

New Multidimensional Poverty Measurements and Economic Performance in Ethiopia

By Teshome Adugna(PhD)¹

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1. Introduction

During the last five decades, different approaches have been used in explaining the concepts and measurements of poverty in developing countries. The earlier approach was using single indicator to measure poverty. This approach of poverty concepts and measurements was criticized by many people who think measurement of poverty must include variables other than the level of consumption or income. Actually the utility (welfare) of the people was not only affected by income or consumption but also by non-income like health, education, water supply...etc. To solve the limitation of the single indicator of poverty measurements, few composite indexes of poverty measurements have been introduced by different international institutions during the last two decades including United Nation (UN).

In their latest effort, United Nation Development Program (UNDP) and Oxford Poverty & Human Development Initiative (OHPI) introduced the new multidimensional poverty measurement which attempted to include more additional variables in the measurement of poverty. The new poverty measurement is known as Multidimensional Poverty Index (MPI). According to MPI, 90 percent of Ethiopia people are under poverty line which put Ethiopia 103rd out of 104 developing countries. What strikes me is the failure of the report to reflect the current reality of the country.

It is an open secret regarding the efforts of the Government of Ethiopia (GoE) to make poverty history in the country. To realize this dream, the government prepared and implemented a full-fledged policy framework during the last ten years. Especially since 2004/05, the Plan of Sustainable Development to End Poverty (PSDEP) has been implemented with remarkable success. Even recently, evaluating the PSDEP performance, the new Growth and Transformation Plan (GTP)² which is expected to achieve food self- sufficiency at the end of the plan year (2015) has been released for public debate. Though I need time to comment on the visibility of

¹ Teshome A. is an Assistance Professor at Ethiopia Civil Service College. E-mail address: feysaduu@yahoo.com

² The Growth and Transformation Plan (GTP) expected to be implemented between 2011 and 2015.

the new government GTP, I do not have any doubt regarding the successful performance of the economy during the last few years.

Contrary to this fact, the latest OPHI report gives the wrong impression for many readers regarding the economic performance of the country. For instance, accepting this new report, some writers started to question the economic performance of the country. My problem is not why Ethiopia's poverty intensity is high as compared to other developing countries; rather my concern is what happens to all success stories mentioned during the last few years by GoE and other International Institutions like World Bank and International Monetary Fund (IMF). Then, using this opportunity, I will try to present the new multidimensional poverty measurement and analyses the economic performance of Ethiopia during the last five years.

This article has six sections including introduction. The next section presents the concepts and different types of composite index of poverty measurements. It focuses in explaining the two different types of multidimensional approaches of poverty measurements. The third section explains the new multidimensional poverty measurement. The fourth section presents and analyzes the success story of the Ethiopian economy which was not considered by the latest new multidimensional poverty measurements. The fifth section identifies the major limitations or problems of MPI from the Ethiopian context. The last section is a summary.

2. Composite Index of Poverty Measurements

Poverty³ is defined as the inability of the people to attain the minimum level of living standard. Poverty includes many aspects like lack of freedom, education and health, inability to participate in decision-making, lack of personal security, inability to participate in the life of a community and threats to sustainability and intergenerational equity etc. which cannot be measured. Various international institutions have tried to introduce a number of composite indexes of poverty measurements.

Few of the composite indexes have tried to add more variable in the measurements of poverty. Human Development Index (HDI) and Human Poverty Index (HPI) are some of the composite index which was introduced by the UN. The HDI is a summary of human development. It measures the average achievement in a country in three basic dimensions of human

³ Poverty has many faces, changing from place to place and across time, and has been described in many ways.

development: A long and healthy life, as measured by life expectancy at birth; Knowledge, as measured by the adult literacy rate (with two-third weight) and the combined primary, secondary and tertiary gross enrollment ratio (with one-third weight); and a decent standard of living, as measured by GDP per capita in purchasing power parity (PPP) terms in US dollars. The HPI measures deprivation in the three basic dimensions of human development:

- A long and healthy life-vulnerability to death at a relatively early age as measured by the probability at birth of not surviving to age 40;
- Knowledge-exclusion from the world of reading and communication, as measured by the adult illiteracy rate;
- A decent standard of living-a lack of access to overall economic provisioning as measured by the unweighted average of two indicators, the percentage of the population not using an improved water source and the percentage of children under weight for age.

