

Problems in Measuring Wellbeing

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Introduction

The introduction to Wellbeing in Developing Countries (WeD) project identified the following potential areas of research: objective human needs, subjective quality of life indicators, household resource profiles, locally and country based economic, social, cultural and political configurations. Some of these are to be studied at the household or individual level, others at community and country levels. Most of the instruments that deal with households and individuals have to do with establishing criterion (or criteria) for identifying some attribute of wellbeing (including poverty status), security, vulnerability or other social indicators. This paper is concerned with some of these measures and the problems that have been met or that could be faced in using these methods in Ethiopia. The next part deals with a summary review of the different methods available to measure welfare (or poverty broadly defined) as measured using some standard of living measurement indicator. Finally some of the problems of these measurements and solutions are suggested.

Measuring wellbeing

The basic starting point in measuring poverty is defining it. And there is little agreement in this, except in that it should enable the identification of those with low level of welfare in terms of standard of living. In spite the differences there is a growing work, some practical country specific others international measurement results (such as the one spearheaded by the World Bank and donors in developing countries) and other theoretical (as could be seen in the growing literature on poverty measurement in journals particularly in after the mid 1990s. In the developing countries, the measurement affects a larger proportion of the population as compared to its effect on policy in the developed world.

The practical works measuring poverty exhibit a range of differences that could sometimes lead to conflicting results. The major issues that lead to differences, among others revolve around choice of:

- a. the standard of living measurement criterion
- b. income or the expenditure unit to be considered
- c. choice of equivalence scale to make the units comparable
- d. identifying a threshold (poverty line).

The standard of living of persons, households and communities depends on multidimensional factors and depending on an indicator would leave much to be desired. Expenditure is used as the only indicator in most important poverty indicators, such as the ones used by poverty monitoring units of the Ministries of Planning in the developing countries. These are used to decide on policy outcomes.

When using expenditure as a criterion, there is a need for caution as people may use savings, borrow to maintain consumption levels and people who could consume may consume less (misers may decide on frugal consumption).

Poverty calculation classifies people based on expenditure and an identified poverty line (or lines). But whose income is to be used? How should the different needs of the family or household members be considered?

Poverty line

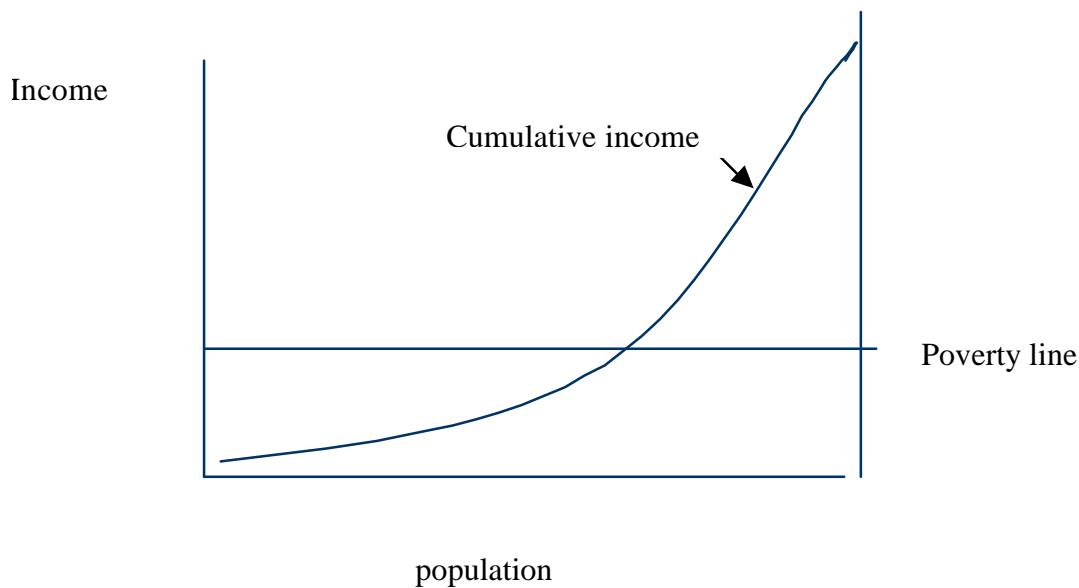
The most popular poverty lines that are widely used in the developing countries are the following:

- Food Energy Intake
- Cost of Basic Needs
- World Bank's \$1 or \$2 a day
- (subjective social poverty lines)

Taking the Food Energy Intake measure, one could see the subjective elements that go into making this 'objective measure':

