

A critique of the Income Poverty Line and Global Multidimensional Poverty Index

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Abstract

Although there is no perfect poverty measure, an effective one should be least imperfect. As this paper defines, a least imperfect poverty measure is one which sufficiently acknowledges that poverty is, by nature, multidimensional, complex, experiential and individual- or context-specific. This paper analyses the degree of imperfection of the extensively and commonly used poverty measures: the Income Poverty Line (IPL) and Global Multidimensional Poverty Index (Global MPI). The analysis reveals that: (i) the IPL and Global MPI do not sufficiently acknowledge the multidimensionality of poverty; (ii) the two poverty measures do not adequately measure poverty as an experiential phenomenon; and (iii) the IPL does not recognise poverty as individual- or context-specific. The Global MPI has achieved remarkably on disaggregating data by context, but the measure is still wanting as far as the heterogeneity of poverty is concerned. Thus, the paper concludes that the IPL and Global MPI are not least imperfect.

“What we measure affects what we do; and if our measurements are flawed, decisions may be distorted.” (Stiglitz, Sen and Fitoussi, 2009, paragraph 3)

Introduction

Today, world governments and their development partners are working towards eliminating, by 2030, all forms of poverty everywhere in the world – Sustainable Development Goal 1 (ICSU, ISSC, 2015; Koehler, 2017). Poverty measurement is, therefore, of utmost significance. It helps to know who the poor are, how many they are, where they live and what their deprivations are (Haughton & Khandker, 2009; Niemietz, 2011; OPHI, 2015; Ravallion, 2016; Schelzig 2004; World Bank, 1990; 2005). This backdrop accentuates the need for least imperfect poverty measures as there are, as World Bank (2005) affirms, no perfect measures of poverty. Today, the Income Poverty Line (IPL) and Global Multidimensional Poverty Index (Global MPI) are the most used poverty measures. Are these two poverty measures the least imperfect? To answer this question, this paper critiques the IPL and Global MPI.

The Income Poverty Line and Global Multidimensional Poverty Index

This section sheds light on what the IPL and Global MPI entail.

The Income Poverty Line

The IPL is a pioneering poverty measure, developed by Charles Booth and improved by Benjamin Seebohm Rowntree in the late 19th Century (Rowntree, 1902; Spicker, 1990; Townsend, 1970). It refers to a minimum income level, e.g. USD 1.90 a day, a person or household requires to meet basic needs, such as food, clothing and housing (Demombynes & Vu, 2015; ICSU & ISSC, 2015; Rowntree, 1902, Schelzig, 2004, Spicker, 1990, World Bank, 2005). The IPL is, today, the dominant poverty measure – it is being used to design, monitor and evaluate poverty alleviation efforts at both national and international levels.

The IPL is determined in four ways:

- (i) *Food Energy Intake (FEI)*, which entails determining a level of consumption expenditure or income that allows an individual to acquire food just adequate for his or her food energy requirement (Haughton & Khandker, 2009; Ravallion 1998; 2016).
- (ii) *Cost of Basic Needs (CBN)*, which involves totalling the cost of acquiring sufficient food for adequate nutrition (usually, 2 100 Calories per person per day) and non-food essentials such as housing and clothing (Haughton & Khandker, 2009; Ravallion, 1998; 2016; World Bank, 2005).
- (iii) *Arithmetic mean or median of the distribution of national income*, which is usually used in the developed world where poverty is conceived in relative terms (Ravallion, 2016). For instance, the European Union region uses 60% of the region's median income as its poverty line (Belfield, Jonathan, Hood, & Joyce, 2014).
- (iv) *Minimum Income Question (MIQ)*, which is used to compute subjective poverty lines (Ravallion, 2016). It entails asking people the minimum income level that they need to meet their basic needs (Haughton & Khandker, 2009; World Bank, 2005)

The Global Multidimensional Poverty Index

The Global MPI is an improved version of the MPI (Alkire & Jahan, 2018; UNDP & OPHI, 2019). The notion for measuring poverty using MPI emanates from the realisation that income or money is not all that people need to live a decent life. Thus, the IPL cannot sufficiently measure poverty. MPI was, therefore, developed in 2010 and improved in 2018 as a complement of the IPL (Alkire & Santos, 2010; Alkire & Jahan, 2018; Ravallion, 2016; UNDP & OPHI, 2019).

