Financing the end of extreme poverty

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Report
September 2018

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Acknowledgements

We would like to thank Mark Plant (Center for Global Development) and Andrew Rogerson (ODI) for peer reviewing this report, as well as Romilly Greenhill, Paddy Carter and Chris Hoy, who worked with Marcus Manuel to develop many of these ideas in an earlier paper (Greenhill et al., 2015). We would also like to thank Mikaela Gavas, Simon Maxwell and Simon Gill for their critical support in starting, shaping and finishing the paper, Stephanie Manea for additional research assistance and many other ODI colleagues for their comments and insights, including Annalisa Prizzon, Elizabeth Stuart, Francesca Bastagli, Jesse Griffiths, Joanna Rea and Lars Engen. The outstanding errors and omissions are the authors' alone. Funding was provided by the Bill & Melinda Gates Foundation.

Contents

About the authors 3

Acknowledgements 3

List of boxes, tables and figures 5

Acronyms and abbreviations 7

Key definitions 8

1 Introduction and overview 9

2 Poverty projections 11

2.1 Recent poverty projections 11

2.2 Poverty projections for this report 11

3 Costing the three core social sectors 15

3.1 Costing education 15

3.2 Costing health and nutrition 16

3.3 Costing social protection transfers 16

3.4 Summary of costings 20

3.5 Key limitation: the absence of infrastructure costings 21

4 Tax potential 22

4.1 Current approaches to estimating tax potential 22

4.2 An urgent need for further research 24

5 Domestic financing gaps and their impact 25

6 Current targeting of donor funding on ending extreme poverty 29

6.1 Current global distribution of aid to LDCs and LICs 29

6.2 Current aid distribution relative to domestic financing gaps 30

6.3 Current donor funding for three core social sectors in SFCCs 31

6.4 Options for aid to better match financing gaps 33

7 Assessing individual donor support for ending extreme poverty **35**

7.1 Construction of donor effort index **35**

7.2 Construction of donor efficiency in targeting extreme poverty (DEEP) index **36**

7.3 Individual major DAC donor DEEP scores **38**

7.4 Should aid allocation account for effectiveness? **39**

7.5 Construction of overall donors' effective support for ending extreme poverty index **40**

8 Recommendations and conclusions **42**

Annex 1 Methodology for poverty projections **44**

Annex 2 Data coverage and main sources **46**

References **48**

List of boxes, tables and figures

Boxes

Box 1 Ethiopia's Productive Safety Net Programme **18**

Tables

Table 1 Characteristics by type of transfer **19**

Table 2 Social sector costs per year **20**

Table 3 Aid and potential revenue per person in extreme poverty per year **29**

Table 4 Underfunding of education, health and social protection transfers in SFCCs **32**

Figures

Figure 1 Severely poverty challenged countries in 2030 **12**

Figure 2 Current and projected median poverty rates by income group **13**

Figure 3 Cost of delivering health, education and social protection – all under-resourced countries **20**

Figure 4 Range of IMF, World Bank and IGC estimated tax efforts **23**

Figure 5 Current revenues and additional potential revenues **23**

Figure 6 Costs of delivering health, education and social protection vs available potential revenues for social sectors – all countries **25**

Figure 7 Costs of delivering health, education and social protection vs available potential revenues for social sectors – all under-resourced countries **26**

Figure 8 Severely financially challenged countries (available potential revenues less than 50% of total costs) **26**

Figure 9 Overlap between SFCCs and LICs **27**

Figure 10 Under-resourced countries within LIC, LDC and OECD fragile states groupings **28**

Figure 11 Median aid per person in extreme poverty in LICs and MICs **30**

Figure 12 Aid and potential revenue available for social sectors vs total costs for health, education and social protection transfers **31**

Figure 13 Total aid (ODA) vs financing gap in SFCCs **33**

Figure 14 Current aid allocation vs ideal aid allocation **34**

Figure 15 Donor effort – volume of aid relative to 0.7% of GNI **35**

Figure 16 Required aid shares for all SFCCs to afford 50% of social sector costs **36**

Figure 17 Current and required cumulative aid shares for all SFCCs to afford 50% of social sector costs **37**

Figure 18 Average donor efficiency at targeting extreme poverty (DEEP) **37**

Figure 19 Individual donor efficiency at targeting extreme poverty (DEEP) **38**

Figure 20 Donor effective support on ending extreme poverty – combined aid effort and efficiency **41**

Acronyms and abbreviations

AAAA	Addis Ababa Action Agenda
CPA	country programmable aid
CPAN	Chronic Poverty Advisory Network
DAC	Development Assistance Committee (of the OECD)
DEEP	donor efficiency in targeting extreme poverty
DPRK	Democratic People's Republic of Korea
DRC	Democratic Republic of Congo
DFID	UK Department for International Development
GDP	gross domestic product
GNI	gross national income
ICTD	International Centre for Tax and Development
IDA	International Development Association (part of World Bank Group)
IFS	International Futures
IGC	International Growth Centre
IMF	International Monetary Fund
ILO	International Labour Office (of the International Labour Organization)
LDC	least developed country
LIC	low-income country (GNI less than $995 per person)
LLMIC	lower-lower-middle-income country (GNI $996–$2,500 per person)
LMIC	lower-middle-income country (GNI $996–$3,895 per person)
MIC	middle-income country (GNI $996–$12,055 per person)
ODA	official development assistance
OECD	Organisation for Economic Co-operation and Development
OLIC	other-low-income country (GNI less than $500 per person)
PPP	purchasing power parity
SFCC	severely financially challenged country
SDG	Sustainable Development Goal
ULMIC	upper-lower-middle-income country (GNI $2,501–$3,895 per person)
UMIC	upper-middle-income country (GNI $3,896–$12,055 per person)
UNESCO	United Nations Educational, Scientific and Cultural Organization
VLIC	very-low-income country (GNI $500–$995 per person)
WHO	World Health Organization

Key definitions

Severely poverty challenged countries	Countries where extreme poverty rate is expected to be above 20% in 2030 (28 countries according to projections in this report)
Three core social sectors	Education, health and social protection transfers
Tax potential	Maximum level of taxation taking into account a country's economic and structural limitations
Tax effort	Ratio of current tax to tax potential
Revenue potential	Tax potential plus non-tax revenues
Available potential revenue	Proportion of potential revenue available for funding three core social sectors. Assumed to be 50%. OECD average is more than 60%
Under-resourced countries	Countries whose available potential revenue is less than costs of three core social sectors (48 countries)
Severely financially challenged countries	Countries whose available potential revenue is less than 50% of costs of three core social sectors (29 countries)
Country programmable aid	Proportion of aid that is available for programming and spending in recipient country. Excludes donor administration costs, debt relief and humanitarian aid
Major donors	Donors that provided more than $500 million of ODA a year (2014–2016 average)

1 Introduction and overview

In 2015, leaders of all countries committed to 'eradicate extreme poverty for all people everywhere' by 2030.[1] In the past 25 years, the world has managed to halve the number of people living in extreme poverty (World Bank, 2015). Yet despite this progress there are still 800 million people living in extreme poverty today.[2]

Some of these people are in countries with relatively low rates of poverty overall, and which have the programmes and the resources already in place to end extreme poverty by 2030. But many more live in countries that lack sufficient resources to achieve this target and face multiple, interlocking obstacles to their progress. The challenges are particularly acute in low-income, least developed, and fragile and conflict-affected countries, most of which currently have poverty rates of over 20%.[3]

This report assesses what needs to be done so that we can deliver the global target to end extreme poverty by 2030 and provides the full background to the shorter ODI briefing note (Manuel et al., 2018). It assesses the situation in over 140 countries and economies, including all the 34 low-income countries and economies (LICs), 103 middle-income countries and economies (MICs), and all 47 least developed countries (LDCs).

The report first identifies those countries that cannot afford to end extreme poverty from their own resources by drawing on:

- **new poverty projections,** so that the estimates of need are based on the number of people that are expected to still be left in poverty in 2030 *after* allowing for the impact of economic growth
- **new tax projections,** based on International Monetary Fund (IMF) and World Bank research as to what is economically feasible, given the structures of the economy and the overall level of economic development (Le et al., 2012; Fenochietto and Pessino, 2013)
- **costings of the three core social sectors** that are funded by all countries in the world, including Organisation for Economic Co-operation and Development (OECD) countries, and are recognised to have a profound impact on efforts to end extreme poverty: education, health (including nutrition) and social protection transfers.

The second part of the report assesses the impact that OECD Development Assistance Committee (DAC) donors are having on efforts to end extreme poverty – in particular, how much aid they provide

1 Sustainable Development Goal (SDG) 1.1 (UNDESA, 2016).

2 ODI estimate based on World Bank's PovcalNet database (2018), with ODI estimates made for 35 countries where data is either missing or deemed unreliable (including Nigeria, Uganda, South Sudan, Syria and Yemen). Latest year in current database is 2013.

3 Ibid.

and how efficiently they target this to the countries that most need external financial support to end extreme poverty. This includes the development of a new methodology for measuring donor effort and efficiency, drawing on the Gini approach to measure income inequality at country level.

2 Poverty projections

2.1 Recent poverty projections

Several recent studies have estimated that between 50 and 60 countries are unlikely to eliminate extreme poverty by 2030. Of this total, recent projections suggest that around 30 countries are particularly at risk, with expected poverty rates of more than 20%.

Chandy (2017), on the basis of current levels of extreme poverty and past trends of poverty reduction, identified 30 countries that were at most risk of being left behind. He also identified another 19 at risk given that their poverty rates were above 20% in 2013. The World Poverty Clock project made projections using the IMF's gross domestic product (GDP) growth forecasts, complemented by long-term shared socioeconomic pathways developed by the OECD and the International Institute for Applied Systems Analysis (Kharas and Fengler, 2017). This identified 62 countries with expected poverty rates of more than 3% in 2030. Using a similar approach, Gertz and Kharas (2018) identified 31 countries that were judged to be severely off-track, defined as those countries with projected extreme poverty rates of more than 20% in 2030.

Recent research has also highlighted that these countries face an intersecting set of challenges, including conflict and climate change. Gertz and Kharas (2018) note that many of the countries in this severely off-track group are also those facing the greatest obstacles to development – low government effectiveness, weak private sector, high risk of conflict and violence and high risk of natural hazards. There is also increasing recognition of the challenges in changing the prospects in chronic poverty countries – such as Zambia, where poverty rates have puzzlingly remained above 50% for the past 30 years (Whitworth, 2015) – and countries where growth is continuing but poverty has increased again – such as Uganda, which had seen a rapid reduction in previous years.

2.2 Poverty projections for this report

The poverty estimates and projections in this report[4] draw on the methodology developed by the World Bank in 2014. The full methodology for these projections is set out in Annex 1. The main data source is the World Bank's PovcalNet database. Where data is missing, this report draws on other sources such as the World Poverty Clock and, in line with World Bank practice, makes estimates based on countries with comparable levels of income. The key differences with World Bank PovcalNet data are:

- For countries in active conflict, where it is known that poverty rates have increased, but it is impossible yet to estimate the precise change, the proportion of the population receiving humanitarian assistance is used (South Sudan, Syria and Yemen).
- For Nigeria, the latest household survey is used (as per World Poverty Clock).
- For Uganda, the latest household survey is used (which reveals an increase in poverty).