Both human development and human poverty are defined in terms of the ability of the population to acquire and use capabilities. The Human Development Index measures deprivation in terms of the absence/prevalence of the capabilities to acquire and use three essential elements of human life: longevity, knowledge and a decent standard of living. The HDI and HPI have been criticized for not including additional dimensions, such as those identified as human rights or within the MDGs. We very much wished the MPI to include additional vital dimensions. Unfortunately, we can state categorically that comparable data of sufficient quality are not available from the same survey in the public domain for 100+ less developed countries to consider *any* other dimensions, nor to include consumption data (OPHI, 2010).

3. New Composite Poverty Measurement by Oxford University and UNDP

Recognizing the limitation of HDI and HPI, in their latest effort, UNDP and OPHI, have presented the new composite poverty measurement. This new measurement is called Multidimensional Poverty Index (MPI). MPI is an index of acute multidimensional poverty. It reveals the combination of deprivation that batters a household at the same time. It reflects deprivation in education, health and living standard for people across 104 counties. The health dimension is measured by using child mortality and nutrition. The education dimension is measured by years of schooling and child enrollment. The last dimension is living standard which is measured by the availability of electricity, drinking water, sanitation, flooring, cooking fuel and assets.

In the report, the OPHI forwarded their arguments in favor of the chosen dimensions. First, parsimony: having only three dimensions simplifies comparisons with income poverty measures. Second, consensus: while there could be some disagreement about the appropriateness of including work, empowerment, or physical safety in a poverty measure, the value of health, education, and basic standard of living variables is widely recognized.

Third, interpretability: there are substantial literatures and fields of expertise on each of these topics, which will make the analysis of the MPI easier. Fourth, data: while some data are poor, the validity, strengths, and limitations of various indicators are well documented; such documentation is not as developed in domains such as empowerment. Fifth, inclusivity: human development appreciates both the intrinsic and the instrumental value of these dimensions. These same dimensions are emphasized in human capital approaches that seek to clarify how each dimension is instrumental to income growth.

Each dimension is equally weighted; each indicator within a dimension is also equally weighted⁴ (OPHI, 2010). The data sources are from different surveys conducted in selected developing countries: the Demographic and Health Survey (DHS), the Multiple Indicators Cluster Survey (MICS) and the World Health Survey (WHS). But due to lack of data, the report takes the available data between 2000 and 2010. Here, a household is identified as multidimensional poor if and only if it is deprived in some combination of indicators whose weighted sum exceeds 30 percent of all deprivation. Those people who were involved in introducing the new index acknowledged that the indexes not include all the information that needed to indicate the intensity of poverty.

4. Economic Performance in Ethiopia

OPHI used DHS, WHS and MICS between 2000 and 2010. In Ethiopia the last DHS is conducted in 2005 and Welfare Monitoring Survey (WMS) is conducted in 2004/05. This indicates that the latest OPHI report used 2004 and 2005 survey to compute MPI in Ethiopia. The purpose of this section is to present the economic performance of the country between

⁴ The poor households are identified and an aggregate measure constructed using a methodology proposed by Alkire and Foster (2007, 2009).

2004/05 and 2008/09 which are not considered by OPHI. Let me try to put the change of the economy based on major economic indicators: Gross Domestic Product (GDP), Per Capita Income (PCI), education provision (number of schools, number of students and number of class rooms), water supply coverage (national, rural and urban) health service coverage (number of hospital beds, number of health officers and number of health centers).