The Global MPI is based on three human development dimensions: education, health and standard of living; and it has ten weighted indicators, namely years of schooling, school attendance, nutrition, child mortality, cooking fuel, sanitation, potable water, electricity, housing, and assets (Alkire & Jahan, 2018; OPHI, 2018). A household is regarded as 'multidimensionally poor' if it is deprived in one-third of the weighted indicators; or 'MPI destitute' if it experiences extreme deprivation in the ten indicators (Hulme, 2015; OECD, 2013).

Are the Income Poverty Line and Global MPI least imperfect?

Characteristically, poverty is multidimensional, complex, experiential, and individual- and context-specific (Ali-Akpajiak & Pyke, 2003; Chambers, 1983; 2012; Sen, 1999; World Bank 2001). A least imperfect poverty measure, as this paper defines, is that which sufficiently captures or acknowledges the characteristics of poverty. Thus, this section examines the degree of imperfection of the IPL and Global MPI.

Multidimensionality of Poverty vs. the IPL and Global MPI

Poverty has multiple dimensions, which can be grouped into six as:

- *Financial* – entails lack of income, savings and access to loans from formal financial institutions as well as being in debt (Banerjee 2016, Chambers, 2012; Laderchi, 2000; World Bank, 2001).
- *Economic* – includes a lack of economic resources and entrepreneurial opportunities, being unemployed, and poor infrastructure (Ellis, 1984; Hulme & McKay, 2007; SIDA, 2017).

- *Material* – includes a lack of household assets, utilities and amenities, and homelessness (Chambers, 2006;2012; Gordon, 2010; Kus, Nolan, & Whelan, 2013; Townsend, 1979; 1987).
- *Social* – lack of social capital and other social resources, and inability to participate in social activities and take up responsibilities that are societally encouraged or approved (Gordon, 2010; Raphael, 2011; Townsend,1979; 1987).
- *Environmental* – entails living in areas that are isolated, vulnerable to disasters and crime, and that lack infrastructure, potable water and electricity (Chambers, 1994; Narayan, Patel, Schafft, Rademacher, & Koch-Schulte, 2000).
- *Seasonal* – entails realities (undesirable life conditions) that people, especially the poor, experience repeatedly at certain times of the year, which are brought about by changing seasons, especially climatic seasons (Chambers, 1979; 2012; Devereux, Sabates-Wheeler & Longhurst, 2012).

The multiple poverty dimensions, described above, reinforce each other in a way that makes poverty complex (Chambers, 2012; Gweshengwe & Noor Hasharina Hassan, 2019). A least imperfect poverty measure should sufficiently capture the dimensions of poverty. Do the IPL and Global MPI adequately capture the multidimensionality of poverty?

The IPL does not capture the multidimensionality of poverty. It measures poverty exclusively in the domain of income; hence, it does not capture non-monetary poverty dimensions, especially those that cannot be monetised, such as life expectancy, mortality, illiteracy and shame (Desarrollo, 2004; Headey, 2006; Human Development Report, 2010; Ravallion, 1996; Sen, 1976; 1999, World Bank, 1990; Weerahewa & Wickramasinghe, 2005)

The apologists of the IPL argue that income correlates with other poverty dimensions like human capital and social relations (Desarrollo, 2004; United Nations, 2009). The claimed correlation is, however, imperfect (Desarrollo, 2004). Alkire, Foster, Seth, Santos, Roche and Ballon (2015) state, “there are large mismatches between income poverty and deprivations in other indicators” (p. 10). A poverty study in China concluded that “the association between monetary poverty and other dimensions of poverty is not high enough to warrant the use only of monetary poverty” (Yan & Mukhopadhyaya, 2016, p. 18). Thus, income is not a perfect proxy for the non-monetary dimensions of poverty (Alkire et al., 2015). The act of converting non-monetary poverty dimensions into a single monetary index is reductionistic (Chambers, 1995; Devas, 2004; Herrera, 2014; Hulme & Mosley, 2005). There are poverty dimensions that people see as more significant and are better measured discretely (Herrera, 2014; White, 1999).

