

## eSwatini (Swaziland)

**EquityTool: Released 29 December 2020**

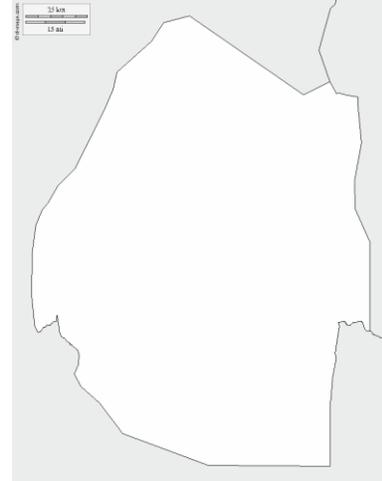
**Source data:** [eSwatini MICS 2014](#)

**# of survey questions in original wealth index: 36**

**# of variables in original index: 142**

**# of survey questions in EquityTool: 11**

**# of variables in EquityTool: 12**



### Questions:

|     | <b>Question</b>   | <b>Option 1</b>     | <b>Option 2</b>  | <b>Option 3</b> |
|-----|---|---------------------|------------------|-----------------|
| Q1  | Does your household have... electricity   | Yes                 | No               |                 |
| Q2  | ... a television?   | Yes                 | No               |                 |
| Q3  | ... a stove?  | Yes                 | No               |                 |
| Q4  | ... a refrigerator?   | Yes                 | No               |                 |
| Q5  | ... a cupboard?   | Yes                 | No               |                 |
| Q6  | Does any member of your household have a car?   | Yes                 | No               |                 |
| Q7  | What is the main source of drinking water for members of your household?              | Piped into dwelling | Other            |                 |
| Q8  | Where is your principal source of drinking water located?                             | In own dwelling     | Outside dwelling |                 |
| Q9  | Is there water available where members of your household most often wash their hands? | Yes                 | No               |                 |
| Q10 | What type of cooking fuel does your household mainly use for cooking?                 | Electricity         | Wood             | Other           |
| Q11 | What is the main material of the floor in your household?                             | Cement              | Other            |                 |

## Technical notes:

### Recreating the full index

To create the EquityTool, we simplify the original full wealth index that is found in the relevant benchmark dataset, usually using published factor weights. In the case of MICS data, the factor weights are not publicly available, however UNICEF has shared the original syntax files used to create wealth indices with us. We attempted to recreate the original wealth index, following the original syntax files. The MICS wealth index for eSwatini is constructed using a similar approach as the DHS Wealth Index. More information about how the DHS Wealth Index is constructed can be found [here](#). Factor weights used in the construction of the eSwatini MICS 2014 EquityTool are available upon request.

### Simplification

The standard simplification process was applied to achieve high agreement with the full wealth index. Kappa was greater than 0.75 for the national and urban indices. Details on the standard process can be found [in this article](#). The data used to identify important variables comes from the factor weights derived from the reconstruction of the Wealth Index.

### Level of agreement:

|                 | National Population<br>(n=4865) | Urban only population<br>(n=1286) |
|-----------------|---------------------------------|-----------------------------------|
| % agreement     | 85.58%                          | 84.98%                            |
| Kappa statistic | 0.775                           | 0.766                             |

