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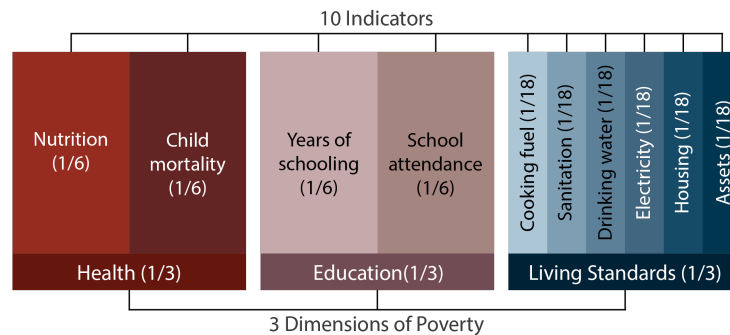
## Changes over Time Country Briefing 2020: Rwanda (Sub-Saharan Africa)

This briefing describes trends in multidimensional poverty for Rwanda between 2010 and 2014/15 using a harmonised version of the global Multidimensional Poverty Index (MPI). For an explanation of the methodology and detailed description of the harmonisation process for Rwanda, see OPHI MPI Methodological Note 50 (Alkire, Kovesdi et al 2020). For the results of the global MPI 2020 for Rwanda using the latest available data, please see the relevant global MPI 2020 country briefing.

### The global MPI

The global MPI was launched in 2010 in collaboration with UNDP to measure acute multidimensional poverty across the developing world. The MPI captures deprivation in three non-monetary aspects of human life – health, education and living standards – reflected in the three dimensions and 10 indicators of the index. All indicators in a dimension are assigned equal weights (1/6 for health and education, and 1/18 for living standards indicators) and each dimension is weighted equally, receiving a third of the full weight. A person is classified as multidimensionally poor if he or she is deprived in one third (33.33%) or more of the weighted indicators. For a detailed methodology and description of the global MPI, see Alkire, Kanagaratnam and Suppa (2020).

Figure 1. Structure of the global MPI



The MPI reflects both the incidence or headcount ratio (H) of poverty – the percentage of the population who are multidimensionally poor – and the average intensity (A) of their poverty – the average share of (weighted) deprivations in which poor people are deprived. The MPI value is calculated by multiplying the incidence of poverty by the average share of deprivations ( $H \times A$ ).

### **Changes in Multidimensional Poverty over Time**

This briefing tracks changes between harmonised versions of the global MPI. The harmonisation process guarantees rigorous comparisons of changes in MPI and its associated statistics over time. We signify that they are harmonised as MPI(T). Harmonisation produces strictly comparable MPI(T) estimations within a country, over time. In other words, trends are estimated using a revised version of the indicators in the global MPI so that precisely the same information is used in both years. This alteration of the original global MPI structure for comparability means that the figures presented in this briefing might differ from those published in the 2020 or previous global MPIs.

Goal 1 of the Sustainable Development Goals proposes an end to poverty in all its forms everywhere, and Target 1.2 sets an aim for countries to reduce at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions by 2030. Tracking this target requires over-time comparisons, like those we present here.

The ten indicators are closely aligned with the SDGs, and analysing trends in the harmonised global MPI enables a close assessment of the progress made by each country, both in terms of reducing levels of multidimensional poverty and improving specific SDG areas such as health or education. For further information on how countries and datasets were selected, and for country-specific methodological considerations, please see OPHI MPI Methodological Note 50.

### **National trends**

Table 1 shows the levels and changes in MPI(T) values, incidence and intensity of poverty between 2010 and 2014/15 for Rwanda. This gives an overall picture of multidimensional poverty in the country and an indication of the speed of poverty reduction. The *absolute reduction in poverty* is calculated by subtracting one measure of poverty from another and the *annualised absolute change* is this change divided by the number of years between surveys. Meanwhile, the *relative reduction* in poverty is calculated as the difference in levels across the two periods as a percentage of the initial period. The *annualised relative change* is the compound rate of reduction per year between the two years.