The exclusive focus on income in measuring poverty is contentious. In the UK, homeowners constitute half of the people said to be in poverty (Burrows & Wilcox, 2001; House of Commons, 2009; Wallace, 2016), and the majority of these poor homeowners are asset-rich pensioners (Knight, 2005). It is debatable to consider a pensioner who is income-poor but asset-rich as a poor person. Furthermore, the IPL’s exclusive focus on income/consumption is misleading and could result in a ‘false positive’ – reporting a decrease or absence of poverty incorrectly. For instance, the Indian poverty line, which is based on calories (food-energy intake), caused the government to report a remarkable reduction in the number of poor people in India, but a multidimensional poverty measure revealed that many Indians are extremely poor (Guruswamy & Abraham, 2006). This made the critics in India call the poverty line a mere starvation line, good only for indicating satisfaction of a person’s hunger (Guruswamy & Abraham, 2006).

The inability of the IPL to capture the multidimensionality of poverty has led Sabina Alkire and Maria Emma Santos to develop the MPI, now the Global MPI, to complement the IPL

(Alkire & Santos, 2010; Alkire & Foster, 2011; Human Development Report, 2010). But does this new poverty measure capture the multiple dimensions of poverty satisfactorily?

In terms of respecting the multidimensionality of poverty, the Global MPI is much better than the IPL. The Global MPI acknowledges, as Alkire and Santos (2010, p.7) state, “the combination of deprivations that batter a household at the same time.” As stressed earlier, the Global MPI covers three human development dimensions: education, health and standard of living and ten deprivation indicators. Thus, the efforts of Alkire and Santos’ are commendable.

The Global MPI, however, does not sufficiently capture the multidimensionality of poverty. It omits a large number of poverty dimensions (Dotter & Klasen, 2014; Herrera, 2014; Ravallion, 2011). Even the three measured dimensions – health, education and standard of living – are not adequately covered. For instance, health is more than mortality and malnutrition; it entails other psychological and physiological health problems, such as depression, anxiety disorder, disability and bed-ridden illness. According to Ravallion (2011), the standard of living component covers far fewer poverty dimensions.

To summarise, the above analysis reveals that the IPL and Global MPI do not sufficiently capture the multidimensionality of poverty. The poverty measures, combined, only cover four dimensions: income, health, education, and standard of living, and furthermore, these four dimensions are not adequately covered. Thus, the IPL and Global MPI underestimate the actual state and extent of poverty in a society.

The experiential nature of poverty vs. the IPL and Global MPI

Poverty is an undesirable state of being or condition of life; hence, it is experiential (Chambers, 2012; Sen 1999). The undesirable states or conditions of life include being illiterate, undernourished, unhealthy, powerless and depressed; not-comfortably sheltered; and unable to participate in community activities (Bourguignon & Chakravarty, 2003; Sen, 1999; World Bank, 2001). Thus, in this case, a least imperfect poverty measure is one which focuses, adequately, on the states or conditions of life (people’s actual achievements) and not income and other resources (people’s possessions). Do the IPL and Global MPI measure up to this trait of a least imperfect poverty measure?

The IPL, as highlighted earlier, focuses exclusively on income or consumption – the means to desirable states or conditions of life. The IPL apologists assert that income is a chief means through which all ends are attained (White, 1999); hence, the focus on income in poverty measurement. This assertion, as White (1999) affirms, is incorrect: other ends cannot be sufficiently achieved through income alone. For instance, Stewart, Saith, and Harris-White (2007) discovered that 53% of malnourished Indian children in their study were from households that were not income-poor. Also in India, in a study by Franco et al. (2002), 43% of children and 60% of adults who were deprived in education were not from income-poor households (cited in Yan & Mukhopadhaya, 2016). In contrast, households can achieve other ends (desirable conditions of life) even if they are income-poor. Again in the study by Stewart, Saith, and Harris-White (2007), 53% of the children living in income-poor households were well-nourished.

