

**WP 2013-17**  
**July 2013**



# Working Paper

Charles H. Dyson School of Applied Economics and Management  
Cornell University, Ithaca, New York 14853-7801 USA

## **SOCIAL PROTECTION, POVERTY, AND THE POST-2015 AGENDA**

**Ariel Fiszbein, Ravi Kanbur, and  
Ruslan Yemtsov**

It is the Policy of Cornell University actively to support equality of educational and employment opportunity. No person shall be denied admission to any educational program or activity or be denied employment on the basis of any legally prohibited discrimination involving, but not limited to, such factors as race, color, creed, religion, national or ethnic origin, sex, age or handicap. The University is committed to the maintenance of affirmative action programs which will assure the continuation of such equality of opportunity.

## **Social Protection, Poverty, and the Post-2015 Agenda**

**Ariel Fiszbein\*, Ravi Kanbur\*\* and Ruslan Yemtsov\*<sup>1</sup>**

**This version: May 23, 2013**

### **Abstract**

Social Protection is absent from the Millennium Development Goals (MDGs), and only recently has gained some prominence in the post-2015 discourse. In the past quarter century, however, rising inequality has often accompanied economic growth. At the same time, the growing importance of risk and vulnerability on the wellbeing of the poor has been recognized. Further, there is now a consensus on adopting more ambitious goals on poverty reduction. Defining social protection as a collection of programs that address risk, vulnerability, inequality and poverty through a system of transfers in cash or in kind, this paper argues that social protection needs to be on the post-2015 agenda as a key element of the discourse. It provides an empirical overview of social protection around the world based on the World Bank's ASPIRE data set. Focusing on the goal of ending poverty, the paper estimates that social protection programs are currently preventing 150 million people from falling into poverty. Based on the ASPIRE data set, this paper develops, tentatively and for discussion, a set of candidate goals, indicators and targets for the acceleration of poverty reduction through social protection. We ask what it would take for social protection programs to contribute to halving the poverty gap in a country. We show that if all countries could achieve the actual poverty reduction efficiency already observed in the top quartile of countries, then 70 percent of the countries in our sample could achieve this goal. However, for 30 percent of the countries even reaching the top quartile on efficiency will not be enough—for these countries the issue is one of budgetary adequacy.

---

<sup>1</sup> With contributions by Brooks Evans. Comments by Arup Banerji and Bénédicte de la Briere are gratefully acknowledged. The authors benefitted from the generous support of the Nordic Trust Fund through the project on “Strengthening the relevance of human rights in the Bank’s Human Development Work” and the Norwegian Trust Fund for Socially and Environmentally Sustainable Development. The authors are from the World Bank\* and Cornell University\*\*. Corresponding author: Ravi Kanbur, sk145@cornell.edu.

## TABLE OF CONTENTS

|   |           |
|---|-----------|
| 1. Introduction.....  | 6         |
| 2. Social Protection and the Changing Development Landscape: Poverty, Inequality and Vulnerability .....                    | 7         |
| 3. Social Protection and Poverty Reduction Around the World .....   | 12        |
| 4. Social Protection Targets for Poverty Reduction.....   | 22        |
| 5. Conclusion .....   | 26        |
| <b>REFERENCES.....</b>  | <b>28</b> |
| Annex 1: Measuring the Effect of Social Protection on Poverty.....  | 31        |
| Annex 2: List of Countries for Which ASPIRE Indicators are Available (Most Recent Survey) .....                             | 32        |
| Annex 3: Coverage by Social Protection, % of Population and % of Poorest Quintile .....                                     | 34        |
| Annex 4: Impact of Social Protection on Poverty and Inequality Indices (% Reduction) .....                                  | 36        |
| Annex 5: Decomposition of Poverty Gap Reduction by Social Protection Programs .....   | 38        |
| Annex 6: Poverty Gap Changes with Differing Efficiency Scenarios, Low Income Countries (LIC) .....                          | 40        |
| Annex 6 (Cont.): Poverty Gap Changes with Differing Budget Efficiency Scenarios, Lower Middle Income Countries (LMIC) ..... | 41        |
| Annex 6 (Cont.): Poverty Gap Changes with Differing Budget Efficiency Scenarios, Upper Middle Income Countries (UMIC) ..... | 42        |
| Annex 6 (Cont.): Poverty Gap Changes with Differing Budget Efficiency Scenarios, High Income Countries (HIC) .....          | 43        |
| Annex 7: Official List of Current MDG Goals, Targets and Indicators .....   | 44        |

## TABLE OF FIGURES

|  |    |
|--|----|
| Figure 1: Percent Covered by Main Types Social Protection Programs by Regions .....  | 14 |
| Figure 2: Poverty Headcount Reduction by Social Protection, by Region and Income Level<br>(at \$1.25/Day/Person) .....       | 16 |
| Figure 3: Graph of Poverty (Post-Transfer) and Poverty Headcount Reduction by Social<br>Protection .....                     | 17 |
| Figure 4: Graph of Poverty Gap Reduction by Social Protection (% of Pre-Transfer Poverty<br>Gap Filled, at \$1.25/Day) ..... | 18 |
| Figure 5: Gini Index Reduction vs. Poverty Gap Reduction.....  | 19 |
| Figure 6: Graph of Benefit-Cost Ratio for Different Types of Social Protection Programs .....                                | 21 |
| Figure 7: Benefit-Cost Ratio and Budget Ratio (Normalized) .....   | 22 |
| Figure 8: Benefit-Cost Ratios, by Country Income Groupings.....  | 24 |
| Figure 9: Budget as a Percent of Poverty Gap, by Country Income Groupings .....  | 24 |
| Figure 10: Percent Countries Achieving Poverty Reduction Target with BCR Scenarios, by<br>Income Groupings.....              | 24 |
| Figure 11: Current SSN, Energy Subsidy, and New SSN Spending*, %GDP .....  | 25 |

## 1. Introduction

The Millennium Development Goals (MDGs) were formulated in the 1990s, using 1990 as the base period to formulate goals and targets. As such, they reflect a perspective on development which goes back 25 years. Some elements of that perspective, for example the global concern with extreme poverty and hunger, have not changed and will continue to frame the post-2015 agenda. The focus on education and health, which was itself new 25 years ago, will also remain central to the development discourse in the years to come. However, the world today is different from that of 1990 in important respects, and development perspectives and challenges have evolved accordingly.

Climate change and environmental damage have accelerated, and the need for global consensus on action is now much clearer. Globalization and technological progress has brought historically high economic growth, but inequality has increased in many parts of the world, and countries that have bucked the inequality trend have only done so with pro-active policy effort. Macro-level vulnerabilities, as result of climate change and globalized trade and capital flows, have increased substantially. At the same time, as a result of better data availability and research, there is a far greater appreciation in the development discourse of the importance of micro-level shocks and vulnerabilities faced by everybody, but particularly the less well off.

The need to address extreme poverty, rising inequality, and risk and vulnerability, has led to an expansion of a set of instruments broadly classified under the heading of social protection. By social protection we mean a collection of programs that address risk, vulnerability, inequality and poverty through a system of transfers in cash or in kind. The last decade has seen a dramatic expansion in the number of developing countries that have established relatively large cash transfer programs focused on low income and excluded groups in society (Hanlon, Barrientos and Hume, 2010). For many countries expanded social protection programs are important enablers of progress in other key development goals: conditional cash transfer programs have played a significant role in the achievement of the health and education MDGs; social safety nets have avoided negative impacts of crises on hunger and poverty<sup>2</sup>. The growing evidence on impact of safety net programs (particularly strong in the case of CCTs as shown in Fiszbein and Schady, 2009) has facilitated their expansion including in low income countries. Since 2009, under the threat of the food, fuel and financial crises, dozens of countries have created new social protection programs, expanded old ones, and improved administrative systems to modernize governance and make their programs more efficient (Fiszbein, Ringold and Srinivasan, 2011).

Comparing 1990 with 2015, it is striking how the focus on social protection has changed, in reality and in the development discourse. It was largely absent from the original MDG discourse, and from the MDGs themselves—as a goal, as a target, or as an indicator. Today, it would be fair to say that social protection has stopped being a silent partner to development efforts. However, less than half of the poor in the world have access to social protection.<sup>3</sup> Social protection of any sort reaches less than a quarter of the poorest quintile of households in Africa.<sup>4</sup> While many middle-income countries have higher rates of coverage by social protection

---

<sup>2</sup> See, for example, Berhane (2011) for an evaluation of the recent experience in Ethiopia.

<sup>3</sup> World Bank (2012).

<sup>4</sup> World Bank (2012).

programs, these often operate under less than optimal conditions (e.g. substantial financing shortfalls, poor targeting, sub-optimal impacts, coordination failures among multiple programs).<sup>5</sup>

Unlike at the time of the original Millennium Declaration, today there is an unparalleled opportunity for the world community to prioritize the social protection agenda and, in doing so, bringing equity to the forefront of debates. Currently, 80 percent of developing countries have plans to initiate or strengthen their social protection systems (World Bank, 2012). This global interest is reflected in the UN Social Protection Floor initiative (ILO 2011) which calls on countries to establish or strengthen their existing social protection as an internationally recognized human right. However, expansion of social protection particularly for the poorest and most vulnerable in society in a sustainable manner remains a challenge. Complex issues are involved in defining the way programs can and should be designed, financed and implemented. The discussions on the post-2015 framework provide a unique opportunity to engage in a serious conversation on such issues. Whether as a goal or as a critical instrument under-pinning many goals, social protection will need to be an integral part of the post-2015 framework.

This paper is a contribution to the dialogue on the post-2015 development agenda, focusing on the role of social protection. While acknowledging that social protection can play an important role in addressing a number of possible goals, we focus our attention on the goal of poverty eradication. Section 2 of the paper sets out how the development landscape and discourse has changed since 1990, highlighting in particular poverty, inequality, risk and vulnerability and explores the role of social protection as an input, an output or an outcome of focus. Section 3 then provides some basic facts about patterns of social protection in the world. Based on the previous discussion, Section 4 develops, in tentative fashion, some goals, targets and indicators for social protection as part of a post-2015 agenda. Section 5 concludes.

## **2. Social Protection and the Changing Development Landscape: Poverty, Inequality and Vulnerability**

The first Millennium Development Goal (MDG1) is to Eradicate Extreme Poverty<sup>6</sup>. The key associated target is to halve, between 1990 and 2015, the proportion of people in extreme poverty. The indicators for this target are: (a) Proportion of people below \$1.25 (PPP) per day, (b) Poverty gap ratio (characterizing the depth of poverty at \$1.25/day) and (c) Share of the poorest quintile in national consumption. The indicators thus recognize that within the context of robust economic growth, mitigating inequality is also an important aspect of achieving the goal of sharply reducing poverty.

The post-2015 discussion is just getting started, and it is too early to know what its full shape will be. However, it would be very surprising if something like the current MDG1, eradication of Extreme Poverty, will not be part of the structure of goals—it may even remain broadly unchanged. Of course, the poverty picture globally has changed, so the targets may change. In particular, the target of halving the proportion of people whose income is less than

---

<sup>5</sup> World Bank (2012).

<sup>6</sup> The full set of MDG goals, targets and indicators is reproduced in Annex 7 for easy reference.

one dollar a day has already been met at the global level, although not of course everywhere in the world, especially not in Africa and in fragile states. This evolution of the development landscape could lead to the adoption of a much more ambitious target for poverty reduction at the global and national levels. The World Bank, for example, is considering adoption of a target of reducing the proportion of people living below the “dollar-a-day” line<sup>7</sup> to zero or close to zero, and something like this target may well emerge in the post-2015 agenda.<sup>8</sup> Further, the global community may set itself a more ambitious agenda on time, to “bend the arc of poverty”<sup>9</sup> and eliminate it much faster than a quarter century time horizon.

There are, however, two features of the situation in 2015, compared to that in 1990, which require going beyond the simple target focused on the percentage or population below the dollar-a-day line. First is the evolution of inequality, and second is the growing recognition of the importance of vulnerability of the poor to a range of risks and shocks. Let us take each of these in turn.

From the perspective of 1990, the development experience of the 25 years previous to then was dominated by the “growth with equity” miracle of the East Asian economies. These economies had managed to achieve growth with falling inequality, which paid a double dividend for poverty reduction.<sup>10</sup> There was considerable discussion and indeed controversy on how they did this, and on the lessons for development policy. This is not the place to revisit that debate and in any event the experience post 1990 has been quite different. The dominant experience of the last 25 years has been the spectacular growth experience by China since the 1980s and by India since the 1990s. However, this growth has been accompanied by sharp rises in inequality. Indeed, in the last 25 years, concerns have grown about increasing income inequality within countries in the world. Even in the East Asian “miracle” economies, inequality has increased. In developing Asia as a whole, more than 80 percent of the population lives in countries where inequality has increased since the 1990s.<sup>11</sup> This trend has been bucked by Latin American economies from 2000 onwards, but it is recognized that this has happened only because of concerted policy effort in these countries, which include significant social protection oriented policy interventions.<sup>12</sup>

An analysis of global trends reveals fundamental economic forces, which are tending to push inequality upwards. An opening up to global trade and to market forces generally initially benefits those best prepared to take these opportunities—those with more capital, better skills, and better geographical location such as coastal regions. Alongside these market forces, the forces of technological change are leading to more capital intensive and skills intensive production, and to rising skill premia, both of which push for greater inequality given the unequal distribution of wealth and of human capital. There is debate as to which of the two, technology or trade, is the dominant explanation, but that both are important is now accepted.<sup>13</sup>

---

<sup>7</sup> Although “dollar a day” is the expression used commonly, the actual line is \$1.25 per day in Purchasing Power Parity (PPP).

<sup>8</sup> See World Bank (2013).

<sup>9</sup> These are the words of World Bank President Jim Yong Kim.

<sup>10</sup> World Bank (1993), Adelman and Robinson (1978).

<sup>11</sup> Asian Development Bank (2012).

<sup>12</sup> Lustig, Lopez-Calva and Eduardo Ortiz-Juarez (2011).

<sup>13</sup> This large literature is reviewed in Asian Development Bank (2012).

It is unlikely that these fundamental forces of technology and markets will reverse in the coming 25 years. Thus, without proactive policy, there will be a strong tendency for inequality to increase and for the goal of eradicating poverty to move further away.

Inequality is a key aspect of social wellbeing and may well deserve a place alongside poverty as a key dimension of the post-2015 framework of goals and targets. However, inequality is also detrimental to the achievement of the poverty reduction goal since it can dissipate the impact of economic growth on poverty reduction. For example, calculations for Asia show that if inequality had not risen, then economic growth could have lifted almost a quarter of a billion more people out of poverty over the last two decades.<sup>14</sup> Similarly, for Brazil between 1998 and 2009, had inequality not declined to the extent it did, annual growth would have had to have been 4 percentage points higher to achieve the same poverty reduction over this period.<sup>15</sup> Thus measures to mitigate inequality will be important in the post-2015 agenda.

Consider now a second feature of development reality and development discourse of the past quarter century--the central role that risk and vulnerability plays in the lives of the poorest of the poor. These vulnerabilities, of ill health for example, were always present, but research and analysis has helped to illuminate their extent, magnitude and nature<sup>16</sup>. Further, there is also evidence that these vulnerabilities have grown, as reflected in climate change driven natural disasters, infectious diseases, financial crises and other risks of globalization.<sup>17</sup> The risks impact the MDGs and the post-2015 discourse in two ways:

- Firstly, the risks faced by the poor and their impact on wellbeing and peace of mind are not fully captured in standard poverty measures. Qualitative research brings this out strongly in the “Voices of the Poor.”<sup>18</sup> In quantitative terms, the costs of this risk are like having an even lower income, for the poor. Further, if this adjustment is made for risk and vulnerability, many of those currently above the poverty line will have equivalent incomes below the poverty line, so that standard approaches may understate actual poverty.<sup>19</sup>
- Secondly, shocks and risks can have a medium term effect on household productivity. For example, the effects of a shortfall in nutrition on body development for babies during difficult times, is not compensated fully by an equal and opposite improvement in nutrition in good times.<sup>20</sup> When faced with these risks poor households do adopt strategies which can reduce (but not eliminate) risk in the short

---

<sup>14</sup>Asian Development Outlook (2012).

<sup>15</sup> Lustig, Ortiz-Juarez and Lopez-Calva (2011).

<sup>16</sup> There is a huge literature, of course. See, for example, Dercon (2004), Chronic Poverty Research Centre (2009), and the special issue of the *Journal of Development Studies* in 2009, including papers by Menon (2009), Bene (2009) and Heltburg and Lund (2009).

<sup>17</sup> See, for example, Di Giovanni and Levchenko (2008) and Kose, Prasad and Terrones (2005).

<sup>18</sup> Narayan (2000).

<sup>19</sup> There is a large literature on measurement of poverty in the context of risk and vulnerability. For recent papers see Ligon and Schecter (2002), DuclosArrar and Giles (2010), and the papers in Addison, Hulme and Kanbur (2009).

