Poverty Lines, What are they telling us?

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Abstract

Global and local Poverty has been subject of study since early times, now a day, it seems like poverty alleviation is one of the most important and complex issues countries and regions are facing, and dealing with. None the less, poverty measurements lack of standardization and comprehensiveness, making difficult to compare and deeply understand poverty and its related issues.

This paper explores the relevant poverty measurements and thresholds literature, describes some common ways to measure and define poverty, acknowledges the large range of practices that governments and institutions use to gauge poverty and generate thresholds, and some of the challenges. Using household survey data and empirical analysis from a range of different economies such as Albania, Chile, Tajikistan, Timor-Leste (East Timor), and South Africa, the paper illustrates some of the problems of poverty thresholds -poverty lines do not represent a clear picture of poverty and deprivation-. The conclusion contains a summary of the findings and some recommendations.

Keywords: Poverty Measurements, household survey, poverty lines.

JEL Classification: I32, D12, D31, D63, 057.

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I. Introduction

There is international consensus that poverty alleviation is a top priority in the world today, however, there seems to be little consensus on the way countries and international agencies approach poverty measurements and define poverty.

Poverty portrays a state of deprivation on multiple levels, the lack of opportunities that prevents people from reaching a "minimum and socially acceptable" standard of living.

"To be poor is to be hungry, to lack shelter and to be sick and not cared for, to be illiterate and not schooled. But for poor people, in poverty is more than this. Poor people are vulnerable to adverse events outside their control. They are often treated badly by the institutions of state and society and excluded from voice and power in those institutions" (World Bank 2000).

"From a human development perspective, poverty is the denial of choices and opportunities for tolerable life" (UNDP 1997).

This condition is being measured in a numbers of ways and according to diverse approaches. Countries and international organizations lack harmonization in their assessment policies and methodologies. This absence of standardization contributes to a lack of clarity that has repercussions on decisions made by governments and policymakers.

Poverty measurements and the definitions of poverty lines have long been criticized, on the merits that thresholds do not always have clear relationships with deprivation and lack of opportunities. National and international poverty lines do not capture the existence of discontinuity between the poor and the non-poor.

By analyzing household data and poverty lines from a variety of countries, this paper illustrates the fact that poverty lines and thresholds have little or no empirical association within the state of deprivation or lack of opportunities that the poor have to face on daily basis. There are no discontinuities in the relationship between per capita income or expenditure and health, child nutrition, or well-being. No major breaks are found in standard of living in the vicinities of the poverty line, as one would expect to see if there were meaningful thresholds.

The paper explores the relevant poverty measurements and thresholds literature, describes some common ways to measure and define poverty, acknowledges the large range of practices that governments and institutions use to measure poverty and generate thresholds, and some of the challenges. Using household survey data and empirical analysis from a range of different economies such as Albania, Chile, Tajikistan, Timor-Leste (East Timor), and South Africa, the paper illustrates some of the problems of poverty thresholds -poverty lines do not represent a clear picture of poverty and deprivation-. The conclusion contains a summary of the findings and some recommendations.

II. Alternatives ways to define and measure poverty

Poverty is most commonly defined as material need or deprivation of essential goods and services like food, clothing and shelter. Sometimes access to health care and education is included in a more broad definition. For some authors poverty also includes social exclusion, the ability to participate in society, lack of education and information availability and access, Smith (1776), Kohr (1955), Sen (1987), Suarez-Berenguela and Pescetto (2003).

Ruggeri et. al. (2003) compare four currently used alternatives to measure poverty and set poverty lines: the monetary approach, the capability approach, the social exclusion approach and the participatory approach. They acknowledge that all four approaches have limitations and provide with different results of poverty counts. All approaches share some arbitrary and subjective elements in addition to construction problems. Monetary and capability approaches can overlook some causes of deprivation, were the social exclusion approach can be helpful. The empirical evidence shown in Ruggeri indicates that poverty rates differ significantly according to which approach is undertaken. Low levels of poverty according to one approach appear to be compatible with high levels of poverty when other measurements are used.

The most common definition of poverty is lack of "sufficient" income or expenditure to purchase a minimum bundle of goods and services required for human survival, "The cost of basic needs methodology".

The first step is to determine the cost of a basic bundle of goods to attain a minimum calories threshold frequently related to the World Heath Organizations and Food and Agricultural Organization (WHO/FAO) minimum caloric threshold (2,100-3,500 Kcal/day depending age, gender

and activity)[1]. With this data, a food poverty line is calculated. After the food poverty line (also called extreme poverty line) is set, some adjustments and allowances for non-food components are made, there are multiple methods of gauging the non-food allowances (Ravallion, 1996). The food and non-food components generally come from consumption habits representative of the society captured in local surveys.

Poverty is then measured as a comparison of owned resources and the cost of the minimum bundle of necessities. A household, or individual, is considered poor if its resources are below their needs. This poverty line, or bundle of necessities, is set as a threshold that theoretically captures deprivation and poverty conditions for the society that it was set for. The poverty line is assumed to reflect the living standard of the household or individual, and desirably should be a way to compare it across time and between countries.

From a pure economic point of view, every individual is maximizing his or hers own utility restricted by his or her resource availability. Therefore, the creation of a single poverty line that fits everybody seems unlikely, (Ravallion and Lokshin 2003, Tarp et al. 2002, Duclos and Arrar 2006).

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[1] See WHO / FAO / UNU, 2001, table 5.4, p41.

a)- Absolute versus relative poverty

Poverty can be measured in absolute or relative terms. Absolute poverty is associated with a cut off point, a pre-conceived minimum standard of living and its associated cost. This threshold or minimum cost of living is compared to the income or expenditure of individuals or households. If an individual or household income or expenditure is below the line, then it is considered poor, once a household or individual reaches an income or expenditure level above the threshold it is not considered poor anymore.

A textbook example of an absolute poverty measure is the International Poverty Line (IPL) that the World Bank uses to measure global poverty and keep track of the Millennium Development Goals (MDGs). The absolute poverty that identifies extreme poverty is defined as living under one dollar a day in *purchasing power parity* (PPP) terms.

On the other hand, relative poverty is associated to the distribution of income, expenditure or other well-being index. The relative threshold would be associated with the mean, median or other distribution cutoff point as a percentage of the pre set distribution. This relative measure varies between countries and regions considerably.

A number of developed countries use relative standards such as a percentage of the median income or expenditure. This approach reflects the importance given not just to income and wealth, but also to its distribution. Unfortunately, relative poverty cannot be eliminated.

Nevertheless, all absolute thresholds imply some level of relativity. The relative prices and the availability of goods and services in a country depend on its particular income distribution.   Adam Smith stated this relative feature of necessities in his famous Book "The Wealth of Nations" in 1776.

