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DEFINING AND MEASURING POVERTY AND INEQUALITY POST-2015

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Abstract: The post-2015 development agenda requires improved concepts to define and measure different forms of poverty and inequality. Building on the experiences made with the Millennium Development Goals, this paper gives an overview of several possible approaches by discussing their strengths and weaknesses. National, international, relative and multidimensional concepts are considered. Arguing that the discussions on the post-2015 agenda offer an opportunity to introduce new global measurements of progress that complement gross domestic product-based approaches, the authors make the case for a simple yet comprehensive index as a headline indicator that could help to better inform poverty and inequality reduction policies in the post-2015 world. Copyright © 2015 John Wiley & Sons, Ltd.

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1 INTRODUCTION

The post-2015 agenda provides the opportunity to transform the global development landscape in a fundamental way. Under the leadership of the United Nations (UN), the international community works together to translate the lessons learnt from the Millennium Development Goals (MDGs) into an enhanced framework that aims to guide future development cooperation and global public policies more effectively than ever before. At the centre of this new agenda lies the goal to reduce different forms of poverty and inequality (OWG, 2014). A key question that remains to be answered is how poverty and inequality are going to be defined and measured by the new framework.

In September 2014, the UN General Assembly agreed that the Outcome Document by the Open Working Group (OWG) on Sustainable Development Goals, whose publication concluded the first phase of global multi-stakeholder consultations on the post-2015 goals,

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will be the main basis for the intergovernmental negotiations: From early 2015 until September, UN member states will consider the OWG's proposal and will decide on which goals, targets and indicators will make it into the final goals framework. This presents a unique opportunity to introduce new definitions and measurements of poverty and inequality into global policy-making.

Our paper gives an overview and discusses several approaches that could help to ensure that the world does not miss this opportunity. We argue that in order to effectively reduce poverty, it is crucial to conceptualise a clear and comprehensive understanding of what poverty is and how it can be measured. Bad definitions and bad measurement concepts prevent sound analyses, yield misguided evidence and can ultimately lead to bad policy decisions. Well-conceived, evidence-based and comprehensive concepts, by contrast, will enable the international community to reduce poverty and inequality more effectively.

2 LEARNING FROM THE MDG EXPERIENCE

It is a key advantage that the deliberations on the post-2015 development agenda can draw on the lessons learnt from the experience with the MDGs. The concluding negotiations should be informed by a diligent examination of both the strengths and the weaknesses of the MDG framework.

According to Vandemoortele (2011: 13), who was involved in the design of the MDGs, the framework had a 'dual purpose'. Not only did the MDGs aim to generate a momentum for intensified development cooperation but were also 'meant to broaden the development narrative beyond the narrow growth paradigm' (Vandemoortele, 2011: 13). The framework should help to go beyond the focus on economic growth and on aggregate macroeconomic indicators like gross domestic product (GDP) to assess development performance. The different goals were supposed to promote a more comprehensive and universal understanding of human development, which could serve as the principle guideline for the monitoring and evaluation of global development efforts.

Yet, the MDGs did not succeed in doing so.

First of all, despite their universal rhetoric, the MDGs did not constitute a truly global framework. They have not been perceived as 'global goals' but as goals that 'ultimately put obligations on developing countries' (Loewe, 2012: 3) while the responsibilities of more developed countries remained underspecified. The 'donor'–'recipient' divide remained, and development was still considered something poor countries have to achieve (MDG 1–7) while rich countries were not assigned clear goals and targets (MDG 8). Therefore, the goals were not considered a truly universal measure of development progress. Some observers like Saith (2006: 1195) even argue that the 'MDG exercise reduces the development issue to a ghettoised state with a focus primarily on the developing countries'. From this perspective, the MDGs neglected the relationship between developing and advanced economies and narrowed the focus on a traditional North–South perspective while more universal conceptions of development cooperation and global policy-making were sidelined.

Besides, many of the goals, as MDG 1A [halving extreme poverty as defined by the international $1.25 purchasing power parity (PPP) poverty line], have been chosen mainly for reasons of international comparability but have neglected in-country relevance. As a consequence, the goals often do not correspond to national realities and are thus of only limited relevance to a large number of countries.