<sup>20</sup>Hoddinott and Kinsey (2001), Tiwari, Jacoby and Skoufias (2013).

term. However, these very same strategies have long term deleterious consequences on their income, thus keeping them in a poverty trap. For example, they can hold back from adopting higher yielding but riskier crop varieties, or investment in human capital.<sup>21</sup>

Given the objective of rapid reduction of poverty, the prospect of rising inequality, and the importance of addressing risk and vulnerability, the logic of modifying and strengthening the discourse on MDG1 has strong validity:

- First, reducing poverty from its 1990 level to half that level is a different proposition from essentially eliminating it starting from its current level. This will prove a more challenging exercise simply because we are getting to the part of the distribution which is harder to reach.
- Secondly, if we want to achieve elimination of poverty on a more ambitious time table than the quarter century to halve it from its 1990 level, to “bend the arc of poverty,” this will in turn add to the challenges and require some pro-active policies towards the poorest.
- Thirdly, given the fundamentally dis-equalizing pressures in the global economy due to technology and more open flows goods and capital, additional policy effort will be needed to achieve the goal of ending extreme poverty.
- Fourthly and finally, the effects of risk and vulnerability on the short term and medium term wellbeing of the poorest individuals and their children will have to be addressed.

When faced with the need to help poor households address and cope with the risks and volatility they face, and with the objective of achieving a more rapid, a more extensive, and a deeper reduction in income poverty and destitution than can be achieved at current growth rates, governments can use a range of interventions broadly described as “social protection.” Some of these are focused on risk, like various insurance programs; others are focused on poverty, like conditional cash transfers; but many if not most programs can and do address both goals (for example, public works schemes). Their effects on poverty (and wellbeing) are both direct and indirect, creating the conditions for higher productivity and risk management.

When social protection programs work well, as a collectivity, they contribute to the achievement of a modified and extended MDG1—modified to incorporate a more ambitious time frame of poverty reduction in the context of rising inequality, and extended to incorporate the short term and long term consequences of income risk.

We believe, therefore, that social protection has a central role to play in the post-2015 development agenda. Specifically, we propose social protection as an instrument for the goals of reducing poverty, reducing inequality, and reducing risk and vulnerability.<sup>22</sup> Whether the

---

<sup>21</sup> See for example Jacoby and Skoufias (1997) and papers in Dercon (2004) and Addison, Hulme and Kanbur (2009).

<sup>22</sup> It should be clear that even though elements of the MDG are independent goals of development in their own right, they are also interdependent in that the achievement of one goal can facilitate the achievement of another. The

inequality and vulnerability goals end up as separate goals in their own right, or are treated as sub-goals under the broad heading of reducing poverty, social protection comes in as a key instrument to achieve these goals. What we need, then, are indicators to help policy makers judge the extent of social protection, and how well it is doing as an instrument for achieving the goals. The next sections will take up this task by focusing on what is the most agreed upon goal under the MDG framework: the reduction of extreme poverty.

It should be noted that the MDG discourse itself is somewhat eclectic about final outcomes and instruments to achieve those outcomes. For example, take MDG4, reducing child mortality. The target is to reduce by two thirds, between 1990 and 2015, the under-five mortality rate. The three indicators for this target include “proportion of 1 year-old children immunized against measles.” Clearly, this is an instrument for the target and the goal, not an indicator for the goal and target. Or consider as a second example MDG5, improving maternal health. The indicators for this include on the one hand the maternal mortality ratio, which is clearly an indicator for the goal, and on the other hand “proportion of births attended by skilled health personnel”, which is equally clearly an instrument for achieving the goal.

There is another use for development goals beyond an expression of consensus on the objectives of development and the related question of the instruments to achieve these goals. This is the use of goal setting per se as an aid to development, through mobilizing political consensus, the energies of civil society, and appropriate volumes and types of development assistance. A set of international goals can act as a standard setting device at the national level, energizing domestic civil society to hold their government to an international standard to which the government has signed up. Thus the goals, targets and indicators can be used as devices for assessing performance of governments relative to international standards, which have possibly been tailored to local conditions. Finally, the standards can also, if quantified, be used to develop estimates of resources needed to achieve the goals and targets, although here there will need to be a clearer articulation of the causal links between instruments (which may be present in the discourse as indicators) and the goals and targets.

For the task of mobilizing civil society’s and the polity’s energies towards the development goals, targets and indicators, these will have to be developed and stated in a form that appeals to a wide audience.<sup>23</sup> There may be a tradeoff between targets and indicators that meet a high theoretical or conceptual standard, and between those that can appeal to a broad audience and can thus be the basis for mobilization. In what follows we will try to develop a set of indicators and targets for social protection as an instrument of poverty reduction which have general appeal but also correspond as closely as possible to rigorous conceptual foundations.

---

interrelationships between education and income are well understood by now, so MDG 1 and MDG2 are clearly interrelated. The links between mother’s education and child health are also well established, so MDG3 and MDG 4 are interrelated. There is now significant evidence that inequality is detrimental to growth (See Kanbur and Lustig (1999) and Berg and Ostry (2011)). Thus reducing inequality as a direct goal is related in turn to the direct goal of reducing income poverty as in MDG1. And the micro level links between risk aversion and turning away from high return/ high risk activities like adoption of new crop varieties has already been discussed. To the extent that investment in education, especially of girls, is perceived by households as a risky proposition, risk and vulnerability also works against the achievement of MDG 2 and MDG 3.

<sup>23</sup> Gauri (2012).

### 3. Social Protection and Poverty Reduction Around the World<sup>24</sup>

Having argued that eliminating poverty, and addressing rising inequality and vulnerability will need to be a major part of the post-2015 development agenda, and that social protection is a key instrument to address these challenges; this section will set out the basic facts of social protection around the world. In particular, we will present quantitative estimates for the impact of social protection programs on poverty and inequality, which in turn depends on their efficiency and the adequacy of resources devoted to them. This factual account will then form the foundation for the next section, which presents potential international standards and targets for social protection as an instrument for achieving poverty reduction.

We acknowledge upfront that poverty reduction is not the sole objective of social protection programs. However, in the context of the post-2015 agenda we prefer to retain the focus on a single goal (poverty reduction) to assess social protection programs. We focus the presentation on the first set of current MDG1 goals formulated in terms of poverty at the international “dollar a day” line (more exactly \$1.25 per day per capita in 2005 PPP). The purpose of this is to show that the proposed recast of goals can be operationalized with the data at hand. But as most readers would know, a poverty line is in many ways an arbitrary cut off. For many (richer) countries the dollar a day line does not represent a meaningful standard. We thus also use a relative cut off, set at the upper boundary of the bottom quintile of consumption (so that poverty headcount is fixed at 20 percent in any country). And alongside impacts on these poverty measures we also look at the impacts of social protection on inequality. In order not to divert the attention from the primary focus on extreme poverty and the potential for its elimination, we reduce discussion of other measures to a minimum; the interested reader can find corresponding data in the annexes. We return to the broader set of measures for social protection when we discuss policy implications in the conclusion to this paper.

There are different types of social protection programs depending on their objectives and the risks they cover. Classifications abound, and we follow the most widespread typology that is accepted for the developing world.<sup>25</sup> In what follows we include as social protection programs for social insurance (contributory programs, principally pensions), labor markets (for example job training), and non-contributory social assistance programs (or social safety nets) which include humanitarian and disaster relief programs, cash transfers, food stamps, school feeding, in-kind transfers, labor-intensive public works, targeted food assistance, subsidies and fee waivers. Social insurance and labor market programs tend to benefit higher income groups, whereas social assistance programs generally (but not exclusively) focus on the most poor and vulnerable.

The objectives of these various social protection programs and their scale vary from country to country. Run by governments, NGOs or donors, these programs are typically designed to protect vulnerable households and individuals, help the poor and promote employment, while increasing social cohesion and reducing inequality. Social protection programs address different needs of different groups; hence it is no surprise that many countries

---

<sup>24</sup> This section draws on a longer forthcoming paper, Fiszbein, Kanbur and Yemtsov (2013).

<sup>25</sup> See, for example, the World Bank’s new Social Protection and Labor Strategy, World Bank (2012b).

adopt different forms of social protection, but some components are almost universally accepted as part of the social protection architecture.

For example, by the year 2013 cash transfers are used in practically all developed, developing and emerging countries around the world and close to 1 billion people are covered by this type of protection.<sup>26</sup> School feeding programs, recently reviewed by the World Food Program and the World Bank, exist in 78 developing countries in the world and cover 270 million children.<sup>27</sup> Public works at scale exist in over 50 countries.

But how do these programs compare to the size of population? Data from household surveys assembled by the World Bank in the resource called ASPIRE give a sense of coverage across countries.<sup>28</sup> Based on responses from households in nationally representative surveys, one can estimate what percent of a population is covered by different forms of social protection programs by regions (Figure 1). We see that globally even though all developing countries seem to have some form of social protection, less than one half of the population benefits from it. Social protection of any sort reaches less than a quarter of the population in Sub-Africa. Despite South Asia's longer history of locally owned safety net programs, just over one third of population (and slightly more- 40 percent of the poorest quintile as shown in Annex 3) is reached by any sort of social protection. Many countries have incomplete social protection systems with important instruments missing. But in some countries, such as Romania, Mongolia, Chile or Thailand, social protection covers close to 100 percent of their poorest and most of the population (see Annex 3).

---

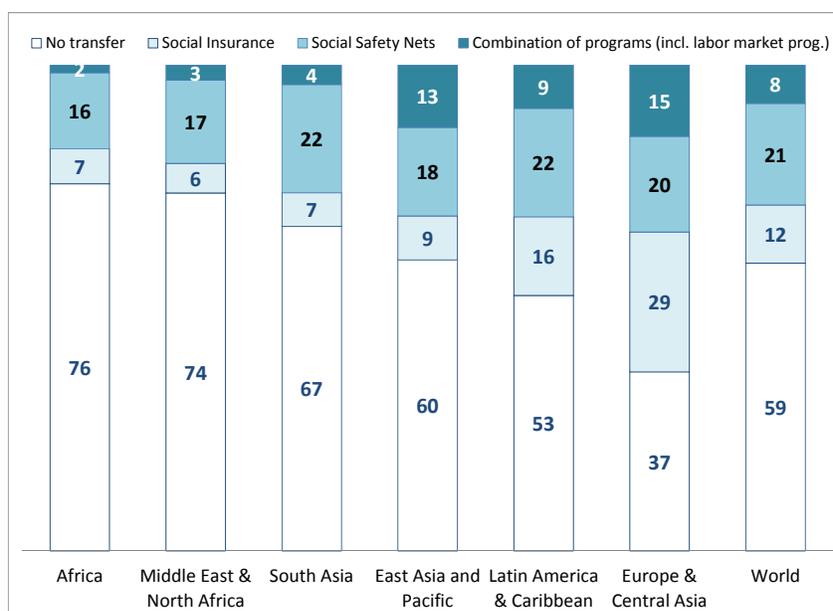
<sup>26</sup> Barrientos (2012). Discussing the choice of specific instruments and their relative role in each country is beyond the scope of this paper; see World Bank (2012b).

<sup>27</sup> World Food Program school feeding global survey 2012.

<sup>28</sup>To look at the coverage by a whole set of social protection programs, their adequacy, and impacts on poverty and inequality, one needs household survey data that provides information on the poverty status of beneficiaries, as well as on the transfers from a variety of social protection programs. We rely on the World Bank's ASPIRE data set. It is based on household surveys that are relatively recent (after 2005), contain social protection questions or modules which allow the identification of beneficiaries of social programs, and are harmonized, and are available to the World Bank ([www.worldbank.org/spatlas](http://www.worldbank.org/spatlas)). Among all countries in the developing world as of 2013 only 56 meet these criteria. The data includes 17 countries in Low-Income Groups, 20 in Lower middle-income and 15 in upper middle income (classification is from WB Atlas). In terms of regional break down 7 countries are in Sub-Saharan Africa (AFR), 8 in East Asia & Pacific (EAP), 17 in Eastern and Central Europe (ECA), 16 in Latin America and the Caribbean (LAC), 3 in the Middle East and northern Africa (MNA), and 7 in South Asia (SAR). The ASPIRE data set is expanding rapidly- this year 10 more countries will be added and another 15 are in the pipeline. See Annex 2 for list of countries and surveys used.

**Figure 1: Percent Covered by Main Types Social Protection Programs by Regions**

*(Percent of population receiving transfers from social protection program)*



Source: World Bank SP Atlas of Social Protection (ASPIRE) – see Annex Table 3 for countries used for the calculations; country populations used as weights to expand to regions’ average

How adequate are social protection transfers? Do they provide sufficient resources to the recipients to alleviate their poverty and avoid detrimental coping strategies? ASPIRE data can be used to compare average transfers received with the average consumption of its beneficiaries. Here also the variation across countries is large (Annex 3). Countries in Eastern Europe and Central Asia tend to provide generous support averaging 53 percent (that is, programs cover over one half of the consumption of people who receive it), while countries in Latin America seem to be calibrating their benefit systems to the scale of poverty gap and transfer on average 27 percent to the income of beneficiaries (the average poor person in these countries is about 25 percent below the poverty line). In Africa and developing Asia extreme values can be found, but for most countries with nascent systems it is very low. The lowest adequacy (less than 10 percent) regionally is South Asia and the Middle East and Northern Africa.

To sum up, most countries in the world use multiple social protection instruments, but their simple presence is not yet a sign of their effectiveness. The scale and coverage of social protection differ a great deal across countries. Hence their real impact on poverty and inequality is also likely to vary a lot.

### **3.1 Poverty impact of social protection programs**

How can the impact of social protection on poverty and inequality be estimated? As argued earlier, social protection affects well-being through three channels of impact: first, direct reduction of income poverty through transfer of purchasing power to the beneficiaries, but also

two other less direct channels, namely insurance/protection against risk or shocks (where the longer-term poverty consequences of a shock often decrease the "lifetime" poverty of the beneficiaries allowing them to recover better from these shocks); and "investment income" as additional returns or income from productive investment, and employment generated through the participation in social protection programs. Obviously, these three channels are co-existent, and any social protection program has effects on poverty and inequality along all three channels. For example, income security due to the receipt of regular transfers encourages beneficiaries to invest in higher risk but also higher return activities, or overcome market failures allowing them to invest in their human capital. There is mounting empirical evidence on the precise magnitude of such indirect impacts for the long-term income growth of the beneficiaries (reviewed in Alderman and Yemtsov 2013). However, all of these studies typically cover the effect of one program in one country, and it is hard to generalize across the world.

To approach the issue of cross-country comparability and comprehensiveness, we limit our attention to just the first, direct, channel of transfer impact on the current wellbeing of beneficiaries. For this we use household survey information and compute what the household's income would be without the transfers it receives from social protection programs. Thus, generally the transfer value is subtracted from individual or household welfare<sup>29</sup>, providing a synthetic counterfactual. Of course these results are more indicative than authoritative since behavioral effects, for example, are not simulated.<sup>30</sup> In the short run, if households reduced their efforts to earn market income in response to income transfers through social protection, then this method would give an overestimate of the impact on poverty. Evidently *any* medium term improvements in household market income discussed above imply that the direct assessment would be an underestimate of the poverty and inequality impact. It is difficult to know where exactly the balance would come out, but our estimates can provide an anchor for discussion and sensitivity analysis.

Using the ASPIRE dataset and an international poverty line of \$1.25 per day per capita in PPP, Figure 2 below uses this simulation to estimate how many people are moved out of poverty as a result of social protection transfers (by income groups of countries) in the ASPIRE surveys. If these estimation from surveys in ASPIRE are extrapolated to the world population in developing and emerging countries, almost 150 million people worldwide are prevented from falling into extreme poverty thanks to social protection.<sup>31</sup> This is a sizeable dent in global poverty which counts 1.4 billion people (at \$1.25 a day). Taking the pre-transfer poverty headcount as the base, the average reduction in poverty across developing countries is about 45

---

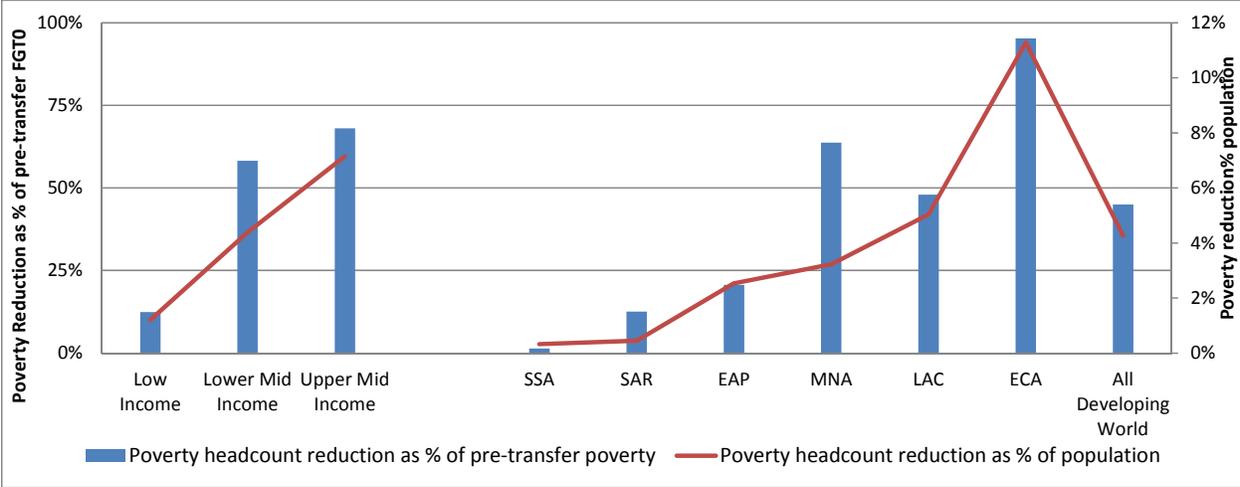
<sup>29</sup> Welfare is a measure of well-being, and is defined either as per capita income or consumption.