"*By necessaries I understand not only the commodities which are indispensably necessary for the support of life, but whatever the custom of the country renders it indecent for creditable people, even of the lowest order, to be without. A linen shirt, for example, is, strictly speaking, not a necessary of life. The Greeks and Romans lived, I suppose, very comfortably though they had no linen. But in the present times, through the greater part of Europe, a creditable day-laborer would be ashamed to appear in public without a linen shirt, the want of which would be supposed to denote that disgraceful degree of poverty which, it is presumed, nobody can well fall into without extreme bad conduct.*

Custom, in the same manner, has rendered leather shoes a necessary of life in England. The poorest creditable person of either sex would be ashamed to appear in public without them. In Scotland, custom has rendered them a necessary of life to the lowest order of men; but not to the same order of women, who may, without any discredit, walk about barefooted. In France they are necessaries neither to men nor to women, the lowest rank of both sexes appearing there publicly, without any discredit, sometimes in wooden shoes, and sometimes barefooted. Under necessaries, therefore, I comprehend not only those things which nature, but those things which the established rules of decency have rendered necessary to the lowest rank of people." (Smith 1776, cited in Duclos and Arrar 2006).

Yet, the definition of poverty in absolute terms is also consistent with Adams Smith's view. The inability to attain a minimal standard of living, minimum nutrition and other necessities varies from country to country. Therefore, is difficult to understand poverty globally in absolute terms and develop a poverty measurement that relies on absolute standards.

In spite of all the knowledge and efforts the world has placed on the issue of poverty, there is still no consensus among scholars or international agencies on whether an absolute or a relative poverty line should be used

as a standard methodology. Generally, absolute poverty lines are used by developing and middle income countries and relative ones used by developed and wealthier countries.

Others authors such as Groedhart et. al. (1977), Colastanto et. al. (1984), Danziger et. al. (1985), Kapteyn et. al. (1985, 1988), Stanovnik (1992) and Kapteyn (1994) advocate for the use of *subjective poverty lines* (SPL), based on *minimum income questions* (MIQ), "What income level do you personally consider to be absolutely minimal?" The information is then tabulated to create the threshold; a person or household's income is below that subjective line is thus considered poor. The main problem of SPL is that they lead to inconsistencies, households with the same income or expenditure level could be considered different. Additionally some scholars have proposed other ways to measure poverty with hybrid lines. Pradhan & Ravallion (1998) propose a hybrid approach that builds on past methods of subjective and objective measurements. This method allows creating a SPL from simple qualitative questions that could be added to the existing living standard surveys. Their subjective quality approach adds effects of relative deprivation.

b)- Issues on data and methodology

Household survey data has been collected for many years in many countries for a number of reasons, one of them being the analysis of poverty. The World Bank started a Living Standard Measurement Surveys (LSMS) initiative in 1979 to monitor global poverty (Deaton, 1997). These kinds of household surveys have been the customary source of data that international organizations, governments and scholars use to determine poverty, and assess changes over time. Even though household surveys are the best available data, these commonly used sources are not devoid of complicated problems associated with data collection and management. Survey coverage is far from perfect; questionnaires differ in time, recall period, creating complications in comparing results.

Differences in survey methods, lack of consistency, and overall discrepancy in general approaches make it difficult to compare and evaluate poverty (income versus expenditure, geographical differences, coverage issues, use of adult equivalence, recognition of economies of scale and other different assumptions). The treatment of non-response related to income (rich households are more likely to avoid participation or respond to surveys) also bias the results by truncating the samples, (Deaton, 1997, Morduch, 2006).

Some countries collect and use data on income while others use expenditure instead. While income and expenditure are related, using data on income leaves out information on borrowing and saving. Using expenditure to determine a poverty line takes into account consumption smoothing, thus a more accurate picture of the individual or household real poverty status.

Reliability of data collection and management is also an issue; data trustworthiness depends on recall periods, missing observation, measurement errors, and changes in surveys. Methodology is nowhere near standardized; Székely et. al. (2000) showed how sensible poverty measures are to the range of available and commonly used methodological choices. Using household level data from 17 Latin American countries, representing 92% of the total population of the region and three benchmark poverty measurements, they explore the sensitivity of measurement choices and assumptions. The use of adult equivalence scales, economies of scale in consumption, the treatment of missing and zero incomes and a range of possible adjustments of misreporting data. Yielding a poverty measure that ranged from 12.7% to 65.8% of the population just by varying some assumptions.

Problems when comparing poverty across time within a country are also documented, Lanjouw and Ravallion (1996) using two similar but not identical LSMS for Ecuador, found that poverty rate ranged from 56% to 45% in 1995. A mere change in the questionnaire can distort poverty rates (in this case the addition of 21 new food components and several non-food consumption items added to the survey). Poverty calculations depend on how we measure it and what are the assumptions and methodologies behind the findings.

In working towards understanding and mapping global practices and methodologies the United Nations Statistical Division (UNSD) implemented a worldwide survey in 2004 yielding interesting results. The statistical addendum compiles the responses from 93 countries, providing the UNSD with detailed information on local poverty measurements and common practices.

The survey provided interesting figures regarding poverty lines and poverty measurement approaches. For example, 31 countries had a national agreement on how to measure poverty and 22 did not. The use of absolute and relative poverty lines is also not homogeneous, 61 countries

use absolute poverty lines, 41 use relative ones and 22 use both. Adult equivalence is used in 34 countries and 41 do not employ them, gender equivalence scales ratios vary a great deal between countries as shown on the graph 1 and graph 2.

Graph N°1: Use of calories threshold adult equivalence of scale.
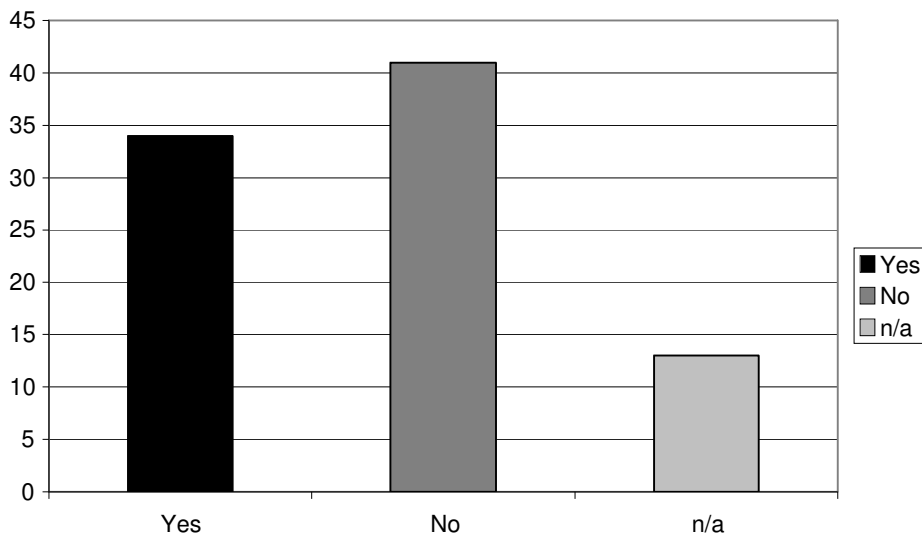
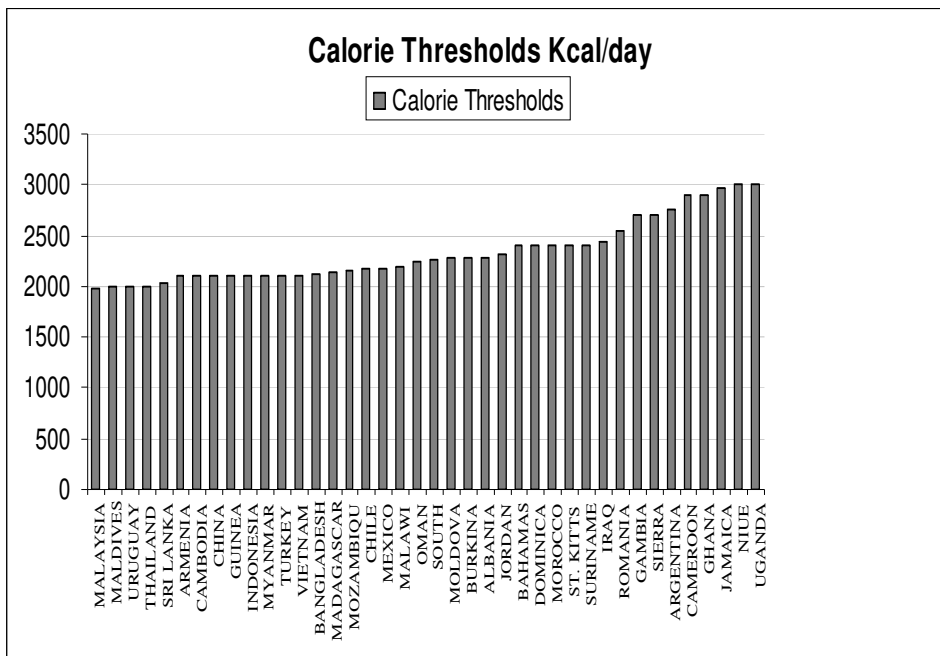Source: UNSD statistical addendum 2005.