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As the current goals do not differentiate between different starting points, relative progress over time of countries with bad starting conditions is downplayed while progress within countries with better starting conditions is overemphasised (Klasen, 2012). The most striking example for this problem is Sub-Saharan Africa. Because of its weak starting conditions, the region's progress is not adequately captured by the MDG framework. An analysis based on the rate of improvement shows that, in fact, Sub-Saharan countries have been above average in accelerating their pace of development progress (Fukuda-Parr & Greenstein, 2010: 12–13). Furthermore, comparing the top 10 countries that made the most progress in absolute terms with the top 10 countries that made the most progress relative to MDG targets shows that only one country (Vietnam) appears on both lists (ODI, 2010: 9). Obviously, the 'MDG champions' are not necessarily the ones that made the most significant progress. The framework overplayed progress by those countries that, by chance, were closest to a certain cutoff value. In the new framework, success should be understood as strong improvement and should not be dependent on strong starting conditions.

On top of that, the MDG framework did not comprise a headline indicator. Consequently, MDG performance had to be measured and evaluated on the basis of a dashboard in a rather complex and unclear way. (It had to follow this pattern: Countries A_1, A_2,… with starting conditions B_1, B_2,… achieved goal X_1, X_2,… but not goal Y_1, Y_2…). An overview that allows comparing development progress across time and countries, that is, a universal measure of progress, was not provided.

Given these weaknesses in terms of measuring progress, it is not surprising that other measurements have continued to be used. Among these, GDP-based measures are still the most prominent. National GDP *per capita* rates, adjusted for PPP, and their annual percentage change constitute an internationally comparable indicator of economic productivity. However, it is often implicitly assumed that economic growth is directly linked to human development and the alleviation of deprivations. As Joseph Stiglitz, Amartya Sen and Jean-Paul Fitoussi (2009: 21) note, GDP 'has often been treated as if it were a measure of economic well-being', and per capita GDP growth has almost been synonymous with rising standard of living for individuals. This 'GDP fetishism' (Stiglitz, 2009), however, is misleading.

The GDP measures the total monetary value added of all goods and services that are produced in a country within 1 year. The statistic is not intended to be a measurement of human development and should not be used that way. For example, GDP figures can only account for value that is reflected in prices. However, by far, not every improvement of well-being is measurable by means of prices. The quality of products and services such as education and medical services is difficult to determine monetarily but impacts the quality of life of many people to a large extent. What is more, the GDP does not say anything about the distribution of income across the population. GDP growth may simply indicate economic improvements for the richer classes and not for those who would need these improvements most. Thirdly, GDP cannot appropriately account for one of the most important aspects of development post-2015: sustainability. The mere value of all goods produced in a given year does not say anything about how sustainable this level and mode of production is in the future, because its long-term social, environmental and economic consequences are not taken into account. Consequently, the incentive to increase the GDP in the short run can have perverse effects on sustainability in the long run.[1]

In sum, predominantly using GDP statistics to evaluate development performance is often misleading, creates wrong incentives for policy makers and can ultimately lead to

[1]The reader is referred to Stiglitz *et al.* (2009) for further arguments.

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bad policy decisions. However, the MDG framework has failed to provide an adequate alternative in terms of measuring, monitoring and evaluating progress. It is a key challenge for the post-2015 development framework to respond to this shortcoming. In fact, the new framework provides the opportunity to ensure that the tools used to evaluate progress in the reduction of poverty and inequality in their multiple dimensions are based on an adequate understanding of these concepts and that these tools work in a way that they create the best possible basis for informed policy decisions.

Of course, better poverty definitions and measures do not *necessarily* lead to better poverty reduction policies. Even the contrary is theoretically conceivable: In recent decades, more elaborate and precise measures of poverty have often been accompanied by 'targeted' poverty reduction policies instead of more 'universalistic' approaches. Mkandawire (2005: 16) and others have shown that such 'targeting' has often been ineffective while there is 'ample evidence of poor countries that have significantly reduced poverty through universalistic approaches to social provision'. Similarly, it was argued that in many countries, the policies that were most successful in combating poverty were not narrowly defined poverty reduction projects, but policies for which other, broader objectives (e.g. improving education systems and pre-empting social unrest) were the main focus (Mkandawire, 2010). For these reasons, some might argue that more precise poverty measures, through their assumed effect to intensify 'targeting', might ironically lead to worse policies. Against such a view, we would hold that a more sophisticated and more detailed measurement does not have to imply more targeting if other, more 'universal' approaches are found to be more promising. To the contrary, it is exactly such evidence-based analyses that examine the effectiveness of different approaches towards poverty reduction for which the best possible measures, definitions and data are needed. Only then they can provide optimal policy recommendations. Because of this, better poverty definitions and measure are a *prerequisite* for better evidence-based poverty reduction policies.

