-24)

There are three composite political indicators presented in Tables 22 to 24 and discussed in Chapter 5 of this report that reflect three aspects of civil unrest: public protests, civil violence by non-state actors and political hardening. These indicators have been calculated based on a detailed monitoring of newswires from a large network of on-field journalists and correspondents working for reputable press agencies across Africa, mainly Agence France Press (AFP) and Reuters. It takes into account the daily events and decisions that make up the reality of political life and government attitudes in African countries.

The methodology used in this report to calculate the indicators of civil unrest was first proposed by Dessus, Lafay and Morrisson (1998).¹ It involves compiling an exhaustive collection of articles covering all relevant political events in Africa, and then reading the articles in order to count events broken down by day and by country and classified by intensity codes and place, according to a detailed classification system (see details below). This is then used to populate a dataset that contains two sets of intensity codes

1. Dessus, S., J.D. Lafay and C. Morrisson (1998), "A politico-economic model for stabilisation in Africa", *Journal of African Economies*, Vol. 7, Issue 1, pp. 91-119, DOI: doi.org/10.1093/oxfordjournals.jae.a020946.

per variable, per week: 4-value variables (with a scale of 0 to 3: 0= non-occurrence, 1= occurrence but weak intensity, 2= medium intensity and 3= strong intensity) and binary variables with values 0 and 1, with 0 being the non-occurrence of the event and 1 its occurrence. These variables are then combined according to a formula to produce the composite indicators published here:

- Public protests: defined as strikes or any type of demonstration with political, economic or social motives. Each event is weighted by its duration (number of days or weeks) and by an intensity score based on the number of protesters.
- Political violence: defined as violence with political motives, inter-community conflicts and terrorist acts against populations. They are also monitored and reflect escalations of public demands or discontent into violence. Each relevant event is counted and then weighted based on such factors as intensity, duration and number of casualties.
- Incidents of political hardening: defined as an increase in government restrictions on the population's ability to organise or express itself politically (e.g. bans on protests, curfews and states of emergency, arrests, and violence perpetrated by government forces).

The three political indicators were initially assembled in 1996 for 30 African countries,² but increased gradually in subsequent years until they now cover all 54 countries of the continent. Initially, the source for the articles was *Marchés Tropicaux et Méditerranéens* (MTM), but since 2006, the source has mostly been the AFP and Reuters newswires. Combining two sources of data (one Francophone and the other Anglophone) ensures a complete coverage of relevant events better than reliance on a single source.

Despite the changes in data sources, the indicators of civil unrest are designed to form a consistent time series. Data collected before 2006 is adjusted using country-specific coefficients in order to ensure comparability with subsequent years. These coefficients were calculated by comparing the indicators produced using AFP and Reuters with the indicators produced using only MTM for 52 countries in two consecutive years (2006 and 2007) which showed that the number of reported relevant events was higher in AFP, which reports daily, than in the weekly reporting by MTM. The average adjustment for the indicators for the years 1996-2005 was by a factor 1.10 for public protests, 1.04 for civil violence by non-state actors and 1.46 for political hardening.

Further improvements to the methodology have been implemented since 2010. The motivations behind public protests and civil violence across the entire continent have been collected and analysed, allowing for a better understanding of public demands and aspirations as well as governance issues (see Chapter 5). An historic backwards coding exercise has also been undertaken in recent years to expand and complete the series. The entire dataset of the motivations are now available back to 2000 for all 54 countries.

Table 22: Public protest

• Strikes – weights:

0 = non-occurrence

1 = low-intensity strike or 1-999 strikers

2 = medium-intensity strike or 1 000-4 999 strikers

3 = high-intensity strike or 5 000 or more strikers

2. The following countries were included in the initial sample: Algeria, Benin, Botswana, Burkina Faso, Cabo Verde, Cameroon, Chad, Côte d'Ivoire, Egypt, Equatorial Guinea, Ethiopia, Gabon, Ghana, Kenya, Libya, Malawi, Mali, Mauritius, Morocco, Mozambique, Namibia, Nigeria, Senegal, South Africa, Tanzania, Togo, Tunisia, Uganda, Zambia and Zimbabwe.

