



## **The Rise of the South: Human Progress in a Diverse World**

### ***Explanatory note on 2013 HDR composite indices***

## **Rwanda**

### **HDI values and rank changes in the 2013 Human Development Report**

#### **Introduction**

The *2013 Human Development Report* presents Human Development Index (HDI) values and ranks for 187 countries and UN-recognized territories, along with the Inequality-adjusted HDI for 132 countries, the Gender Inequality Index for 148 countries, and the Multidimensional Poverty Index for 104 countries. Country rankings and values in the annual Human Development Index (HDI) are kept under strict embargo until the global launch and worldwide electronic release of the Human Development Report.

It is misleading to compare values and rankings with those of previously published reports, because the underlying data and methods have changed. Readers are advised in the Report to assess progress in HDI values by referring to table 2 ('Human Development Index Trends') in the Statistical Annex of the report. Table 2 is based on consistent indicators, methodology and time-series data and thus shows real changes in values and ranks over time reflecting the actual progress countries have made. Caution is requested when interpreting small changes in values because they may not be statistically significant due to the sampling variation. Generally speaking, changes in third decimal of all composite indices are considered insignificant.

For further details on how each index is calculated please refer to Technical Notes 1-4 and the associated background papers available on the Human Development Report website.

#### **Human Development Index (HDI)**

The HDI is a summary measure for assessing long-term progress in three basic dimensions of human development: a long and healthy life, access to knowledge and a decent standard of living. As in the 2011 HDR a long and healthy life is measured by life expectancy. Access to knowledge is measured by: i) mean years of schooling for the adult population, which is the average number of years of education received in a life-time by people aged 25 years and older; and ii) expected years of schooling for children of school-entrance age, which is the total number of years of schooling a child of school-entrance age can expect to receive if prevailing patterns of age-specific enrolment rates stay the same throughout the child's life. Standard of living is measured by Gross National Income (GNI) per capita expressed in constant 2005 international dollars converted using purchasing power parity (PPP) rates.

To ensure as much cross-country comparability as possible, the HDI is based primarily on international data from the United Nations Population Division, the United Nations Educational, Scientific and Cultural Organization (UNESCO) Institute for Statistics (UIS) and the World Bank. As stated in the introduction, the HDI values and ranks in this year's report are not comparable to those in past reports (including the 2011 HDR) because of a number of revisions done to the component indicators by the mandated

agencies. To allow for assessment of progress in HDIs, the 2013 report includes recalculated HDIs from 1980 to 2012.

### Rwanda's HDI value and rank

Rwanda's HDI value for 2012 is 0.434—in the low human development category—positioning the country at 167 out of 187 countries and territories. Between 1980 and 2012, Rwanda's HDI value increased from 0.277 to 0.434, an increase of 57 percent or average annual increase of about 1.4 percent.

The rank of Rwanda's HDI for 2011 based on data available in 2012 and methods used in 2012 was— 167 out of 187 countries. In the 2011 HDR, Rwanda was ranked 166 out of 187 countries. However, it is misleading to compare values and rankings with those of previously published reports, because the underlying data and methods have changed.

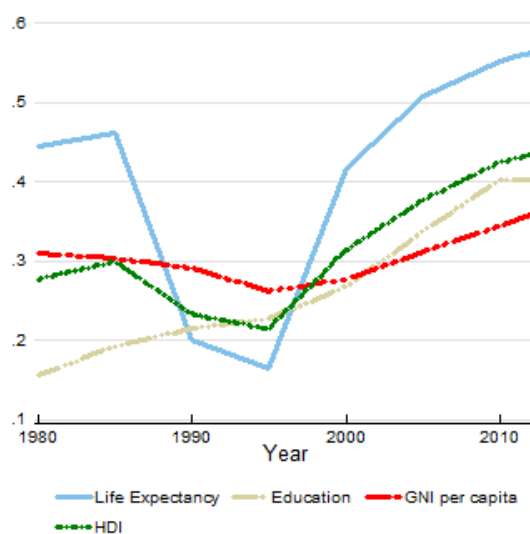
Table A reviews Rwanda's progress in each of the HDI indicators. Between 1980 and 2012, Rwanda's life expectancy at birth increased by 7.5 years, mean years of schooling increased by 2.2 years and expected years of schooling increased by 6.2 years. Rwanda's GNI per capita increased by about 40 percent between 1980 and 2012.