All in all, the post-2015 development framework has to deliver answers to two fundamental questions: What do we measure? And, how do we measure? What we measure must reflect a well-informed and comprehensive understanding of poverty and inequality. The way we measure must provide guidance for such an understanding and constitute a convincing alternative to 'GDP fetishism'.

3 WHAT TO MEASURE?

Our starting point is the assumption that reducing poverty should be at the centre of development policy. This general idea is quite uncontroversial and has been repeatedly emphasised by the OWG; but, how to define, measure and combat poverty is an old debate that has recently been revived in the context of the post-2015 consultations. This influx of new research could help lead to an agreement on better poverty definitions and measures for the post-2015 world that will be more effectively used. In the following, we will present and discuss elements of new poverty definitions and measures for the upcoming post-2015 negotiations.

3.1 Extreme Income Poverty

The MDG framework measures poverty by means of the international poverty line of absolute income poverty set at \$1.25 a day at 2008 international prices. This line represents

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a revision of the 'a dollar a day' line, which was set for the World Bank's *World Development Report* 1990: *Poverty* based on research documented in Ravallion, Datt, and van de Walle (1991; see also Chen & Ravallion, 2010). The \$1.25 revision is based on the analysis of new national poverty lines and 2008 PPP estimates.[2] (Of course this line must continuously be updated according to new PPP estimates. The new data of 2011 PPPs, which became available in early 2014, will require the international poverty line to be raised significantly.) In order to maintain the momentum of currents efforts and avoid losing credibility by discontinuing previous efforts, the goals should continue to measure the equivalence of \$1.25 PPP (2008) per day poverty after 2015 (Ravallion, 2013). And they should agree on a new target of 'getting to zero' on extreme poverty (Aryeetey *et al*., 2012; OECD, 2013a).

Yet, there is growing consensus within the international community that the \$1.25 PPP (2008) per day poverty line alone is not sufficient for measuring poverty. Regarding income poverty, there are calls to make the equivalence of \$2 PPP (2008) line a complement to the \$1.25 PPP (2008) line in the new framework, one argument being that \$1.25 is simply too low to measure absolute extreme income poverty. Especially for Asian emerging economies and for the evolving challenge of poverty in middle-income countries (MICs), this line is much more relevant (Brooks *et al*., 2013). In Asia alone, more than 1.7 billion people live on less than \$2 PPP (2008) per day (Brooks *et al*., 2013; World Bank, 2012).

Other analysts demand an additional, 'high global poverty line' (Kenny & Pritchett, 2013; Pritchett, 2006, 2013), which could, for instance, be set at \$10 or \$12.5 PPP (2008) a day. The latter figure would be in the range of most developed countries' national poverty lines and would be 'a nice even ten times as high as the \$1.25' (Pritchett, 2013). There are strong arguments for such a high line: First of all, basic fairness requires it. The current framework's way of measuring poverty does 'not allow the world's population to even aspire to the living standards of the now rich industrial world' (Pritchett, 2013). A high global poverty line would make use of the same standards for everyone and would point to the obvious fact that global income poverty is not eradicated if everyone lives on \$1.25 or \$2 PPP (2008) a day. It also would speak to a much wider range of people and countries; approximately six out of the seven billion people live under the \$12.5 PPP line. With such a line, measuring poverty would be truly universal.

These three or similar international poverty lines would allow the post-2015 framework to measure income poverty more comprehensively and would help to portray the global poverty challenge in a more adequate and universal way than a single line does.

3.2 International and National Poverty Lines

While such international poverty lines help to compare patterns of poverty on the global level, they often lack relevance on the national level. Only in very few countries do the international poverty lines lie in the same range as the poverty line that has been nationally constructed. As a consequence, 'the resonance of the international poverty line as a tool to monitor and analyse poverty in individual countries has been limited' (Klasen, 2013a). Even though the PPP data should in theory ensure that national price levels are adequately reflected, in practice, this is often not the case. The PPP measures were originally intended

[2]The relevance and robustness of the \$1.25 PPP (2008) line is justified and defended in Ravallion, Chen, & Sangraula (2009).