<sup>30</sup> For example, it is assumed that if a person stops receiving a pension, he or she will try to survive on the remaining income after the pension is taken away. In practice that person can seek assistance from relatives and community that will partly compensate this loss of income, so will not be as poor as assuming no replacement.

<sup>31</sup> This is based on assumption that 56 countries in ASPIRE are broadly representative of their regional peers currently not in the ASPIRE data set. If there is some correlation between the presence of data on social protection and real effort in providing social transfers, then extrapolating from surveys to countries without surveys will provide an overestimate of the number of people affected by social protection in the world. At the same time, since most surveys do not entirely capture all social protection programs in countries (for reasons of data collection costs), the ASPIRE itself may be underestimating the poverty impact of social protection in countries it covers. Thus there are forces pulling in opposite directions which tend to cancel each other out, giving us some confidence at least for the range of estimates we produce, but it is difficult to know the net effect precisely.

percent. This impressive global impact differs across countries: it is largest in Eastern Europe and Central Asia and smallest in Sub-Saharan Africa, where only 1 percent of the population moves out of poverty thanks to social protection transfers.

**Figure 2: Poverty Headcount Reduction by Social Protection, by Region and Income Level (at \$1.25/Day/Person)**

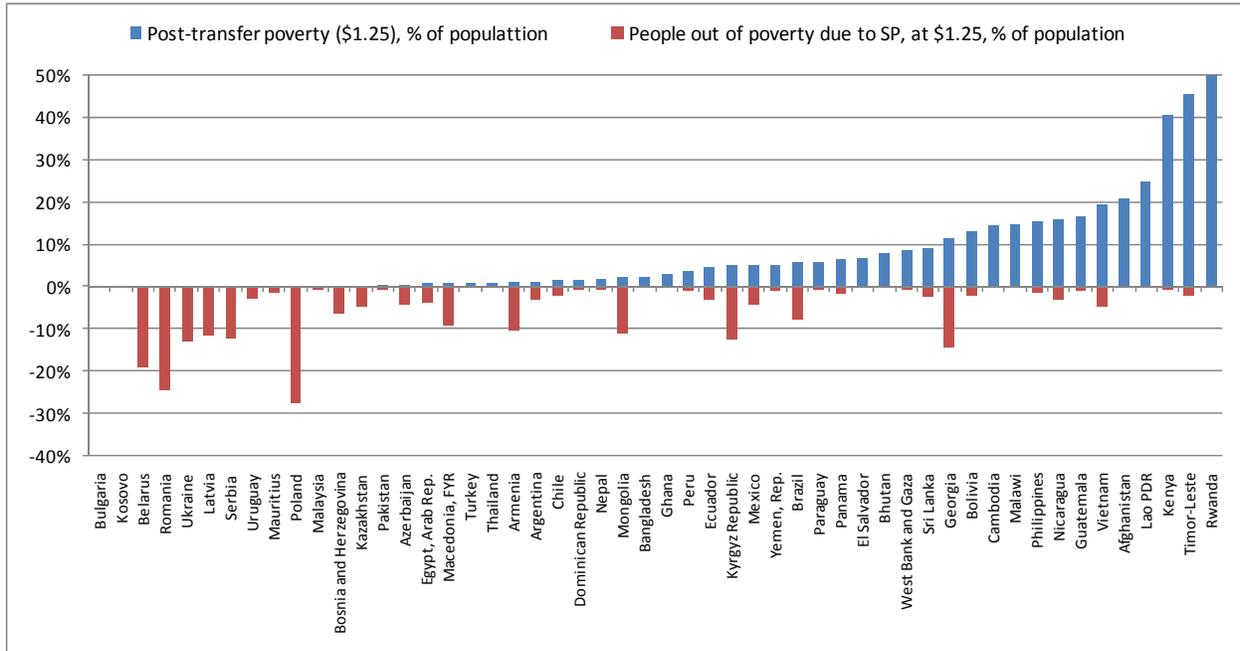


SSA: Sub-Saharan Africa, MNA: Middle East and North Africa, SAR- South Asia, EAP- East Asia and Pacific, LAC- Latin America and Caribbean, ECA- Eastern Europe and Central Asia

Source: Authors based on ASPIRE, see Annex

Turning now to differences across *countries* we see quite a large spread in terms of poverty reduction, even across countries belonging to the same income group or the same region: dollar a day poverty is reduced by 100 percent (it is eliminated) in several upper middle income countries in ECA (such as Romania or Poland), and in some low income country like Mongolia in EAP (see Annex 4). Figure 3 shows that typically it is in the poorest countries that the impact of social protection on poverty is the smallest, and arguably this is where it is needed the most. But at the same time countries that are close in poverty incidence achieve very different results in terms of poverty reduction: Georgia and Bolivia and next to each other on the graph, but without social protection Georgia would have a much higher poverty rate.

**Figure 3: Graph of Poverty (Post-Transfer) and Poverty Headcount Reduction by Social Protection**



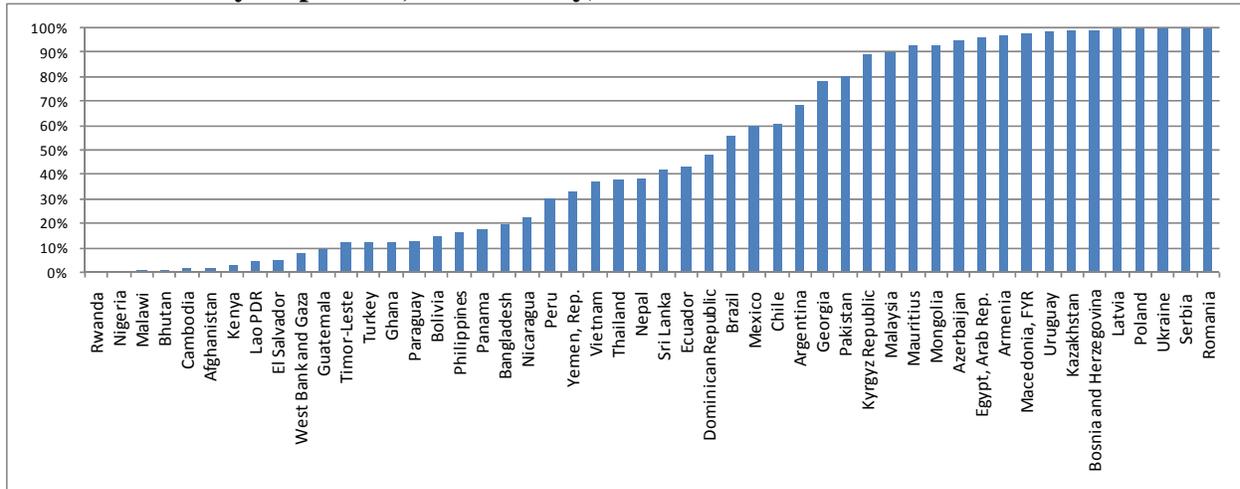
Source: Authors based on ASPIRE, See Annex

There are several countries where absolute poverty measured by \$1.25 a day standard is low or even zero, and hence the impact of social protection cannot be assessed. For this reason, the annexes give estimates of poverty impact not only for \$1.25/day line, but also for a relative line with a cutoff of the bottom quintile.

The poverty headcount, while informative about the scale of poverty, does not characterize the nature of poverty: how deep and severe it might be, how far an average poor person is from the poverty line. The most intuitive measure for this is the total poverty gap- or the sum of the gaps between income and the poverty line for the poor in country.<sup>32</sup> Using again the international poverty line of \$1.25 and a simulation of social protection impacts we can see in Figure 4 that the impact of social transfers on this poverty measure is even greater than what we saw for the headcount (on average almost half of the poverty gap is eliminated). Once more countries differ a lot in how successfully they are closing the poverty gap. Some are eliminating it completely; some are making hardly a visible difference.

<sup>32</sup> Note that this is simply the FGT1 measure of poverty multiplied by the poverty line and the total population in the country—see Annex 1.

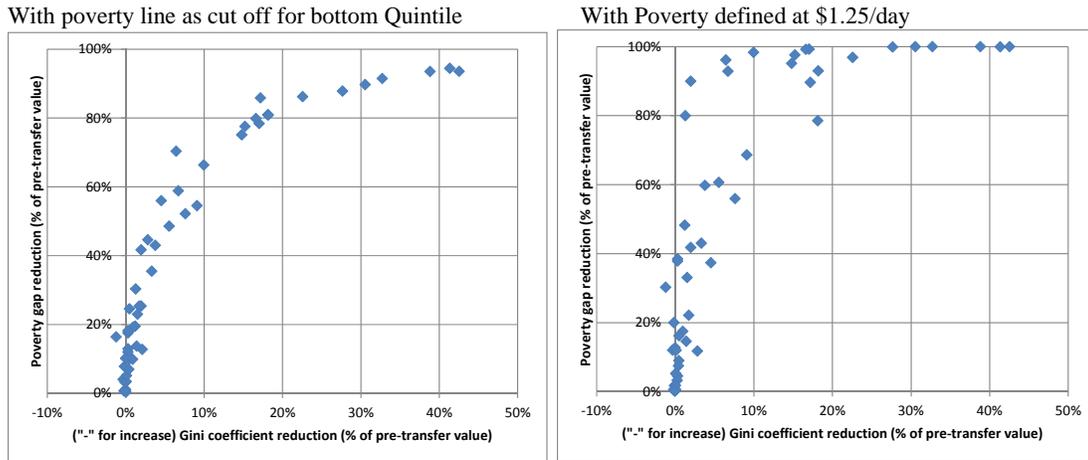
**Figure 4: Graph of Poverty Gap Reduction by Social Protection (% of Pre-Transfer Poverty Gap Filled, at \$1.25/Day)**



Source: Authors based on ASPIRE, see Annex

The reduction of inequality as measured by the Gini index is also quite dramatic (Annex 4), even though properties of this measure of inequality mean that impacts will tend to be smaller: on average the Gini index is reduced by 10 percent by social protection programs, led by ECA averaging over 30 percent, while the other regions all experience a reduction of less than 5 percent in the Gini. Figure 5 shows a close relationship between the scale of inequality reduction and the poverty gap reduction by social protection programs, even though the relationship is not one-to-one (in some countries inequality is even increasing as a result of social protection transfers- something impossible with our definition of poverty measures). Note that for several countries the standard of \$1.25/day as a poverty line means the complete elimination of poverty, while they achieve very different results in terms of inequality reduction (top of the right panel). Using relative cut-off (left panel) gives a closer relationship, and again shows much stronger effects on poverty than on inequality. In what follows we will focus on the poverty impact at the absolute \$1.25/day line as the most direct and visible measure for social protection's contribution to eliminating extreme poverty.

**Figure 5: Gini Index Reduction vs. Poverty Gap Reduction**



Source: Authors based on ASPIRE, see Annex

### 3.2 Decomposing the Poverty Impact: Poverty Reduction Efficiency and Budgetary Adequacy

We have shown that social protection programs can have a significant impact on poverty. But there is considerable variation in poverty reduction performance of social protection programs across countries. What does this depend on? Intuitively, the impact will depend on two things—total funds available for transfers to the poor, and how well they are used. The decomposition can be represented clearly in the case where poverty is measured by the sum of the shortfalls of poor peoples’ income from the poverty line, the poverty gap or PGAP (see Annex 1 for further explanation). The reduction in this poverty gap as a result of social protection programs,  $\Delta PGAP$ , is then simply the total amount of transfers that go the poor,  $T_p$ . Denoting all transfers to poor and non-poor as the transfer budget  $B$ , we can write the following:

$$(\Delta PGAP/PGAP) = (T_p/B)/(B/PGAP)$$

In the above expression, the left hand side is the percentage reduction in the poverty gap. The first term on the right hand side is the ratio of transfers that go to the poor as fraction of all transfers (i.e. to both the poor and non-poor). This is a measure of the poverty reduction efficiency, also called the targeting efficiency, of the programs as a whole. It is also referred as the “benefit-cost ratio” (BCR), as it shows for each dollar of transfers (or “costs”) what share goes to fill the poverty gap (“benefit”), and only poverty gap.<sup>33</sup> The BCR can take values from zero (the poor receive nothing) to one (all of the transfers are going to the poor and only to fill the poverty gap). The second term on the right hand side is the total transfers as compared to the full pre social protection transfer poverty gap. If this “budget ratio” is less than one, then even with perfect targeting the poverty gap cannot be filled. Evidently, the budget ratio can also have

<sup>33</sup> This measure obviously ignores administrative costs to run the program or any leakages or losses that occur before the program reaches to beneficiaries. It takes therefore “an ideal” view of the systems performance. Such administrative data are not easily available across a wide range of countries and programs.

a value greater than one. The expression synthesizes the twin requirements for social protection to have an impact on poverty—**adequate budget**, and **good targeting**.<sup>34</sup>

Annex 5 shows the percentage reduction in poverty gap, and its constituent parts in terms of poverty reduction efficiency and budgetary adequacy.

The adequacy of the social protection budgets varies extremely widely across countries. On average, countries' total transfer flows to beneficiaries from social protection amount to 26 times the poverty gap (as measured by international extreme poverty line of \$1.25/day). Thus, on average the support provided is well above what it takes to eliminate absolute poverty if poverty focus were perfect, or even sufficiently good. That of course is a reflection of the fact that for many countries the poverty line of \$1.25 is a very low standard and represents a negligible fraction of GDP. But even for these countries, it is important to ascertain that the very poor are at least being helped. The median SP system is providing transfers 12 times the poverty gap. If properly targeted, benefits could lift the average poor out of poverty or at least bring her much closer to the poverty line, thereby reducing the poverty gap or even eliminating it completely.

Achieving such impacts depend not only on the adequacy of transfers, but also on how well the system is focused towards the poor. It is of course unrealistic to expect that the benefit-cost ratio for social protection will be anywhere near to 1. First, no real program is attempting to exactly close the poverty gap and just that. Transferring different amounts to beneficiaries depending on how close they are to the poverty line would mean giving different amounts to different poor people, which proves at times to be politically infeasible and administratively costly. Second, the objectives of the social protection programs may go beyond immediate consumption and short-term poverty eradication. Many elements of social protection are indeed not intended to be targeted to the actual poor, but to protect non-poor against the risk of becoming poor, or help the vulnerable to improve their resilience (e.g. contributory pensions, unemployment benefits, universal health insurance etc.). In the developing world represented by 56 countries in ASPIRE, only 23.6 percent of all social protection beneficiaries are present among the poorest quintile.

Nevertheless, important criterion for assessing the adequacy of any social protection program is its ability to alleviate poverty and ensure equity (see for instance Grosh et al's (2008) discussion of targeting efficiency). That is, while a BCR of 1 is an unattainable ideal benchmark, countries may ensure adequate protection of the poor and vulnerable by ensuring that at least some resources flow to the poor. And indeed, on average the BCR for the SP system as a whole is above zero, with a maximum value of 0.4 (the higher levels are achieved by countries as diverse as Timor-Leste, West Bank and Gaza and Rwanda) – meaning that for each dollar of transfer at least 40 cents is going to fill the poverty gap.

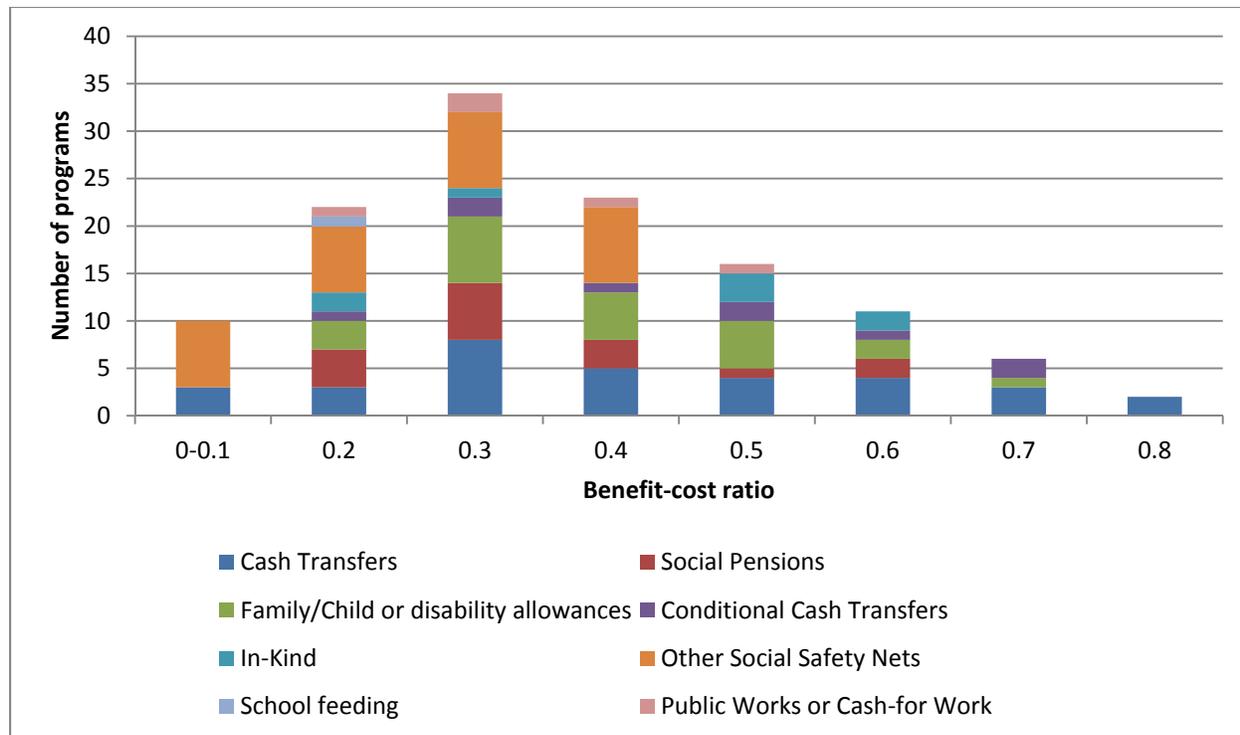
Even programs that are not specifically focused on the poor can achieve good performance in targeting the lower end of the income distribution. We examine this through ASPIRE, focusing on how well different types of programs reach *the poorest quintile*. Figure 6 shows the BCR varies across types of programs. With a mix of social protection programs some

---

<sup>34</sup> The Annex 1 shows the formulae in full technical detail.

countries are achieving relatively high degrees of efficiency for some programs- the BCR is above 0.5 in almost 40 programs across countries.