**Table A: Rwanda's HDI trends based on consistent time series data, new component indicators and new methodology**

|      | Life expectancy at birth | Expected years of schooling | Mean years of schooling | GNI per capita (2005 PPP\$) | HDI value |
|------|--------------------------|-----------------------------|-------------------------|-----------------------------|-----------|
| 1980 | 48.2                     | 4.7                         | 1.1                     | 0,817                       | 0.277     |
| 1985 | 49.3                     | 5.5                         | 1.5                     | 0,779                       | 0.299     |
| 1990 | 32.8                     | 5.9                         | 1.8                     | 0,720                       | 0.233     |
| 1995 | 30.5                     | 5.9                         | 2                       | 0,590                       | 0.214     |
| 2000 | 46.6                     | 7.1                         | 2.3                     | 0,654                       | 0.314     |
| 2005 | 52.3                     | 9.2                         | 2.8                     | 0,830                       | 0.377     |
| 2010 | 55.1                     | 10.9                        | 3.3                     | 1,036                       | 0.425     |
| 2011 | 55.4                     | 10.9                        | 3.3                     | 1,088                       | 0.429     |
| 2012 | 55.7                     | 10.9                        | 3.3                     | 1,147                       | 0.434     |

Figure 1 below shows the contribution of each component index to Rwanda's HDI since 1980.

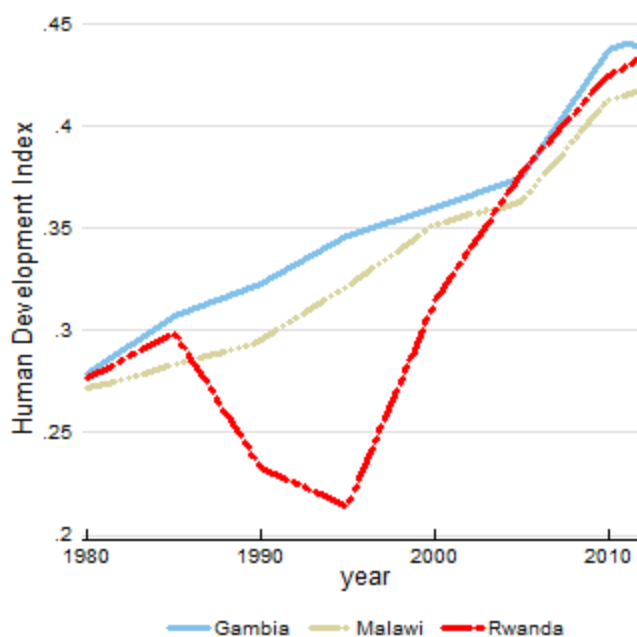
**Figure 1: Trends in Rwanda's HDI component indices 1980-2012**



## Assessing progress relative to other countries

Long-term progress can be usefully assessed relative to other countries—both in terms of geographical location and HDI value. For instance, during the period between 1980 and 2012 Rwanda, Gambia and Malawi experienced different degrees of progress toward increasing their HDIs (see figure 2).

**Figure 2: Trends in Rwanda's HDI 1980-2012**



Rwanda's 2012 HDI of 0.434 is below the average of 0.466 for countries in the low human development group and below the average of 0.475 for countries in Sub-Saharan Africa. From Sub-Saharan Africa, countries which are close to Rwanda in 2012 HDI rank and population size are Togo and Guinea, which have HDIs ranked 159 and 178 respectively (see table B).