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to compare national GDP figures, not poverty baskets, and therefore include a lot of prices of goods that are not relevant for the poor. Besides, nationally defined poverty lines correspond better to country-specific contexts and starting points, and they usually have more legitimacy as well as resonance within the countries (Klasen, 2013a; Pritchett, 2013). This is why the idea to include national poverty lines in the post-2015 development agenda should be on the table.

However, in order to ensure global comparability within a global development framework, such national poverty lines could 'be appropriately coordinated through appropriate international standards […] so as to reflect a common meaning of the poverty lines constructed in terms of the resource requirements of essential human achievements' (Reddy, 2009: 14). Based on this idea, Klasen (2013b: 39) proposes 'to co-ordinate the methods for setting the poverty line in each country internationally [and] to calculate poverty levels and trends nationally, using national currencies', by making use of the cost of basic needs method. 'This method estimates how much income is needed to attain a minimum access to food (measured in calories). It then fixes a poverty basket using current expenditure patterns of people close to the poverty line that achieves this caloric norm, and additionally makes some allowance for non-food spending' (Klasen, 2013b: 41; for details, also see Ravallion, 1992). Adding internationally coordinated national poverty lines to the Sustainable Development Goals (SDGs) is convenient, as it would ensure both in-country relevance, and cross-country comparability of the new framework's poverty measurement.

3.3 Poverty and Inequality

Recent research suggests that income poverty, today more than ever, is a problem of income distribution. Since 1990, income inequality increased in almost every region and some three-quarters of the global population live in countries, in which intra-state income inequality has increased since the early 1990s (OECD, 2011a; Rippin, 2013; UNDP, 2013; UNU-WIDER, 2008). Such rises in inequality have been especially grave in regions where most of the world's poor live. In the 15 of the top 20 countries where 90 per cent of the world's poor live for which data is available, 'the share of gross national income (GNI) to the poorest four deciles is, in general, static or declining when 1990 and 2008 are compared' (Sumner & Lawo, 2013: 16–17). Some commentators even suggest that inequality is the 'main reason why the world is unlikely to achieve most of the MDGs' (Rippin, 2013: 46; Vandemoortele, 2008). Today, poverty and inequality are inextricably linked.

This is especially because of the 'new geography of poverty'. According to Sumner (2013), a 'new bottom billion' lives in MICs. Whereas, in 1990, most extremely poor persons lived in low-income countries, today more than 70 per cent of them live in MICs. A rising *per capita* GNI does not automatically lead to a decrease in absolute income poverty. For instance, 'nearly 60 per cent of the income growth that was generated in the US between 1976 and 2007 went to the top one per cent of households' (Vandemoortele, 2011: 13; Rajan, 2010). As economic growth often entails rising inequality, if it is not actively counteracted (Kanbur, 2011; OECD, 2011a), tackling poverty means tackling inequalities.

As Sumner and Edward (2013) illustrate, changes in inequality could have a large impact on the future of global poverty—regarding both the total number of poor people and the costs of ending poverty: 'The difference between $2 poverty estimated on current inequality trends versus a hypothetical return to "best ever" inequality for every country

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could be […] 1 billion poor people in one scenario' (Sumner & Edward, 2013: 82). And such 'best ever' inequality 'would reduce the cost of ending $2 poverty in 2030 […] by about $100 billion on optimistic growth trends' and 'by about $300 billion on pessimistic growth trends' (Sumner & Edward, 2013: 83).

Goals, targets and indicators to reduce income inequality should, thus, be included in the post-2015 development agenda.

The two Word Bank goals to (1) end extreme poverty (target: the percentage of people living on less than $1.25 PPP per day to fall to 3 per cent by 2030) and to (2) promote shared prosperity (target: foster income growth of the bottom 40 per cent of population in every country)—are good starting points—but they are not sufficient for the post-2015 framework. 'Shared prosperity' requires more than just monitoring the income of the bottom 40 per cent of the population. It requires information on the income *share* of the poor. The current MDG framework already measures the share of the poorest quintile in national consumption (MDG 1.A.1.3.). The world should not fall behind what has been agreed already. Instead, the income of the bottom *x* per cent (10, 20 and 40) of the population needs to be related to the evolution of gross national income or the income of the top 10 per cent of the population (as suggested by Bourguignon, 2013, and Cobham & Sumner, 2013). The Gini and/or the Palma index could serve as stand-alone indicators regarding inequality (Cobham & Sumner, 2013).