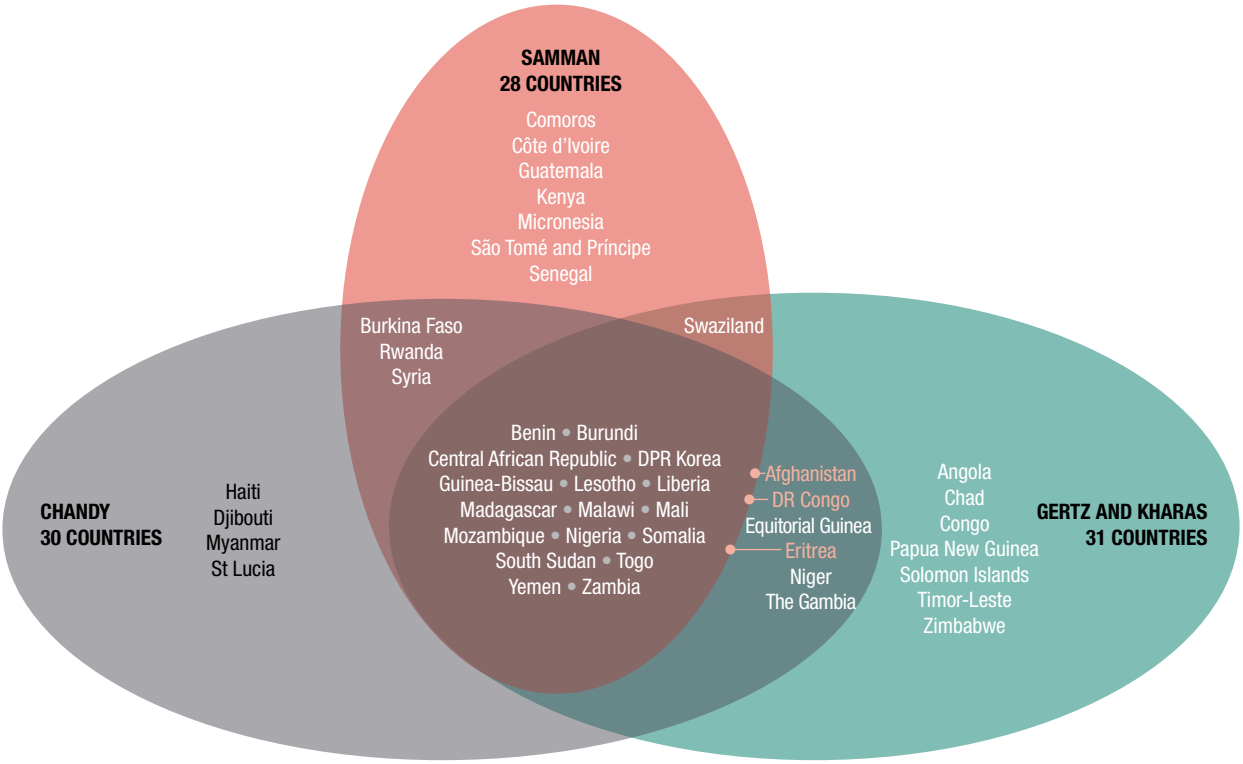
4 The poverty estimates and projections in this report have been prepared by Emma Samman, Research Associate in ODI's Growth, Poverty and Inequality programme.

The two key assumptions for the poverty projections are that mean incomes per person grow at the same rate as in the past 10 years and that there is no change in distribution of income (there has been little improvement on average in the most recently measured five years).[5]

These projections confirm earlier research that suggests growth will result in dramatic progress towards eliminating extreme poverty at a global level. The proportion of people living in extreme poverty across the world is projected to fall from 10.8% in 2013 to 4.7% in 2030. As result 400 million people are expected to be in extreme poverty in 2030. Within this global aggregate there are 28 severely poverty challenged countries with poverty rates of more than 20%. In some of these countries, the rate of poverty reduction is expected to be much slower than the global average, while in others poverty is expected to increase – such as the Central African Republic and Malawi.

This list of severely poverty challenged countries is broadly similar to lists produced by others (Figure 1). Samman, Chandy (2017) and Gertz and Kharas (2018) all identify around 30 countries[6] with expected poverty rates of more than 20%. There are 17 countries that appear on all three lists. If the marker is set slightly lower to allow for small differences in forecasts – extreme rates of poverty of more than 15% – then this overlap increases to 20 countries.[7] The extent of overlap is surprising given

Figure 1 Severely poverty challenged countries in 2030



5 This assumption was selected in the light of past trends – according to the World Bank's Global Database of Shared Prosperity, on average, the incomes (or consumption) of the bottom 40% of the distribution grew at 0.3 percentage points higher than the mean, across 9,591 countries (circa 2009/2014, 2010/2015).

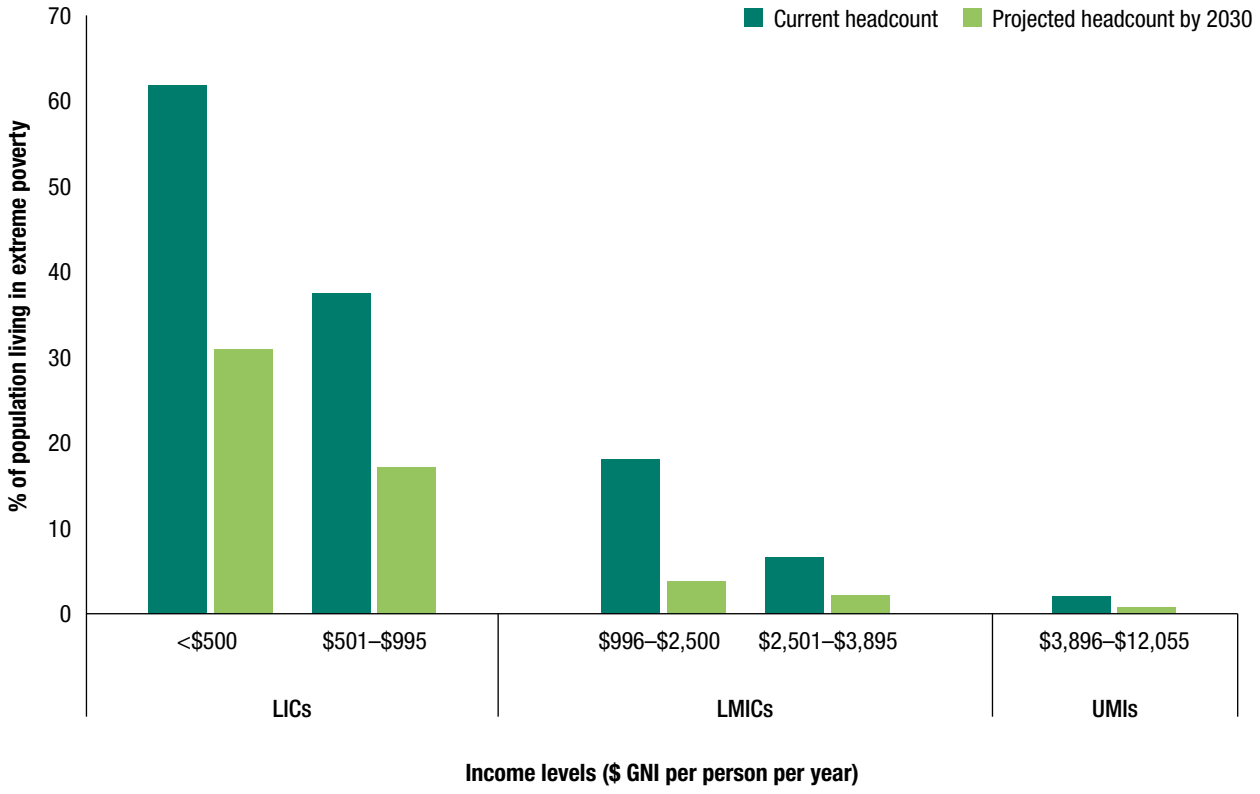
6 Samman: 28 countries; Chandy: 30; and Gertz and Kharas: 31.

7 The 20 common countries are (with three additions as a result of widening the Samman poverty headcount threshold to 15% poverty rates in bold): **Afghanistan**, Benin, Burundi, Central African Republic, DPRK, **DRC**, **Eritrea**, Guinea-Bissau, Lesotho, Liberia, Madagascar, Malawi, Mali, Mozambique, Nigeria, Somalia, South Sudan, Togo, Yemen, Zambia.

the three very different approaches – current rates of poverty (Chandy), future poverty rates assuming past economic growth rates (Samman) and future poverty rates based on IMF projected economic growth rates (Gertz and Kharas). The two main reasons for the overlap are the current very high levels of poverty in a significant number of countries (20 countries have rates of more than 45%) and the very slow rate of poverty reduction in a few other countries.

These poverty projections confirm previous studies that have noted that poverty will be increasingly concentrated in fragile states and LDCs (e.g. Kharas and Rogerson, 2017). Over half of those states in extreme poverty are also considered fragile states, according to the OECD's latest broadly defined list of 58 fragile states, and by 2030 this proportion is expected to rise to 85%.[8] To a much lesser extent, extreme poverty will also be increasingly concentrated in the 47 LDCs, with the proportion rising from 43% to 55%. The proportion of the extreme poor in LICs is also expected to rise from 40% now to 54% in 2030. While LICs have only just over half of the global total, poverty rates are expected to be seven times more concentrated in these countries: the average, population-weighted poverty rate is predicted to be 21% in LICs, compared to 3% in MICs.

Figure 2 Current and projected median poverty rates by income group



8 As Kharas and Rogerson (2017) note, there is no universally accepted definition of fragility. Their estimate that after 2022 over half the poor will be living in fragile states is based on a broad OECD style definition of fragility, which included 56 countries (in 2016). The OECD has now updated this list to 58 (in 2018). Estimates in this paper are also higher due to different assumptions about poverty rates in countries currently in conflict (see Annex 1 for details). The World Bank list (harmonised list of fragile situations FY18/19) has only 36 countries and excludes some large countries such as Bangladesh, Ethiopia, Nigeria and Pakistan. The UK Department for International Development (DFID) list (of high and moderate fragile countries as submitted to Parliament in 2016) also has only 36 countries. But only 20 countries are common to both the World Bank and DFID lists. For example, Bangladesh, Ethiopia, Nigeria and Pakistan appear only on the DFID list while Liberia and Mozambique appear only on the World Bank list. All these countries are on the OECD list. Based on the World Bank list, 25% of the extreme poor live in fragile states now and, on these poverty projections, 33% will in 2030.

These projections also confirm a continued strong correlation between a country's poverty rates and its overall level of income (Figure 2). Poverty is particularly high in the very-low-income countries (VLICs) – that is, countries with less than half the income per capita threshold for LICs and MICs. However, lower-middle-income countries (LMICs) still account for nearly a third of the countries expected to have poverty rates in excess of 20% by 2030 (with over 10 million people in extreme poverty in each of Côte d'Ivoire, Nigeria and Zambia).