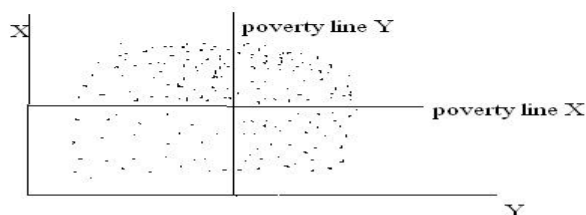
- a. Identify a basic food bundle (usually of the poorest -% in terms of expenditure)
- b. Separate bundles for each region/social group
- c. Convert the foods into calories and scale up or down to meet a certain minimum calorie requirement- adults and draw adult equivalences
- d. Multiply each type of the food items in the bundle by the price of that particular food
- e. Draw the poverty line

The following figure illustrates a single poverty line based poverty measure



The problem of using more than one poverty line can be illustrated using a two-dimensional poverty measurement criterion as shown in the following figure. The area of intersection between X and Y is easy to interpret. However, when one looks at the union area, things start to be problematic, particularly concerning the areas where one is positive while the other measure is negative. It is important to note that these are different from the composite indices such as the Human Development Index, which are constructed applying arbitrary weights to the indicator variables.

Two dimensional poverty lines



The next area is the aggregation problem, where a whole range of indicators could be used. Aggregation, as mentioned earlier has to consider the unit of measurement or draw an equivalence scale. The OECD and the WHO use very similar measures to reduce household

members to a unit of measurement – adult equivalent. The first adult counts as one, while other adults in the household count as 0.5, while children count as 0.3 adult.

Household	Points
Couple with no children	1.5
Couple with two children	2.1
A woman with two children	1.1
Single person	1.0

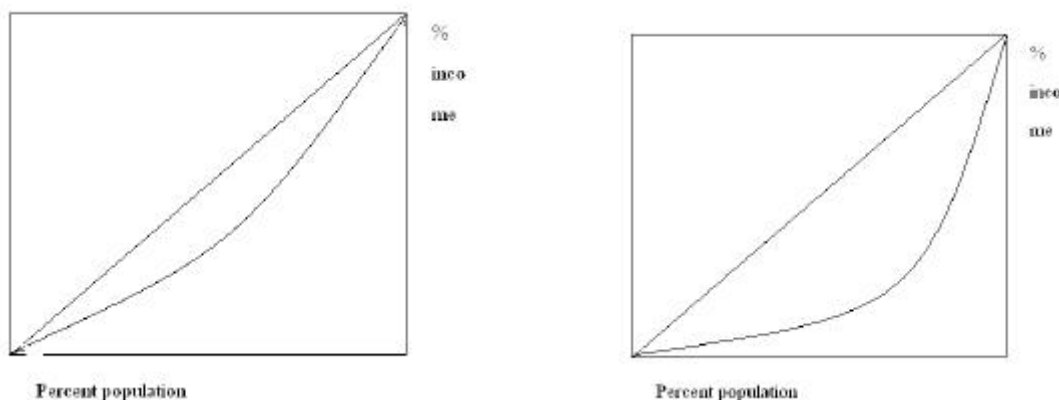
One set of measures rely on the Gini Coefficient

that is basically derived from the Lorenz curve. Another set are the class of poverty measures based on the relative distance the individual measures have from the poverty income level.

- Head count ratio – the poor/total population
- Poverty gap- the distance each x has from the poverty line
- Poverty gap squared – to make the value of improving the poorest more important

Lorenz curves as shown here could be used to compare inequity in income distributions. Or the Gini coefficient, which is based on the Lorenz curve could be employed

Lorenz curves with different income distribution populations



Major problems of measurement

- Household definition and composition
 - Composition small children, youngsters, older children, old people
 - Some members may not have a full member status extended family, ‘tiegna’
 - Destitute, movement from household to household
- Data
 - Based on recall 7/30/60/365 days recall

- The questions asked – problems of understanding
- Who should answer what within the household?
- Local units of measurement
- Kelkelo, menilik, wancha, sini, birchiko, isir, kuna, chinet
- Prices – which price bundle ‘the poorest buy in the most expensive market’
different price sets- seasonal, spatial, and the specific market (within the same market)
- Valuation of own production
- Food and consumer goods bundle identification
- Diversity of communities
- Seasonal variation in consumption patterns of the same community
- Cyclical changes in agricultural production influence baskets

What could be done to overcome the problems?

- Careful methodological approach
- Honesty in recognizing limitations
- Multidimensional poverty lines instead of over killing the single poverty line based approach
- Engaging policy makers early