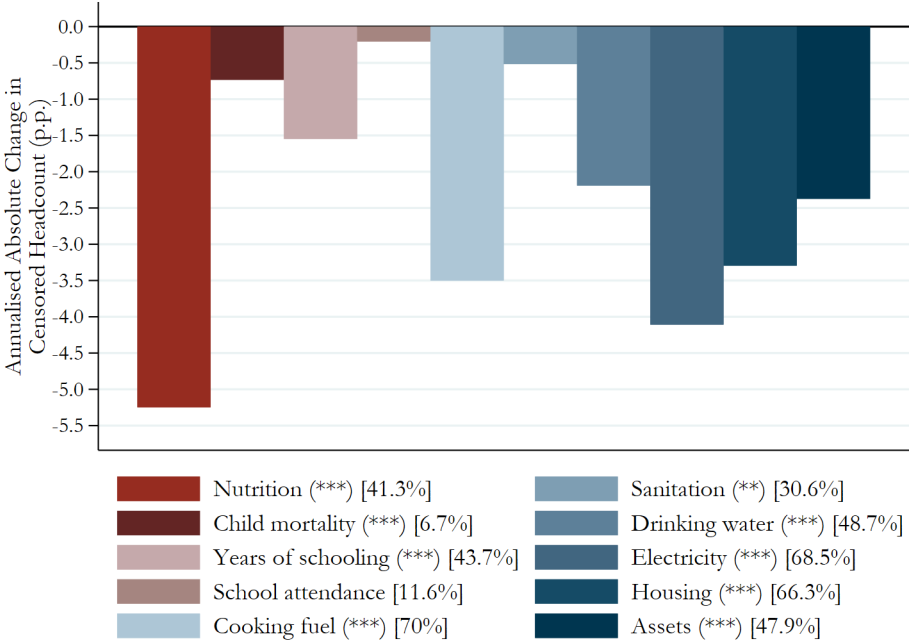
*Table 1. MPI(T), poverty headcount ratio (H) and average intensity (A) for Rwanda*

|        | 2010  | 2014/15 | Annualised<br>absolute<br>change | Annualised<br>relative change |
|--------|-------|---------|----------------------------------|-------------------------------|
| MPI(T) | 0.357 | 0.259   | -0.022 ***                       | -6.9%                         |
| H      | 70.2% | 54.4%   | -3.5% ***                        | -5.5%                         |
| A      | 50.8% | 47.5%   | -0.7% ***                        | -1.5%                         |

An advantage of the global MPI is that results can be broken down by indicators to provide a detailed picture of deprivations by showing the interlinkages of deprivations in poor people's lives. *Censored headcount ratios* are

the percentage of the population who are multidimensionally poor and deprived in a given indicator, and Figure 2 below presents the absolute change in the censored headcount ratios for Rwanda between 2010 and 2014/15. Statistical significance of the difference is denoted by \* at 90%, \*\* at 95% and \*\*\* at 99% confidence level. The number in squared brackets is the censored headcount ratio in the starting year.

Figure 2. Changes in censored headcount ratios (absolute) between 2010 and 2014/15