Some of the countries with projected high rates of poverty are long-term conflict-affected countries, such as Central African Republic, Somalia and South Sudan. Others are countries where poverty rates have been high for many years, such as Madagascar, Malawi, Mali, Nigeria and Zambia. And some are countries where poverty has started to increase after a long period of decline, such as Uganda.

3 Costing the three core social sectors

Economic growth has long been the key driver of global poverty reduction. And as these and other poverty projections confirm, this is likely to remain the key driver in the longer term. However, these projections also show growth will not be sufficient to eliminate extreme poverty within many countries by 2030. Three core interlocking social sectors are pursued in all OECD countries and LICs and MICs that have a profound impact on poverty: education, health and financial support to the poorest. These three sectors account for around half of all government spending in OECD countries and a third of all donor aid.[9] These three large-scale sectors are recognised as being essential components in ensuring long-term escapes from extreme poverty. This chapter estimates these costs in LICs and MICs. As the costings for education and health are already well established, most of our analysis focuses on targeted support to the poorest, but it should be noted that all three are interlocking and critical.

3.1 Costing education

The United Nations Education, Scientific and Cultural Organization (UNESCO) education costing exercise for many LICs and LMICs (UNESCO, 2015) remains the most detailed country-by-country costing estimate for education.[10] The UNESCO report covers the costs for primary and lower secondary education, totalling 10 years of education, in all LICs and many LMICs. It assumes 100% completion rates are achieved by 2030 for both primary and lower secondary and there is a slight reduction in the pupil:teacher ratio (e.g. from 35:1 to 31:1 for primary).

As the cost estimates for 2015 are based on much lower current completion rates, and the cost estimates for 2030 take into account substantial growth in pupil population, the average for 2015 to 2030 is used as the best single point estimate. The estimates also assume a 20%–25% increase in teacher salaries as a multiple of GDP per capita (implying a 4.5 multiple for primary teachers in 2030) and a 25% share of non-salary items in total recurrent expenditures. Finally, the estimates also provide for increased equity, with an average 25% mark-up on student costs to attract marginalised children. The number of marginalised children is related to the number of children not in school and the share of the population living on less than $2 a day. The UNESCO estimates also included provision for demand-side interventions to increase attendance by the poorest and most marginalised children (e.g. cash transfers). As such transfers are covered separately in this report, we have excluded this provision from our education costs to avoid double counting.

The UNESCO report did not include provision for pre-primary schooling. Given the increasing recognition of the importance of this intervention, this report increases the UNESCO costs by 10% to ensure provision for another year of education. UNESCO also did not estimate the costs for all the

9 35% of all sector-allocable aid. Authors' own calculation. Source: OECD DAC.

10 It is also the basis for the more recent estimates prepared by the Education Commission.

LMICs or any of the upper-middle-income countries (UMICs). For these countries, costs are presumed to be in line with the lower Education for All target of 4% of GDP.

3.2 Costing health and nutrition

The World Health Organization's Commission of Macroeconomics and Health made the first attempt to cost the health Millennium Development Goals in 2001 (WHO, 2001). It estimated that 'the set of essential interventions costs around $34 per person per year', corresponding to 11% of the average LDC per person income of $300. Adjusting for US inflation, the $34 figure becomes $48 in 2013. The second major attempt was by the High-Level Task Force on Innovative International Financing for Health Systems in 2009. This looked at a broader range of services and higher coverage rates and estimated the average cost in LICs at $54 (in 2005). The Task Force included services that address chronic diseases (tobacco control and salt reduction) as well as essential drugs for chronic diseases such as some cancers and mental health. In 2014, the Centre on Global Health at Chatham House convened an expert group that updated the Task Force figure, adjusting for both inflation and exchange rate movements, to yield a figure of $86 per person in LICs.

More recently teams funded by WHO and the World Bank have re-examined the costs of providing universal healthcare and published their results in The Lancet. The WHO-funded report estimated the costs of transforming health systems to ensure achievement of the health Sustainable Development Goals (SDGs) and looked at 67 LICs and MICs (Stenberg et al., 2017). It concluded that the average general government healthcare expenditure required in LICs was $71 per person (with a wide range from $48–$116 per person). The World Bank-funded report costed 21 essential packages, covering 218 interventions, and defines a model concept of essential universal healthcare coverage (Jamison et al., 2017). Its estimated average costs for LICs and LMICs were $76 and $110 per person, respectively. As both studies have similar average figures, this report uses the higher of the two. For the very poorest countries these figures are likely to overstate the costs but there are no alternative country-by-country estimates.

Given the growing recognition of nutrition's importance, this report also includes the costings from a recent World Bank report, which estimated the cost of a set of high-impact nutrition-specific interventions to reach global targets for stunting, anaemia, breastfeeding for infants and wasting (Shekar et al., 2017). The average additional cost over existing spend is estimated at $10 per child aged 0–4 years (equivalent to $2 per person).

3.3 Costing social protection transfers

As economic growth is expected to still leave a large number of countries with high levels of extreme poverty, it is encouraging that every country now has some form of a targeted transfer system to directly address poverty.

However, coverage of targeted transfer programmes is still woefully inadequate. Current programmes cover only a small proportion of poor populations and transfers to them are small in monetary value. Recent reports by the International Labour Office (2017) and the World Bank (2018) estimate that social protection benefits cover only 45% of the world population and social safety nets reach only 20% of those living in extreme poverty in LICs. Ethiopia's large-scale scheme, for instance, is due to reach 10 million beneficiaries but will still cover only a third of the people living in extreme poverty. Furthermore, the average transfer is still only half what is needed to lift a household out of poverty (Box 1). In Nigeria, although there were three schemes in 2015, total coverage was still less than 0.2% of the extreme poor population. And even large-scale schemes in Asia, such as in Bangladesh and Pakistan, were reaching only between 20% and 25% of the extreme poor in 2015.

The precise design of social protection programmes to address poverty varies across countries depending on their context and history. This report does not attempt to consider which precise design would be most appropriate at the national level; our outline proposal is to ensure countries have the funding they need to provide a basic set of social protection transfers and services that can lift the poor population towards or over the international extreme poverty line of $1.90. Many countries may choose to spend more than this minimum and provide more than a floor – for example through contributory benefits and pension schemes, although those programmes tend to be less progressive. Some countries may also want to make payments conditional – for example on children attending school or receiving vaccination.

The stylised costings in this report, developed by Martin Evans (ODI),[11] are based on:

1. the size of the aggregate extreme poverty gap in each country – that is, the shortfall in consumption or income level relative to the extreme poverty line[12]
2. projected levels of poverty so programmes are scaled to be provided only for people who are not expected to be lifted out of poverty by broader economic growth
3. the need to provide for different forms of transfers and services to consider the demographic and economic drivers of improved livelihoods of poor people
4. recognition that long-term sustainability and domestic political acceptability considerations imply that the choice of the precise form of demographic cash transfers (e.g. to children and elderly people) needs to balance poverty reducing and universal coverage aims
5. recognition that people with disabilities and those who are chronically ill would need additional support from cash and services.

The costings in this report therefore covers two distinct types of transfers.

Demographic transfers. Children are over-represented among the extreme poor: the World Bank estimates that 19.5% of children under 18 years live in $1.90 extreme poverty compared to 9.2% of adults (2016). Poverty is particularly high for children aged 0–9 years and declines in older groups of children. So, transfers that reflect the presence and/or the number of children can be a characteristic of an efficient poverty reducing transfer. Very high percentages of extremely poor households contain children in many countries.

Most countries also recognise the need to provide support for older populations, even though they are less associated with poverty in poorer countries. The poorest countries have high fertility rates and a large proportion of households contain children (unlike other, richer countries). How far transfers to children (and older people) should be universal or not is therefore a question of coverage and efficiency as well as a normative policy question, and best determined at national level to reflect political and economic constraints. To ensure countries can afford to choose, the costings here assume a universal approach, which is the costlier option. The difference between the universal and targeted approaches is not that large in high-poverty countries, as targeted programmes would need to reach most of the population anyway and have much higher leakage rates and administration costs. Only in five countries is a universal approach estimated to be marginally cheaper: Central African Republic, Guinea-Bissau, Madagascar, Malawi and Zambia. For all these countries, the costings used in the rest of this report have been increased so that the marginally costlier, targeted option could be adopted if countries chose to do so.

11 This design has been developed by Martin Evans, Senior Research Fellow in ODI's Social Protection programme.

12 Costings based just on the poverty gap have been used in many other papers (e.g. Greenhill et al., 2015).

Productive safety net/livelihood-enhancing programmes. These programmes should assist in smoothing underlying risks from uncertain income generation and encourage increasing productivity. The child transfer allocation would provide an income and consumption smoothing for the large majority of economically active adults in the poorest countries. As such, our stylised example provides for a 'productive safety net' type transfer based on public works employment for the adult population combined with 'livelihood improvement services' that will help improve productivity and promote business, based on the Ethiopian Productive Safety Net Programme (Box 1).

The demographic transfers would be the largest element of the package and universal coverage would ensure that, as well as the extreme poor, the near poor and others who are vulnerable to poverty were also reached. A recent Chronic Poverty Advisory Network (CPAN) report shows considerable movement over time across the poverty line, with households rising out of poverty for some years but then falling back again later, especially if one member falls ill and health costs have to be found (Shepherd et al., 2018). The proposed transfer is based on the extreme poverty gap so the amount per beneficiary would be a small but regular source of income that can reduce their risk aversion.

Box 1 Ethiopia's Productive Safety Net Programme

Ethiopia's Productive Safety Net Programme is the largest-scale safety net programme in any LIC. It started in 2005 after the realisation that a decade of annual humanitarian appeals had not reduced high levels of chronic hunger. The programme is credited with lifting 1.4 million people out of extreme poverty and enabling Ethiopia to avoid famine during the severe 2010/11 drought. It also played a pivotal role in the response to the worst drought for 40 years in 2015/16. However, it was not then at a sufficient scale to be the sole channel of support, so additional relief food had also to be provided.

The programme plans to double in size to reach 10 million beneficiaries by 2020 and to lift nearly half of these out of extreme poverty. It is expected that most beneficiaries (over 80%) will receive a transfer by the adult members of the household working half the year on local public works, worth $42 per beneficiary a year, equivalent in purchasing power parity (PPP) terms to $0.28 a day. Those unable to work (i.e. those with disabilities, or older people living alone) receive the same transfer but for the whole year. Most beneficiaries are expected to receive payment in cash, and e-payment mechanisms are being increasingly piloted.

Part of the package of support includes training in nutrition practices and livelihood skills. Many of the public works projects are agriculture investments – for example soil and water conservation programmes and small-scale irrigation schemes. These have wider benefits as well, such as large-scale carbon sequestration. Other projects build infrastructure for local economic development (for example, rural roads) and basic service delivery (school rooms and health posts). A focus on climate-smart approaches is intended to maximise the adaption benefits and minimise the risks of maladaptation. The programme is well targeted, with 80% of transfers going to the poor – a direct result of its emphasis on public works. Beneficiaries are therefore self-selecting, with only the poorest taking part as they lack other livelihood opportunities.