As White (1999) further argues, the monetary means do not “necessarily lead to the ends” (p. 504), as that depends, according to Sen (1999; 2009), on people’s psychological, biological and physical conditions, and the environments they live in. A person “could be well off, without being well” (Sen, 1987, p. 1). That is, having enough money or access to basic goods and services does not guarantee a decent life, as that is a function of a person’s abilities to use (convert) them to improve his or her life (Sen, 1999). For instance, the 2012/13 UK income distribution study revealed that having a vacation abroad was the activity that the pensioners were most deprived of, and the common reasons given were poor health and disability (Carr, Councill, Higgs & Singh, 2014). As Mahbub ul Haq (1995) noted, “there is no automatic link

between income and human lives” (p. 14). Thus, it is misleading to measure poverty based on means (income) and not actual achievements (states or conditions of life).

The Global MPI, for the most part, focuses on people’s states or conditions of life. Many of the weighted indicators are actual human achievements. Although the Global MPI’s focus on actual human achievements (conditions or states of life) is a remarkable achievement in poverty measurement, there is still a gap. There is no clear link between the weighted indicators and other human achievements, such as powerlessness, insecurity, shame and isolation, that are not covered by the Global MPI. Furthermore, the Global MPI is deficient even in the dimensions that it measures. For instance, malnutrition and mortality inadequately represent people’s overall health. In fact, how malnutrition and mortality represent other health dimensions is unclear. A household can score well on malnutrition and mortality but still have undesirable health conditions, such as disability, mental illness or bed-ridden sickness. Can such a household be considered not health-poor? On the education dimension, years of schooling and child school attendance are indirect and deceptive indicators of literacy. Meeting years of schooling or school attendance requirement does not guarantee one’s literateness or cognitive skills development. People’s educational achievements should be measured directly by evaluating their cognitive skills and not by access to schooling (Santos, Lugo, López-Calva, Cruces, & Battistón, 2010). Lastly, the weighted indicators of the standard of living component focus mainly on ‘means’ and not actual living conditions or states. For instance, having household assets does not guarantee a desirable life condition. In Brunei, some households are severely indebted, and the debts are causing psychological distress, but they are driving good cars, which are bought on loan (Gweshengwe, 2019; Noor Hasharina Hassan, 2017).

In summary, as the above analysis reveals, the IPL and Global MPI do not adequately measure poverty as an experiential phenomenon. The IPL focuses on the means (income) to achieve the desired conditions of life and not the actual human achievements. The Global MPI respects the experiential nature of poverty as it focuses on people’s actual achievements, but it does not go far enough.

The individual- and context-specific nature of poverty vs. the IPL and Global MPI

Poverty is “experienced differently by men and women and can differ according to geographical area, social group, and political or economic context” (Ali-Akpajiak & Pyke, 2003, p. 5). Thus, poor people are heterogeneous (Akpajiak & Pyke, 2003; World Bank, 2001). Their heterogeneities, as Sen (2009) observed, are personal – age, sex, disabilities, illness etc.; and relational – differences in attitudes, behaviour, way of thinking etc. The heterogeneities are shaped by social climate – cultural and religious norms, public health and education arrangements, crime, violence etc; and physical environments – environmental or geographic conditions such as climate and geomorphology (Sen, 2009). Needless to say, poverty measures should adequately acknowledge the individual and contextual variations of poverty. Do the IPL and Global MPI sufficiently treat the poor as a diverse group of people?