**Figure 6: Graph of Benefit-Cost Ratio for Different Types of Social Protection Programs**



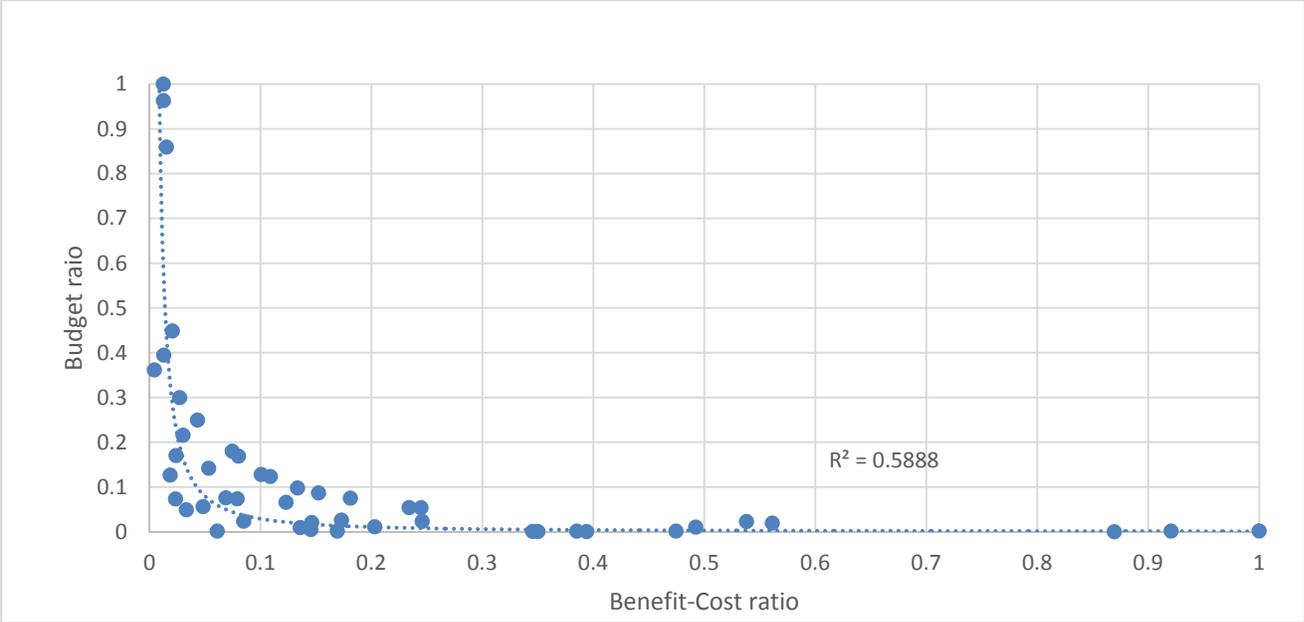
Source: Authors calculations. Note: BCR for poverty line set at the lowest quintile cut-off. Benefit-cost ratio is the reduction in poverty gap obtained for each \$1 spent in Social Protection and Labor programs.

Figure 6 also shows that there is no specific association between program type and its efficiency in targeting the poor. The distribution of BCRs across social pensions, other cash transfers and in-kind programs is similar. CCTs tend to have higher efficiency in terms of filling poverty gaps, while “other” programs (typically subsidies or social services) tend to be less efficient. This comparison suggests that countries have a lot of space for increasing the poverty focus to achieve greater poverty reduction by changing the mix of programs they already have or by improving the targeting of their programs in line with better practice.

The decomposition of poverty impact into budgetary adequacy and targeting efficiency shows that adequacy and efficiency often move in opposite directions. Many countries have more than adequate budgets, but their efficiency is reduced by a very low BCR. Figure 7 summarizes this relationship using the \$1.25 poverty line. The figure suggests there is potential to increase the impact on poverty. On the one hand, some countries with high adequacy can increase efficiency, possibly through reallocation from less efficient programs. On the other hand countries with high efficiency can achieve greater impacts by expanding their programs and increasing adequacy. For countries with similar budget adequacy the BCR takes very different values: Vietnam achieves 4 time greater efficiency (BCR) than Guatemala with a comparable budget ratio. This suggests the BCR has considerable scope to improve the performance of the

social protection systems in terms of their impacts on poverty and equity at every level of the spending. At the same time, countries at moderate levels of efficiency can also have very different degree of budgetary adequacy, leading to different performance on poverty reduction. The next section considers the impact on poverty reduction of improving efficiency at given levels of budget, and budgetary requirements for poverty reduction even at high levels of efficiency. This leads to consideration of where to set potential targets for social protection.

**Figure 7: Benefit-Cost Ratio and Budget Ratio (normalized)**



Source: Annex 6: Poverty Gap Changes with Differing Efficiency Scenarios, Low Income Countries (LIC). Maximum value of BCR of 0,4 and maximum value of budget adequacy of 186 are taken as 1 for comparison across countries.

**4. Social Protection Targets for Poverty Reduction**

The previous section has shown that social protection can have a major impact on poverty. Under certain assumptions, social protection can be argued to have prevented more than 150 million people from falling into poverty in 2010. There is, however, large variation across countries and programs in how much poverty reduction is accomplished. By looking at this variation, and in particular focusing on global best practice, this section suggests, in tentative fashion, some guidelines and perhaps targets for social protection programs within the post-2015 framework. These targets are based on the empirical assessment of performance of social protection programs in reducing poverty and simulations of how the poverty gap could be reduced further under greater levels of efficiency of existing expenditures. We will show that while in many countries increasing efficiency to global best practice levels is sufficient to achieve poverty reduction goals, in many other low and lower middle income countries additional expenditure will be needed. Greater efficiency can be achieved at the level of individual programs, as well as through reallocations from less to more efficient social protection

programs. However, when those alternatives are not sufficient, the mobilization of additional resources will be needed to increase the budget envelope for social protection.

While social protection can clearly be a contributor to poverty reduction, it cannot be the whole story. Rising incomes of the poor, through rising productivity and economic growth, have to play their role. In this section we explore the implications of asking that social protection contribute a certain share of poverty reduction. Specifically, we will analyze the implications of what is needed for social protection to reduce the poverty gap by a half, leaving the other half to be filled by rising incomes associated with economic growth.

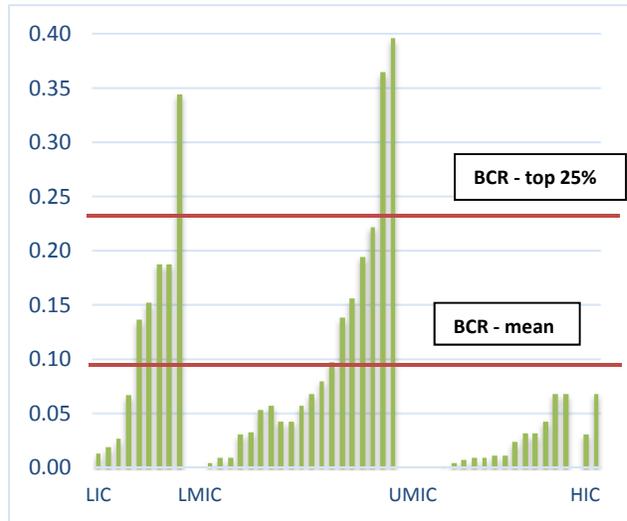
Figure 4 in the previous section and Annex 5 present the percentage reduction of the poverty gap accounted for by social protection transfers for 47 countries for which have data, ranked from lowest to highest. The mean reduction is 45 percent and the median is 38 percent. These results suggest that a contribution of 50 percent to poverty reduction seems a reasonable goal for social protection to achieve. What would this take? Of our 47 countries, 19 countries are already achieving better than this standard, but there are 28 countries where social protection could do more. How much more, and through what means?

Figure 8 presents the benefit-cost ratio (BCR), defined as the poverty gap reduction per unit of total transfers, for 47 countries ranked from lowest to highest for four country income groupings: (Low Income Countries (LIC), Lower Middle Income Countries (LMIC), Upper Middle Income Countries (UMIC), and High Income Countries (HIC). The overall mean for the BCR is 8.2 percent while the median is 4.9 percent. These are very low, but there are countries where the ratio is much better. Specifically, the average benefit-cost ratio for the best 12 countries (top 25 percent of the countries) is 21.7 percent. At the maximum, the best value for a country is 40 percent. We can thus ask what would happen if countries had poverty reduction efficiency no lower than these levels which are actually observed.

Annex 6 presents the impact of social protection on poverty reduction with same budget but at different levels of poverty alleviation efficiency, for all the countries in ASPIRE grouped by income level. The four scenarios are (i) the baseline, with actual efficiency in the country, (ii) if efficiency is lower than the global average, raise it to the global average, (iii) if efficiency is lower than the average of the top quartile of efficiencies, raise it to that level, and (iv) raise efficiency to the observed global maximum. Figure 10 shows for what percentage of countries in each income grouping this sequence of raising efficiency succeeds in attaining the target of halving the poverty gap through social protection.

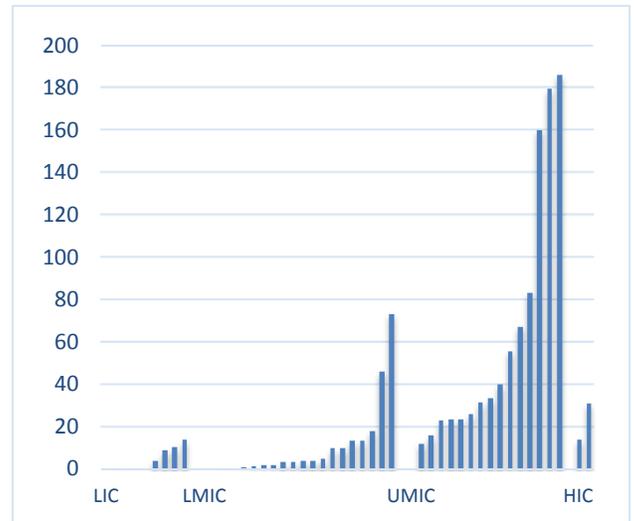
As seen in Figure 10, with the current BCR of each country (the baseline), 40 percent of countries meet the poverty reduction target for social protection that is proposed in this paper. This increases to 59 percent of countries meeting the target when using the mean benefit-cost ratio of all the countries (0.082), 70 percent of countries when using the BCR of the top quartile (0.217), and 76 percent of countries when using the somewhat unrealistic maximum value (0.400). In LICs, even with increased efficiency to the maximum (0.4), the fiscal resources are insufficient in more than half of countries, suggesting a need to reallocate existing non-social protection expenditure and/or mobilize additional budgetary resources.

**Figure 8: Benefit-Cost Ratios, by Country Income Groupings**



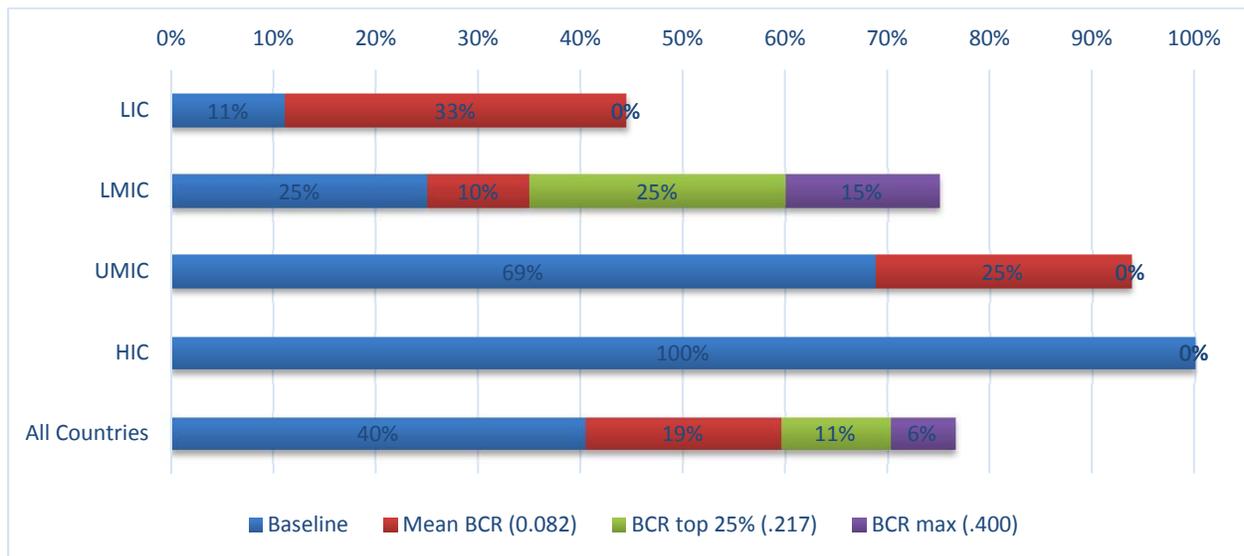
Source: Authors calculations

**Figure 9: Budget as a Percent of Poverty Gap, by Country Income Groupings**



Source: Authors calculations

**Figure 10: Percent Countries Achieving Poverty Reduction Target with BCR Scenarios, by Income Grouping**



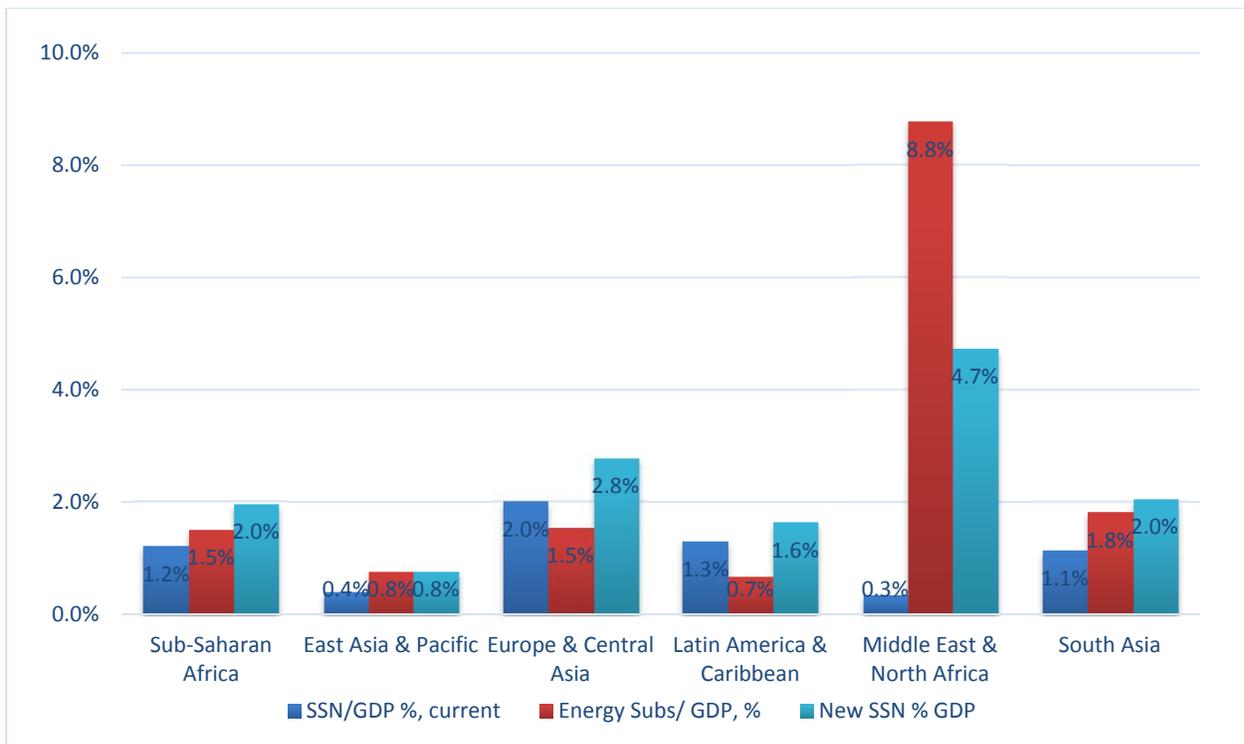
Source: Authors' calculations

For countries where efficiency gains alone are not sufficient, raising the social protection budget will have to be an important part of the social protection strategy and for achieving the poverty target. Figure 9 gives the ratio of the budget to the poverty gap for our countries in

ascending order, grouped by income level. Most striking is how much lower the budget ratios are for low and lower middle income countries as compared to upper middle countries. The disparity is a function of larger poverty gaps on average coupled with smaller budgets to address these gaps in lower income countries.