Even with the planned scaling-up, this programme will reach only a third of those living in extreme poverty and the average transfer will be only half the amount needed to lift the typical poor household above the poverty line. A programme that reached all the poor with the full amount would therefore cost nearly six times more – just over $4 billion a year. Such a programme is currently inconceivable, even allowing for increase in taxation, as this is much more than the total of all aid that Ethiopia currently receives and, to be politically feasible, would need to be committed over many years.

As universal demographic transfers can result in a low administration cost and can reduce exclusion error, a conservative 4% administration cost is assumed.[13]

The productive safety net/livelihood services would be in two forms. The first would be a productive safety net: a public works programme available to households living in or near extreme poverty who want to have a public works top-up to their demographic allocation. Self-targeting is envisaged and leakage rates are estimated at 20%, but there would be much higher administrative costs, set at 36% (both based on the experience of the Ethiopia Productive Safety Net Programme). These higher administrative costs owe mainly to the capital costs of the public works – small-scale irrigation schemes, local roads and reforestation. The second form would be 'livelihood improvement' as per the Ethiopia Productive Safety Net, allocated 25% of total expenditure (from higher unit costs) and with an admin cost of 30% of the transfer. As is the case Ethiopia Productive Safety Net Programme the assumption is that public works would be the main transfer and the livelihood improvement transfer would be just 10% of the total productive safety net/livelihood transfer.

As is the case with the Ethiopia Productive Safety Net Programme, the costs include a provision for those living with disabilities and the chronically ill. These groups receive the same level of monthly benefit without engaging in public works and also receive it for the whole year (whereas the public work opportunities are available only for six months). As is the case with the Ethiopia Productive Safety Net programme, 8% of the beneficiaries are assumed to need this support (World Bank, 2014).[14]

In this report, the costing is based on the expected poverty gap in 2030. This ensures the support is targeted at countries most at risk of missing the 2030 target and avoids funding people who are expected to be lifted out of poverty through growth.[15] This approach results in much lower costs – $154 billion per year compared to $249 billion per year[16] for current poverty levels. It also yields a different pattern of funding needs at country level.

However, as poverty projections necessarily also involve a degree of judgement, the key conclusions in this report are also tested against the basis of current poverty rates. This turns out to have little impact on the overall conclusions – in part because most of the high-poverty countries in 2015 are also expected to still be high-poverty countries in 2030.

Table 1 Characteristics by type of transfer

Type of transfer	Available to	Leakage	Administration costs
Demographic allocation	0–14 years of age and 65+ years of age	0%	4%
Public works	Working-age extreme poor	20%	35%
Livelihoods improvement	Working-age extreme poor	10%	30%

13 After five years, the Brazilian administration cost rate fell to 3% and the Mexican rate to 6%. In the well-established Pakistan Benazir Income Support Programme, administration costs are 8%. See Manuel and Hoy (2015).

14 Figures taken from Ethiopia Productive Safety Net Programme budget 2015/16–2019/20.

15 The projected poverty gap for 2030 (a percentage figure) is applied to the current population to ensure consistency with all other costs and revenue estimates. All estimates are expected to change in line with population growth.

16 The estimate for LICs, based on current poverty rates, is $75 billion, which is much larger than the previous Greenhill et al. (2015) estimate of $42 billion. This is mainly due to the increase in the international poverty line from PPP $1.25 to PPP $1.90, a depreciation of the dollar compared to the average PPP exchange rate, and population growth.

3.4 Summary of costings

The costs for all three sectors in all LICs and MICs total $2.4 trillion. The costs in LICs are $137 billion, amounting to $188 per person per year in a typical LIC.

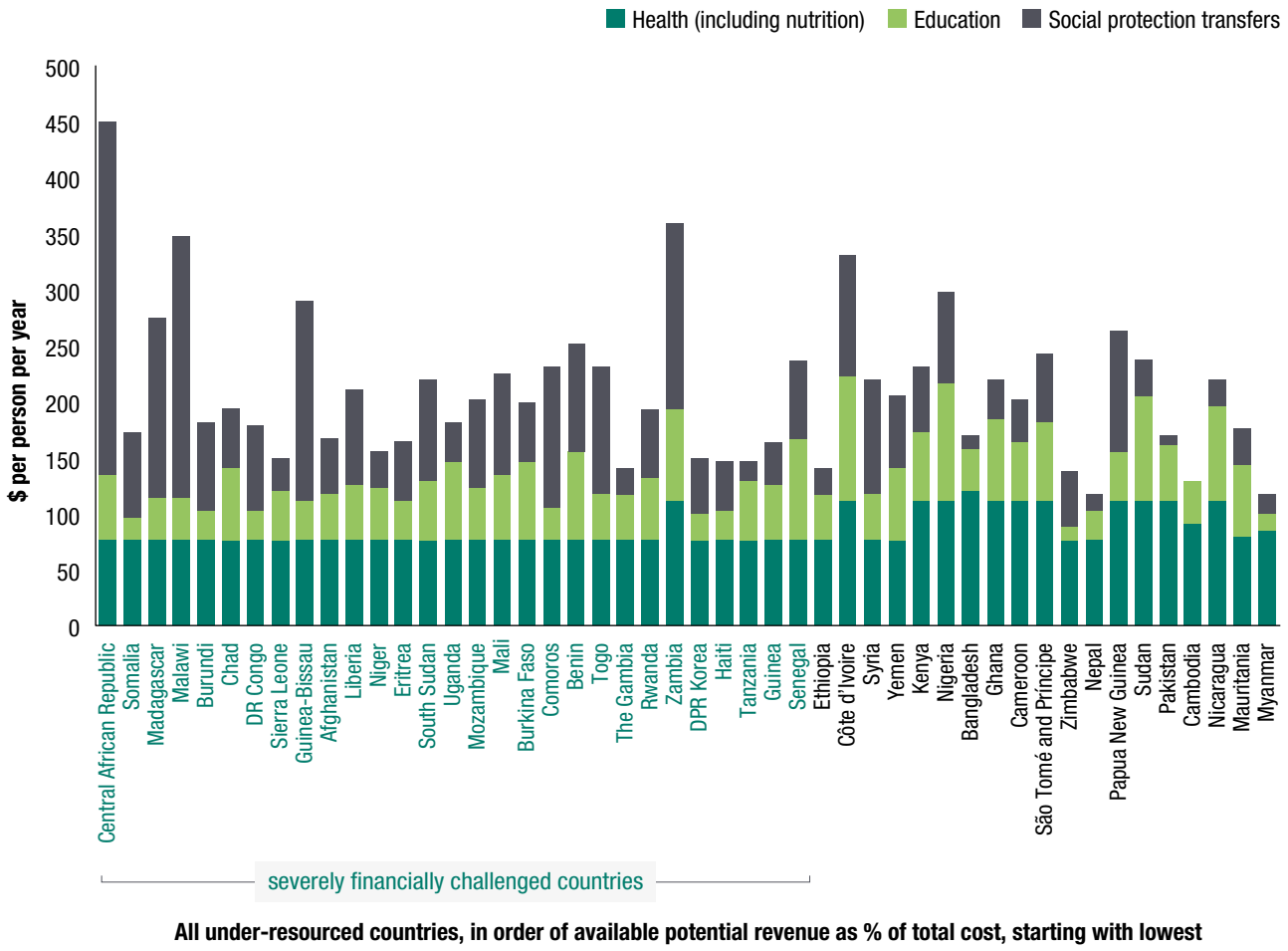
In the countries with high levels of expected poverty, the costliest social sector programme is social protection. In Central African Republic, the costs of social protection transfers sized to eliminate extreme poverty are twice the combined costs of providing education and health. In countries with lower poverty rates – such as Nigeria – the reverse is true: the costs of social protection transfers are less than those for either education or health. And in some countries, where growth is essentially expected to eliminate

Table 2 Social sector costs per year

	Total cost ($ billion)	Of which LIC ($ billion)	Cost per person in LICs (median $ per person)
Education	1,138.8	33.2	41.0
Health (including nutrition)	1,155.0	58.2	77.0
Social protection transfers	153.6	45.9	65.0
Total	**2,447.4**	**137.3**	**188.0***

**Sum of three sectors is slightly different ($183 per person) as all figures are medians.*

Figure 3 Cost of delivering health, education and social protection – all under-resourced countries



All under-resourced countries, in order of available potential revenue as % of total cost, starting with lowest

poverty (such as Bangladesh), the costs of social protection transfers are close to zero. This does not imply there is no need to make such transfers. As in many MICs and OECD countries, there is a strong case for making transfers to reduce the numbers of those still in poverty, but *just above* the extreme poverty line and to reduce inequality in the country. Figure 3 shows the costs for all the under-resourced countries – that is, those countries whose available potential revenue is insufficient to meet the costs of these core social sectors, as defined in chapter 5 – starting on the left with the country with the highest financing gap, Central African Republic.

3.5 Key limitation: the absence of infrastructure costings

As further costings are developed, it would be good to broaden the scope of this analysis to include other critical sectors, such as infrastructure and water. Not including these sectors also means missing synergies across issues. The current social sector approach does capture some inter-sectoral linkages: cash transfer provision is well known to improve school attendance, for example. But national-level diagnostics such as the World Bank's Maquette for MDG Simulations tool go further to recognise these synergies to help sequence priorities across sectors. Hence, for example, household income growth in rural areas (itself dependent on various things – such as rural roads investments) was found to be a bigger driver of school attendance improvement than more obvious elements of school supply (Rogerson et al., 2014: 17 ff.).

One problem is that there is often not an agreed standard level of provision or service for other sectors – for example road density, percentage of population with access to minimum level of electricity, etc. Even the ground-breaking Africa Infrastructure Country Diagnostic report, which was developed nearly 10 years ago and is still a key source today, targeted different levels of infrastructure provision in countries (Foster and Briceno-Garmendia, 2010). Over time, more sectoral costings will be developed, and incorporating these into a costings analysis would be a valuable future research endeavour.

4 Tax potential

4.1 Current approaches to estimating tax potential

A country's tax potential is the level of tax revenue it could achieve by maximising its tax effort, while accepting that the economic and structural characteristics of a country necessarily limit such potential. The IMF (2011) usefully summarises the case for more than 20 possible characteristics that could have an impact. And two papers, Fenochietto and Pessino (2013) at the IMF and Le et al. (2012) at the World Bank, illustrate the two different approaches to quantifying the impact of these characteristics on a country's tax potential. In this literature, tax effort is defined as the ratio of current tax revenue to potential tax revenue.