Gross Domestic Product (GDP): It is the total domestic product produced in the given period (Usually one year) in the country. In Ethiopia the total real GDP⁵ was 83 billion birr in 2004/05, which reached to 127 billion birr in 2008/09. The real GDP⁶ during this period was increased by 52 percent. In average, per year, the real GDP increased by 10.4 percent which is above the 7 percent planned to meet millennium development goal of poverty reduction. The growth in real GDP would reduce poverty incidence by 10.8 percent. At the end of 2008/09 the income poverty index reduced to 29 percent⁷ as compared to 39 percent in 2004/05. On the other side the per capital income is also increased per year by 9.9 percent during the same period. The increase in real GDP and per capita income strongly contributed in the decline poverty incidence based on the income poverty measurements. The growth of real GDP and per capital income is not the only indicator of the performance of the economy or of the decline in poverty. Recognizing this fact I incorporated the other social indicators.

As mentioned above, the variables included in under social indicator⁸ are: education, health and water supply coverage. The provision of education plays significant role in improving the living standard of the household. In this regard, the number of schools increased from 17,219 in 2004/05 to 30,301 in 2008/09. During these years, total new number of schools constructed was 13,082. In the same year the number of teachers, number of students and number of class rooms increased by 71.5, 33.7 and 3.4 percent respectively.

⁵ Just to remind my reader, the real GDP exclude the change in the price⁵. It shows only the change in the monetary value of real production and service produced during the mentioned years.

⁶ If I consider the change in price, GDP increased from 106 billion birr 2004/05 to 336 billion in 2008/09. This GDP called the nominal GDP which include both the change in price and change in the real output.

⁷ The estimation conducted based on the 7 percent economic growth that expected to reduce poverty incidence by halve at the end of MDGs.

⁸ I am not saying these are the only social indicator that show change during the s study year. I just only want to mention few of the change during the last few years.

Table 1: Selected indicators of economic performance in 2004/05 and 2008/09

Indicator	2004/05	2008/09	Percentage change
Real GDP (In million Birr)	83,804	127,737	52.4
Per Capita Income (in USD)	143	217	49.6
Education dimension			
No. of schools	17,219	30,301	78.0
No. of teachers	188,717	323,576	71.5
No. of students	12,180,775	16,281,590	33.7
No. of class room	122,323	126,455	3.4
Access to water supply			
Rural water supply	31.4	61.5	95.8
Urban water supply	83.1	88.6	6.6
National water supply	39.4	66.2	68.0
Health service dimension			
Number of hospitals	7845	13,808	76.0
Number of health Centers	713	1188	66.7
No. of health officers	608	1749	187.7

Source: NBE, 2008/09 and CSA, 2009

The second variable which is showing the performance of the economy is the provision of water supply. Availability of water supply is one of the welfare indicators which increase the health status of the household and at the same time which gives extra time for households to involve in wage earning activities. The national drinking water supply increased from 39.4 percent to 66.2 percent. In terms of urban and rural area: the water supply in the urban area increased from 31.4 percent in 2004/05 to 61.5 percent in 2008/09. In the urban areas the drinking water supply increased from 83.1 percent to only 88.6 percent in the same period. The new water supply policy and institutional reform in the sub sector contributed for the improvements of water coverage in the national and rural area.

The other indicator of the performance of the economy is the provision of health service. Government prepared the health sector development program to improve the health coverage in the country. The health sector program includes activities like the health extension program, maternal health service, immunization, improving hospital services, construction of health center and malaria and TB prevention and control. During the last five years the number of hospital beds increased by 5963. It increased by 76 percent in 2008/09 as compared to 2004/05. The other indicator like the construction of health centers and number of health officers increased by 66 and 187 percent between 2004/05 and 2008/09. Such an improvement in health infrastructure would improve the health status of the people which has an impact on the intensity of poverty.

There are various other changes recorded during the last few years which I have not mentioned here. For instance the government has undertaken effort to control food security through National Food Security Program⁹. The Program rests on three pillars: increasing the availability of food through domestic (own) production; ensuring access to food for food deficit households; building household assets¹⁰; and, strengthening emergency response capabilities. The Voluntary Resettlement Program has been intended to create access to land for food insecure households who live in highly degraded and over populated parts of the country. The program started in 2002/03, and considerable progress has been made since then. Up to 2006/07 around 178 thousand household had voluntarily resettled to enhance their food security. In 2006, the number of Safely Net Program beneficiaries increased to 7.2 million and the same number of beneficiaries (MoFED, 2006/07).