- Demonstrations – weights:
 - 0 = non-occurrence
 - 1 = low-intensity demonstration or 1-4 999 protesters
 - 2 = medium-intensity demonstration or 5 000-9 999 protesters
 - 3 = high-intensity demonstration or 10 000 or more protesters

Table 23: Political violence by non-state actors

- Incidents of political violence – weights:
 - 0 = none
 - 1 = 1-9 dead or 1-49 injured
 - 2 = 10-99 dead or 50-499 injured
 - 3 = 100 or more dead or 500 or more injured

Table 24: Political hardening

This composite indicator is calculated using an equation taking the following qualitative variables as inputs and using coefficients determined by the results of the principal components analysis described below.

- State of emergency (0 or 1)
- Arrests and incarcerations of opponents (protesters, journalists, opposition actors) or for other political reasons
 - 0 = non-occurrence
 - 1 = between 1 and 9
 - 2 = between 10 and 99
 - 3 = 100 or more
- Additional means for police repression, judicial harassment, death threats, propaganda or censorship (0 or 1)
- Toughening of the political environment, e.g. dissolution of political parties, new law against democracy, expulsions, dismissals, curfew (0 or 1)
- Violence perpetrated by government forces:
 - 0 = none
 - 1 = 1-9 dead or 1-49 injured
 - 2 = 10-99 dead or 50-499 injured
 - 3 = 100 or more dead or 500 or more injured
- Extrajudicial prosecutions and executions (0 or 1)
- Bans on strikes and demonstrations (0 or 1)
- Bans on press or public debates (0 or 1)
- Closing of schools for political reasons (0 or 1)

These variables are combined into a single indicator using a linear formula with coefficients assigned to each variable based on the results of a principal component analysis: each intensity value of police violence is multiplied by 0.261 (if dead), 0.423 (if injured) and 0.402 (if arrested). For dichotomous variables, the coefficients are: state of emergency (0.631), additional resources for the police (0.603), extrajudicial prosecution (0.583), prohibition of strikes (0.383), prohibition of the press (0.292), hardening of the political climate (0.253) and closure of schools (0.092).

Methodological note: Gender indicators (included in Statistical Annex Table 26)

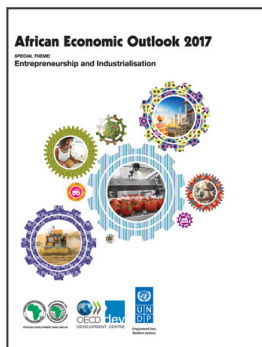
The African Development Bank's Gender Equality Index (AfDB GEI) reflects the status of women in Africa along three dimensions of equality: economic opportunities (business and employment), human development (education and health), and laws and institutions. Each dimension draws on a series of indicators, measuring equality in business and employment, education, health, political representation, and legal and household rights. Countries are scored on a scale from 0 to 100, where 100 indicates perfect gender equality. For more details on computation see the technical note available at www.afdb.org/fileadmin/uploads/afdb/Documents/Publications/African_Gender_Equality_Index_2015-EN.pdf.

The OECD Development Centre's Social Institutions and Gender Index (SIGI) measures discriminatory social institutions, i.e. formal and informal laws, social norms and practices that restrict or exclude women and consequently curtail their access to rights, justice, resources and empowerment opportunities. The SIGI scores 108 countries on 14 indicators grouped into five sub-indices: discriminatory family code, restricted physical integrity, son bias, restricted resources and assets, and restricted civil liberties. The SIGI is an unweighted average of a non-linear function of its five sub-indices. The SIGI and its sub-indices values are between 0 and 1, with 0 indicating very low levels of inequality and 1 indicating very high levels of inequality. For more details on computation see the technical note available at www.genderindex.org.

The United Nations Development Programme's Gender Development Index (GDI) measures gender gaps in human development achievements by accounting for disparities between women and men in three basic dimensions of human development – health, knowledge and living standards – using the same component indicators as in the Human Development Index (HDI). The GDI is the ratio of the HDIs calculated separately for women and men showing the female HDI as a percentage of the male HDI. For more details on computation see the technical note available at http://hdr.undp.org/sites/default/files/hdr2015_technical_notes.pdf.

The United Nations Development Programme's Gender Inequality Index (GII) measures gender inequalities in three important aspects of human development – reproductive health, measured by maternal mortality ratio and adolescent birth rates; empowerment, measured by the proportion of parliamentary seats occupied by females and the proportion of adult females and males aged 25 years and older with at least some secondary education; and economic status, expressed as labour market participation and measured by the labour force participation rate of female and male populations aged 15 years and older. The higher the GII value the more disparities there are between females and males. For more details on computation see the technical note available at http://hdr.undp.org/sites/default/files/hdr2015_technical_notes.pdf.





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