The IMF aims to identify the theoretical maximum tax potential and the level of tax effort by using a 'stochastic efficiency frontier' approach. However, none of the countries covered by the IMF paper reach this theoretical frontier. The IMF approach identifies three key factors that determine tax potential and effort: (1) the overall level of development (GDP per person); (2) the degree of openness to trade (as this is recognised as an easy sector to tax); and (3) the structure of the economy (as agriculture is recognised to be a much harder sector than manufacturing to tax). It also finds an impact of corruption, spending on education and income distribution. More recently, and using the same approach, Langford and Ohlenburg (2016) from the International Growth Centre (IGC) confirm these first three key factors (albeit measured in a slightly different way), and that education and corruption are important (among other variables).[17]

The World Bank follows a more traditional econometric approach.[18] It also identifies the same three key factors as the IMF as well as corruption and population growth. Other more recent studies report similar results: Morrissey et al. (2016), for example, confirm agriculture is a key determinant. The World Bank paper then compares the performance of a country with other countries that share similar economic characteristics that affect a country's ability to raise tax. As a result of this 'comparison with peers' approach, half the countries do better than average, and half do worse.

The estimates in this report are based on the mid-point of these two approaches: a country's tax potential is not deemed to be its theoretical frontier but nor is it deemed to be just the average of that of its peers. This mid-point approach means that a typical country's tax capacity is estimated to be 80% of the IMF/IGC frontier capacity figure, but 20% higher than its current World Bank capacity peer average.

Given the differences in the specification and approaches it is not surprising that the IMF, IGC and World Bank produce different estimates of tax potential. But the extent of the range is surprising.

In view of these unresolved differences, this report takes the average of the three estimates for tax potential. The total revenue potential is then the sum of tax potential and latest non-tax revenue figures.

17 Their full list of the most significant variables includes general government data coverage, age dependency ratio and law and order.

18 Atisphon et al. (2011), to cite one of the more recent studies. The authors, in turn, note studies going back to 2001.

Figure 4 Range of IMF, World Bank and IGC estimated tax efforts

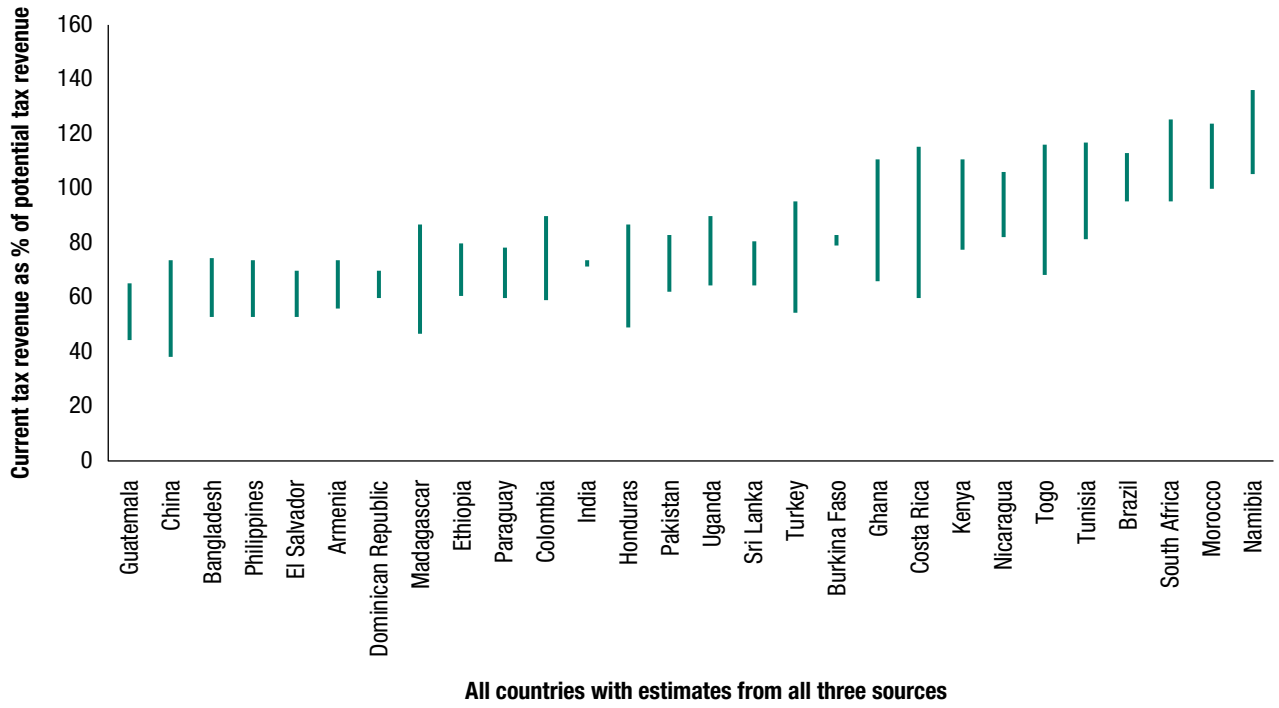
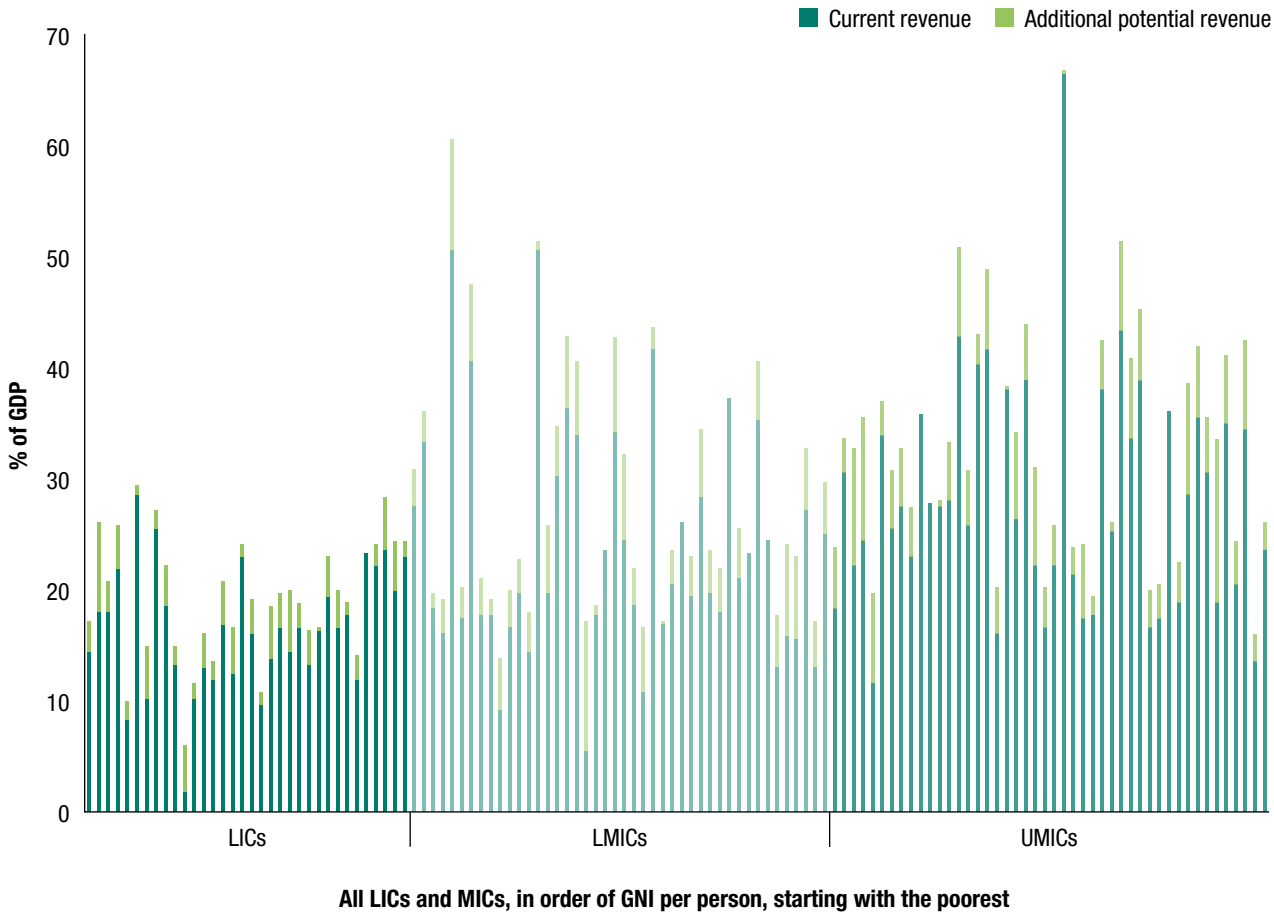


Figure 5 Current revenues and additional potential revenues



On average (median) these estimates suggest: LICs can increase their revenues from 17% to 19% of GDP; LDCs from 18% to 20%; and MICs from 25% to 30%. But within these broad groups there is a wide variation, especially among LICs, some of which have a revenue potential of less than 10%, while others have more than 25%.

These tax potential numbers confirm earlier reports that at a global level there is great potential for increased taxation. LICs and MICs could raise another $2.0 trillion per year in taxation revenues to a total of $9.4 trillion a year. The increase in aid is more than 10 times the current levels of aid. But this potential is overwhelmingly in MICs: LICs account for only 1% of this total – just $15 billion per year – which is half their current aid flows.

4.2 An urgent need for further research

One clear conclusion from all these studies is that there is an urgent need for further research in this area. Not only would this be useful in terms of assessing financing gaps but also in terms of the broader policy debate within countries – especially between the parliament and the executive but also with development partners and civil society. As Long and Miller (2017) describe, such research is particularly needed as setting inappropriate revenue targets risks impeding private investment and ending up with regressive taxation systems. As they note:

1. Tax:GDP ratios of many LICs and MICs are already not very different from those of today's higher-income countries when they were at a similar stage of development. Targeting higher rates too soon can have adverse consequences for development.
2. The IMF's standard recommendation for LICs is to aim for a 15% revenue:GDP ratio, as noted by Gasper et al. (2016), but the IMF admits this is an arbitrary benchmark (IMF, 2011).
3. In the discussion ahead of the Addis Ababa Financing for Development Conference in 2015 there was considerable pressure to include a revenue target of 20% before this was finally rejected. Ideas for such targets remain pervasive.

'Target' revenue–GDP rates are often cited in studies looking at funding needs of particular sectors and are used to suggest that a large part of the funding needs could be overcome by countries increasing their taxation. It is often noted, for example, that many sub-Saharan Africa countries are lagging behind the common benchmark of 15% of GDP and that some Asian countries have had low levels of revenue mobilisation for many years.

Yohou and Goujon (2017) flag similar concerns to those of Long and Miller. They confirm the same three key factors as the IMF and the World Bank but also highlight the importance of adjusting for economic vulnerability and limited human assets. They conclude that many poorer countries, especially in sub-Saharan Africa, are already making outstanding tax efforts, so that the actual tax is significantly above their tax potential. Bastagli (2015) also highlights the risk that increasing taxes results in a more regressive taxation system that hinders poverty reduction.