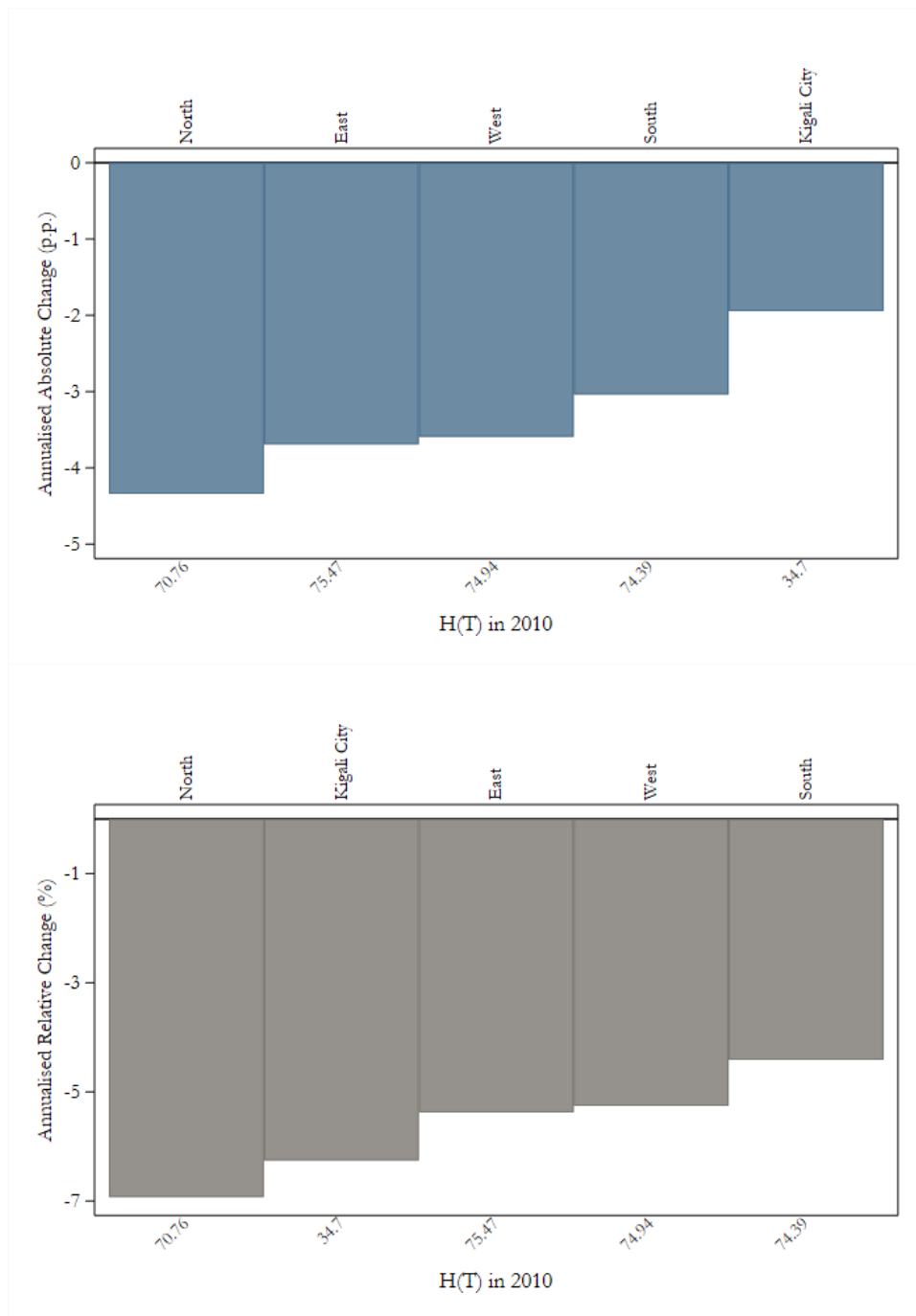
**Disaggregating the MPI – trends by region, area and age groups**

Eradicating poverty in all its forms is the main goal outlined in the SDGs. However, national level results can often mask inequalities in poverty across subgroups of the population and geographical areas of a country. Recognising the importance of such inequalities, the 2030 Sustainable Development Agenda pledged to ensure ‘no one will be left behind’ in the process of poverty reduction.

Therefore in addition to changes at the national level, trends in the harmonised global MPI(T) can shine a light on the inequalities in poverty reduction by presenting disaggregated results at the area and subnational level, and for different age groups. This enables an assessment of whether poverty reduction in a country is pro-poor – with the poorest regions or groups having the fastest reduction, therefore reducing inequality among the poor. Contrastingly, if poverty reduces faster among the less poor regions or groups, those with the highest level of poverty fall further behind, hindering efforts to narrow the gap in poverty levels across the population.

Figure 3 shows the absolute and relative changes in the incidence of multidimensional poverty (H) across the subnational regions of Rwanda between 2010 and 2014/15. For regions with a high level of poverty, it is often easier to reduce poverty in absolute terms, while low poverty regions tend to have higher rates of relative reduction.

Figure 3. Changes in poverty headcount ratio (H) of subnational regions between 2010 and 2014/15