Graph N°2: Gender equivalence of scale ratios.
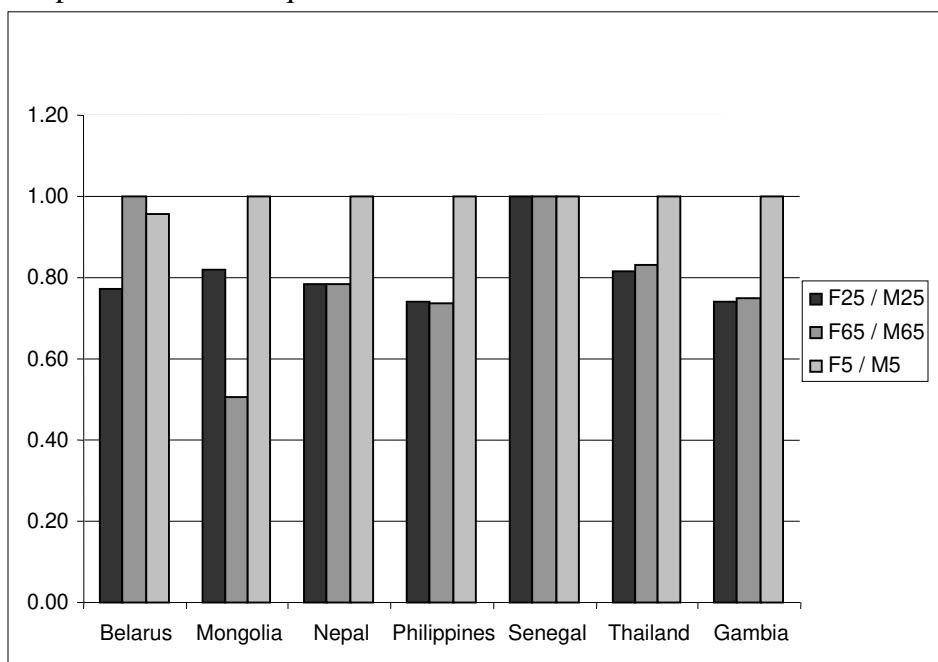
Source: UNSD statistical addendum 2005.

Graph 3 shows the range of calories thresholds used by different countries. The data reveals a wide array of minimum calorie requirements among countries that are not using equivalence of scale. From 2,000 Kcal/day in Malaysia, Maldives and Uruguay to 3,000 Kcal/day in Jamaica, Niue and Uganda, appearing to be set arbitrarily.

Graph N°3: Calorie requirements for countries with out equivalence of scale.

Source: UNSD statistical addendum 2005.

Calories thresholds and equivalence of scale appear not to follow any standardized trend across countries. Age weights holding gender constant also show the same pattern.

Table N°1: calorie thresholds, gender, and adult equivalence (Kcal/day).

Country	Male 25	Female 25	Male 65	Female 65	Male 5	Female 5
Belarus	2,899	2,242	2,028	2,028	2,369	2,269
Mongolia	2,667	2,184	2,016	1,016	1,365	1,365
Nepal	2,800	2,200	2,800	2,200	1,500	1,500
Philippines	2,570	1,900	2,090	1,540	1,600	1,600
Senegal	2,400	2,400	2,400	2,400	1,200	1,200
Thailand	2,150	1,750	2,100	1,750	1,300	1,300
Gambia	2,700	2,000	2,400	1,800	1,700	1,700

Source: UNSD statistical addendum 2005.

Table 2 illustrates the significant differences in food to non-food component of poverty lines that ranges from 0.34 in Bahamas to 0.89 in Malawi.

Table Nº2: Food to non-food component ratio.

Country	Food PL / PL
Malawi	0.89
Vietnam	0.72
Nepal	0.69
Philippines	0.66
Albania	0.62
Armenia	0.61
Dominica	0.59
Paraguay	0.54
Belarus	0.51
Sierra Leone	0.49
Jordan	0.48
Turkey	0.43
Russian Federation	0.43
Bahamas	0.34

Source: UNSD statistical addendum 2005.

Most of the countries surveyed measure expenditure data, however, 39 countries state that they are collecting data on household income, making comparison across countries extremely difficult. Most Latin-American countries still use income data. In the Latin American and Caribbean study conducted by Székely et. al. (2000) only 3 out of 17 countries (Ecuador, Mexico and Peru) had expenditure data available; all others only collected household income data.

Graph N°5: Income and expenditure data collection.
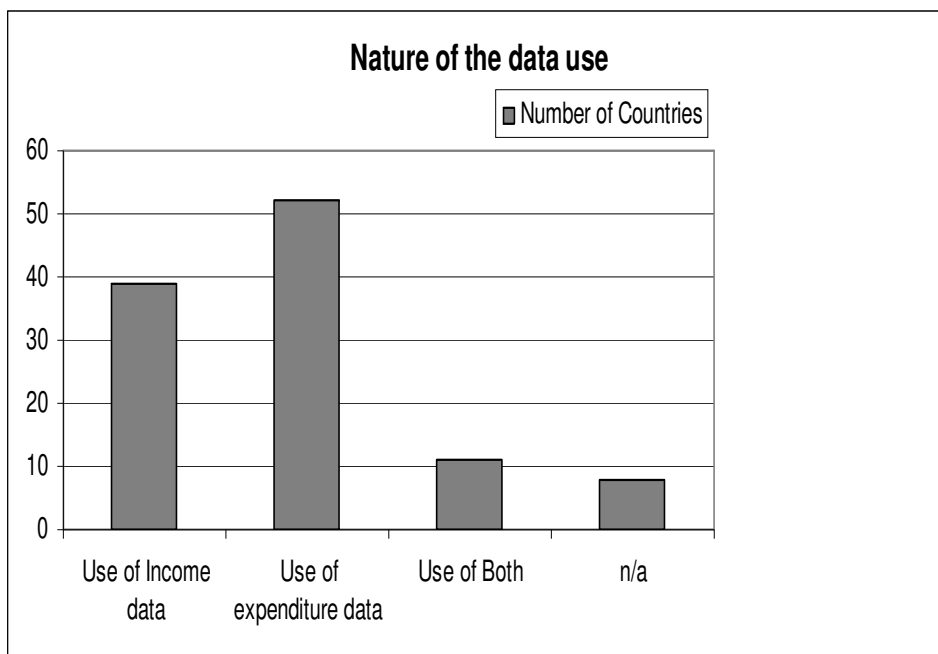
Source: UNSD statistical addendum 2005.