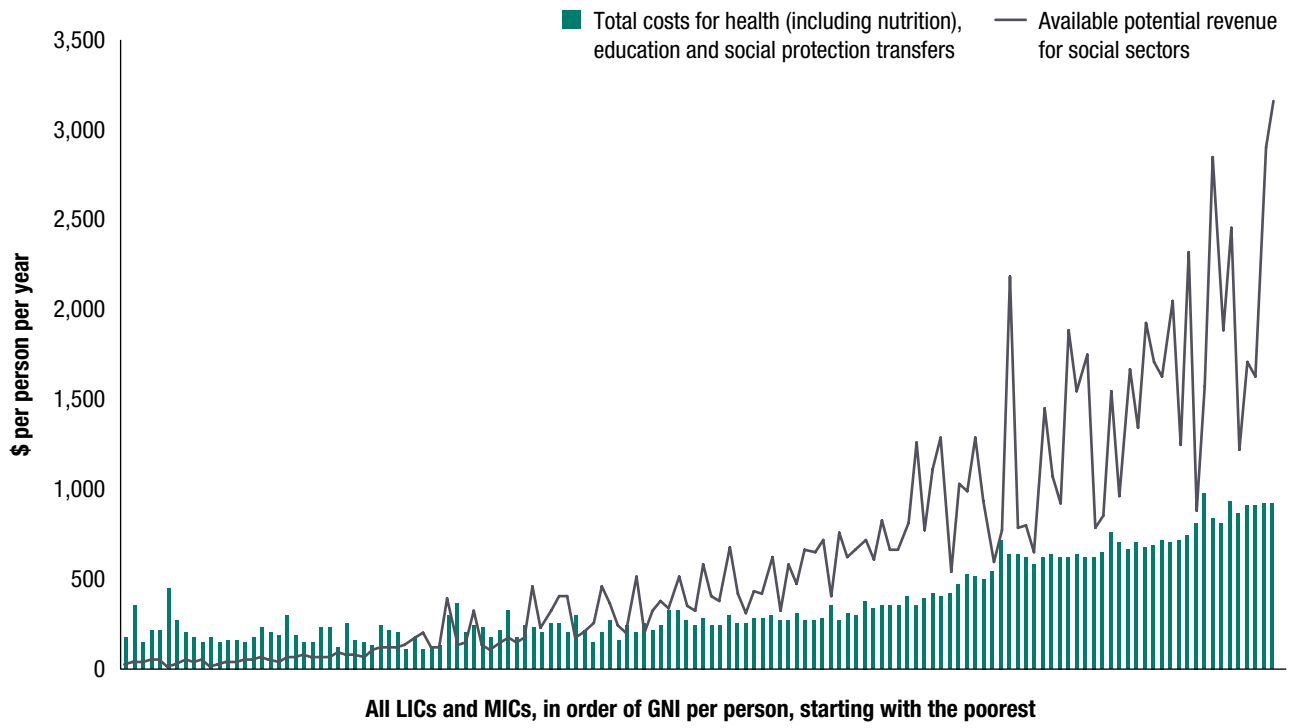
As Long and Miller conclude, while there are some countries that don't collect enough tax, there are also others that are close to capacity. It is misleading to assume that all countries are the same. A 'blind adherence to push for more taxation is likely to have adverse consequences' (Long and Miller, 2017). This report seeks to address such concerns by drawing on individual estimates of a country's potential and not assuming uniform targets. The hope also is that, by using the tax potential estimates that are available, this will prompt further research into improving their quality and reduce the current degree of uncertainty around them.

5 Domestic financing gaps and their impact

Figure 6 brings together the total costs for education, health and extreme poverty-eliminating cash transfers and compares this with a country's own domestic revenue potential.[19] The chart covers all LICs and MICs (and hence all LDCs) and is ordered by size of the financing gap relative to the costs.

Government revenues of course need to fund a much wider set of activities – most obviously infrastructure – so it is assumed that only 50% of a country's tax potential is available for education, health and social transfer sectors. OECD governments on average spend more than 60% of their revenues on these three sectors (in the US the figure is 56%). However as infrastructure needs are relatively much greater in many LICs and MICs, it would seem appropriate to presume a lower percentage share for spending on social sectors. As Figure 6 shows, all UMICs and most LMICs could fully fund the costs. However, none of the LICs (except Tajikistan) could afford the full costs, even if they increased their taxation to the maximum level possible.

Figure 6 Costs of delivering health, education and social protection vs available potential revenues for social sectors – all countries



19 Including both tax and non-tax domestic revenue sources.

Figure 7 focuses just on the 48 countries that that cannot fully afford to finance their own costs, assuming half of their potential revenues were made available for social sector spending (in line with

Figure 7 Costs of delivering health, education and social protection vs available potential revenues for social sectors – all under-resourced countries

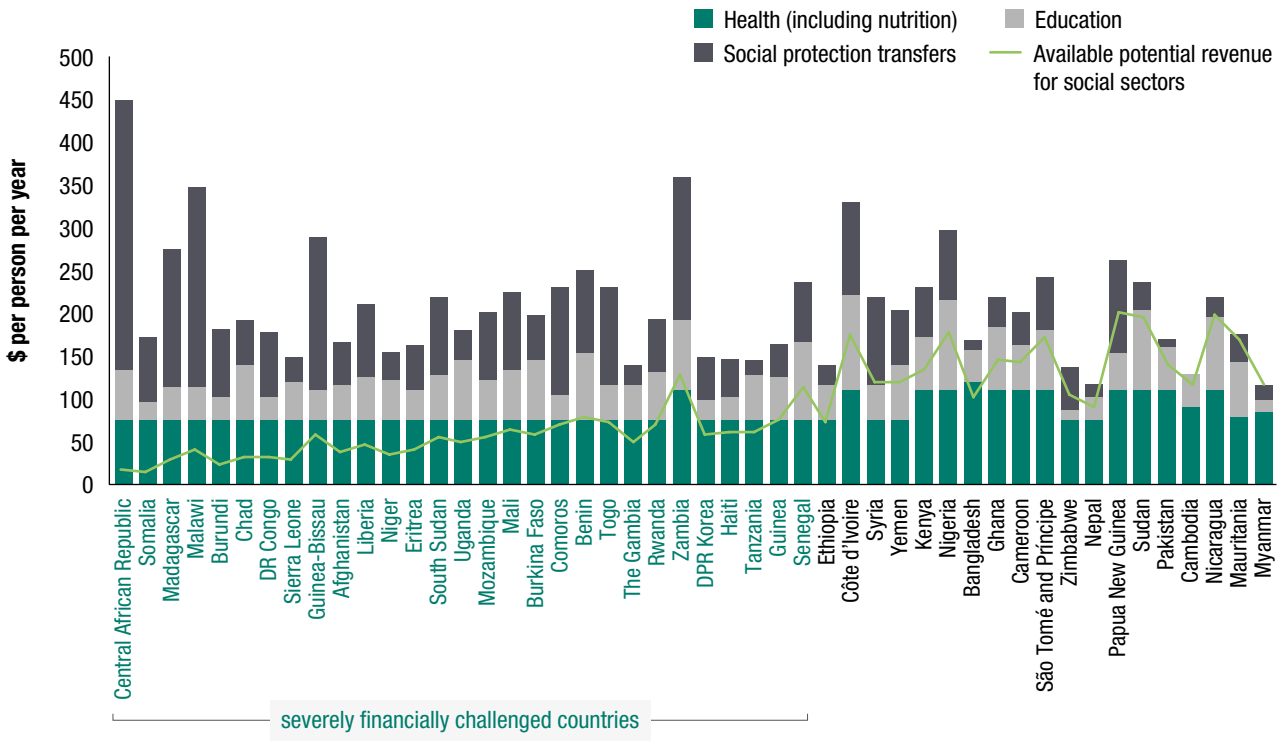
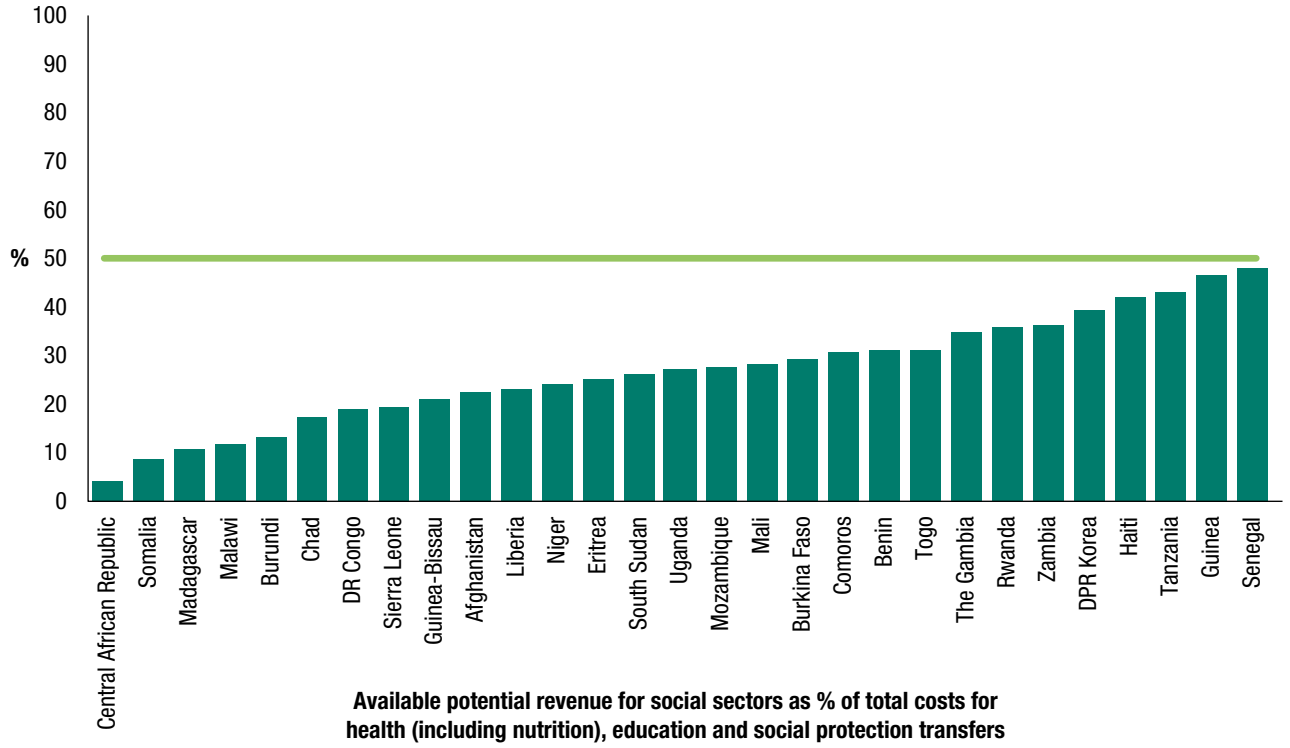


Figure 8 Severely financially challenged countries (available potential revenues less than 50% of total costs)



international targets[20] but below the 60% average in OECD countries). The countries in this chart are ordered according to the ratio of revenues to cost, starting with the lowest, Central African Republic.

Of the 48 under-resourced countries there are 29 severely financially challenged countries (SFCCs) that cannot finance even 50% of the costs (Figure 8).