Furthermore, measures of 'relative poverty' can account for the important link between poverty and inequality. For advanced economies, the European Union (EU) and the Organisation for Economic Co-operation and Development (OECD) set poverty lines as a share of the median income in a given country. The EU's 'at-risk-of-poverty' line is set at a net income of 60 per cent of the national median (European Commission, 2011). However, it has become common practice to report the statistics for multiple relative poverty lines in EU and OECD countries—usually 40, 50, 60 and 70 per cent (European Commission, 2011; OECD, 2008, 2014). Garroway and De Laiglesia (2012) argue that such relative poverty lines should complement absolute poverty lines in developing countries, too. Their argument 'builds on the idea that absolute and relative poverty reflect failings in different capabilities, respectively linked to survival and integration. While the development agenda has largely focused on the first in the past decades, the second should be given its rightful place' (Garroway & De Laiglesia, 2012: 37, see also Atkinson & Bourguignon, 2001). It has however been noted that for some very poor countries, this measure would have to be interpreted carefully. Because of the extremely low median income in some countries some people would fail to qualify as 'relatively poor' even though they are 'absolutely poor'. Relative poverty lines in the post-2015 development framework would link poverty and inequality and would directly measure the inclusiveness of economic growth. In general, because of its prime importance for the future of poverty reduction, tackling inequality should be placed in the centre of the post-2015 agenda. The OWG's proposed Goal 10 (reducing inequality within and among countries) and the corresponding proposed targets are good starting points for the intergovernmental negotiations.

3.4 Beyond Income: The Multidimensionality of Poverty and Inequality

The Development Assistance Committee (DAC) PovNet and other global actors helped develop the understanding that poverty should not only be regarded as income-based

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(OECD, 2007). Instead, the adequate comprehension of poverty requires a concept that comprises multiple dimensions. The MDG 1A to halve extreme income poverty overlooks many other deprivations. A growing body of research demonstrates that those living in poverty value income just as highly as education, health, social inclusion, honest governance and freedom from fear and violence (MyWorld Survey, 2013; OECD, 2012a; World Bank, 2000a, 2000b, 2002). Beyond that, it was found that poor people describe ill-being to concern nutrition, adequate sanitation and clean water, housing conditions, shame and disempowerment (OPHI, 2013a). Another argument against the use of income as a proxy for poverty is that no high correlation between trends in income poverty and trends in variables such as child mortality, primary school completion rates or undernourishment has been found (Bourguignon *et al*., 2010: 24–27; OPHI, 2013b). The people that are income-poor are not necessarily the same as the ones that are multidimensionally poor.

Therefore, ending income poverty is unlikely to mean the end of the many overlapping deprivations faced by poor people like malnutrition, poor sanitation, lack of electricity or ramshackle schools (Alkire & Sumner, 2013; OECD, 2013b). Many of these facets of poverty do not vanish as soon as a certain level of household income is surpassed. Leaving multidimensional poverty often means that a variety of social, economic and political structures must be adjusted in a way that basic public goods and services are provided. Measuring poverty in a multidimensional way, thus, is a more ambitious concept, but it is one that reflects what poverty actually means to people, in a much more adequate way.

This implies that inequality also should be measured across multiple dimensions of poverty. As has been shown in the preceding text, income inequality operates as a barrier to income poverty reduction. Similarly, non-income inequalities operate as barriers to the reduction of non-income (and income) poverty.

In this regard, gender equality is crucial. For instance, OECD data show a strong relationship between discriminatory social norms and women's educational and employment outcomes (OECD, 2012b, 2012c). At the same time, '[g]reater gender equality in educational attainment has a strong positive effect on economic growth' (OECD, 2012b: 23). According to Veenhoven (2011, 2012), gender equality is a key driver in self-reported well-being and life satisfaction across the world.

It was also found that greater socio-economic inequalities have negative impacts on social cohesion, political stability and peace, which in turn obstruct poverty reduction (OECD, 2011a, 2012a; Stewart, 2010). For example, the research of Stewart (2002, 2010) and others (Buhaug *et al*., 2011; Cederman, Weidmann, & Gleditsch, 2011) shows that so-called 'horizontal inequalities'—that is, within-country inequalities between social groups—are linked to violent conflicts. At the same time, most conflict-affected countries are among those that perform worst with regard to achieving the MDGs (OECD, 2013c). Measuring and tackling different dimensions of inequalities should, thus, be a central component of any development framework.