The UNSD survey is the first attempt to assess the variety of poverty measurements and assumptions behind domestic poverty lines and methodologies. The results of the survey confirm the difficulties of relying on domestic statistics to assess global poverty, and the urgent need for harmonization and standardization within national poverty measurements.

In light of standard measurements the World Bank's approach to estimate global income poverty and keep track of the Millennium Development Goals using the dollar a day and two dollars a day poverty lines, has been

strongly criticized by Chossudovsky (1999), Srinivasan (2001), Kakwani (2004) and Reddy and Pogge (2005).

The World Bank's first calculations and global poverty statistics using the dollar a day poverty line were published in the World Development Report 1990. The dollar a day poverty line was derived from a collection of 33 national poverty lines in the mid eighties. Originally, the Bank tried to obtain a common poverty line by fitting a cross-country semi logarithmic function that related consumption and the national poverty lines. Given the failure to obtain a sound index, the Bank determined the IPL by a rough adjustment of the scatter plot to obtain $31 a month or the "dollar a day" threshold.

The "dollar a day" line was born and considered to be representative for developing countries, however some scholars argue that this threshold is no more than an arbitrary line, a mere average of domestic poverty lines not explicitly derived from any minimum living standard. Chossudovsky (1999) criticizes the World Bank's IPL stating that its construction deliberately diverges from traditional methodologies for measuring poverty such as the US Bureau of Census or the United Nations. The poverty line selection was carried out irrespectively of the actual living

conditions of the poor. Furthermore, he points out that evidence confirms that individuals with incomes equal to 2, 3 or 5 dollars a day are unable to meet their basic food, shelter, education, and health needs in several countries around the world.

Chossudovsky also criticizes the UNDP "Human poverty index" (HPI) and its poverty count results, also arguing that these results appear to be inconsistent with countries` social reality. Using as examples Mexico and Trinidad & Tobago where poverty counts appear to be extremely low 10.9% and 4.1%, even lower than some developed countries like Canada or the US. Poverty counts and statistics seem quite senseless when lacking explicit explanation and justification of the methodology and assumptions utilized. Srinivasan (2001) points out that the World Bank's global poverty count is meaningless due the disassociation between the dollar a day and a common consumption bundle for the poor. Kakwani (2004) argues that global poverty counts based on the IPL are "too low" given the problems in its construction. He proposes two alternatives: a "poverty line based on local costs of a diet that ensures adequate calorie intake for the world's poor" or "The median of existing poverty lines in a sample of 19 low-income countries around the late 1990s". Reddy and Pogge (2005) argue that the international poverty lines of "dollar a day" and "two

dollars a day" used by the World Bank have three major problems; the first is that the World Bank uses poverty lines that are not linked to any specific minimum well-being requirements. The second is the problem associated with the PPP method, arguing that the concept is not well defined and detached from the actual consumption patterns of the poor, and the third is the extrapolation of unreliable data, that creates bias on results.

The common procedure of calculating the minimum costs of achieving certain living standard appears to be far from what the World Bank used to determine the International Poverty Line (IPL). Problems with PPP arise from the lack of connection between this methodology and empiric deprivations defined in human needs or elementary capabilities. *"Current PPPs are inappropriate for measuring absolute poverty because they draw too much on information that is irrelevant and too little on information that is relevant to this particular task"* (Reddy and Pogge 2005). Furthermore, ambiguity is introduced by PPP rate based only on assumptions and fitted values instead of based on observation of prices and quantities consumed for those countries where there is no data. Reddy and Pogge (2005) propose a poverty line set nationally with a "common achievement interpretation" a globally specified set of ends that would

include human capabilities. The new IPL will be consistent with a set of needs and minimum capabilities instead of a mere monetary threshold.

Deaton (2004) contributes to the discussion by proposing a way to obtain PPP exchange rates for the poor. He analyses household survey data from India and Indonesia and proposes a new approach to find a PPP index specific for the poor. The new methodology computes PPPs using data from unit values, similar to prices and tied up to actual transactions. Information on expenditure and quantities of commodities, (food, beverages, tobacco, and fuel) will help to construct consumption PPP for the poor based on household budgetary information. Using this methodology Deaton estimates multilateral price indices for different states of India and compared price index for Indonesia and India. Within India his results do not differ much from previous estimations, however, for Indonesia and India comparison the new PPP differ considerably from the World Bank's approach, concluding that the standard PPP between Indonesia and India is unreliable when used to understand the relative living standards between those two countries.

It appears impossible to find global poverty measurement approach free of technical and practical predicaments. Clearly, the "dollar a day" is not the exception, but most of the problems faced by this methodology are shared with most of the ones described above.

All global poverty assessments face problems with measurement, sampling error, differences in prices and consumption patterns play an important role on poverty measurement and head count determination ultimately threatening to bias global poverty estimates.

Although behind the international poverty line there is no deep understanding of what it means to live under a dollar a day, the World Bank's global poverty assessment and work play an important role in monitoring the level of change in poverty around the world, help in setting the agenda, and raising awareness among the world's population on poverty issues. The dollar a day has an intuitive appeal; no one can deny that living under a dollar a day is living in poverty.

III. Cross-sectional data analysis, the lack of discontinuities

Poverty measurement has been carried out not only by international organizations like the World Bank or the United Nations. Many governments with their respective national statistical offices have addressed their need of poverty measurements in order to understand their own conditions, plan social policy and evaluate current programs.

One would think that their measure of poverty reflects accurately their circumstances; therefore, each country's measure should become the best available data to assess global poverty. However, as illustrated above the wide variety of methodologies and assumptions behind poverty measures used by different countries makes impossible to compare poverty across countries and regions.

When looking at cross-sectional data and household surveys across the board there is no clear and or meaningful threshold. Empirical data does not show any clear relationship between domestic poverty lines and well-being of households or individuals. There are no clear discontinuities in the relationship between health, nutritional status and income.

Poverty lines do not indicate clearly any changes in living standards, as they should. Domestic poverty thresholds do not take into account any substitution effects of price or income changes of individuals or households; therefore, we do not really understand what is behind living under a specific poverty line, or what they are really capturing.

As pointed out earlier, the analysis of household level data have not revealed a clear empirical correspondence between the poverty line and the living standards of a specific population. Thresholds used by governments and statistical agencies do not appear to be capturing any discontinuities in the association of income and health, child nutrition, or individual well-being as they should be.