Not surprisingly, there is a significant overlap between the group of the 29 SFCCs and the 28 severely poverty challenged countries (countries with poverty rates of more than 20% in 2030); many countries are in both groups. However, there are significant differences:

- Five of severely poverty challenged countries can fully fund their own costs – including Lesotho, Swaziland and Guatemala.
- Ten of the SFCCs are in that position despite having poverty rates of less than 20%.
- The relative needs within each group are very different. Zambia ranks as the fifth most poverty challenged country but only 24th in terms of being financially challenged.

These significant differences in the composition of the group of severely poverty challenged countries and the SFCCs highlight the risks of just compiling lists of vulnerability using one (or several) measures of need, especially when the lists are interpreted as justifying additional financial resources. If the allocation of scarce and limited aid resources is the issue then the comparison needs to be based on overall relative financial need.

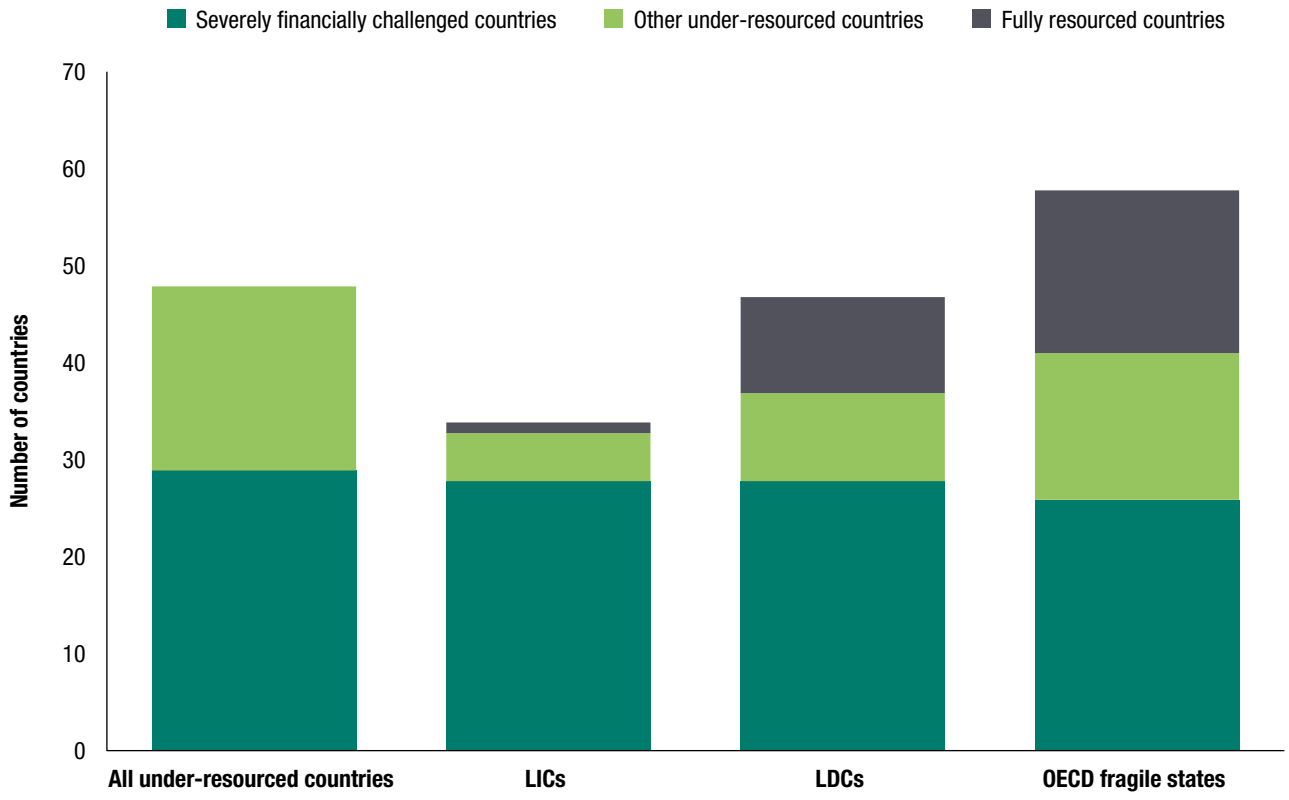
Figure 9 Overlap between SFCCs and LICs

20 The Education for All target for education (20% of government revenues), the Abuja target for health (15%) and the implied International Labour Office minimum threshold for social protection (at least 15%).

Not surprisingly, there is also a significant degree of overlap between this group of SFCCs and other country groupings, namely LICs, LDCs and fragile states. The majority of the 29 SFCCs are members of all three groups. The clearest overlap is with the LICs: all bar one of the 29 of the SFCCs are LICs, the only MIC in the group is Zambia and only six LICs are not severely financially challenged.

There is less of an overlap with the 47 LDCs and 58 OECD fragile states. A significant number of LDCs have no financing gap at all. And, while the majority of SFCCs are also fragile states, SFCCs represent a small proportion of fragile states: fewer than half the 58 fragile states qualify as severely financially challenged.

Figure 10 Under-resourced countries within LIC, LDC and OECD fragile states groupings



6 Current targeting of donor funding on ending extreme poverty

Donor funding is currently poorly targeted at those countries facing the greatest challenge on financing the ending of extreme poverty. This is clear from three different ways of assessing donor targeting:

1. global allocation of aid to LDCs and LICs
2. donor funding relative to countries' domestic financing gaps
3. donor funding of core social sectors in SFCCs.

6.1 Current global distribution of aid to LDCs and LICs

Current aid allocations are so poorly targeted at the poorest countries that they are actually regressive: richer countries receive more aid than the poorer. And, despite the international target to increase aid to LDCs and repeated commitments, their share of aid has fallen over the past six years from 30% to 24%.[21]

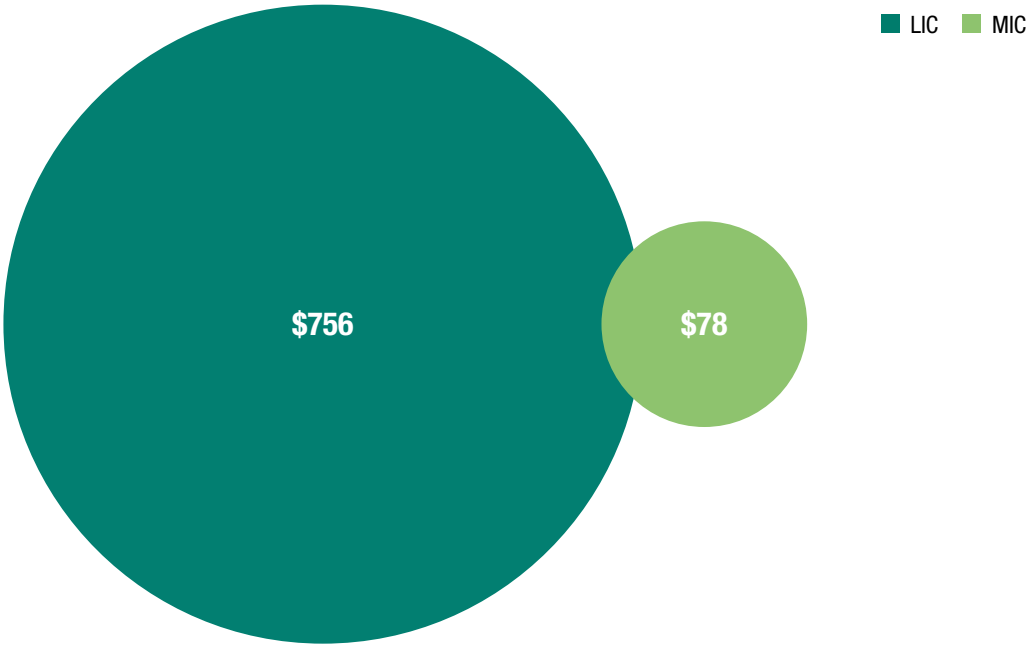
The current regressive distribution of aid is particularly perverse given richer countries have far greater resources for tackling extreme poverty. As Table 3 shows, even though a typical MIC has over 100 times the potential revenue per person living in extreme poverty of a typical LIC, the typical MIC receives 10 times more aid per person in extreme poverty.

Table 3 Aid and potential revenue per person in extreme poverty per year

Income group (GNI per person)	Median CPA per person living in extreme poverty (2017–2019) ($)	Median revenue potential per person living in extreme poverty ($)
LIC (up to $995)	**78**	**247**
VLIC (>$500)	69	118
OLIC ($500–$995)	92	288
MIC (up to $996–$12,055)	**756**	**26,372**
LMIC ($996–$3,895)	563	4,497
UMIC ($3,896–$12,055)	845	73,987
MIC:LIC ratio	**10:1**	**107:1**

21 Share of net official development assistance (ODA) (all donors) 2010 compared to 2016 (latest DAC figures). This includes both bilateral and multilateral donors. The figures just for DAC donors, included DAC estimates for imputed multilateral share, show a similar trend (34% to 27%). The figures for just the bilateral aid from DAC donors also show a similar trend (22% to 17%). Initial figures for 2017 from OECD DAC suggest there may have been a small improvement.

Figure 11 Median aid per person in extreme poverty in LICs and MICs



CPA $ per person in extreme poverty per year

The median level of aid per person in extreme poverty in MICs is now ten times that of LICs. In an earlier ODI report (Greenhill et al., 2015), which only covered countries with populations of less than a million, and hence only included 55 of the current 103 MICs, the ratio was estimated at 3:1.