4 HOW TO MEASURE?

Based on this analysis of what should be measured in the post-2015 development agenda, the ensuing—and not less important—question is how to measure what should be measured. The way data is compiled, analysed, framed and presented crucially determines the impact of the measurement on policies. A successful development framework necessitates a convincing 'how' of measuring progress post 2015.

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In this regard, the world should learn from the GDP experience. Understanding why it is so tempting to use the indicator as if it was a measure for human development helps to identify what it takes for any indicator of development to be successful. The first obvious advantage is its simplicity. The calculation of the GDP yields one simple number. The meaning of this number is a clear concept as it simply signifies the monetary value of everything that is produced. Secondly, the GDP's rate of change is always meaningful, which makes it comparable over time. The GDP is, thus, a real indicator of change. Thirdly, the measurement is universal and can be used regardless of the country's level of development. It therefore allows meaningful cross-country comparisons. The post-2015 agenda should build on these insights and use indices and indicators that share these advantages. Yet, at the same time, it has to be ensured that this 'how' of measurement does not interfere with the content of measurement, so that the indices still measure what they are supposed to measure.

A growing body of research suggests that this is possible: It was a major breakthrough when Amartya Sen, Mahbub ul-Haq and others initiated the human development index (HDI) in 1990 (UNDP, 1990). Since then, academia, international organisations, governments and the civil society have continuously worked on new indices in order to improve the measures of development in ways that help to achieve global development goals. For the post-2015 development framework, the world, therefore, does not have to reinvent the wheel but can draw on the HDI and much existing research, concepts and indices.

4.1 The Role of Indices

The HDI was the first measurement approach to acknowledge and monitor multiple dimensions of development. But, until today, the UN Human Development Report Office (HDRO) is continuously exchanging with lead experts on how to best define and measure poverty and well-being. In order to account for the aforementioned importance of inequalities, the HDRO introduced the inequality-adjusted HDI in 2010 and has reported it yearly ever since. In this context, the OECD's Development Centre (OECD, 2012a) has worked on other measures that focus on the issue of 'social cohesion'. This approach looks at the three dimensions social inclusion, social capital and social mobility and is based on the assumption that 'a cohesive society works towards the well-being of all its members, fights exclusion and marginalisation, creates a sense of belonging, promotes trust, and offers its members the opportunity of upward mobility' (OECD, 2012a, 17).

Besides, both the UN Human Development Report Office and the OECD have developed indices that focus on gender inequalities. The Gender Inequality Index reported in the HDR reflects inequality between women and men in the dimensions reproductive health, empowerment and the labour market (UNDP, 2013). The OECD's Social Institutions and Gender Index data (see OECD, 2012a, 2012b) looks at factors underlying discrimination against women, including a wide range of social institutions and practices (OECD, 2012b).

Other ways of measuring multiple dimensions of well-being include the Better Life Index developed by OECD's Statistics Directorate, which includes 11 dimensions[3]

[3]Income and wealth, jobs and earnings, housing conditions, health status, work–life balance, education and skills, social connections, civic engagement and governance, environmental quality, personal security and subjective well-being.

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(OECD, 2011b). It goes beyond macroeconomic statistics and looks at different topics in the areas of material living conditions and quality of life. The OECD has also announced that '[i]n the future, these indicators reflecting current material living conditions and quality of life will be complemented by indicators describing sustainability of well-being over time' (OECD, 2011c). More recently, the International Human Dimensions Programme of the UN University and the UN Environment Programme launched the Inclusive Wealth Index. The Inclusive Wealth Index 'measures the wealth of nations by carrying out a comprehensive analysis of a country's capital assets, including manufactured, human and natural capital, and its corresponding values' (UNU-IHDP, 2012). In order to explicitly focus on poverty and to account for its multidimensionality, the HDR in 2010 began to report the Multidimensional Poverty Index (MPI), which has been developed by Sabina Alkire and James Foster (2007, 2011a, 2011b). The MPI measures 10 deprivation factors across three dimensions of poverty: health, education and living standards.