The IPL overlooks the heterogeneities of poor people (Weerahewa & Wickramasinghe, 2005). For example, the international poverty line of USD 1.90 (Jolliffe & Prydz, 2015; United Nations, 2015) treats the poor as a homogenous group. It considers equally poor, say, a retired woman in Brunei Darussalam and a middle-aged male farmer in rural Malawi with the same daily income but less than USD 1.90 a day. In reality, however, these two people’s poverty status is not similar. As observed by Baker and Grosh (1994), people with access to subsidized goods or free public services are less poor than those without, “even though their incomes and expenditures may be the same” (p. 3). This implies that a Bruneian woman is less poor than a Malawian farmer as she, unlike the farmer, lives in an economy with a fully-fledged welfare system. Also, people’s ability to use the money to better their lives is intensely influenced by age, gender, physical status (old age, illness, disability etc), intra-household dynamics (rules,

norms and customs), profession and geographical location (Sen 1999). Thus, a retired Bruneian woman and a middle-aged Malawian rural farmer are not equally poor – even though their less-than-USD-1.90-a-day income is the same. Their differences in age, sex, profession and geographical location make their deprivations varied despite having the same income below the international poverty line.

The Global MPI has attempted to reflect the heterogeneities of poverty, but is still lacking as far as the individual- or context-specific attribute of poverty is concerned. It has remarkably achieved disaggregating data by global regions, countries, rural and urban areas and ethnic groups (Alkire & Santos, 2010; 2014; Human Development Report, 2014), but this is only limited to the three poverty dimensions that the Global MPI covers. The Global MPI does not reflect the contextual variations of poverty that are not linked to health, education and standard of living. Also, the Global MPI does not do justice when it comes to poverty heterogeneities at the personal or individual level. Technically, the Global MPI uses the household as a unit of analysis (Alkire & Santos, 2010; Ravallion, 2011; Vijaya, Lahoti & Swaminathan, 2013); hence, it still bears the limitation of overlooking intra-household dynamics or inequalities (Human Development Report, 2010; Ravallion, 2011). The Global MPI regards a household deprived if there is one person malnourished, the death of a child, or a child who does not meet the education indicators (Dotter & Klasen, 2014). This does not tell us more about each household member's experience of poverty, as, in Vijaya, Lahoti and Swaminathan's words, "not all individuals within a household are equal" (2013, p.3).

To summarise, the IPL does not acknowledge the individual-or context-specific trait of poverty as it treats poor people as a homogenous group. The Global MPI recognises the heterogeneity of poverty but is limited to the three poverty dimensions that the measure covers. Also, the Global MPI hardly acknowledges intra-household differences.

Conclusion

Success in making a dent on poverty depends, among other aspects, on how poverty is measured. Although there is no perfect measure of poverty, an effective measure should be the least imperfect one. Poverty, characteristically, is multidimensional, complex, experiential and individual- or context-specific. Thus, a least imperfect poverty measure is one which sufficiently captures the characteristics of poverty. In light of this, this paper has analysed the degree of imperfection of the Income Poverty Line (IPL) and Global Multidimensional Poverty Index (Global MPI). The analysis shows that:

- (i) The IPL and Global MPI do not sufficiently respect the multidimensionality of poverty. The IPL covers only one dimension: monetary poverty and the Global MPI covers only three, namely health, education and standard of living. However, the dimensions that the measures focus on are adequately covered.
- (ii) The PL and Global MPI do not adequately measure poverty as an experiential phenomenon. The IPL, in measuring poverty, focuses exclusively on the means (income) to achieve a desirable condition of life; hence, the measure hardly acknowledges the experiential trait of poverty. The Global MPI respects the experiential nature of poverty as it focuses on people's actual achievements. However, it does not go far enough.
- (iii) The IPL does not recognise poverty as individual- or context-specific. The Global MPI has achieved, remarkably, on disaggregating data by context, but this is only limited to the three poverty dimensions that the measure covers. Also, the Global MPI hardly acknowledges intra-household differences.

Based on the above observations, the paper concludes that the IPL and Global MPI are not least imperfect, and more needs to be done to minimise their imperfection.

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