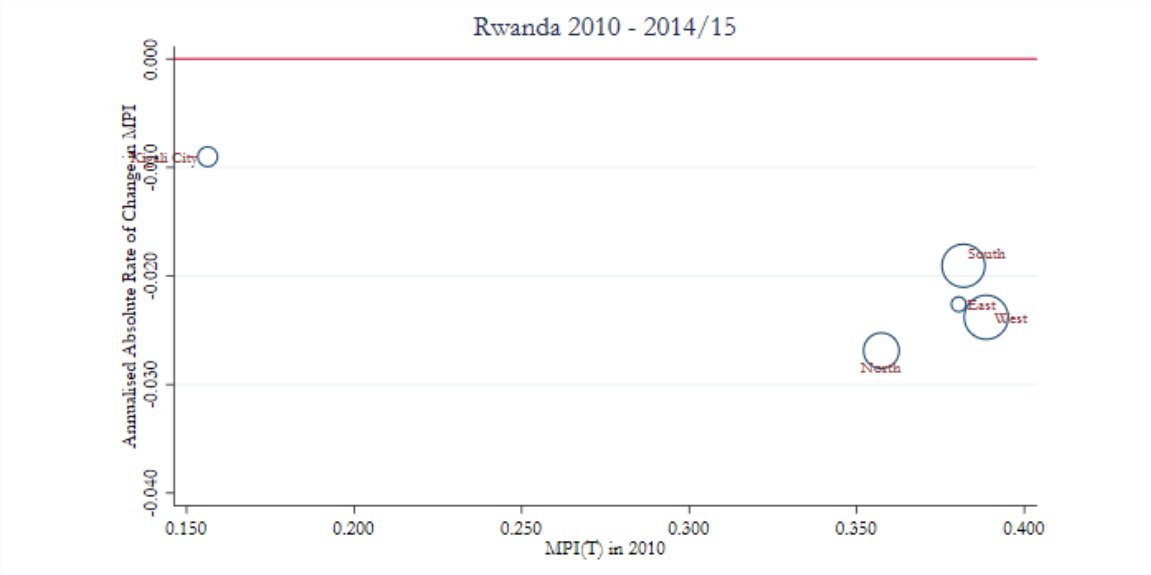


The figure below (Fig. 4) presents the difference in the absolute reduction of MPI(T) among the subnational regions in Rwanda. The horizontal axis presents the level of MPI(T) in 2010 for each region, while the vertical axis shows the rate of absolute reduction for the given region over time. The size of the bubbles refer to the share of poor people in 2010.

Some countries present a pro-poor pattern at the subnational level, with the poorest regions reducing multidimensional poverty the fastest - thus not being left behind. This pattern is displayed if there is a

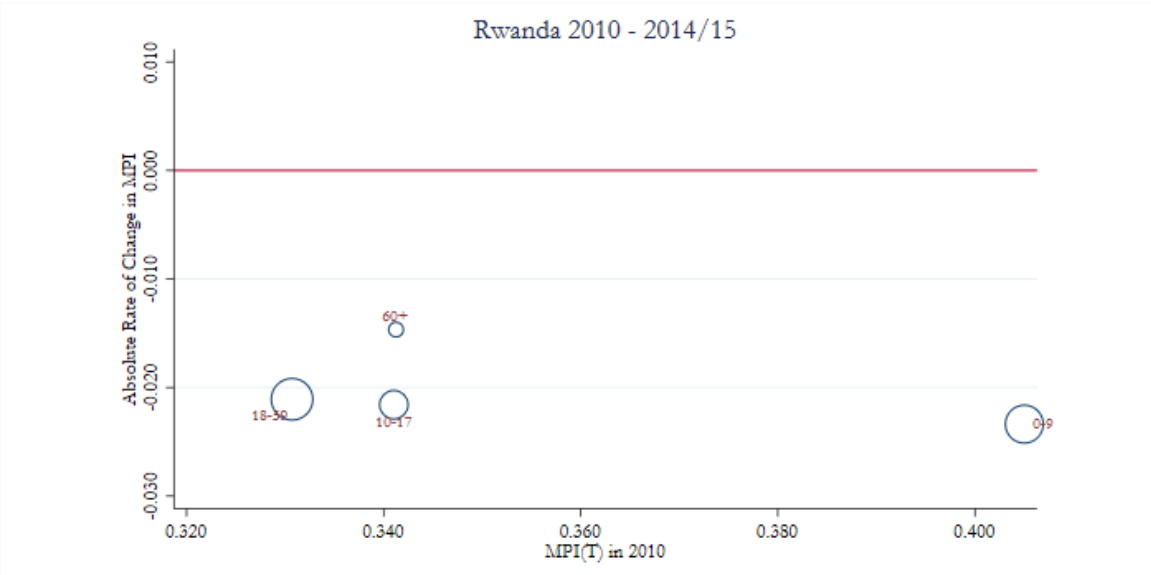
diagonal trend, with the poorest region towards the bottom right of the graph and the least poor region towards the top left.

