

## Poverty Indicators Documentation

### Method used

Multiple correspondence analysis (MCA) procedure was used to compute all the indices. The principal component analysis (PCA) was also used to compute the composite indices for comparison purpose.

### Data transformation

The first step before implementing the MCA procedure is to recode the variables to be used in the computation. The main rules to be considered when recode are:

- Preserve ordinality where it exist
- Start the coding with the value 1
- Keep the coding sequential
- Maintain a maximum of fives categories

Categories with the frequency less than 1% were merged with the nearest category.

Then the MCA procedure was implemented to compute different indices as detailed below:

### Dwelling index

The household amenities (source of drinking water, toilet facilities, floor, roof and wall materials, cooking place, cooking fuel, source of lighting, garbage disposal, dwelling tenure and the room density) were used in the computation of the dwelling index. This was done round by round.

*Do files:*

*Recoding amenities and recoding amenities 2 - recoding*

*Amenities index – computing the index*

### Assets index

Assets information on whether the household owned any of the following household assets:

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Vehicle	Sewing machine	Torch
Motorcycle	Electric iron	Kerosene lamp with glass
Bicycle	Fan	Kerosene stove
Refrigerator	Telephone/mobile phone	wall clock
Television	Electric/gas stove	Mattress
Radio/stereo	Sofa set	Blankets
DVD/VCD/VCR	Table	Bed

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3 indices were computed:

- ***Index for asset here*** – this is the index for the assets which were at the household
- ***Index for assets elsewhere*** – for assets belonging to the household but are kept elsewhere

- *Index for assets here and elsewhere* – for household assets owned here and/or owned elsewhere

Do files:

*Assets here* – computing assets here index and assets elsewhere index

*Assets here there* – computing the combined asset here and elsewhere index

### **Livestock index**

The livestock index was computed on the basis of the livestock owned by household. Livestock considered included cattle, goats, pigs, chicken, and donkeys

The computations were done per round.

*Do file:*

*Livestock index*

### **Composite index**

Two composite indices were computed:

1. A composite index from a combination of assets owned by the household here or elsewhere, the household amenities, livestock own by the household and the room density.
2. A composite index as in 1 above but excluding assets elsewhere.

*Do file:*

*Composite*

### **Household expenditure, size and composition**

The monthly household expenditure was estimated by adding up the expenditures during the month, with the weekly expenditure multiplied by 4.2857 to get the estimate for the month.

The residency file was used to compute the household size during a particular round. The equivalent household composition was computed using three different criteria; taking a child to be equivalent to

- A quarter an adult
- Half an adult
- Three quarter an adult
- An adult

### **Expenditure per capita**

The expenditure per capita was computed by dividing the monthly household expenditure by the household composition

### **Poverty classification**

The dwelling, assets and the expenditure per capita indices were then used to classify a household to be poor or not. Two methods were used;

## **1. Absolute poverty**

The official Nairobi poverty line (Kshs.2913)<sup>1</sup> was used to classify a household to be poor or not poor. This method was only used for the expenditure per capita since it was in monetary units. This was done by household (by round)

## **2. Relative poverty**

This was done for all the three indices, and the computation was done by years. The median (50% of the cumulative indices) of the index during a year was taken as the cut off point and was used to classify a household to be poor or not poor.

## **PCA**

The PCA procedure was then used to compute the composite wealth indices, with and without assets owned elsewhere.

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<sup>1</sup> The adult equivalent poverty line per month  
Source: Kenya economic review 2007