As can be seen in Figure 11, there is considerable scope to increase the social protection budget level without raising the overall fiscal envelope. The figure shows the current spending on social safety net programs (SSN, dark blue), Energy Subsidies (red), and ‘new SSN spending’ (light blue), where the new spending assumes that 50 percent of energy subsidies, which are often the least efficient for poverty reduction, are re-allocated to SSNs. The potential increase in SSN spending is considerable, as in every developing country region except for Europe and Central Asia and Latin America and the Caribbean, spending on energy subsidies exceeds that on social safety nets. In many countries, a reallocation of generally untargeted and inefficient energy subsidies, which can be particularly costly when energy prices are high, to transfers with stronger effects on poverty is feasible without having to increase overall spending.<sup>35</sup> Of course not all countries subsidize energy, while others may have very limited fiscal capacity, and in these cases additional resources may be necessary to achieve their poverty reduction targets.

**Figure 11: Current SSN, Energy Subsidy, and New SSN Spending\*, %GDP**



Source: Authors and Weigand and Grosh (2008), and IMF (2013).

Note: \* New SSN Spending assumes 50% of Energy Subsidies Reallocated to SSNs.

<sup>35</sup> A number of countries are now implementing or considering such an approach.

As this paper has shown, countries can reach the poverty reduction target of 50 percent through social protection by either increasing generosity or the efficiency of public expenditure. Having used different scenarios for efficiency, we have shown that many countries can achieve the poverty target. This is not the case for all countries, particularly Low Income and Lower Middle Income countries. In these countries, the budget for social protection likely needs to be increased, though importantly this often does not require increasing the overall public expenditure envelope and may be achieved through fiscal reallocation.

## **5. Conclusion**

In this paper we argue that social protection must be an integral part of the post-2015 MDG framework. While acknowledging that social protection could be conceived as a development goal in itself, we have followed an essentially instrumental perspective in our approach. The evidence from across the developing world is clear: social protection programs have resulted in (often significant) reductions in poverty – and their absence constitutes a potentially serious threat to efforts to end poverty. More generally, they can contribute to improving equity, reducing income inequality and enhancing opportunities along the income distribution.

We have also shown that this proposed role of social protection is realistic. In other words, it is within the reach of a majority of developing countries. The importance of this finding should not be minimized. At the time the original MDGs were formulated few could have argued, on the basis of evidence, this was a realistic target. But the last decade has seen a dramatic expansion in the number and size of social protection programs, particularly targeted cash transfers, across the developing world.

The simulations we have presented in Section 4 are based on simple assumptions. We focused on the most extreme form of poverty (i.e. a poverty line of \$1.25 per day in PPP terms) and considered a somewhat arbitrary (albeit intuitive) target of assigning social protection programs the job of cutting the poverty gap in half. Different assumptions (a higher poverty line, a relative –rather than an absolute—poverty line, a more or less ambitious target) would naturally affect the specific results. Inequality (or vulnerability) rather than poverty may be used as the key evaluative criteria. We welcome a debate on the ‘right’ assumptions – and plan to conduct further work exploring the implications of alternative assumptions. This paper provides a (data-driven) framework under which those debates can take place in a fruitful manner.

In this paper, the impact of social protection on poverty is taken as simple mechanical filling of the poverty gap by a transfer. While simplistic – and even problematic from a policy perspective— the framework allows us to highlight the centrality of policy decisions regarding the level and share of government budgets reaching the poor and vulnerable (i.e. those in most need of social protection), however one defines those categories.

As shown in Section 4 in many developing countries current levels of social protection spending allow the pursuit of poverty reduction goals. How? First, by seeking improvements in the efficiency of all programs. This implies an emphasis on reforms that reduce administration costs (including leakages of different types) and increase the share of the budget reaching the

hands of intended beneficiaries. Consolidation of small programs into larger ones using a systems approach is often one way in which such improvements can be achieved. The use of new information and communication technologies (including in low income country settings) and enhanced accountability mechanisms provides useful entry points for such reforms.

Second, by rationalizing (often overlapping) programs seeking to provide protection to similar target populations. Indeed, poverty reduction (or other) impacts can vary significantly across programs (both within and across countries). Shifts from in-kind to cash transfers is often one way to rationalize already acceptable levels of social protection spending.

Third, through a more careful focusing of fiscal resources to those more in need of social protection. This would often require shifting resources across social protection programs. In our view, such discussions on coverage of social protection programs ('who is covered and why') needs to be more nuanced by asking questions such as if the groups are in fact the most vulnerable and poorest, versus basing this on ideology or 'common sense'. A strong example is the elderly who are often not the poorest group in a country, and that social assistance may be better spent on children – even though political and cultural values may dictate otherwise. Answers to these questions will, naturally, depend on the goals society is willing to prioritize (e.g. the minimum level of income needed to achieve acceptable standards of living). Nonetheless, discussions on coverage (including in the context of 'social floor' proposals) cannot avoid dealing with such trade-offs without running the risk of placing social protection on an unsustainable path.<sup>36</sup>

Improving individual program efficiency, rationalizing duplicative programs and prioritizing the use of fiscal resources on the basis of both equity and efficiency considerations are the core of efforts to strengthen social protection systems.

In many countries, however, current levels of social protection spending are insufficient (even under the most optimistic assumptions regarding targeting efficiency) to enable a significant impact on poverty, let alone broader equity objectives. Increasing budgets for social protection programs can, in many of those countries, conceivably be done by shifting resources away from often large, badly targeted and otherwise distortive generalized subsidies. A prime example are fossil fuel subsidies. A recent IMF study<sup>37</sup> documents the extent of such subsidies. Even in Sub-Saharan Africa (which accounts for only about 4 percent of global energy subsidies), subsidies amount to 1½ percent of regional GDP or 5½ percent of total government revenues, with electricity subsidies accounting for over 70 percent. It is hard not to see the potential for subsidy reform enabling the necessary increase in social protection.

Of course, country conditions will vary and the right (and politically feasible) response will most likely differ across countries. However, the evidence reviewed in this paper strongly suggests that social protection cannot and should not remain as the silent partner to the new set of development goals the international community is currently debating.

---

<sup>36</sup> In this paper we have not delve into the intricacies of how to design social protection programs. Considerations such as the need to set payment levels to both ensure adequacy and avoid savings and labor market distortions, or the need to define graduation policies that avoid perverse incentives remain at the core of the policy discussions.

<sup>37</sup> IMF (2013) <http://www.imf.org/external/np/pp/eng/2013/012813.pdf>.

## References

- Addison, Anthony, David Hulme and Ravi Kanbur (Editors). 2009. *Poverty Dynamics: Interdisciplinary Perspectives*. Oxford University Press.
- Adelman, Irma, and Sherman Robinson. 1978. *Income Distribution Policy in Developing Countries: A Case Study of Korea*. Stanford: Stanford University Press.
- Alderman, Harold and Ruslan Yemtsov. 2013. How Can Safety Nets Contribute to Economic Growth? World Bank Policy Research Papers, Number 6437.
- Asian Development Bank. 2012. *Asian Development Outlook 2012: Confronting Rising Inequality in Asia*. Asian Development Bank.
- Bene, Christopher. 2009. "Assessing Economic Vulnerability in Small Scale Fishing Communities." *Journal of Development Studies*, Volume 45, Issue 6, pp. 911-933.
- Berg, A. and J. D. Ostry. 2011. Equality and Efficiency: Is there a Tradeoff between the Two or Do the Two Go Hand in Hand? *Finance and Development*.
- Berhane, Guush, John Hoddinott, Neha Kumar, and Alemayahu Seyoum Taffesse (2011): "The Impact of Ethiopia's Productive Safety Nets and Household Asset Building Programme: 2006-2010," International Food Policy Research Institute (December).
- Bourguignon, Francois, Francisco Ferreira and Michael Walton. 2007. "Equity, Efficiency and Inequality Traps: A Research Agenda." *Journal of Economic Inequality*, Volume 5, Issue 2, pp. 235-256.
- Bourguignon, Francois, et. al. 2010. "Millennium Development Goals at Midpoint: Where Do We Stand?" (with F. Bourguignon and others), in Ravi Kanbur and A. Michael Spence (Editors), *Equity in a Globalizing World*, The World Bank for the Commission on Growth and Development, pp. 17-40.
- Chronic Poverty Research Centre. 2009. *The Chronic Poverty Report, 2008-09*. [http://www.chronicpoverty.org/uploads/publication\\_files/CPR2\\_ReportFull.pdf](http://www.chronicpoverty.org/uploads/publication_files/CPR2_ReportFull.pdf) . Accessed, April 20, 2013.
- Dercon, Stefan (Editor). 2004. *Insurance Against Poverty*. Oxford University Press.
- Di Giovanni, Julian and Andrei Levchenko. 2008. "Trade Openness and Volatility." IMF Working Paper, WP/08/146. <http://www.imf.org/external/pubs/ft/wp/2008/wp08146.pdf> . Accessed, April 20, 2013.
- Duclos, Jean-Yves, Abdelkrim, Arrar and John Giles. 2010. "Chronic and Transient Poverty: Measurement and Definition." *Journal of Development Economics*. Volume 91, Issue 2, pp. 266-277.

- Ferrerira, Francisco and Norbert Schady (2009): 'Aggregate Economic Shocks, Child Schooling, and Child Health', *The World Bank Research Observer*, Vol. 24, No.5, pp. 147-181 (August).
- Fiszbein, Ariel and Norbert Schady. (2009): *Conditional Cash Transfers: Reducing Present and Future Poverty*. World Bank Policy Research Report. Washington DC: World Bank.
- Fiszbein, Ariel, Dena Ringold and Santhosh Srinivasan (2011): "Addressing children's vulnerability to economic shocks through cash transfers", in *Development Policy Review*, Vol. 29, No. 5, pp. 585-602, (September).
- Fiszbein, Ariel, Ravi Kanbur and Ruslan Yemtsov (2013): "Global Patterns of Social Protection: Facts and Some Explanations." In preparation.
- Gauri, Varun. 2012. *MDGs That Nudge: The Millennium Development Goals, Popular Mobilization and the Post-2015 Development Framework*," World Bank Policy Research Papers, Number 6282.
- Grosh, M., C. Del Ninno, E. Tesliuc, and A. Ouerghi. 2008. *For Protection and Promotion: The Design and Implementation of Effective Safety Nets*. World Bank, Washington, DC.
- Hanlon, Joseph, Armando Barrientos and David Hume (2010): *Just Give Money to the Poor: The Development Revolution from the Global South*. Sterling, VA: Kumarian Press.
- Heltburg, Rasmus and Niels Lund. 2009. *Shocks, Coping and Outcomes for Pakistan's Poor: Health Risks Predominate.*" *Journal of Development Studies*, Volume 45, Issue 6, pp. 864-888.
- Hoddinott, John and Bill Kinsey. 2001. "Child Growth in the Time of Drought." *Oxford Bulletin of Economics and Statistics*, Volume 63, Issue 4, pp. 409-436.
- International Labor Office (2011): *Social Protection Floor for a Fair and Inclusive Globalization*. Geneva: ILO.
- International Monetary Fund, IMF (2013). "Energy Subsidy Reform: Lessons and Implications" Prepared by the Fiscal Affairs, African, and Middle East and Central Asia Departments. <http://www.imf.org/external/np/pp/eng/2013/012813.pdf>.
- Jacoby, H. and E. Skoufias (1997). "Risk, Financial Markets, and Human Capital in a Developing Country," *Review of Economic Studies*, Vol. 64(3), pp. 311-35.
- Kanbur, Ravi and Nora Lustig. 2000. "Why is Inequality Back on the Agenda?" in *Proceedings of Annual World Bank Conference in Development Economics*, World Bank, pp. 285-313, 2000.
- Kose, Ayan, Eswar Prasad and Marco Terrones. 2006. "How do trade and financial integration affect the relationship between growth and volatility?" *Journal of International Economics*. Vol. 69, pp. 176-202.

- Ligon, Ethan, and Laura Schechter. 2003. Measuring vulnerability. *Economic Journal* 113(486), C95–C102.
- Lustig, Nora, Luis F. Lopez-Calva and Eduardo Ortiz-Juarez. 2011. “The Decline in Inequality in Latin America: How Much, Since When and Why.” Tulane Economics Working Paper Series, No. 1118. <http://econ.tulane.edu/RePEc/pdf/tul1118.pdf> . Accessed April 20, 2013.
- Menon, Nidhiya. 2009. “Rainfall Uncertainty and Occupational Choice in Agricultural Households in Nepal.” *Journal of Development Studies*, Volume 45, Issue 6, pp. 889-910.
- Narayan, Deepa. 2000. *Voices of the Poor Volume I” Can Anyone Hear Us?* Oxford University Press.
- Roemer, John E. 1998. *Equality of Opportunity*. Cambridge, MA: Harvard University Press.
- Sen, Amartya. 1992. *Inequality Reexamined*. Clarendon Press.
- Sen, Amartya. 2009. *The Idea of Justice*. Harvard University Press.
- Tesliuc, Emil D., Stephen Younger, Phillippe G. Leite (forthcoming). User Manual for ADePT Social Protection (ADePT SP), The World Bank.
- Tiwari, Sailesh, Hannan Jacoby and Emmanuel Skoufias. 2013. “Monsoon Babies: Rainfall Shocks and Child Nutrition in Nepal.” World Bank Policy Research Working Paper, Number 6395. [http://www-wds.worldbank.org/external/default/WDSContentServer/IW3P/IB/2013/03/28/000158349\\_20130328165435/Rendered/PDF/wps6395.pdf](http://www-wds.worldbank.org/external/default/WDSContentServer/IW3P/IB/2013/03/28/000158349_20130328165435/Rendered/PDF/wps6395.pdf). Accessed April 20, 2013.
- Weigand, C. and M. Grosh. 2008. “Levels and Patterns of Safety Net Spending in Developing and Transition Countries”, SP Discussion Paper No. 0817, World Bank, June 2008.
- World Bank (1993): *The East Asian Miracle: Economic Growth and Public Policy*. Oxford University Press.
- World Bank (2012): Safety nets work: During crisis and prosperity. Paper prepared for the Development Committee Meeting, DC2012-003, Washington, DC. April 11, 2012
- World Bank (2012b): Resilience, Equity and Opportunity. Social Protection and Labor Strategy. World Bank, Washington, DC.
- World Bank (2013): “A Common Vision for The World Bank Group.” <http://web.worldbank.org/WBSITE/EXTERNAL/DEVCOMMEXT/0,,pagePK:64000837~piPK:64001152~theSitePK:277473~contentMDK:23384016,00.html>

## Annex 1: Measuring the Effect of Social Protection on Poverty <sup>38</sup>

The well-known FGT (Foster, Greer and Thorbecke, 1984) class of poverty indices is given by

$$P(\alpha) = \frac{1}{N} \sum_i \max \left( 0, \left( \frac{z - y_i}{z} \right)^\alpha \right)$$

where  $z$  is the poverty line;  $y_i$  is income for person  $i$ ; and  $(z - y_i)$  is the “poverty gap” for person  $i$  – the difference between her income and the poverty line – expressed as a share of income at the poverty line in the above formula. When  $\alpha = 0$ , we get the “headcount” poverty measure, the fraction of population below the poverty line. If  $\alpha = 1$ , then  $NzP(1)PGA$  is simply the amount of money needed to eliminate poverty with perfect targeting so that the poor and only the poor receive transfers.

Let  $t_i$  be the amount of transfer that person  $i$  receives through the programs of interest. Then if all transfers were ended the income measure for each person would be  $y_i - t_i$ . Comparing the actual poverty with the poverty measure based on  $y_i - t_i$  is one measure of the poverty impact of social protection, assuming no behavioral responses. Alternatives could be tried with the counterfactual income  $y_i - kt_i$  for different values of  $k$  (for example, 0.5).

For the PGAP measure (ie for  $\alpha = 1$ ), we can write:

$$\begin{aligned} \frac{\Delta PGAP}{PGAP} &= \frac{\frac{\sum_{i \in poor} \min(t_i, (z - y_i))}{\sum_i t_i} \cdot \frac{\sum_i t_i}{n_t} \cdot n_t}{1 \cdot \frac{\sum_i (z - y_i)}{n_{poor}} \cdot n_{poor}} = \left( \frac{\sum_{i \in poor} \min(t_i, pgap_i)}{\sum_i t_i} \right) \left( \frac{\bar{t}}{PGAP} \right) \left( \frac{n_t}{n_{poor}} \right) \\ &= (T_p/B)/(B/PGAP) \end{aligned}$$

where  $T_p$  is transfers to the poor, and  $B$  is transfers to the poor and the non-poor, in other words the total transfer budget.

<sup>38</sup> The idea of the decomposition was proposed by D. Coady and is described in detail in Tesliuc et al (forthcoming).