A poverty line discriminates poverty status, below it an individual is considered poor, and above it he or she is not. Therefore poverty lines set by income or expenditure should be indicating discontinuities in well-being indicators, however in all cases studied, they do not. The data suggests that poverty lines linked to minimum consumption bundles or minimum per capita caloric intake; do not explain the daily lives of the poor and their real deprivation status.

In order to examine the lack of discontinuities and the deficiency of poverty lines to capture poverty and deprivation condition, this study uses the available Living Standard Measurements Surveys from Albania, Chile, Tajikistan, Timor-Leste, and South Africa, provided by the World Bank and the Chilean Ministry of Planning. These countries were selected for the analysis due to the availability of data and existence of desired variables such as health status, child nutrition status and Z scores, income or expenditure and poverty lines, as well as for their geographical location, size, and income diversity. Table 3 shows some relevant features of the countries and their surveys.

Table N°3: Selected countries poverty lines and survey characteristics.

	Albania	Chile	Tajikistan	Timor-Leste	South Africa
Year of survey	2002	2003	2003	2001	1994
Income vs. Expenditure	Income	Income	Income	Expenditure	Expenditure
Energy threshold Kcal/day	2288	2176	Not available	2100	2261
Poverty Line in national currency	4,891 Leks	21,856 Pesos	20 Som	15.43 USD	220 Rand
GDP per capita USD	1,444	4,677	248	447	3,382
Population in thousands	3,084	15,755	6.265	830	40,157

Source: Albania LSMS 2002, CASEN 2003, TLSS 2003, TLSS 2001, SAHIS 1994, WDI World Bank.
All variables correspond to the year of the survey. All surveys but CASEN 2003 were downloaded from http://www.worldbank.org/LSMS/guide/select.html. CASEN 2003 was provided by MIDEPLAN.

a)- Albania 2002 survey:

The 2002 LSMS was undertaken by the Living Standards unit of the Albanian Institute of Statistics, with the technical assistance of the World Bank. Four survey instruments were used to collect information for the 2002 Albania LSMS: a household questionnaire, a diary for recording household food consumption, a community questionnaire, and a price questionnaire. The final sample design for the 2002 LSMS included 3,600 households.

The poverty line used in the analysis is the one provided in the survey data, the Albanian Institute of Statistics Albania computed the poverty line using the costs of basic needs methodology (Ravallion and Bidani, 1994). Taking into account the FAO minimum calorie requirements recommendations and adjusting them to Albania's population distribution, the minimum calorie intake was estimated at 2,288 calories per capita per day. Then the calorie content of the basket and its price were estimated and added to the non-food component of the poverty line to finally set the poverty line at 4,891 Leks per capita per month.

Analyzing data from health status of individuals and per capita income in terms of poverty line, graph 6 shows the lack of clear breaks around the poverty line in health status of individuals for the Albania LSMS for 2002.

Graph N°6: Health status and income relationship.
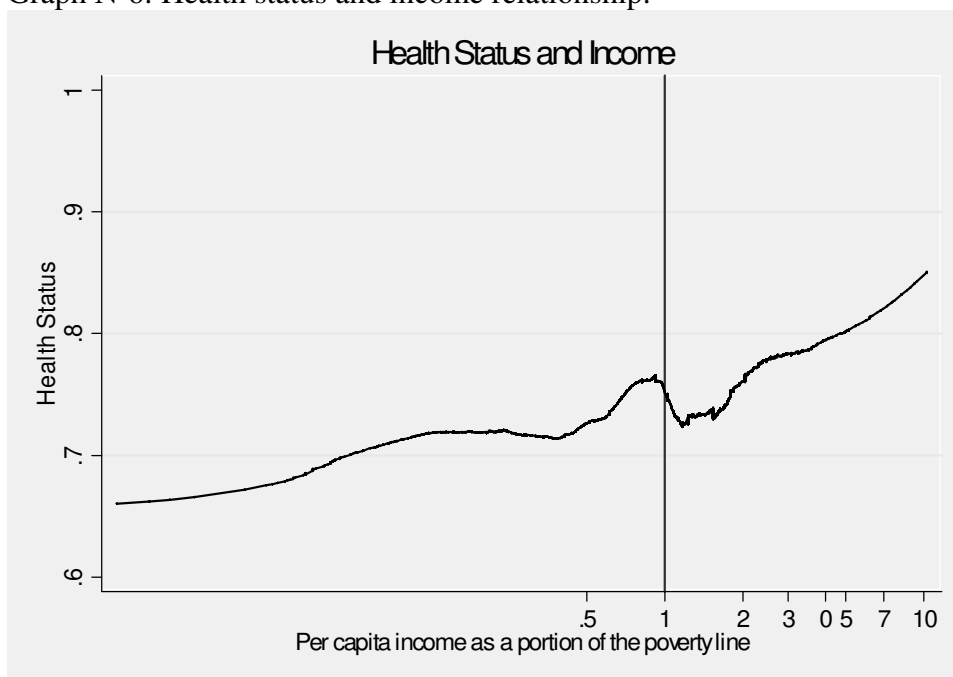
Source: Authors calculations, Albania 2002 LSMS.

The data suggests that past half of a poverty line as income per capita raises health status seems to rise as well. However, the poverty line does not indicate any distinctive income breaking point that once achieved health status would improve drastically.

b)- Chile 2003 survey:

In this research we use the National Socioeconomic Characterization Survey (CASEN), which is a cross sectional survey that has detailed information on employment, housing, health, and income. The survey was undertaken by the government Ministry of Planning (MIDEPLAN) in the year 2003 to 55,650 households from a universe of approximately 3.7 million.

In Chile, the poverty line is estimated using the income method or "cost of basic needs", defining the nutritional requirements reflecting the population consumption patterns and preferences, and relative prices. The minimum calorie requirements established in Chile is 2,176 Kcal per day per person, a weighed average of the population needs as a whole adjusting by age, gender, activity, and anthropometrics. The food poverty line (extreme PL) for 2003 is set at $21,856 pesos per capita per month; the urban poverty line is set as twice the extreme PL and the rural one at 1.5 times the extreme PL. The urban and rural poverty line calculations seem arbitrary and may not really capture the well-being of the population.
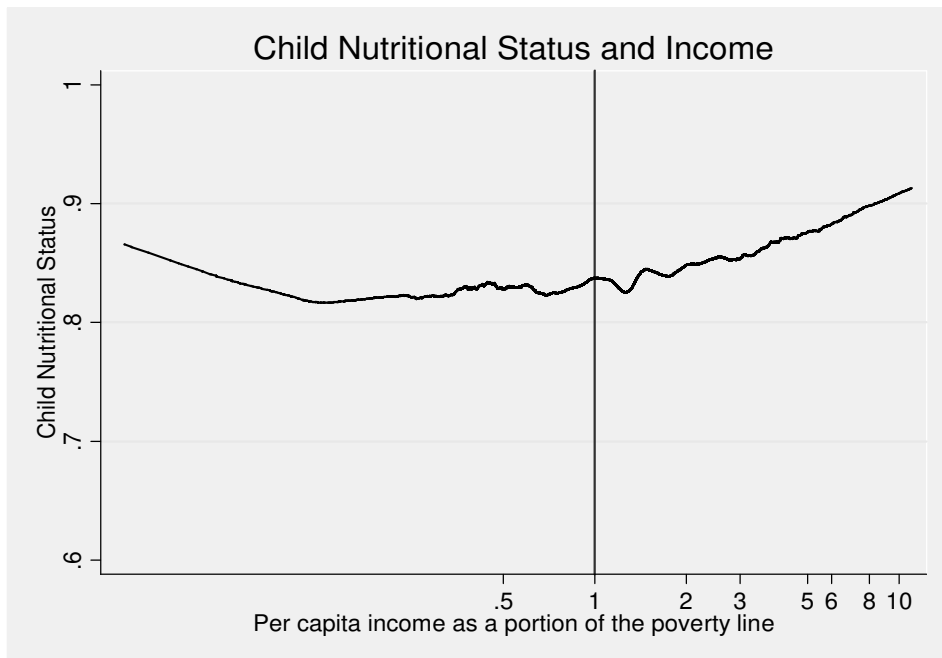
Using data from income, self reported health status and child nutrition, the next two graphs 7 and 8 exemplify the relationship between heath, child nutrition and income per capita in terms of urban poverty line.