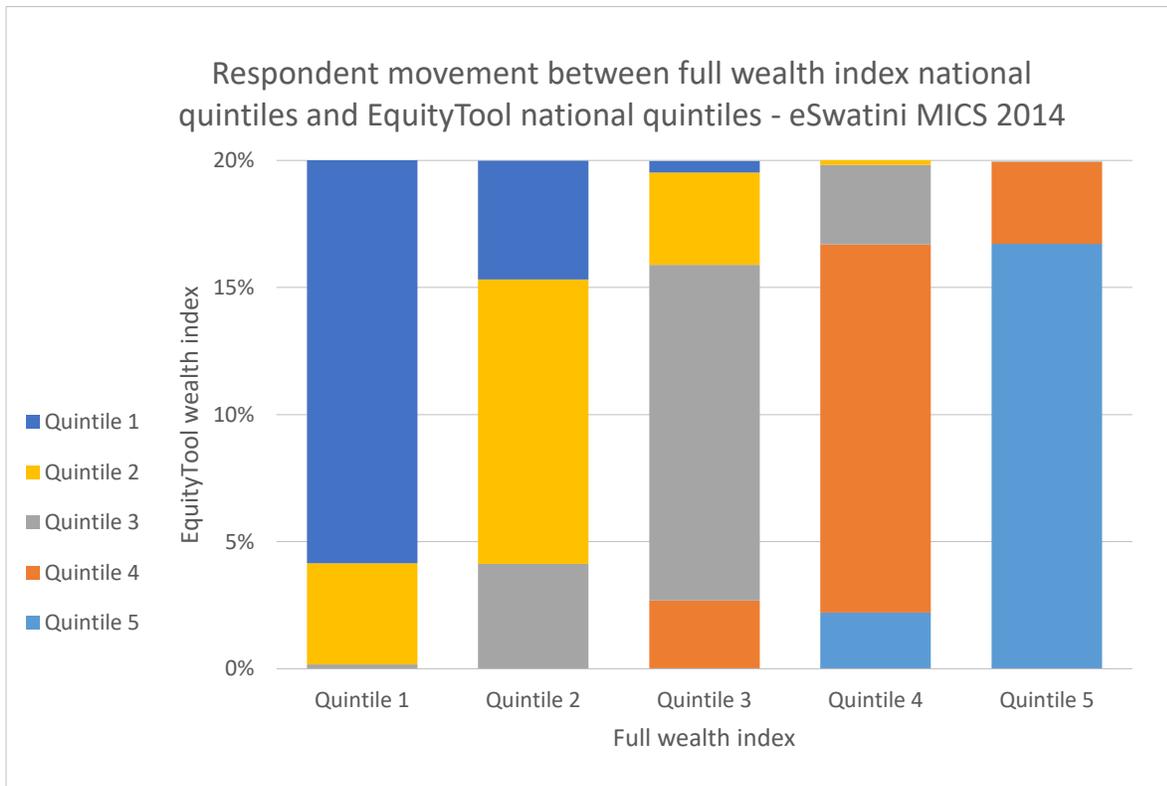
Respondents in the original dataset were divided into three groups for analysis – those in the 1<sup>st</sup> and 2<sup>nd</sup> quintiles (poorest 40%), those in the 3<sup>rd</sup> quintile, and those in the 4<sup>th</sup> and 5<sup>th</sup> quintiles (richest 40%). After calculating their wealth using the simplified index, they were again divided into the same three groups for analysis against the full index. Agreement between the recreated wealth index data and our simplified index is presented above.

### What does this mean?

When shortening and simplifying the index to make it easier for programs to use to assess equity, it no longer matches the full index with 100% accuracy. At an aggregate level, this error is minimal, and this methodology was deemed acceptable for programmatic use by an expert panel. However, for any given individual, especially those already at a boundary between two quintiles, the quintile the EquityTool assigns them to may differ to their quintile according to the full wealth index.



The graph below illustrates the difference between the EquityTool generated index and the full wealth index. Among all of those people (20% of the population) originally identified as being in the poorest quintile, approximately 79% are still identified as being in the poorest quintile when we use the simplified index. However, approximately 20% of people are now classified as being in Quintile 2. From a practical standpoint, all of these people are relatively poor. Yet, it is worthwhile to understand that the simplified index of 11 questions produces results that are not identical to using all 36 questions in the original survey.



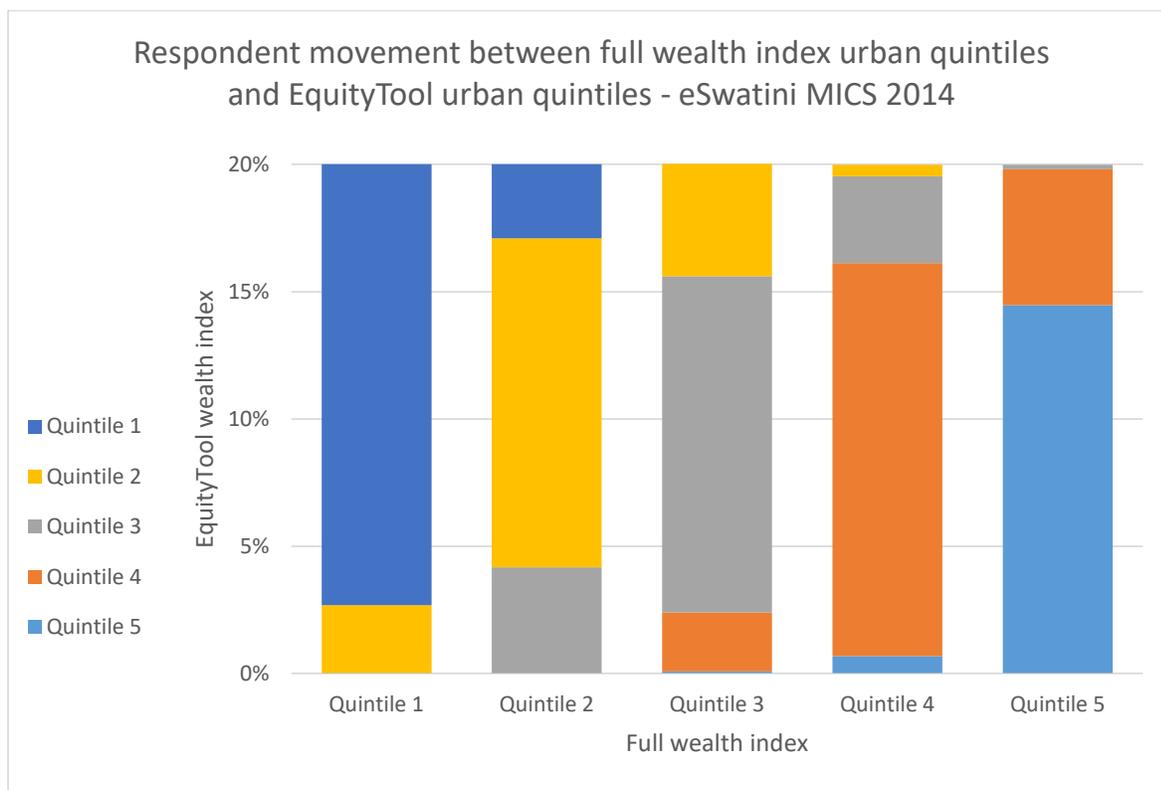
The following table provides the same information on the movement between national quintiles when using the EquityTool versus the full wealth index:

|                               |            | EquityTool National Quintiles |            |            |            |            | Total |
|-------------------------------|------------|-------------------------------|------------|------------|------------|------------|-------|
|                               |            | Quintile 1                    | Quintile 2 | Quintile 3 | Quintile 4 | Quintile 5 |       |
| Full Index National Quintiles | Quintile 1 | 15.88%                        | 3.99%      | 0.17%      | 0.00%      | 0.00%      | 20%   |
|                               | Quintile 2 | 4.68%                         | 11.18%     | 4.13%      | 0.00%      | 0.00%      | 20%   |
|                               | Quintile 3 | 0.46%                         | 3.63%      | 13.21%     | 2.66%      | 0.02%      | 20%   |
|                               | Quintile 4 | 0.00%                         | 0.20%      | 3.13%      | 14.49%     | 2.21%      | 20%   |
|                               | Quintile 5 | 0.00%                         | 0.00%      | 0.02%      | 3.22%      | 16.72%     | 20%   |



|       |        |        |        |        |        |      |
|-------|--------|--------|--------|--------|--------|------|
| Total | 21.02% | 19.00% | 20.66% | 20.37% | 18.96% | 100% |
|-------|--------|--------|--------|--------|--------|------|

The following graph provides information on the movement between urban quintiles when using the EquityTool versus the full wealth index:



The following table provides the same information on the movement between urban quintiles when using the EquityTool versus the full wealth index:

|                            |            | EquityTool Urban Quintiles |            |            |            |            | Total |
|----------------------------|------------|----------------------------|------------|------------|------------|------------|-------|
|                            |            | Quintile 1                 | Quintile 2 | Quintile 3 | Quintile 4 | Quintile 5 |       |
| Full Index Urban Quintiles | Quintile 1 | 17.33%                     | 2.68%      | 0.00%      | 0.00%      | 0.00%      | 20%   |
|                            | Quintile 2 | 2.92%                      | 12.92%     | 4.17%      | 0.00%      | 0.00%      | 20%   |
|                            | Quintile 3 | 0.00%                      | 4.42%      | 13.21%     | 2.31%      | 0.08%      | 20%   |
|                            | Quintile 4 | 0.00%                      | 0.45%      | 3.41%      | 15.43%     | 0.69%      | 20%   |
|                            | Quintile 5 | 0.00%                      | 0.00%      | 0.17%      | 5.34%      | 14.47%     | 20%   |
|                            | Total      | 20.25%                     | 20.46%     | 20.96%     | 23.08%     | 15.24%     | 100%  |



**Data interpretation considerations:**

1. This tool provides information on relative wealth – ‘ranking’ respondents within the national or urban population. The most recent available data from the WorldBank indicates that 29.2% of people in eSwatini live below \$1.90/day<sup>1</sup>. This information can be used to put relative wealth into context.
2. People who live in urban areas are more likely to be wealthy. In eSwatini, 53% of people living in urban areas are in the richest national quintile, compared to only 8% of those living in rural areas<sup>2</sup>.
  - a. If your population of interest is predominantly urban, we recommend you look at the urban results to understand how relatively wealthy or poor they are, in comparison to other urban dwellers.
  - b. If the people you interviewed using the EquityTool live in rural areas, or a mix of urban and rural areas, we recommend using the national results to understand how relatively wealthy or poor they are, in comparison to the whole country.
3. Some regions in eSwatini are wealthier than others. It is important to understand the country context when interpreting your results.
4. In most cases, your population of interest is not expected to be equally distributed across the five wealth quintiles. For example, if your survey interviewed people exiting a shopping mall, you would probably expect most of them to be relatively wealthy.

Metrics for Management provides technical assistance services to those using the EquityTool, or wanting to collect data on the wealth of their program beneficiaries. Please contact [support@equitytool.org](mailto:support@equitytool.org) and we will assist you.

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<sup>1</sup> From [povertydata.worldbank.org](http://povertydata.worldbank.org), reporting Poverty headcount ratio at \$1.90/day at 2011 international prices.

<sup>2</sup> From the eSwatini (Swaziland) MICS 2014 Final Report, available at <http://mics.unicef.org/surveys>