**Annex 2: List of Countries for which ASPIRE Indicators are Available (Most Recent Survey)**

| Region | Classification | Country                | Year | Survey   | Sample Size: HH |
|--------|----------------|------------------------|------|--|-----------------|
| AFR    | LIC            | Ghana                  | 2005 | Ghana Living Standard Survey (GLSS)                            | 8,686           |
| AFR    | LIC            | Kenya                  | 2005 | Kenya Integrated Household Budget Survey (KIHBS)               | 13,093          |
| AFR    | UMIC           | Mauritius              | 2006 | Mauritius Household Budget Survey                              | 6,720           |
| AFR    | LIC            | Malawi                 | 2010 | Integrated Household Survey                                    | 12,271          |
| AFR    | LMIC           | Nigeria                | 2010 | Nigeria Living Standard Survey (NLSS)                          | 4,867           |
| AFR    | LIC            | Rwanda                 | 2005 | Enquête Intégrale sur les Conditions de Vie des ménages (EICV) | 6,900           |
| EAP    | LIC            | Cambodia               | 2008 | Household Economic Survey                                      | 3,548           |
| EAP    | LMIC           | Indonesia              | 2009 | SUSENAS  | 67,174          |
| EAP    | LIC            | Lao                    | 2008 | Expenditure and Consumption Survey                             | 8,296           |
| EAP    | UMIC           | Malaysia               | 2008 | Household Income Survey  | 42,645          |
| EAP    | LMIC           | Mongolia               | 2007 | Socio-Economic Survey  | 11,172          |
| EAP    | LMIC           | Philippines            | 2006 | Integrated Survey of Households                                | 38,483          |
| EAP    | LMIC           | Thailand               | 2009 | Household Socio-Economic Survey                                | 43,844          |
| EAP    | LMIC           | Timor-Leste            | 2007 | Timor-Leste Survey of Living Standards                         | 4,477           |
| EAP    | LMIC           | Vietnam                | 2006 | Household Living Standard Survey                               | 9,189           |
| ECA    | LMIC           | Armenia                | 2008 | Integrated Living Conditions Survey                            | 7,872           |
| ECA    | UMIC           | Azerbaijan             | 2008 | Household and Targeted SA Monitoring and Evaluation Survey     | 6,518           |
| ECA    | UMIC           | Belarus                | 2008 | Household Budget Survey  | 5,328           |
| ECA    | UMIC           | Bosnia and Herzegovina | 2007 | Household Budget Survey  | 7,468           |
| ECA    | UMIC           | Bulgaria               | 2007 | Multitopic Household Survey                                    | 4,194           |
| ECA    | LMIC           | Georgia                | 2007 | Household Budget Survey  | 5,256           |
| ECA    | UMIC           | Kazakhstan             | 2007 | Household Budget Survey  | 12,000          |
| ECA    | LMIC           | Kosovo                 | 2006 | Household Budget Survey  | 2,392           |
| ECA    | LIC            | Kyrgyzstan             | 2006 | Integrated Sample Household Budget and Labor Survey            | 4,862           |
| ECA    | HIC            | Latvia                 | 2008 | Household Budget Survey  | 4,002           |
| ECA    | UMIC           | Macedonia              | 2005 | Household Budget Survey  | 4,215           |
| ECA    | HIC            | Poland                 | 2005 | Household Budget Survey  | 34,767          |
| ECA    | UMIC           | Romania                | 2008 | Household Budget Survey  | 31,743          |
| ECA    | UMIC           | Russia                 | 2007 | Household Budget Survey  | 212,329         |
| ECA    | UMIC           | Serbia                 | 2007 | Household Budget Survey  | 5,557           |
| ECA    | UMIC           | Turkey                 | 2008 | Household Budget Survey  | 8,548           |
| ECA    | LMIC           | Ukraine                | 2006 | Household Budget Survey  | 10,499          |

|     |      |                    |      |  |         |
|-----|------|--------------------|------|--|---------|
| LAC | UMIC | Argentina          | 2010 | Encuesta Permanente de Hogares Continua                      | 35,206  |
| LAC | LMIC | Bolivia            | 2007 | Encuesta de Hogares  | 4,148   |
| LAC | UMIC | Brazil             | 2009 | Pesquisa Nacional por Amostra de Domicilios                  | 129,333 |
| LAC | UMIC | Chile              | 2009 | Encuesta de Caracterización Socio-Económica Nacional (CASEN) | 71,460  |
| LAC | UMIC | Colombia           | 2003 | Encuesta de Calidad de Vida                                  | 22,949  |
| LAC | UMIC | Costa Rica         | 2009 | Encuesta de Hogares de Propósitos Múltiples                  | 13,244  |
| LAC | UMIC | Dominican Republic | 2009 | Encuesta de Fuerza de Trabajo                                | 8,270   |
| LAC | LMIC | Ecuador            | 2010 | Encuesta de Empleo y Subempleo y Desempleo                   | 20,670  |
| LAC | LMIC | El Salvador        | 2009 | Encuesta de Hogares de Propósitos Múltiples                  | 20,361  |
| LAC | LMIC | Guatemala          | 2006 | Encuesta Nacional de Condiciones de Vida                     | 13,686  |
| LAC | LMIC | Honduras           | 2009 | Encuesta Permanente de Hogares de Propósitos Múltiples       | 21,112  |
| LAC | UMIC | Mexico             | 2010 | Encuesta Nacional de Ingresos y Gastos de los Hogares        | 27,655  |
| LAC | LMIC | Nicaragua          | 2005 | Encuesta Nacional de Hogares sobre Medición de Nivel de Vida | 6,884   |
| LAC | UMIC | Panama             | 2008 | Encuesta de Niveles de Vida                                  | 7,045   |
| LAC | LMIC | Paraguay           | 2009 | Encuesta Permanente de Hogares                               | 4,439   |
| LAC | UMIC | Peru               | 2009 | Encuesta Nacional de Hogares- Condiciones de Vida y Pobreza  | 21,794  |
| LAC | UMIC | Uruguay            | 2009 | Encuesta Continua de Hogares                                 | 46,936  |
| LAC | UMIC | Venezuela          | 2006 | Encuesta de Hogares por Muestreo                             | 38,492  |
| MNA | LMIC | Egypt              | 2008 | Income and Expenditure Survey panel sub sample               | 3,553   |
| MNA | LMIC | Yemen              | 2005 | Household Budget Survey                                      | 13,136  |
| MNA | LMIC | West Bank and Gaza | 2007 | Expenditure and Consumption Survey                           | 1,213   |
| SAR | LIC  | Afghanistan        | 2007 | National Risk and Vulnerability Assessment Survey (NRVA)     | 20,543  |
| SAR | LIC  | Bangladesh         | 2010 | Household Income and Expenditure Survey                      | 12,240  |
| SAR | LMIC | Bhutan             | 2007 | Bhutan Living Standard Survey                                | 9,798   |
| SAR | LMIC | India              | 2009 | Socio-Economic Survey  | 102,004 |
| SAR | LIC  | Nepal              | 2010 | Nepal Living Standards Survey                                | 7,180   |
| SAR | LMIC | Pakistan           | 2010 | Pakistan Social and Living Standards Measurement Survey      | 6,982   |
| SAR | LMIC | Sri Lanka          | 2008 | Sri Lanka Labour Force Survey                                | 18,544  |

**Annex 3: Coverage by Social Protection, % of Population and % of Poorest Quintile**

| Country                | Year | Coverage, % |            |              | Generosity/adequacy, all transfers |                     |
|------------------------|------|-------------|------------|--------------|------------------------------------|---------------------|
|                        |      | Population  | Bottom 20% | Of the poor* | Average amount, \$/day, PPP        | As % of consumption |
| Afghanistan            | 2007 | 15          | 21.8       | 21.9         | 0.01                               | 24.7                |
| Argentina              | 2010 | 37.4        | 23.8       | 13.4         | 2.66                               | 37.7                |
| Armenia                | 2008 | 58.2        | 28.8       | 24.5         | 0.75                               | 50.8                |
| Azerbaijan             | 2008 | 63.6        | 40.1       | 43.3         | 0.79                               | 39                  |
| Bangladesh             | 2010 | 19.2        | 26.7       | 26.9         | 0.05                               | 0.6                 |
| Bulgaria               | 2007 | 70.7        | 56.9       | -            | 2.18                               | 5                   |
| Bosnia and Herzegovina | 2007 | 51.6        | 11.4       | 8.2          | 2.27                               | 57.8                |
| Belarus                | 2008 | 72.5        | 57.4       | n.a.         | 3.81                               | 116.3               |
| Bolivia                | 2007 | 16.3        | 9.8        | 9.7          | 0.44                               | 38.6                |
| Brazil                 | 2009 | 51.8        | 47.9       | 37.2         | 2.85                               | 36.9                |
| Bhutan                 | 2007 | 2.4         | 2          | 2.3          | 0.01                               | 2.3                 |
| Chile                  | 2009 | 93.1        | 89.2       | 78.1         | 1.31                               | 20.8                |
| Costa Rica             | 2009 | 57.4        | 63.7       | 49           | n.a.                               | n.a.                |
| Dominican Republic     | 2009 | 28.1        | 35.2       | 39.1         | 0.29                               | 13.2                |
| Ecuador                | 2010 | 67.3        | 82.1       | 70.6         | 0.72                               | 26.1                |
| Egypt, Arab Rep.       | 2008 | 55.5        | 54.9       | 60.3         | 0.53                               | 15                  |
| Georgia                | 2007 | 58.2        | 21         | 22.4         | 0.64                               | 115.7               |
| Ghana                  | 2005 | 27.9        | 2.2        | 0.5          | 0.09                               | 13.2                |
| Guatemala              | 2006 | 46.9        | 52.2       | 50.4         | 0.13                               | 8.1                 |
| Indonesia              | 2009 | 45.1        | 65.8       | 65.3         | n.a.                               | n.a.                |
| India                  | 2009 | 31          | 25.4       | 25.1         | n.a.                               | n.a.                |
| Kazakhstan             | 2007 | 45.8        | 42.2       | 35.4         | 0.76                               | 31.9                |
| Kenya                  | 2005 | 18.2        | 30.5       | 24.9         | 0.04                               | 5.1                 |
| Kyrgyz Republic        | 2006 | 45.5        | 27.9       | 29.8         | 0.41                               | 33                  |
| Cambodia               | 2008 | 3.2         | 0.2        | 0.2          | 0.01                               | 5                   |
| Kosovo                 | 2006 | 43.8        | 26.9       | n.a.         | 0.14                               | 3.5                 |
| Lao PDR                | 2008 | 1.7         | n.a.       | n.a.         | 0.02                               | 85.9                |
| Sri Lanka              | 2008 | 35.7        | 52.2       | 56           | 0.15                               | 8                   |
| Latvia                 | 2008 | 80.6        | 65.9       | 100          | 3.92                               | 65.7                |
| Mexico                 | 2010 | 86.9        | 57.4       | 60.1         | 0.8                                | 32.6                |
| Macedonia, FYR         | 2005 | 54.5        | 15.8       | 25.9         | 1.42                               | 73.8                |
| Mongolia               | 2007 | 93.1        | 91.5       | 90.7         | 0.73                               | 32.2                |
| Mozambique             | 2008 | 7           | 7.8        | 6.1          | 0.02                               | 274.6               |
| Mauritius              | 2006 | 39.1        | 37.1       | 45.1         | 1.3                                | 33.2                |
| Malawi                 | 2010 | 21.1        | 21.2       | 20.6         | 0.01                               | 4.9                 |

|                    |      |      |      |      |      |      |
|--------------------|------|------|------|------|------|------|
| Malaysia           | 2008 | 15   | 19.6 | 24   | 0.45 | 20.5 |
| Nigeria            | 2010 | 5.8  | 1.7  | 1.7  | 0.03 | 10.7 |
| Nicaragua          | 2005 | 62.5 | 70.7 | 69.9 | 0.34 | 31.3 |
| Nepal              | 2010 | 45.9 | 50.2 | 55.4 | 0.09 | 3.7  |
| Pakistan           | 2010 | 19.1 | 13.7 | 17.2 | 0.15 | 15.6 |
| Panama             | 2008 | 77.5 | 78.8 | 74.6 | 1.04 | 19.7 |
| Peru               | 2009 | 66.3 | 85   | 83.3 | 0.56 | 17.7 |
| Philippines        | 2006 | 7.5  | n.a. | n.a. | 0.1  | 42.5 |
| Poland             | 2005 | 69.7 | 64.1 | 76.2 | 4.1  | 70.4 |
| Paraguay           | 2009 | 40.4 | 45.5 | 40.8 | 0.51 | 61.8 |
| Romania            | 2008 | 82.7 | 78.1 | n.a. | 2.65 | 61.4 |
| Russian Federation | 2007 | 58.5 | 46.8 | 63.2 | n.a. | n.a. |
| Rwanda             | 2005 | 2.2  | 0.4  | 1.3  | 0.03 | 3.6  |
| El Salvador        | 2009 | 74.5 | 77.9 | 77.5 | 0.04 | 4.5  |
| Thailand           | 2009 | 99.2 | 82.6 | 85.1 | 0.34 | 7.9  |
| Timor-Leste        | 2007 | 26.4 | 26.8 | 26.3 | 0.05 | 1.7  |
| Turkey             | 2008 | 64.1 | 55.5 | 59.4 | 0.21 | 3    |
| Ukraine            | 2006 | 67.4 | 46.3 | 100  | 2.83 | 60.8 |
| Uruguay            | 2009 | 68   | 82.7 | 56.1 | 3.58 | 23.5 |
| Venezuela, RB      | 2006 | 14.1 | 3.8  | 3.1  | n.a. | n.a. |
| Vietnam            | 2006 | 28.7 | 37   | 37   | 0.18 | 29.3 |
| West Bank and Gaza | 2007 | 13.3 | 30.4 | 33.4 | 0.01 | 6.9  |
| Yemen, Rep.        | 2005 | 28.8 | 27.6 | 26.8 | 0.08 | 9.4  |
| Serbia             | 2007 | 61.5 | 43.4 | 83.2 | 3.04 | 65.8 |

\*at poverty line of \$1.25 /day/per capita

Notes: Coverage is percentage of population participating in Social Protection and Labor programs (includes direct and indirect beneficiaries). The indicator is estimated by program, for the entire population and by quintiles of post-transfer welfare distribution. Programs are aggregated into Social Assistance, Social Insurance and Labor Market according to the SP Adept guidance note. Indicators for all Social Protection and Labor programs provide the totals summing up the social assistance, social insurance and labor market figures. Specifically, coverage is: (Number of individuals in the group who live in a household where at least one member receives the transfer) / (Number of households in that group).

Adequacy/generosity: Generosity is the total transfer amount received by all beneficiaries in a group as a share of the total welfare of beneficiaries in that group. The indicator is estimated by program, for the entire population and by quintiles of post-transfer welfare distribution. Programs are aggregated into Social Assistance, Social Insurance and Labor Market according to the SP Adept guidance note. Indicators for all Social Protection and Labor programs provide the totals summing up the social assistance, social insurance and labor market figures.