All these indices calculate poverty, inequalities and well-being within countries based on factors identified as essential for material living conditions and the quality of life. They aim to encompass a country's entire population, multiple dimensions and often changes throughout a person's life. A comprehensive understanding of development underlies them.

Such an understanding is required in the post-2015 agenda. The OWG's recommendation 'to develop measurements of progress on sustainable development that complement GDP' (OWG, 2014) should be taken seriously. The international community should move away from one-dimensional approaches towards goals and concepts that account for the multidimensionality of poverty and human development as well as for the inherent interdependence between these different dimensions. A United Nations Development Programme (UNDP) (2010: iv) report already noted that

> there are important synergies among the MDGs – acceleration in one goal often speeds up progress in other. In households where women are illiterate, child mortality is higher, implying the links between education, the empowerment of women and the health of children. Given these synergistic and multiplier effects, all the goals need to be given equal attention and achieved simultaneously. This requires multisectoral approaches.

Our point is that the post-2015 way of measurement has to account for this reality. Only if the way of measuring progress reflects a comprehensive understanding of development, policies will mutually reinforce each other and create synergies. Multidimensional and comprehensive goals and policies need multidimensional and comprehensive measures as a basis for decision-making. The new development framework provides a unique opportunity to move such indices to the centre of international development cooperation and global policy-making.

4.2 The MPI as a Post-2015 Headline Indicator

As has often been emphasised in United Nations General Assembly (UNGA) and OWG negotiations, the reduction of poverty in its many dimensions is supposed to be the overarching goal of the SDGs. To account for this, it has been proposed to include the MPI as a post-2015 headline indicator in the SDG framework. While the OWG proposes

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a measure of ‘poverty in all its dimensions according to national definitions’, the UN Sustainable Development Solutions Network’s proposed list of indicators explicitly recommends using the MPI for this purpose (UN SDSN, 2015). The Multidimensional Poverty Peer Network—an international peer network of policy makers, launched in June 2013 by over 20 countries—proposes that a revised global MPI ‘could be used as a headline indicator for the post-2015 Millennium Development Goals, providing an intuitive overview of multidimensional poverty to complement a $1.25/day measure’ (Alkire & Sumner, 2013). It therefore seems reasonable to briefly discuss the benefits and weaknesses of this approach.[4]

The MPI captures three dimensions of poverty (education, health and living standards) by measuring 10 deprivation factors (nutrition, child mortality, years of schooling, children enrolled, cooking fuel, toilet, water, electricity, floor and assets) (Alkire & Santos, 2010). If an individual is deprived in more than a third of these 10 weighted indicators, the MPI identifies him or her as multidimensionally poor. At the same time, the index measures how many deprivations these individuals face at the same time. The MPI figure equals the product of the proportion of people who are multidimensionally poor (incidence) multiplied with the average number of deprivations the multidimensionally poor experience (intensity).

According to its inventors, ‘[t]he MPI can be used to create a comprehensive picture of people living in poverty, and permits comparisons both across countries, regions and the world and within countries by ethnic group, urban/rural location, as well as other key household and community characteristics’ (OPHI, 2015). The index can thus be used as a tool that helps to identify patterns of multidimensional poverty and makes them comparable across countries and over time.

Yet, one of the critiques of the MPI points to the obvious problem that several facets of poverty such as conflict, domestic violence and intra-household dynamics are not addressed (Green, 2010). What is more, several of the indicators the MPI uses are problematic. Dotter and Klasen (2014), for example, criticise the unclear interpretation of some of the six variables used to assess living standards and recommend keeping only three of them (drinking water, floor and assets). They furthermore suggest changes to the operationalisation of variables such as undernutrition and school enrollment (e.g. they argue that the Body Mass Index as a proxy for undernutrition is subject to bias because of the nutrition transition).

However, Alkire, who rightly points to the lack of data for many of these shortcomings, stresses the flexible structure of the MPI. This structure allows that variables can be added or modified should more comprehensive data become available. Besides, this flexibility meets the demand for national targets after 2015 as it is possible to create national MPIs ‘with indicators, cutoffs and values that reflect their own national plan or goals, complementing and enriching the global MPI 2.0’ (Alkire & Sumner, 2013: 3). Several countries made use of this possibility and modified their national MPI; among them, for instance, the Colombian government, which uses five dimensions of poverty in its national MPI (OPHI, 2013c).