**Table B: Rwanda's HDI indicators for 2012 relative to selected countries and groups**

|                           | HDI value | HDI rank | Life expectancy at birth | Expected years of schooling | Mean years of schooling | GNI per capita (PPP US\$) |
|---------------------------|-----------|----------|--------------------------|-----------------------------|-------------------------|---------------------------|
| <b>Rwanda</b>             | 0.434     | 167      | 55.7                     | 10.9                        | 3.3                     | 1,147                     |
| <b>Togo</b>               | 0.459     | 159      | 57.5                     | 10.6                        | 5.3                     | 0,928                     |
| <b>Guinea</b>             | 0.355     | 178      | 54.5                     | 8.8                         | 1.6                     | 0,941                     |
| <b>Sub-Saharan Africa</b> | 0.475     | —        | 54.9                     | 9.3                         | 4.7                     | 2,010                     |
| <b>Low HDI</b>            | 0.466     | —        | 59.1                     | 8.5                         | 4.2                     | 1,633                     |

## Inequality-adjusted HDI (IHDI)

The HDI is an average measure of basic human development achievements in a country. Like all averages, the HDI masks inequality in the distribution of human development across the population at the country level. The 2010 HDR introduced the Inequality Adjusted HDI (IHDI), which takes into account inequality in all three dimensions of the HDI by 'discounting' each dimension's average value according to its level of inequality. The HDI can be viewed as an index of 'potential' human development and the IHDI as an index of actual human development. The 'loss' in potential human development due to inequality is given by the difference between the HDI and the IHDI, and can be expressed as a percentage. (For more details see technical note 2).

Rwanda's HDI for 2012 is 0.434. However, when the value is discounted for inequality, the HDI falls to 0.287, a loss of 33.9 percent due to inequality in the distribution of the dimension indices. Togo and Guinea, show losses due to inequality of 33.5 percent and 38.8 percent respectively. The average loss due to inequality for low HDI countries is 33.5 percent and for Sub-Saharan Africa it is 35 percent.

**Table C: Rwanda's HDI for 2012 relative to selected countries and groups**

|                           | HDI value | Overall Loss (%) | Loss due to inequality in life expectancy at birth (%) | Loss due to inequality in education (%) | Loss due to inequality in income (%) |
|---------------------------|-----------|------------------|--------------------------------------------------------|-----------------------------------------|--------------------------------------|
| <b>Rwanda</b>             | 0.287     | 33.9             | 41.3                                                   | 29.4                                    | 30.2                                 |
| <b>Togo</b>               | 0.305     | 33.5             | 37.2                                                   | 41.5                                    | 20                                   |
| <b>Guinea</b>             | 0.217     | 38.8             | 42.7                                                   | 42                                      | 31.1                                 |
| <b>Sub-Saharan Africa</b> | 0.309     | 35               | 39                                                     | 35.3                                    | 30.4                                 |
| <b>Low HDI</b>            | 0.31      | 33.5             | 35.7                                                   | 38.7                                    | 25.6                                 |

### **Gender Inequality Index (GII)**

The Gender Inequality Index (GII) reflects gender-based inequalities in three dimensions – reproductive health, empowerment, and economic activity. Reproductive health is measured by maternal mortality and adolescent fertility rates; empowerment is measured by the share of parliamentary seats held by each gender and attainment at secondary and higher education by each gender; and economic activity is measured by the labour market participation rate for each gender. The GII replaced the previous Gender-related Development Index and Gender Empowerment Index. The GII shows the loss in human development due to inequality between female and male achievements in the three GII dimensions. (For more details on GII please see Technical note 3 in the Statistics Annex).

Rwanda has a GII value of 0.414, ranking it 76 out of 148 countries in the 2012 index. In Rwanda, 51.9 percent of parliamentary seats are held by women, and 7.4 percent of adult women have reached a secondary or higher level of education compared to 8 percent of their male counterparts. For every 100,000 live births, 340 women die from pregnancy related causes; and the adolescent fertility rate is 35.5 births per 1000 live births. Female participation in the labour market is 86.4 percent compared to 85.4 for men.

In comparison Togo is ranked at 122 on this index.