#### Annex 4: Impact of Social Protection on Poverty and Inequality Indices (% Reduction)

| Country              | Year | Poverty Headcount Reduction |                | Poverty Gap Reduction |                | Inequality reduction |                  |                  |
|----------------------|------|-----------------------------|----------------|-----------------------|----------------|----------------------|------------------|------------------|
|                      |      | Lowest 20%                  | \$1.25/day ppp | Lowest 20%            | \$1.25/day ppp | Gini index           |                  | % Gini reduction |
|                      |      |                             |                |                       |                | With Transfer        | Without Transfer |                  |
| Afghanistan          | 2007 | 1%                          | 1%             | 3%                    | 2%             | 0.277                | 0.2771           | 0%               |
| Argentina            | 2010 | 31%                         | 74%            | 55%                   | 69%            | 0.4464               | 0.4911           | 9%               |
| Armenia              | 2008 | 47%                         | 92%            | 86%                   | 97%            | 0.2776               | 0.3586           | 23%              |
| Azerbaijan           | 2008 | 39%                         | 92%            | 75%                   | 95%            | 0.3048               | 0.3578           | 15%              |
| Bangladesh           | 2010 | 2%                          | 7%             | 8%                    | 20%            | 0.2688               | 0.2684           | 0%               |
| Bulgaria             | 2007 | 8%                          |                | 13%                   |                | 0.2744               | 0.2803           | 2%               |
| Bosnia & Herzegovina | 2007 | 39%                         | 98%            | 78%                   | 99%            | 0.3556               | 0.4287           | 17%              |
| Belarus              | 2008 | 54%                         | 100%           | 94%                   | 100%           | 0.2729               | 0.4461           | 39%              |
| Bolivia              | 2007 | 13%                         | 13%            | 14%                   | 15%            | 0.5835               | 0.5919           | 1%               |
| Brazil               | 2009 | 38%                         | 57%            | 52%                   | 56%            | 0.5504               | 0.5958           | 8%               |
| Bhutan               | 2007 | 0%                          | 0%             | 0%                    | 1%             | 0.2946               | 0.2947           | 0%               |
| Chile                | 2009 | 27%                         | 60%            | 49%                   | 61%            | 0.5223               | 0.5531           | 6%               |
| Costa Rica           | 2009 |                             |                |                       |                | 0.5161               | n.a.             |                  |
| Dominican Republic   | 2009 | 9%                          | 32%            | 19%                   | 48%            | 0.4886               | 0.4947           | 1%               |
| Ecuador              | 2010 | 19%                         | 40%            | 36%                   | 43%            | 0.4948               | 0.5119           | 3%               |
| Egypt, Arab Rep.     | 2008 | 29%                         | 86%            | 70%                   | 96%            | 0.3097               | 0.3311           | 6%               |
| Georgia              | 2007 | 40%                         | 55%            | 81%                   | 79%            | 0.3866               | 0.4724           | 18%              |
| Ghana                | 2005 | 2%                          | 5%             | 4%                    | 12%            | 0.419                | 0.4177           | 0%               |
| Guatemala            | 2006 | 5%                          | 6%             | 10%                   | 9%             | 0.5538               | 0.5565           | 0%               |
| Indonesia            | 2009 |                             |                |                       |                | 0.3669               | n.a.             |                  |
| India                | 2009 |                             |                |                       |                | 0.4285               | n.a.             |                  |
| Kazakhstan           | 2007 | 40%                         | 97%            | 80%                   | 99%            | 0.2734               | 0.328            | 17%              |
| Kenya                | 2005 | 4%                          | 1%             | 11%                   | 3%             | 0.4764               | 0.4777           | 0%               |
| Kyrgyz Republic      | 2006 | 43%                         | 72%            | 86%                   | 90%            | 0.3231               | 0.3902           | 17%              |
| Cambodia             | 2008 | 1%                          | 1%             | 3%                    | 2%             | 0.3136               | 0.3133           | 0%               |
| Kosovo               | 2006 | 4%                          |                | 10%                   |                | 0.303                | 0.3058           | 1%               |
| Lao PDR              | 2008 | 2%                          | 1%             | 13%                   | 5%             | 0.314                | 0.315            | 0%               |
| Sri Lanka            | 2008 | 13%                         | 22%            | 42%                   | 42%            | 0.4004               | 0.4085           | 2%               |
| Latvia               | 2008 | 49%                         | 100%           | 88%                   | 100%           | 0.3381               | 0.4675           | 28%              |
| Mexico               | 2010 | 20%                         | 46%            | 43%                   | 60%            | 0.5089               | 0.529            | 4%               |
| Macedonia, FYR       | 2005 | 40%                         | 93%            | 78%                   | 98%            | 0.4026               | 0.4749           | 15%              |
| Mongolia             | 2007 | 45%                         | 84%            | 81%                   | 93%            | 0.3103               | 0.3794           | 18%              |
| Mozambique           | 2008 | 3%                          |                | 12%                   |                | 0.4582               | 0.4597           | 0%               |
| Mauritius            | 2006 | 30%                         | 93%            | 59%                   | 93%            | 0.3649               | 0.3912           | 7%               |

|                    |      |     |      |     |      |        |        |     |
|--------------------|------|-----|------|-----|------|--------|--------|-----|
| Malawi             | 2010 | 0%  | 0%   | 1%  | 1%   | 0.4498 | 0.449  | 0%  |
| Malaysia           | 2008 | 10% | 82%  | 25% | 90%  | 0.4626 | 0.472  | 2%  |
| Nigeria            | 2010 | 0%  | 0%   | 1%  | 0%   | 0.4002 | 0.4002 | 0%  |
| Nicaragua          | 2005 | 15% | 16%  | 25% | 22%  | 0.5231 | 0.5324 | 2%  |
| Nepal              | 2010 | 6%  | 21%  | 18% | 38%  | 0.3487 | 0.3499 | 0%  |
| Pakistan           | 2010 | 12% | 60%  | 30% | 80%  | 0.2985 | 0.3025 | 1%  |
| Panama             | 2008 | 12% | 20%  | 19% | 18%  | 0.5432 | 0.5486 | 1%  |
| Peru               | 2009 | 6%  | 24%  | 16% | 30%  | 0.4905 | 0.4847 | -1% |
| Philippines        | 2006 | 6%  | 7%   | 25% | 16%  | 0.3713 | 0.3732 | 1%  |
| Poland             | 2005 | 64% | 100% | 94% | 100% | 0.3224 | 0.5498 | 41% |
| Paraguay           | 2009 | 5%  | 10%  | 10% | 13%  | 0.5104 | 0.5105 | 0%  |
| Romania            | 2008 | 63% | 100% | 94% | 100% | 0.2809 | 0.4891 | 43% |
| Russian Federation | 2007 |     |      |     |      | 0.4233 | n.a.   |     |
| Rwanda             | 2005 | 0%  | 0%   | 1%  | 0%   | 0.5147 | 0.5144 | 0%  |
| El Salvador        | 2009 | 1%  | 2%   | 3%  | 5%   | 0.4853 | 0.4857 | 0%  |
| Thailand           | 2009 | 7%  | 35%  | 18% | 38%  | 0.4871 | 0.4887 | 0%  |
| Timor-Leste        | 2007 | 10% | 5%   | 45% | 12%  | 0.2726 | 0.2806 | 3%  |
| Turkey             | 2008 | 4%  | 14%  | 5%  | 12%  | 0.3738 | 0.3743 | 0%  |
| Ukraine            | 2006 | 57% | 100% | 91% | 100% | 0.2898 | 0.4309 | 33% |
| Uruguay            | 2009 | 40% | 97%  | 66% | 98%  | 0.4449 | 0.4942 | 10% |
| Venezuela, RB      | 2006 |     |      |     |      | 0.4694 | n.a.   |     |
| Vietnam            | 2006 | 18% | 19%  | 56% | 37%  | 0.3295 | 0.3452 | 5%  |
| West Bank and Gaza | 2007 | 1%  | 6%   | 7%  | 8%   | 0.4115 | 0.4132 | 0%  |
| Yemen, Rep.        | 2005 | 10% | 19%  | 23% | 33%  | 0.3914 | 0.3975 | 2%  |
| Serbia             | 2007 | 54% | 100% | 90% | 100% | 0.3098 | 0.4462 | 31% |

**Notes:** Inequality reduction: Simulated percentage change on Gini inequality coefficient of discontinuing Social Protection and Labor programs. The Gini coefficient of the population's income distribution is measured assuming the absence of the programs (pre-transfer welfare distribution). The indicator is estimated for the entire population and by programs. Programs are aggregated into Social Assistance, Social Insurance and Labor Market according to the SP Adept guidance note. Indicators for all Social Protection and Labor programs provide the totals summing up the social assistance, social insurance and labor market figures.

Poverty headcount reduction: Simulated change (%) on poverty headcount of discontinuing Social Protection and Labor programs. Poverty headcount ratio is the percentage of the population below the poverty line and it is measured assuming the absence of the programs (pre-transfer welfare distribution). The indicator is estimated for the entire population and by programs. Programs are aggregated into Social Assistance, Social Insurance and Labor Market according to the SP Adept guidance note. Indicators for all Social Protection and Labor programs provide the totals summing up the social assistance, social insurance and labor market figures.

Poverty gap reduction: Simulated change (%) on poverty gap of discontinuing Social Protection and Labor programs. The poverty gap index is the average percentage shortfall in income of poor people, from the poverty line and it is measured assuming the absence of the programs (pre-transfer welfare distribution). The indicator is estimated for the entire population and by programs. Programs are aggregated into Social Assistance, Social Insurance and Labor Market according to the SP Adept guidance note. Indicators for all Social Protection and Labor programs provide the totals summing up the social assistance, social insurance and labor market figures.

**Note:** () represents increase in inequality due to social protection

### Annex 5: Decomposition of Poverty Gap Reduction by Social Protection Programs

|                        | IN PPP \$       |             |                                  | Ratios                              |     | Decomposition       |               |                   |
|------------------------|-----------------|-------------|----------------------------------|-------------------------------------|-----|---------------------|---------------|-------------------|
|                        | Transfer amount | Poverty gap | Poverty gap reduction, \$ in PPP | Poverty gap reduction, n,% estimate | BCR | Budget as % of Pgap | Due to budget | Due to Efficiency |
| Afghanistan            | 181,685         | 1,378,195   | 24,888                           | 2%                                  | 14% | 13%                 | 0.5           | 0.5               |
| Argentina              | 66,014,239      | 790,489     | 542,493                          | 69%                                 | 1%  | 8351%               | -11.8         | 12.8              |
| Armenia                | 2,490,795       | 249,774     | 241,917                          | 97%                                 | 10% | 997%                | -72           | 73                |
| Azerbaijan             | 5,967,932       | 250,919     | 238,702                          | 95%                                 | 4%  | 2378%               | -63.5         | 64.5              |
| Bangladesh             | 6,771,077       | 649,637     | 129,927                          | 20%                                 | 2%  | 1042%               | -1.5          | 2.5               |
| Bulgaria               |                 |             |                                  |                                     |     |                     |               |                   |
| Bosnia and Herzegovina | 7,824,009       | 233,545     | 231,821                          | 99%                                 | 3%  | 3350%               | -474.1        | 475.1             |
| Belarus                | 35,027,524      | 1,988,476   | 1,988,476                        | 100%                                | 6%  | 1762%               |               |                   |
| Bolivia                | 4,305,659       | 996,133     | 145,295                          | 15%                                 | 3%  | 432%                | -0.8          | 1.8               |
| Brazil                 | 544,396,545     | 20,640,650  | 11,552,067                       | 56%                                 | 2%  | 2638%               | -5.6          | 6.6               |
| Bhutan                 | 498             | 12,140      | 78                               | 1%                                  | 16% | 4%                  | 0.6           | 0.4               |
| Chile                  | 22,044,412      | 395,001     | 239,522                          | 61%                                 | 1%  | 5581%               | -8            | 9                 |
| Costa Rica             |                 |             |                                  |                                     |     |                     |               |                   |
| Dominican Republic     | 2,814,297       | 70,092      | 33,837                           | 48%                                 | 1%  | 4015%               | -5.1          | 6.1               |
| Ecuador                | 10,107,679      | 737,298     | 317,497                          | 43%                                 | 3%  | 1371%               | -3.1          | 4.1               |
| Egypt, Arab Rep.       | 39,645,000      | 2,184,375   | 2,100,000                        | 96%                                 | 5%  | 1815%               | -73.6         | 74.6              |
| Georgia                | 2,586,014       | 733,340     | 575,729                          | 79%                                 | 22% | 353%                | -5.2          | 6.2               |
| Ghana                  | 2,098,462       | 230,387     | 27,757                           | 12%                                 | 1%  | 911%                | -1            | 2                 |
| Guatemala              | 1,736,679       | 1,041,039   | 93,613                           | 9%                                  | 5%  | 167%                | -0.2          | 1.2               |
| Indonesia              |                 |             |                                  |                                     |     |                     |               |                   |
| India                  |                 |             |                                  |                                     |     |                     |               |                   |
| Kazakhstan             | 11,715,484      | 510,022     | 506,172                          | 99%                                 | 4%  | 2297%               | -413.7        | 414.7             |
| Kenya                  | 1,415,145       | 6,590,480   | 216,154                          | 3%                                  | 15% | 22%                 | 0.5           | 0.5               |
| Kyrgyz Republic        | 2,152,186       | 512,487     | 459,292                          | 90%                                 | 21% | 420%                | -13.1         | 14.1              |
| Cambodia               | 123,841         | 471,062     | 8,323                            | 2%                                  | 7%  | 26%                 | 0.3           | 0.7               |
| Kosovo                 | 279,647         |             |                                  |                                     |     |                     |               |                   |
| Lao PDR                | 104,295         | 433,862     | 19,625                           | 5%                                  | 19% | 24%                 | 0.5           | 0.5               |
| Sri Lanka              | 2,914,311       | 680,006     | 284,145                          | 42%                                 | 10% | 429%                | -1.7          | 2.7               |
| Latvia                 | 8,769,540       | 279,317     | 279,037                          | 100%                                | 3%  | 3140%               | 3,438.10      | 3,439.10          |
| Mexico                 | 89,925,737      | 7,346,506   | 4,391,015                        | 60%                                 | 5%  | 1224%               | -4.9          | 5.9               |
| Macedonia, FYR         | 2,783,089       | 172,485     | 168,320                          | 98%                                 | 6%  | 1614%               | -113.8        | 114.8             |
| Mongolia               | 1,768,490       | 176,535     | 164,141                          | 93%                                 | 9%  | 1002%               | -31.7         | 32.7              |
| Mozambique             | 437,205         |             |                                  |                                     |     |                     |               |                   |

|                    |             |            |            |      |     |        |           |          |
|--------------------|-------------|------------|------------|------|-----|--------|-----------|----------|
| Malawi             | 145,224     | 645,048    | 3,525      | 1%   | 2%  | 23%    | 0.3       | 0.7      |
| Malaysia           | 11,225,035  | 62,570     | 56,313     | 90%  | 1%  | 17940% | -49.3     | 50.3     |
| Nigeria            | 439,024     | 22,479,670 | 60,976     | 0%   | 14% | 2%     | 0.7       | 0.3      |
| Nicaragua          | 1,720,198   | 450,899    | 99,774     | 22%  | 6%  | 382%   | -0.9      | 1.9      |
| Nepal              | 2,573,856   | 182,842    | 70,324     | 39%  | 3%  | 1408%  | -2.8      | 3.8      |
| Pakistan           | 19,060,699  | 410,508    | 328,406    | 80%  | 2%  | 4643%  | -17.2     | 18.2     |
| Panama             | 3,445,067   | 146,482    | 25,655     | 18%  | 1%  | 2352%  | -1.8      | 2.8      |
| Peru               | 17,264,850  | 545,384    | 165,151    | 30%  | 1%  | 3166%  | -2.9      | 3.9      |
| Philippines        | 8,750,026   | 4,357,923  | 704,958    | 16%  | 8%  | 201%   | -0.4      | 1.4      |
| Poland             | 154,808,253 | 11,125,133 | 11,120,415 | 100% | 7%  | 1392%  | -6,207.30 | 6,208.30 |
| Paraguay           | 3,168,079   | 232,626    | 29,664     | 13%  | 1%  | 1362%  | -1.3      | 2.3      |
| Romania            | 57,109,186  | 5,005,284  | 5,005,284  | 100% | 9%  | 1141%  |           |          |
| Russian Federation |             |            |            |      |     |        |           |          |
| Rwanda             | 27,525      | 5,528,739  | 9,491      | 0%   | 35% | 1%     | 0.8       | 0.2      |
| El Salvador        | 264,343     | 289,220    | 15,262     | 5%   | 6%  | 91%    | 0         | 1        |
| Thailand           | 21,840,341  | 297,355    | 112,513    | 38%  | 1%  | 7345%  | -4.4      | 5.4      |
| Timor-Leste        | 52,073      | 175,406    | 20,651     | 12%  | 40% | 30%    | 0.6       | 0.4      |
| Turkey             | 14,669,242  | 217,877    | 26,145     | 12%  | 0%  | 6733%  | -2        | 3        |
| Ukraine            | 128,486,577 | 5,721,023  | 5,721,023  | 100% | 5%  | 2246%  |           |          |
| Uruguay            | 10,821,326  | 67,616     | 66,483     | 98%  | 1%  | 16004% | -300.3    | 301.3    |
| Venezuela, RB      |             |            |            |      |     |        |           |          |
| Vietnam            | 14,731,080  | 7,701,650  | 2,876,520  | 37%  | 20% | 191%   | -0.7      | 1.7      |
| West Bank and Gaza | 35,485      | 172,441    | 12,958     | 8%   | 37% | 21%    | 0.6       | 0.4      |
| Yemen, Rep.        | 1,642,337   | 340,900    | 112,798    | 33%  | 7%  | 482%   | -1.4      | 2.4      |
| Serbia             | 22,512,394  | 936,565    | 936,565    | 100% | 4%  | 2404%  | -316.4    | 316.4    |

### Annex 6: Poverty Gap Changes with Differing Efficiency Scenarios, Low Income Countries (LIC)

| Country                | (1)<br>% Poverty Gap reduction - current | (2)<br>BCR - Actual | (3)<br>BCR - Max of 1) actual or 2) mean all countries (.082) | (4)<br>% Pgap reduction with BCR from (3) | (5)<br>BCR - Max of 1) actual or 2) BCR of top 25% (.217) | (6)<br>% reduction Pgap with BCR from (5) | (7)<br>BCR - Max of 1) actual or 2) BCR max (.400) |
|------------------------|--|---------------------|---|---|---|---|--|
| Rwanda                 | 0.002                                    | 0.345               | 0.345   | 0.002                                     | 0.345   | 0.002                                     | 0.002  |
| Cambodia               | 0.018                                    | 0.067               | 0.082   | 0.021                                     | 0.217   | 0.057                                     | 0.105  |
| Afghanistan            | 0.018                                    | 0.137               | 0.137   | 0.018                                     | 0.217   | 0.029                                     | 0.053  |
| Kenya                  | 0.033                                    | 0.153               | 0.153   | 0.033                                     | 0.217   | 0.047                                     | 0.086  |
| Lao PDR                | 0.045                                    | 0.188               | 0.188   | 0.045                                     | 0.217   | 0.052                                     | 0.096  |
| Ghana                  | 0.12                                     | 0.013               | 0.082   | 0.743                                     |   |   |  |
| Bangladesh             | 0.2                                      | 0.019               | 0.082   | 0.85                                      |   |   |  |
| Nepal                  | 0.385                                    | 0.027               | 0.082   | 1.148                                     |   |   |  |
| <b>Kyrgyz Republic</b> | 0.896                                    |                     |   |   |   |   |  |