Other doubts are not as easy to deal with. Several scholars have noted that the MPI neglects inequality in the spread of deprivations across the entire population (Rippin, 2011, 2012; Silber, 2011). Hence, ‘transferring items from a poor to a less poor household does not change the poverty index as long as both households remain poor according to the MPI’ (Rippin, 2011: 1). Rippin’s solution is to introduce the Correlation-Sensitive Poverty

[4]The reader is referred to Dotter and Klasen (2014) for a comprehensive analysis of the MPI.

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Index that accounts for this inequality: This index attaches an additional weight to each household depending on the number of its deprivations and is therefore sensitive to transfers of items from poor to less poor household.

Another issue is that the MPI simply does not yet exist for all countries. At the moment, the MPI exists only for 104 countries (Alkire, Conconi, & Roche, 2013: 1). This leaves 89 UN member states without an MPI, many of them high-income countries. However, today, more than ever, poverty is a universal issue that is not limited to low-income countries (Sumner, 2013). Even the most advanced economies face challenges regarding poverty and inequalities (OECD, 2011a, 2011b). To give just one example, even in the USA, 800 000 households lived on less than \$2 per person per day in 2011 (Shaefer & Edin, 2012). Therefore, the SDGs should be universal and overcome the artificial and anachronistic North–South divide. If the MPI is to be included in the post-2015 agenda, it should be calculated for all countries.

While many of these issues can be overcome if further work is put into the MPI, Ravallion (2010a) addresses a problem any multidimensional index faces: The MPI ends up adding apples and oranges. Ravallion (2010b) already criticised the HDI for implicitly putting a value on an additional year of life by combining the indicators GNI *per capita* and life expectancy. From this perspective, the MPI goes even further and combines indicators that are even more difficult to combine (e.g. the death of a child and cooking with wood). According to him, 'being multidimensional about poverty is not about adding up fundamentally different things in arbitrary ways. Rather it is about explicitly recognising that there are important aspects of welfare that cannot be captured in a single index' (Ravallion, 2010a). This valid point goes against any composite index and leads to the argument that instead of such indices, decomposed and disaggregated data are needed.

True, for successful policy-making post-2015, the SDGs need high-quality, disaggregated data. Only then context-specific and evidence-based policy solutions are possible. But, this does not mean that a composite index is needless. A multidimensional poverty index as a headline indicator within the new development agenda would constitute a serious alternative to 'GDP fetishism' while building on what has made the GDP a success: The index provides a simple and intuitive number with an intelligible meaning, the monitoring of its rate of change over time allowing trends in performance to be identified and countries to be compared internationally. It enables effective resource allocation and helps policy makers to design effective poverty reduction policies. At the same time, such an index would measure what an indicator for development is supposed to measure: not merely economic growth but progress towards addressing the multiple dimensions of poverty.

5 CONCLUSION

This paper has argued that the post-2015 development agenda provides an opportunity to introduce new definitions and new measures of poverty and inequality. It has discussed different approaches at hand and has pointed to their strengths and weaknesses.

Initially, various international poverty lines to measure extreme income poverty should be considered. It seems reasonable to complement the equivalence of the existing \$1.25 PPP line with the \$2 PPP and an additional 'high' poverty line. At the same time, (internationally coordinated) national poverty lines could be integrated into the framework to ensure in-country relevance. Because of their prime importance for poverty reduction,

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inequalities should also be taken into consideration. As we have shown, there are different options for doing so and for combining poverty and inequality in the post-2015 agenda. On top of all this, the new framework should account for the multiple dimensions of poverty and inequality.

It has further been demonstrated that much existing research on measurement and development indices can be built on. A wide range of measurement instruments that account for the inherent multidimensionality of development exist. The post-2015 development agenda should include such a multidimensional index: A simple yet comprehensive and universal index like the MPI as a headline indicator could, together with disaggregated data, help to overcome the focus on GDP-based indicators and to broaden the development agenda.

In sum, it became evident that a variety of useful concepts exist. The remaining challenge is to pick and combine the best. The time for doing so is now: Since early 2015, the intergovernmental negotiation process on the post-2015 agenda between UN member states is in full swing. National governments now should consider and discuss the multiple options available in order to agree on an effective concept for the new agenda. All other non-state stakeholders, not least the scientific community, should continue to support UN member states so that the best definitions and indicators are chosen. Only then the post-2015 agenda can exploit its full potential.

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