Graph N°7: Self reported health status and per capita income.
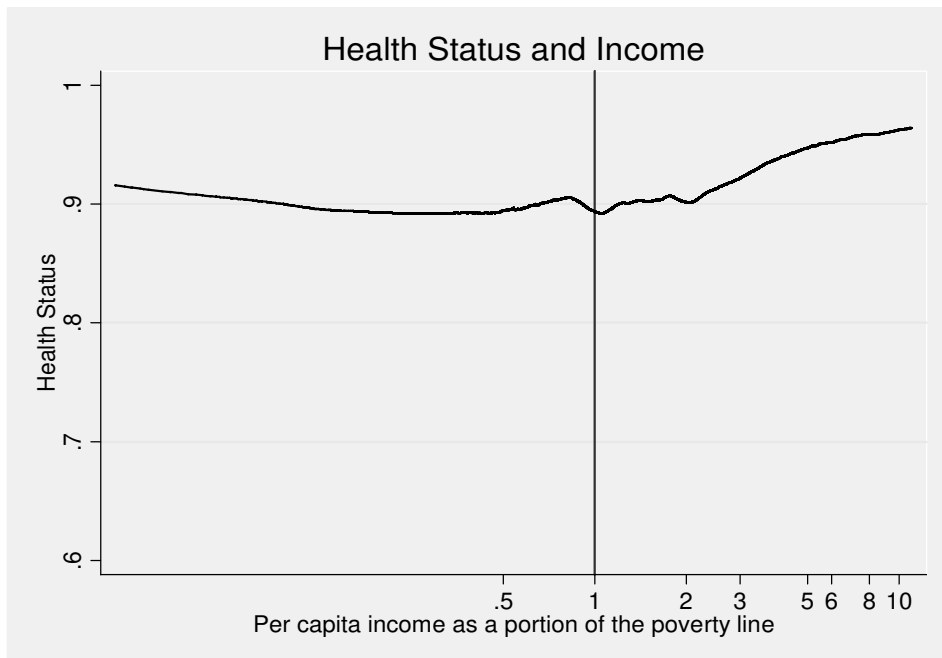
Source: Authors calculations from CASEN survey 2003.

Graph 8: Child nutrition and per capita income.

Child Nutritional Status and Income

Child Nutritional Status (y-axis: .6, .7, .8, .9, 1)

Per capita income as a portion of the poverty line (x-axis: .5, 1, 2, 3, 5 6, 8 10)

Empirical data from the 2003 Chilean socio economic characterization survey also shows the same deficient capacity of poverty lines to capture breaks in the data, being above or below the poverty line does not appear to determine the individual health condition or child nutrition status. Data on health and child nutrition for the very poor come out very flat, there are no major changes when an individual crosses the poverty line, overall health and child nutrition seem to start improving after an individual's income reaches roughly 1.7 times the poverty line.

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c)- Tajikistan 2003 survey:

The Tajikistan Survey of Living Standards (TLSS) was conducted by the GOSCOMSTAT (State Statistical Agency) with the technical and financial assistance of the World Bank and the Department of International Development of British Government. The survey covered a sample of 4,160 households. The 2003 Tajikistan Living Standards Survey provides individual and household level socio-economic data. The survey objective is to gather data reflecting the living conditions of the population in Tajikistan to evaluate socio-economic development and formulate policies to improve living conditions.

The poverty line used in the study was estimated by the State Statistical Agency, in a poverty participatory assessment, conducted in 2000 as part of the poverty reduction strategy[2].

Using income data and self reported health status, and following Albania's and Chile's examples graph 9 reveals the same lack of discontinuities in

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[2] The poverty lines used in the study corresponds to the one proposed in the Poverty partnership agreement between the Government of the Republic of Tajikistan and the Asian Development Bank 2002 document adjusted by CPI. The poverty line defined comes from the State Statistical Committee's definition of poverty line of TR 20,000 (or about Som 20) per person per month.

the relationship between income and health. Again the poverty line is incapable of showing a distinct break in the series.

Graph N°9: Self reported health status and per capita income.
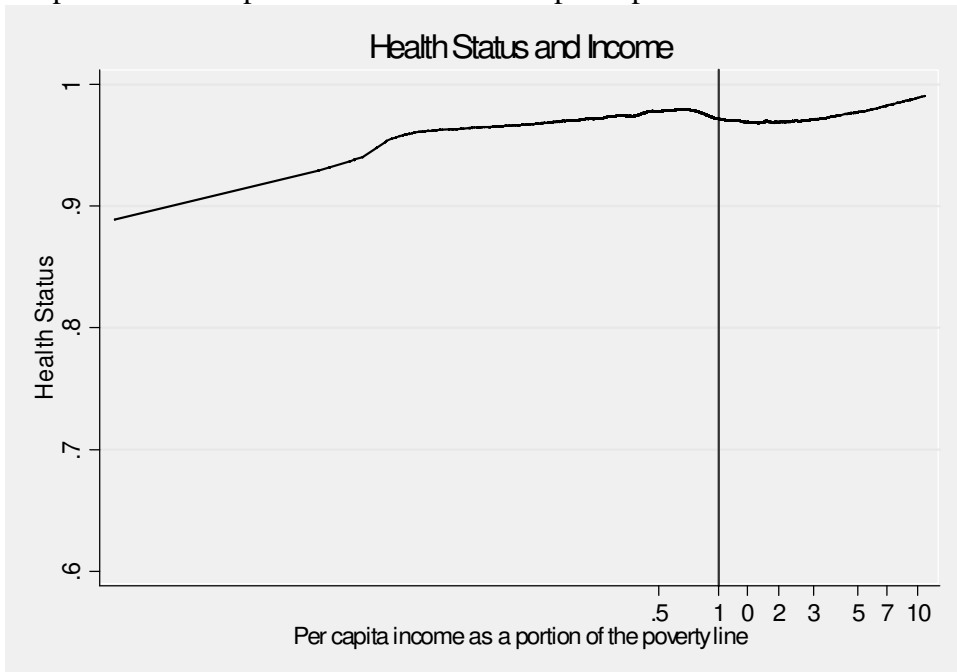
Source: Authors calculations from TLSS 2003.

d)- Timor-Leste 2001 survey:

The Timor-Leste Living Standards Measurement Survey (TLSS) was part of a Poverty Assessment Project planned by the Timor-Leste Transitional Authority along with the World Bank, the Asian Development Bank, the United Nations Development Program and the Japanese International Cooperation Agency (JICA).