**Table D: Rwanda's GII for 2012 relative to selected countries and groups**

|                           | GII value | GII Rank | Maternal mortality ratio | Adolescent fertility rate | Female seats in parliament (%) | Population with at least secondary education (%) |      | Labour force participation rate (%) |      |
|---------------------------|-----------|----------|--------------------------|---------------------------|--------------------------------|--------------------------------------------------|------|-------------------------------------|------|
|                           |           |          |                          |                           |                                | Female                                           | Male | Female                              | Male |
| <b>Rwanda</b>             | 0.414     | 76       | 340                      | 35.5                      | 51.9                           | 7.4                                              | 8    | 86.4                                | 85.4 |
| <b>Togo</b>               | 0.566     | 122      | 300                      | 54.3                      | 11.1                           | 15.3                                             | 45.1 | 80.4                                | 81.4 |
| <b>Sub-Saharan Africa</b> | 0.577     | —        | 475                      | 105.2                     | 20.9                           | 23.7                                             | 35.1 | 64.7                                | 76.2 |
| <b>Low HDI</b>            | 0.578     | —        | 405                      | 86                        | 19.2                           | 18                                               | 32   | 56.4                                | 79.9 |

### **Multidimensional Poverty Index (MPI)**

The 2010 HDR introduced the Multidimensional Poverty Index (MPI), which identifies multiple deprivations in the same households in education, health and standard of living. The education and health dimensions are based on two indicators each while the standard of living dimension is based on six indicators. All of the indicators needed to construct the MPI for a household are taken from the same household survey. The indicators are weighted, and the deprivation scores are computed for each household in the survey. A cut-off of 33.3 percent, which is the equivalent of one-third of the weighted

indicators, is used to distinguish between the poor and nonpoor. If the household deprivation score is 33.3 percent or greater, that household (and everyone in it) is multidimensionally poor. Households with a deprivation score greater than or equal to 20 percent but less than 33.3 percent are *vulnerable* to or at risk of becoming multidimensionally poor.

The most recent survey data available for estimating MPI figures for Rwanda were collected in 2010. In Rwanda 69 percent of the population lived in multidimensional poverty (the MPI 'head count') while an additional 19.4 percent were vulnerable to multiple deprivations. The intensity of deprivation – that is, the average percentage of deprivation experienced by people living in multidimensional poverty – in Rwanda was 50.8 percent. The country's MPI value, which is the share of the population that is multidimensionally poor adjusted by the intensity of the deprivations, was 0.35. Togo and Guinea had MPI values of 0.284 and 0.506 respectively.

Table E compares income poverty, measured by the percentage of the population living below PPP US\$1.25 per day, and multidimensional deprivations in Rwanda. It shows that income poverty only tells part of the story. The multidimensional poverty headcount is 5.8 percentage points higher than income poverty. This implies that individuals living above the income poverty line may still suffer deprivations in education, health and other living conditions. Table E also shows the percentage of Rwanda's population that live in severe poverty (deprivation score is 50 percent or more) and that are vulnerable to poverty (deprivation score between 20 and 30 percent). The contributions of deprivations in each dimension to overall poverty complete a comprehensive picture of people living in poverty in Rwanda. Figures for Togo and Guinea are also shown in the table for comparison.

**Table E: The most recent MPI figures for Rwanda relative to selected countries**

|               | Survey year | MPI value | Headcount (%) | Intensity of deprivation (%) | Population                |                       |                               | Contribution to overall poverty of deprivations in |           |                  |
|---------------|-------------|-----------|---------------|------------------------------|---------------------------|-----------------------|-------------------------------|----------------------------------------------------|-----------|------------------|
|               |             |           |               |                              | Vulnerable to poverty (%) | In severe poverty (%) | Below income poverty line (%) | Health                                             | Education | Living Standards |
| <b>Rwanda</b> | 2010        | 0.35      | 69            | 50.8                         | 19.4                      | 34.7                  | 63.2                          | 30.9                                               | 19.5      | 49.6             |
| <b>Togo</b>   | 2006        | 0.284     | 54.3          | 52.4                         | 21.6                      | 28.7                  | 38.7                          | 25.4                                               | 28.3      | 46.3             |
| <b>Guinea</b> | 2005        | 0.506     | 82.5          | 61.3                         | 9.3                       | 62.3                  | 43.3                          | 23                                                 | 35.5      | 41.5             |