Figure 4. Absolute reduction in MPI(T) across subnational regions between 2010 and 2014/15



It is also useful to assess trends among age groups and whether poverty reduced among both children and adults. Figure 5 below has the same horizontal and vertical axis – with MPI(T) and absolute reduction rate – and presents results for four age groups: 0-9, 10-17, 18-59, and 60+.

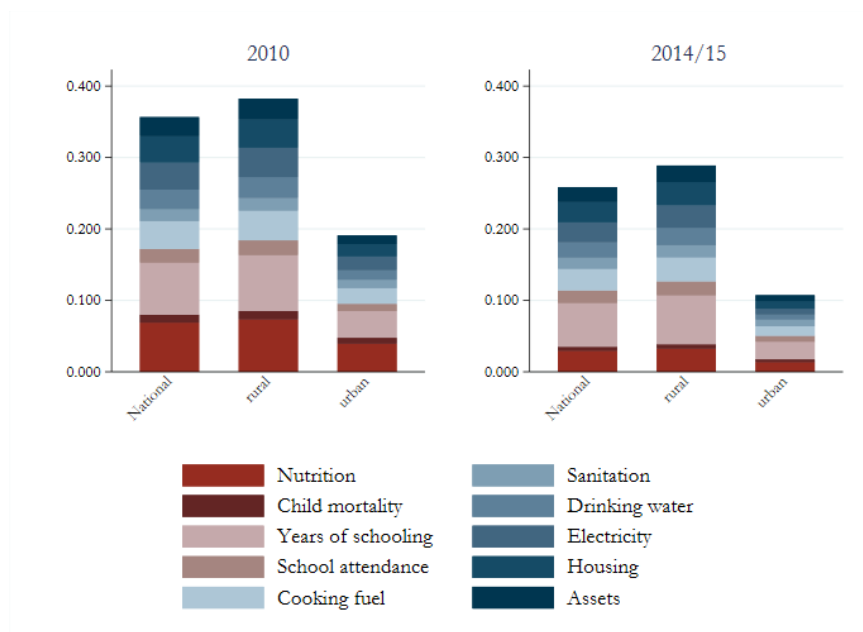
Figure 5. Absolute reduction in MPI(T) among age groups between 2010 and 2014/15



The MPI(I) also shows the composition of poverty in a given country or area which can inform governments and help design policies and programmes targeting the deprivations that are contributing the most to poverty.

The figure below (Fig. 6) shows the weighted contribution of the ten indicators to the MPI at the national level and in urban and rural areas for each of the two time points. The height of the bar reflects the value of MPI(T), while the contribution of each indicator is shown by the height of the relevant coloured stripe.

Figure 6. Contribution of each indicator to MPI(T) values in 2010 and 2014/15 at the national and urban-rural level



### **Further information**

In addition to the trends analysis presented in this brief, all results for Rwanda can be accessed in Table 6 on the OPHI website. Table 6 contains all results for the countries included in the Changes over Time 2020 release. This includes results for each country at the national level and for the three disaggregations included in the global MPI(T): area level, subnational and age group. Access Table 6 at <https://ophi.org.uk/multidimensional-poverty-index/data-tables-do-files/>.

An analysis of trends in 80 countries including a comparison of monetary and multidimensional poverty trajectories is available in Research in Progress 57a (Alkire, Kovesdi et al 2020), at <https://ophi.org.uk/publications/ophi-research-in-progress>.

A detailed description of the methodology including country specific harmonisation decisions is available in MPI Methodological Note 50 at <https://ophi.org.uk/publications/mpi-methodological-notes>.

Country briefing files for all 80 countries, and the 107 countries included in the global MPI, are available at <https://ophi.org.uk/multidimensional-poverty-index/mpi-country-briefings>.

For a list of Frequently Asked Questions about trends in the global MPI and the global MPI 2020, see <https://ophi.org.uk/gmpi-2020-faq/>

The latest global MPI report 'Charting pathways out of multidimensional poverty: achieving the SDGs', featuring an analysis of trends in the global MPI is available at: <https://ophi.org.uk/publications/special-publications/>.