The household survey with a nationally representative sample of 1,800 families from 100 villages was intended to assess poverty, and to analyze policy options. It assembled comprehensive information on household demographics, housing and assets, household expenditures and some components of income, agriculture, labor market data, basic health and education, subjective perceptions of poverty and social capital.

The poverty line determined for Timor-Leste is based on the cost of basic needs (CBN) approach. It is composed of food and non-food components. The minimum nutritional requirement used was 2,100 calories per person per day. The non-food shares for the poverty line were calculated with a nonparametric technique as suggested in Ravallion (1998). The poverty

line used for the analysis is the upper poverty line set at US$15.43[3] per month per person.

Examining data on self-reported health status and expenditure for the 2001 TLSS, the analysis exposes similar results. One more time, there is no apparent cut on the series where one could place a specific poverty line that would clearly discriminate between health status conditional to expenditure.

Graph N°10: Health Status and expenditure relationship.
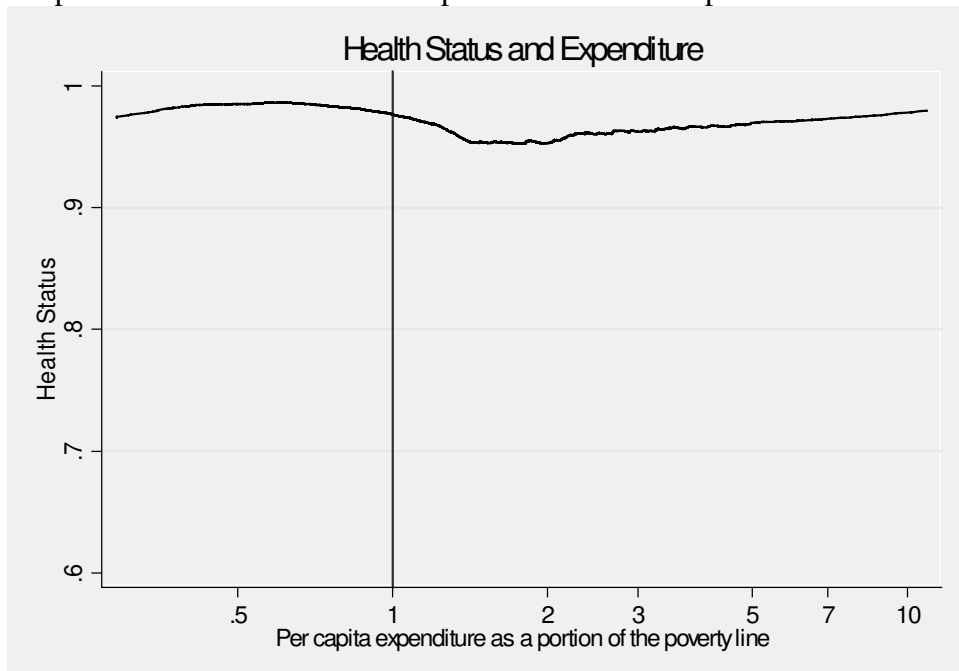
Source: Authors calculations from TLSS 2001.
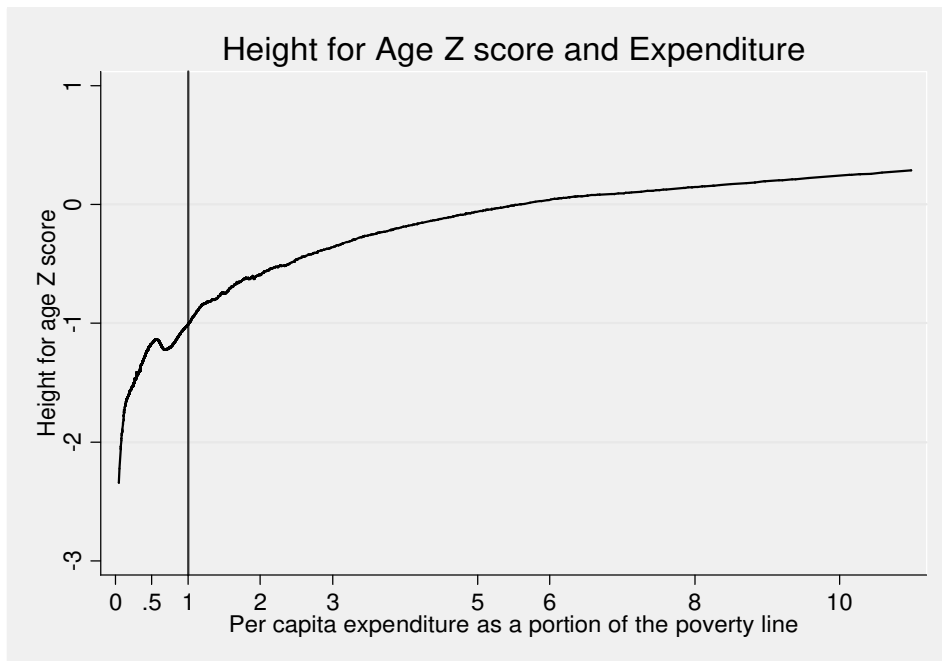
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[3] Timor-Leste's currency is the US dollar.

e)- South Africa 1994 survey:

The governments of Denmark, the Netherlands and Norway working through the World Bank, funded the 1994 South Africa Integrated Household Survey (SAIHS). The objective of the survey was to gather statistical information about the living conditions of South Africans in order to supply policy makers with the necessary data for planning strategies to implement development goals outlined in the Government of National Unity's Reconstruction and Development Program. The SAIHS covered approximately 9,000 households and included data on demography, household services, household expenditure, educational status and expenditure, remittances and marital maintenance, land access and use, employment and income, health status and expenditure and anthropometry (children under the age of six were weighed and their heights measured). South Africa's poverty line used in the analysis comes from the supplemental living levels (SLL) per capita set by the Bureau of Market Research at the University of South Africa, equivalent to 220.1 Rand per month per person.

Using the poverty line above and the anthropometrics data provided in the survey graphs 11, 12, and 13 shows the relationship between expenditure and Z scores (height for age, weight for age and weight for height Z

scores). As per capita expenditure rises, so do the Z scores. However, again the poverty line and expenditures levels around it do not seem to be indicating any discontinuity in the Z scores as one could hope for, as an important characteristic of a poverty threshold.