**Annex 6 (cont.): Poverty Gap Changes with Differing Budget Efficiency Scenarios, Lower Middle Income Countries (LMIC)**

| Country            | (1)<br>% Poverty Gap reduction - current | (2)<br>BCR - Actual | (3)<br>BCR - Max of 1) actual or 2) mean all countries (.082) | (4)<br>% Pgap reduction with BCR from (3) | (5)<br>BCR - Max of 1) actual or 2) BCR of top 25% (.217) | (6)<br>% reduction Pgap with BCR from (5) | (7)<br>BCR - Max of 1) actual or 2) BCR max (.400) |
|--------------------|--|---------------------|---|---|---|---|--|
| Nigeria            | 0.003                                    | 0.139               | 0.139   | 0.003                                     | 0.217   | 0.004                                     | 0.008  |
| Bhutan             | 0.006                                    | 0.156               | 0.156   | 0.006                                     | 0.217   | 0.009                                     | 0.016  |
| El Salvador        | 0.053                                    | 0.058               | 0.082   | 0.075                                     | 0.217   | 0.199                                     | 0.366  |
| West Bank and Gaza | 0.075                                    | 0.365               | 0.365   | 0.075                                     | 0.365   | 0.075                                     | 0.082  |
| Guatemala          | 0.09                                     | 0.054               | 0.082   | 0.136                                     | 0.217   | 0.363                                     | 0.667  |
| Timor-Leste        | 0.118                                    | 0.397               | 0.397   | 0.118                                     | 0.397   | 0.118                                     | 0.119  |
| Paraguay           | 0.128                                    | 0.009               | 0.082   | 1.11                                      |   |   |  |
| Bolivia            | 0.146                                    | 0.034               | 0.082   | 0.352                                     | 0.217   | 0.94                                      |  |
| Philippines        | 0.162                                    | 0.081               | 0.082   | 0.164                                     | 0.217   | 0.436                                     | 0.803  |
| Nicaragua          | 0.221                                    | 0.058               | 0.082   | 0.311                                     | 0.217   | 0.829                                     |  |
| Yemen, Rep.        | 0.331                                    | 0.069               | 0.082   | 0.393                                     | 0.217   | 1.047                                     |  |
| Vietnam            | 0.373                                    | 0.195               | 0.195   | 0.373                                     | 0.217   | 0.416                                     | 0.765  |
| Thailand           | 0.378                                    | 0.005               | 0.082   | 5.987                                     |   |   |  |
| Sri Lanka          | 0.418                                    | 0.098               | 0.082   | 0.349                                     | 0.217   | 0.932                                     |  |
| Ecuador            | 0.431                                    | 0.031               | 0.082   | 1.118                                     |   |   |  |
| Georgia            | 0.785                                    |                     |   |   |   |   |  |
| Pakistan           | 0.8                                      |                     |   |   |   |   |  |
| Mongolia           | 0.93                                     |                     |   |   |   |   |  |
| Egypt, Arab Rep.   | 0.961                                    |                     |   |   |   |   |  |
| Armenia            | 0.969                                    |                     |   |   |   |   |  |

**Annex 6 (cont.): Poverty Gap Changes with Differing Budget Efficiency Scenarios, Upper Middle Income Countries (UMIC)**

| Country    | (1)<br>% Poverty Gap reduction - current | (2)<br>BCR - Actual | (3)<br>BCR - Max of 1) actual or 2) mean all countries (.082) | (4)<br>% Pgap reduction with BCR from (3) | (5)<br>BCR - Max of 1) actual or 2) BCR of top 25% (.217) | (6)<br>% reduction Pgap with BCR from (5) | (7)<br>BCR - Max of 1) actual or 2) BCR max (.400) |
|------------|--|---------------------|---|---|---|---|--|
| Malawi     | 0.005                                    | 0.024               | 0.082   | 0.018                                     | 0.217   | 0.049                                     | 0.09   |
| Turkey     | 0.12                                     | 0.002               | 0.082   | 5.489                                     |   |   |  |
| Panama     | 0.175                                    | 0.007               | 0.082   | 1.917                                     |   |   |  |
| Peru       | 0.303                                    | 0.01                | 0.082   | 2.581                                     |   |   |  |
| Dominican  | 0.483                                    | 0.012               | 0.082   | 3.273                                     |   |   |  |
| Brazil     | 0.56                                     |                     |   |   |   |   |  |
| Mexico     | 0.598                                    |                     |   |   |   |   |  |
| Chile      | 0.606                                    |                     |   |   |   |   |  |
| Argentina  | 0.686                                    |                     |   |   |   |   |  |
| Malaysia   | 0.9                                      |                     |   |   |   |   |  |
| Mauritius  | 0.929                                    |                     |   |   |   |   |  |
| Azerbaijan | 0.951                                    |                     |   |   |   |   |  |
| Macedonia  | 0.976                                    |                     |   |   |   |   |  |
| Uruguay    | 0.983                                    |                     |   |   |   |   |  |
| Kazakhstan | 0.992                                    |                     |   |   |   |   |  |
| Bosnia and | 0.993                                    |                     |   |   |   |   |  |

**Annex 6 (cont.): Poverty Gap Changes with Differing Budget Efficiency Scenarios, High Income Countries (HIC)**

| Country | (1)<br>% Poverty Gap reduction - current | (2)<br>BCR - Actual | (3)<br>BCR - Max of 1) actual or 2)mean all countries (.082) | (4)<br>% Pgap reduction with BCR from (3) | (5)<br>BCR - Max of 1) actual or 2) BCR of top 25% (.217) | (6)<br>% reduction Pgap with BCR from (5) | (7)<br>BCR - Max of 1) actual or 2) BCR max (.400) |
|---------|--|---------------------|--|---|---|---|--|
| Latvia  | 0.999                                    |                     |  |   |   |   |  |
| Poland  | 1.000                                    |                     |  |   |   |   |  |

## Annex7: Official List of Current MDG Goals, Targets and Indicators<sup>39</sup>

| Goals and Targets  | Indicators for monitoring progress  |
|--|---|
| <b>Goal 1: Eradicate extreme poverty and hunger</b>  |   |
| Target 1.A: Halve, between 1990 and 2015, the proportion of people whose income is less than one dollar a day                                    | 1.1 Proportion of population below \$1 (PPP) per day <sup>i</sup><br>1.2 Poverty gap ratio<br>1.3 Share of poorest quintile in national consumption   |
| Target 1.B: Achieve full and productive employment and decent work for all, including women and young people                                     | 1.4 Growth rate of GDP per person employed<br>1.5 Employment-to-population ratio<br>1.6 Proportion of employed people living below \$1 (PPP) per day<br>1.7 Proportion of own-account and contributing family workers in total employment |
| Target 1.C: Halve, between 1990 and 2015, the proportion of people who suffer from hunger  | 1.8 Prevalence of underweight children under-five years of age<br>1.9 Proportion of population below minimum level of dietary energy consumption  |
| <b>Goal 2: Achieve universal primary education</b>   |   |
| Target 2.A: Ensure that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling         | 2.1 Net enrolment ratio in primary education<br>2.2 Proportion of pupils starting grade 1 who reach last grade of primary<br>2.3 Literacy rate of 15-24 year-olds, women and men  |
| <b>Goal 3: Promote gender equality and empower women</b>   |   |
| Target 3.A: Eliminate gender disparity in primary and secondary education, preferably by 2005, and in all levels of education no later than 2015 | 3.1 Ratios of girls to boys in primary, secondary and tertiary education<br>3.2 Share of women in wage employment in the non-agricultural sector<br>3.3 Proportion of seats held by women in national parliament                          |
| <b>Goal 4: Reduce child mortality</b>  |   |
| Target 4.A: Reduce by two-thirds, between 1990 and 2015, the under-five mortality rate   | 4.1 Under-five mortality rate<br>4.2 Infant mortality rate<br>4.3 Proportion of 1 year-old children immunised against measles   |
| <b>Goal 5: Improve maternal health</b>   |   |
| Target 5.A: Reduce by three quarters, between 1990 and 2015, the maternal mortality ratio  | 5.1 Maternal mortality ratio<br>5.2 Proportion of births attended by skilled health personnel   |
| Target 5.B: Achieve, by 2015, universal access to reproductive health  | 5.3 Contraceptive prevalence rate<br>5.4 Adolescent birth rate<br>5.5 Antenatal care coverage (at least one visit and at least four visits)<br>5.6 Unmet need for family planning   |

<sup>39</sup> The Millennium Development Goals and targets come from the Millennium Declaration, signed by 189 countries, including 147 heads of State and Government, in September 2000 (<http://www.un.org/millennium/declaration/ares552e.htm>) and from further agreement by member states at the 2005 World Summit (Resolution adopted by the General Assembly - A/RES/60/1, <http://www.un.org/Docs/journal/asp/ws.asp?m=A/RES/60/1>). The goals and targets are interrelated and should be seen as a whole. They represent a partnership between the developed countries and the developing countries “to create an environment – at the national and global levels alike – which is conducive to development and the elimination of poverty”. Source: <http://mdgs.un.org/unsd/mdg/host.aspx?Content=indicators/officialist.htm>

| <b>Goal 6: Combat HIV/AIDS, malaria and other diseases</b>  |   |
|---|---|
| Target 6.A: Have halted by 2015 and begun to reverse the spread of HIV/AIDS   | <p>6.1 HIV prevalence among population aged 15-24 years</p> <p>6.2 Condom use at last high-risk sex</p> <p>6.3 Proportion of population aged 15-24 years with comprehensive correct knowledge of HIV/AIDS</p> <p>6.4 Ratio of school attendance of orphans to school attendance of non-orphans aged 10-14 years</p>   |
| Target 6.B: Achieve, by 2010, universal access to treatment for HIV/AIDS for all those who need it  | <p>6.5 Proportion of population with advanced HIV infection with access to antiretroviral drugs</p>   |
| Target 6.C: Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases  | <p>6.6 Incidence and death rates associated with malaria</p> <p>6.7 Proportion of children under 5 sleeping under insecticide-treated bed-nets</p> <p>6.8 Proportion of children under 5 with fever who are treated with appropriate anti-malarial drugs</p> <p>6.9 Incidence, prevalence and death rates associated with tuberculosis</p> <p>6.10 Proportion of tuberculosis cases detected and cured under directly observed treatment short course</p>   |
| <b>Goal 7: Ensure environmental sustainability</b>  |   |
| Target 7.A: Integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources  | <p>7.1 Proportion of land area covered by forest</p> <p>7.2 CO2 emissions, total, per capita and per \$1 GDP (PPP)</p> <p>7.3 Consumption of ozone-depleting substances</p> <p>7.4 Proportion of fish stocks within safe biological limits</p> <p>7.5 Proportion of total water resources used</p>  |
| Target 7.B: Reduce biodiversity loss, achieving, by 2010, a significant reduction in the rate of loss   | <p>7.6 Proportion of terrestrial and marine areas protected</p> <p>7.7 Proportion of species threatened with extinction</p>   |
| Target 7.C: Halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation   | <p>7.8 Proportion of population using an improved drinking water source</p> <p>7.9 Proportion of population using an improved sanitation facility</p>   |
| Target 7.D: By 2020, to have achieved a significant improvement in the lives of at least 100 million slum dwellers  | <p>7.10 Proportion of urban population living in slums<sup>ii</sup></p>   |
| <b>Goal 8: Develop a global partnership for development</b>   |   |
| Target 8.A: Develop further an open, rule-based, predictable, non-discriminatory trading and financial system   | <p><i>Some of the indicators listed below are monitored separately for the least developed countries (LDCs), Africa, landlocked developing countries and small island developing States.</i></p>  |
| Includes a commitment to good governance, development and poverty reduction – both nationally and internationally   | <p><b>Official development assistance (ODA)</b></p> <p>8.1 Net ODA, total and to the least developed countries, as percentage of OECD/DAC donors' gross national income</p> <p>8.2 Proportion of total bilateral, sector-allocable ODA of OECD/DAC donors to basic social services (basic education, primary health care, nutrition, safe water and sanitation)</p> <p>8.3 Proportion of bilateral official development assistance of OECD/DAC donors that is untied</p> <p>8.4 ODA received in landlocked developing countries as a proportion of their gross national incomes</p> |
| Target 8.B: Address the special needs of the least developed countries  |   |
| Includes: tariff and quota free access for the least developed countries' exports; enhanced programme of debt relief for heavily indebted poor countries (HIPC) and cancellation of official bilateral debt; and more |   |

|  |   |
|--|---|
| <p>generous ODA for countries committed to poverty reduction</p> <p>Target 8.C: Address the special needs of landlocked developing countries and small island developing States (through the Programme of Action for the Sustainable Development of Small Island Developing States and the outcome of the twenty-second special session of the General Assembly)</p> <p>Target 8.D: Deal comprehensively with the debt problems of developing countries through national and international measures in order to make debt sustainable in the long term</p> | <p>8.5 ODA received in small island developing States as a proportion of their gross national incomes</p> <p><u>Market access</u></p> <p>8.6 Proportion of total developed country imports (by value and excluding arms) from developing countries and least developed countries, admitted free of duty</p> <p>8.7 Average tariffs imposed by developed countries on agricultural products and textiles and clothing from developing countries</p> <p>8.8 Agricultural support estimate for OECD countries as a percentage of their gross domestic product</p> <p>8.9 Proportion of ODA provided to help build trade capacity</p> <p><u>Debt sustainability</u></p> <p>8.10 Total number of countries that have reached their HIPC decision points and number that have reached their HIPC completion points (cumulative)</p> <p>8.11 Debt relief committed under HIPC and MDRI Initiatives</p> <p>8.12 Debt service as a percentage of exports of goods and services</p> |
| <p>Target 8.E: In cooperation with pharmaceutical companies, provide access to affordable essential drugs in developing countries</p>  | <p>8.13 Proportion of population with access to affordable essential drugs on a sustainable basis</p>   |
| <p>Target 8.F: In cooperation with the private sector, make available the benefits of new technologies, especially information and communications</p>  | <p>8.14 Fixed telephone lines per 100 inhabitants</p> <p>8.15 Mobile cellular subscriptions per 100 inhabitants</p> <p>8.16 Internet users per 100 inhabitants</p>  |

i For monitoring country poverty trends, indicators based on national poverty lines should be used, where available.

ii The actual proportion of people living in slums is measured by a proxy, represented by the urban population living in households with at least one of the four characteristics: (a) lack of access to improved water supply; (b) lack of access to improved sanitation; (c) overcrowding (3 or more persons per room); and (d) dwellings made of non-durable material.

## OTHER A.E.M. WORKING PAPERS

| WP No   | Title   | Fee<br>(if applicable) | Author(s)   |
|---------|---|------------------------|---|
| 2013-16 | Impacts of local food system activities by small direct-to-consumer producers in a regional economy: a case study from upstate NY |                        | Schmit, T.M., Jablonski, B.B.R. and Y. Mansury          |
| 2013-15 | The Operational Dimensions of Results-Based Financing   |                        | O'Brien, T. and R. Kanbur                               |
| 2013-14 | Identifying Factors Influencing a Hospital's Decision to Adopt a Farm-toHospital Program  |                        | Smith, II, B., Kaiser, H. and M. Gómez                  |
| 2013-13 | The State of Development Thought  |                        | Currie-Alder, B., Kanbur, R., Malone, D. and R. Medhora |
| 2013-12 | Economic Inequality and Economic Development: Lessons and Implications of Global Experiences for the Arab World                   |                        | Kanbur, R.  |
| 2013-11 | An Agent-Based Computational Bioeconomic Model of Plant Disease Diffusion and Control: Grapevine Leafroll Disease                 |                        | Atallah, S., Gómez, M., Conrad, J. and J. Nyrop         |
| 2013-10 | Labor Law violations in Chile   |                        | Kanbur, R., Ronconi, L. and L. Wedenoja                 |
| 2013-09 | The Evolution of Development Strategy as Balancing Market and Government Failure  |                        | Devarajan, S. and R. Kanbur                             |
| 2013-08 | Urbanization and Inequality in Asia   |                        | Kanbur, R. and J. Zhuang                                |
| 2013-07 | Poverty and Welfare Management on the Basis of Prospect Theory  |                        | Jääntti, M., Kanbur, R., Nyssölä, M. and J. Pirttilä    |
| 2013-06 | Can a Country be a Donor and a Recipient of Aid?  |                        | Kanbur, R.  |
| 2013-05 | Estimating the Impact of Minimum Wages on Employment, Wages and Non-Wage Benefits: The Case of Agriculture in South Africa        |                        | Bhorat, H., Kanbur, R. and B. Stanwix                   |
| 2013-04 | The Impact of Sectoral Minimum Wage Laws on Employment, Wages, and Hours of Work in South Africa                                  |                        | Bhorat, H., Kanbur, R. and N. Mayet                     |

Paper copies are being replaced by electronic Portable Document Files (PDFs). To request PDFs of AEM publications, write to (be sure to include your e-mail address): Publications, Department of Applied Economics and Management, Warren Hall, Cornell University, Ithaca, NY 14853-7801. If a fee is indicated, please include a check or money order made payable to Cornell University for the amount of your purchase. Visit our Web site (<http://aem.cornell.edu/research/wp.htm>) for a more complete list of recent bulletins.