Someone can see from the above presentation about the increased effort of social development in the country. Though, there is absence of effective institutional coordination during the last five years, the government has done its level best to achieve the majority of its development plan. But the groups of people who did not know anything about Ethiopia's economic performance use old figures to rank the country as before. I do not have any problem to include more dimensions to measure poverty. I hope all OPHI members accept that value of Ethiopia MPI is overestimated due to excluding the recent economic performance in the country.

⁹ The National Food Security Program seeks to ensure food security for five million chronically food insecure people and another 10 million who are badly affected by shortages in drought years.

¹⁰ Building Household Assets: Asset depletion has been considered as one of the principal causes of food insecurity in the country.

5. Limitation of the new poverty measurement

In poverty measurement someone must apply the latest data and information. This may represent the current situation of a given country to suggest or design appropriate policy. Accordingly, the main purpose of OPHI should be to show the severity of poverty in developing countries in order to set proper measures to reduce poverty. This tool could be used to target the poorest, track the Millennium Development Goals and design policies that directly address the interlocking deprivations of poor peoples' experience (OPHI, 2010). Although I do not have stronger evidence about other countries, I can disagree with the outcome of MPI in presenting Ethiopia's recent level of poverty intensity. This happened due to the absence of latest data, equal weighting problem and missing observation.

To start with, the first limitation of the MPI from Ethiopia's context is the absence of latest data on demographic and health survey. The study used 2004/05 welfare monitoring survey and 2005 demographic health survey. Both surveys cannot represent today's Ethiopia poverty intensity. As I explained above in section 4, many changes have been observed in the country since 2004/05. Unlike the years before 2004, no significant economic volatility has been observed in the country except the inflation and lack of foreign reserve in 2008 and 2009. Even these problems were easily maintained (controlled) without aggravating the intensity of poverty in the country. Here my problem is with the information applied in these measurements since they lack the latest data and don't provide relevant feedback for policy makers or international institutions. My question then becomes "what do they really want to tell/advise Ethiopia government?" by using 2004 outdated data. The government is already aware of the multidimensional nature of poverty and due to this fact has invested and is still investing a lot of money in all poverty related activities.

The second problem of MPI is equal weighting problems. In this regard, as mentioned by one of the co-writers of the new multidimensional approach, they are ready to talk about the proper weighting system. Like other people I believe that it is not fair to give equal weight for child mortality and nutrition level in the same family. We must have some form of different weighting mechanisms based on household level survey. At least someone must contact the household to know the extent of child death and nutrition level in their living standard rather than decide the

weighting in the office. In the family where the number of children is high, the death of a child may have less impact as compared to level of nutrition or otherwise¹¹.

The last critic of the new measurements is missing observations/variables. The new poverty measurement does not include all variables related to poverty. In this regard they already acknowledged the index has not included all the observation. The index used only ten indicators. At least when we compare it with the MDGs¹², it is less by thirty eight indicators.

6. Summary

During the last few decades, many efforts have been undertaken to explain and measure poverty. Today no one questions the importance of composite index to measure poverty in developed and developing countries. That is why OPHI introduced the new multidimensional measurements of poverty which is expected to replace HPI. It is an encouraging move to improve the poverty measurement by including more variables in the new index. But the lack of up to date data, weighting methods and missing variables affects the effectiveness of the new MPI. The economic change observed since 2004 reduces the credibility of the new ranking report from Ethiopia's context. The OPHI must consider the latest development in developing countries rather than using the old data only to calculate the index. If their intention is to advise the Ethiopian government, what currently exists in the country today is completely different to what it was in 2004. That means their advice does not hold water for anyone who has witnessed the outstanding economic performance of the country during the last five years. Unless they retract their analytical mistake and improve the MPI ranking by reflecting the objective reality, their latest ranking cannot go beyond paper work.

References

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¹¹ Here I am not saying that the value of children decline when the number of children increase. But the death of one child does not have the same pain in the different family size.

¹² The MDGs are a set of eight goals for which 18 numerical targets have been set and over 40 quantifiable indicators have been identified.