Graph N°11: Height for age Z score and expenditure as a proportion of the poverty line.
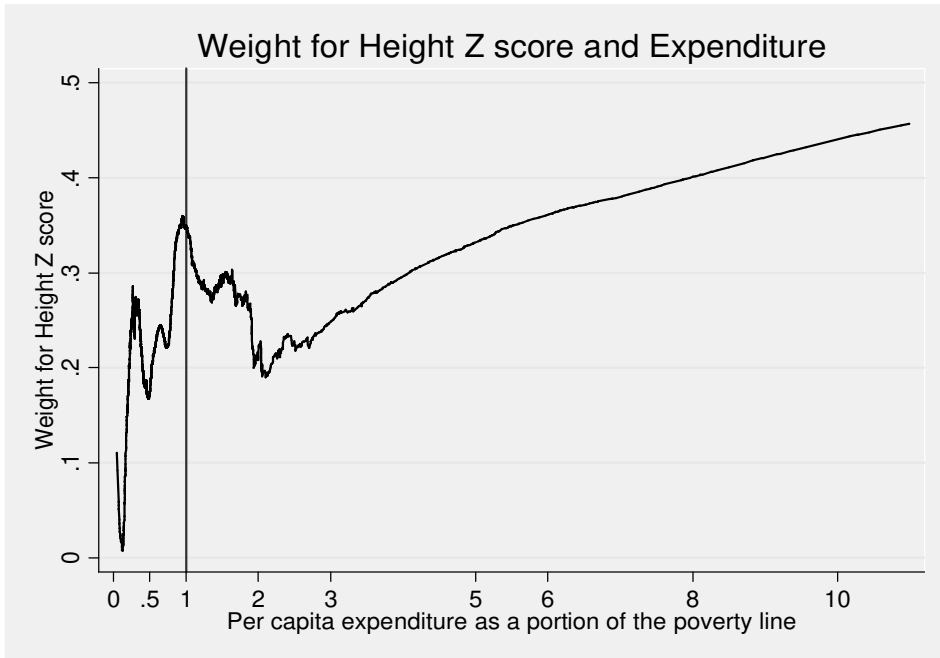

Source: Authors calculations, from SAIHS 1994.

Graph N°12: Weight for age Z score and expenditure as a proportion of the poverty line.

Weight for Age Z score and Expenditure
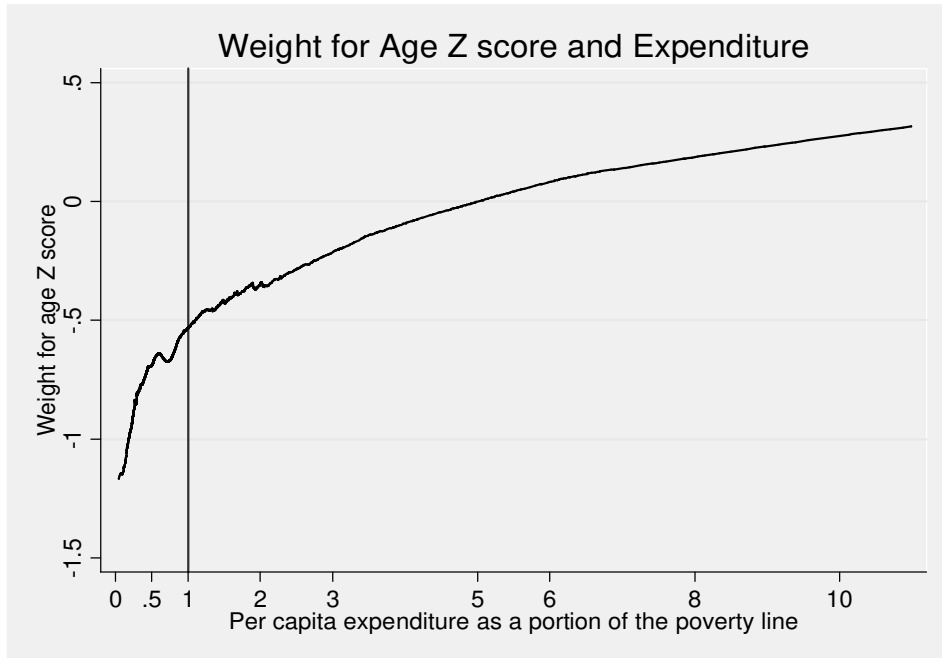
Source: Authors calculations, from SAIHS 1994.

Graph N°13: Weight for height Z score and expenditure as a proportion of the poverty line.

Weight for Height Z score and Expenditure

Source: Authors calculations, from SAIHS 1994.

IV. Conclusions

The United Nations Millennium Development Goals have re-focused the attention on global poverty, its measurements and the policies to alleviate it. Looking at poverty as a worldwide phenomenon and creating comprehensive and strategic plans to reduce extreme poverty in half by 2015. Nevertheless, the way that we are now thinking about global poverty and the subsequent policies for alleviation are closely related and directly dependent on how we are measuring this social phenomenon.

The literature and data analysis suggest that when countries and international organizations set poverty lines they appear not to have much knowledge and understanding of what is really behind those thresholds, beyond a cost assessment of minimum energy requirements, (which have been shown to vary tremendously among countries). Therefore, poverty lines appear to be arbitrary, particularly international poverty lines, Chossudovsky (1999), Srinivasan (2001), Ruggeri et. al. (2003), Kakwani (2004) Reddy and Pogge (2005).

International agencies, governments and policy makers interested in development and poverty alleviation face great problems due to the lack of widely used standard measurements of calculating poverty. The need for

harmony in measurements is essential and urgent in order to accurately assess poverty, and to be able to compare, assess changes over time, rank counties and regions.

Drawing from the literature and empirical analysis, this paper confirms the lack of standardization and great impact of different assumptions and methodologies in poverty counts and the understanding of living standards. Poverty lines set by governments and international organizations appear not to be capturing individual well-being or any form of poor non-poor discontinuity.

Poverty lines and their derived poverty counts are of great matter for policymaking; therefore, these thresholds should capture more accurately the different dimensions of poverty. However, poverty measures based on poverty lines are still important and relevant when used as a descriptive tool, but that characteristic should be widely recognized.

The United Nations 2004 survey helped understand the vast disparities present in countries' poverty measurements, the lack of standards, great array of surveys, etc. The need for coordination among countries' statistical offices is imperative in order to gauge poverty accurately and

reliably, as well as to improve the ability to compare across time, regions and countries. Countries should make public household data collected in local survey, perform sensibility studies and explain their assumptions behind the numbers. This way scholars and organizations can collectively achieve more reliable and accurate information.

New approaches should include a more broad understanding of the multidimensional aspects of human life, offering policymakers better guides for crafting more efficient and effective program monitoring and evaluation standard, as well as new initiatives to understand what it really means to live under a certain poverty line.

Qualitative analysis to understand the other side of the story, the one not told by the econometric analysis, is in great need as well. Banerjee and Duflo (2007), using household surveys from thirteen countries explore the economic lives of individual living under one dollar a day, their choices, constrains and challenges. Similar studies should be broadly conducted in order to understand the economic lives of the people living in poverty, and gain knowledge of the actual problems they face, to facilitate policy makers to find better and more efficient ways to help poor people attain better opportunities to leave poverty behind.

Different approaches focuses on different policies, a pure monetary approach focus on increasing income and relying on the maximization of utility, a capability approach centers the attention more on the role of the government and the provision of public goods. Social exclusion measures will argue that poverty can be alleviated by breaking down exclusionary factors and discrimination.

Changing the analysis of poverty and its measurement by shifting to a more standardized approach across countries, broadening the spectrum of dimensions accounted for in the poverty thresholds, would benefit governments, international organizations and policymakers as a whole. This new and more complete set of information will facilitate the creation of more accurate evaluations of specific social plans to address particular deprivation issues relating health, housing, education, consumption, transportation, access to credit, and social participation, etc. all dimensions that poor individuals struggle to attain a minimum level of.

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