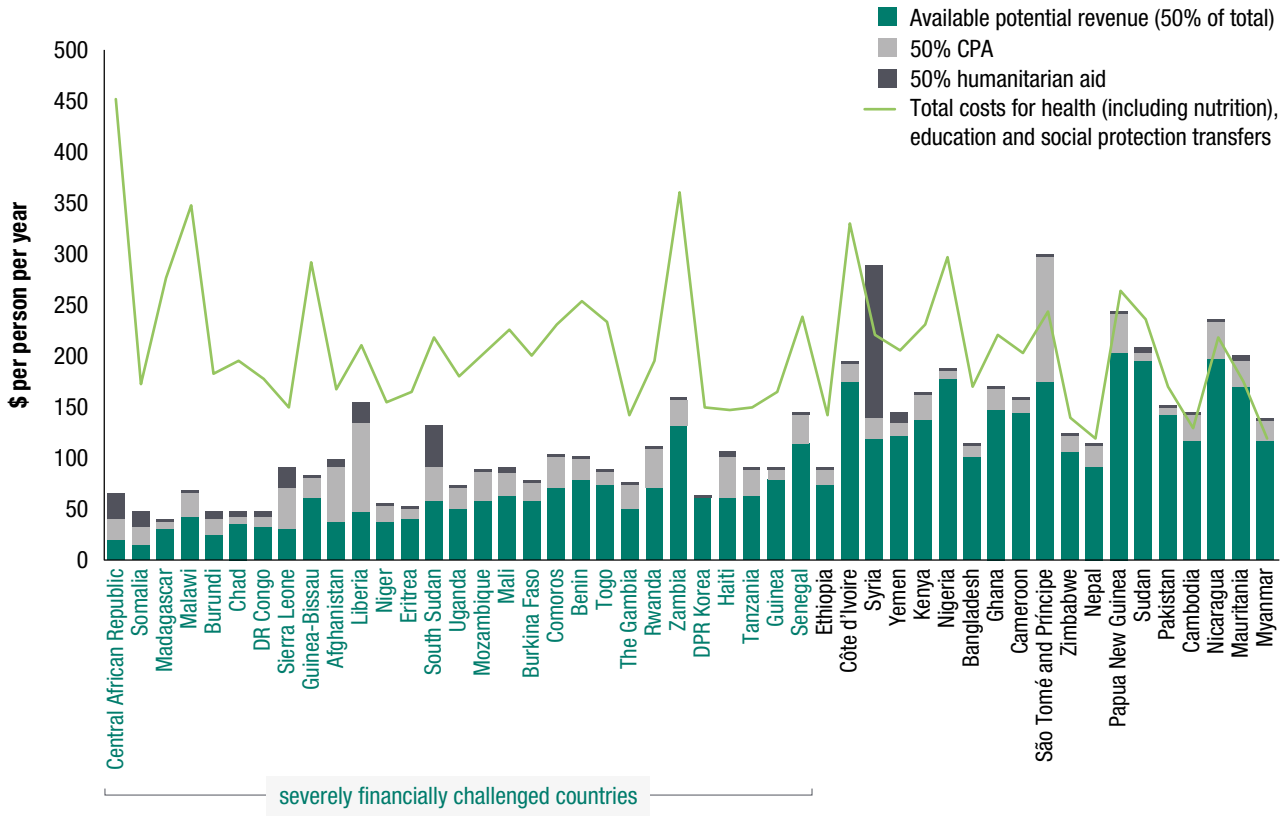
6.2 Current aid distribution relative to domestic financing gaps

Aid is also poorly targeted at the countries facing the largest domestic financing gaps. Figure 12 assumes that donors mirror what governments are doing and that 50% of the aid given is for education, health and social protection. Overall the picture is very clear: with a couple of exceptions – Liberia and, to lesser extent, Sierra Leone – aid goes only a small way to filling the gaps in the 29 most financially challenged countries. The current aid allocation leaves a significant number of countries underfunded, while 45% of all country programmable aid (CPA)[22] is provided to countries that can fully finance these programmes for themselves. As Figure 12 shows, the number of underfunded countries hardly changes even if humanitarian aid is included. As humanitarian aid is allocated solely on the basis of humanitarian need and is designed to be used for short-term emergencies rather than the long development of national systems of education, health and social protection transfers. As such, the discussion of aid reallocation in the rest of this report refers just to CPA and assumes no change in humanitarian aid.

Aid is of course not the only source of external finance available. But while private sector investment and remittances increase growth and can reduce poverty, they cannot fund universal provision of public social services. Further, as noted by the earlier ODI paper (Greenhill et al., 2015) and the more recent Gertz and Kharas (2018), these flows benefit mainly the richer countries. Where there are significant foreign direct investment flows, these tend to be for specific resource extraction industries; apart from their contribution to domestic revenues, these have little direct impact on extreme poverty.

22 As a significant amount of ODA is spent in the donor's own country (e.g. on administration and on the education cost for nationals from an aid-recipient country attending university in the donor country), this report uses the OECD's definition of CPA, which excludes these amounts. CPA also excludes unpredictable aid flows such as debt relief and humanitarian aid.

Figure 12 Aid and potential revenue available for social sectors vs total costs for health, education and social protection transfers



All under-resourced countries, in order of available potential revenue as % of total cost, starting with lowest

Similarly, where there are large remittance flows, their benefit is already captured by the household income surveys that are the source for the extreme poverty figures. And while some countries are seeking to tax these remittances or encourage the diaspora to invest in development bonds, the amounts raised are relatively small compared to the overall tax potential of the country. As Gertz and Kharas (2018) noted, tackling the worst cases of extreme poverty will need to continue to rely on public finance: domestic taxes and external aid.

6.3 Current donor funding for three core social sectors in SFCCs

Table 4 presents the cost of each of the three core social sectors in SFCCs and compares this to the funding that donors provide. This table uses official development assistance (ODA) rather than CPA, to ensure donor contribution is not understated (as ODA includes donor spend through humanitarian channels).

The overall financing gap for the three core social sectors is a clear constraint to ending extreme poverty. The inadequate funding of all three sectors is also at odds with the Addis Ababa Action Agenda (AAAA) commitment to a new social compact to address just these areas of spending.[23] It is

23 'To end poverty in all its forms everywhere and finish the unfinished business of the Millennium Development Goals, we commit to a new social compact'. As part of a new social compact, governments also committed to 'provide fiscally sustainable and nationally appropriate social protection system, including social protection floors' (UN, 2015).

Table 4 Underfunding of education, health and social protection transfers in SFCCs

	Education	Health (including nutrition)	Social protection transfers	Total 3 sectors
Estimated cost (median)	$46	$78	$74	$195
International target for sector's share of government revenue*	20%	15%	15%	50%
Implied government spend (based on median revenue potential of $114)	$23	$17	$17	$57
Financing gap	**$23**	**$61**	**$57**	**$138**
Donor ODA spend (including humanitarian)	$2.9	$10.5	$3.4	$19.4
Donor ODA spend as % of financing gap	**13%**	**17%**	**6%**	**14%**

*Notes: all figures dollar per person per year (unless otherwise stated); figures may not sum precisely; all figures are medians. *The Education for All target for education is 20% of government revenues and the Abuja target for health is 15%. There is no clearly agreed target for social protection spending as percentage of revenue. The Windhoek target, agreed in 2008, was for 4.5% of GDP (which is 27% of a typical LIC's current revenues of 16.4% of GDP) and there is an ILO target of 6% of GDP (which is 36% of a typical LIC's current revenues). More recently, ILO presentations have mentioned 2.9% of GDP as a minimum threshold (18% of a typical LIC's current revenues). The table assumes 15% as the implied target, which brings the combined targets for all three social sectors to 50%, the figure assumed in the rest of the paper.*

also of concern given the increasing recognition of the importance of these three sectors for investing in a country's human capital, which is critical for long-term growth.[24]

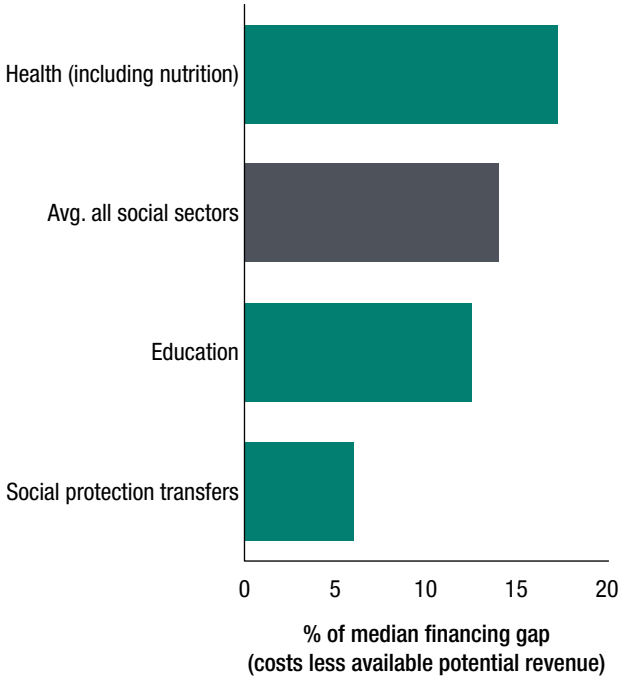
The underfunding has a particularly negative effect on those groups most at risk of being left behind. In education, the latest UNESCO report shows that out-of-school rates for primary-age children are three times higher in LICs than in MICs (UIS, 2018). The recent Education Cannot Wait campaign has highlighted the risk to children affected by conflict. Those with disabilities will remain excluded without additional investment in school buildings and toilet facilities to make them accessible. In health, lack of finance means that malaria bed nets have reached only half of those that need them (WHO, 2017).

Both education and health have less funding than is needed. But social protection is particularly underfunded, receiving only half the level of aid that education does and a third of the aid that health does (relative to their respective financing gaps). This relative underfunding of social cash transfers was also noted by Development Initiatives (2015), who estimated an even greater degree of relative underfunding: only 12% of external needs for social protection were funded – compared with 50% for education and health. The World Bank figures also show that the total spend (including both government and donor support) in LICs is only $5 per person per year,[25] compared to this report's estimate of average costs of $66 (for LICs).

24 See for example www.worldbank.org/en/news/immersive-story/2018/08/03/investing-in-people-to-build-human-capital.

25 Author calculations using World Bank PPP$ exchange rates.

Figure 13 Total aid (ODA) vs financing gap in SFCCs



One result of this under-funding for social protection is the delay in scaling up (and in some cases creating) coordinated national cash transfer programmes to support those living in extreme poverty. The latest figures from the World Bank note that only a fifth of the poorest in LICs are currently covered by a social safety net programme World Bank (2018).[26] This lack of funding is particularly surprising given the growing analysis of the importance and impact of such programmes (see, for example, Bastagli et al., 2016). Globally, over a third escaping extreme poverty do so because they receive such transfers (World Bank, 2018).

The direct result of the underfunding of social transfer programmes is that in many countries progress out of poverty is slow or non-existent (ibid.). The recent increase in poverty in Uganda was associated with a period of drought. If Uganda had had a productive safety net programme on the scale of Ethiopia's, households would have been better able to endure the drought without falling back into extreme poverty. And again, it is those groups that are most at risk of being behind that are worst affected: marginalised communities struggling to survive on subsistence; those living with disabilities. With targeted cash transfers, their position in the household and the community can be transformed from being locked up and hidden away to being appreciated as someone bringing income into the household.

Ideally the creation and/or scaling-up of such programmes would be developed in full partnership with the governments of the countries. But in some cases, for political, capacity and timing reasons, these may have to be delivered independently, as many cash transfer schemes are currently administered by humanitarian agencies.

6.4 Options for aid to better match financing gaps

Across all the 48 under-resourced countries, and before any donor funding, the aggregate financing gap to deliver the education, health and cash transfers to eliminate extreme poverty is $150 billion.[27] After accounting for the existing allocation of donor funding to these countries – assuming half of this is for education, health and nutrition, and social protection – the gap falls, but only to $125 billion.[28] Current aid eliminates the funding gaps in just six countries, leaving shortfalls in the other 42 countries.

There are two main options for reducing this gap. First, reallocating some of the existing aid could bridge some of the gap. In aggregate, $40 billion of CPA is going to 98 countries that are able to fully

26 While ILO (2017) does not present figures for LICs, it notes that less than a fifth of the population in Africa is covered by at least one social protection cash benefit scheme. The ILO figure would be expected to be higher than the World Bank's as the ILO's includes coverage by contributory pension schemes.

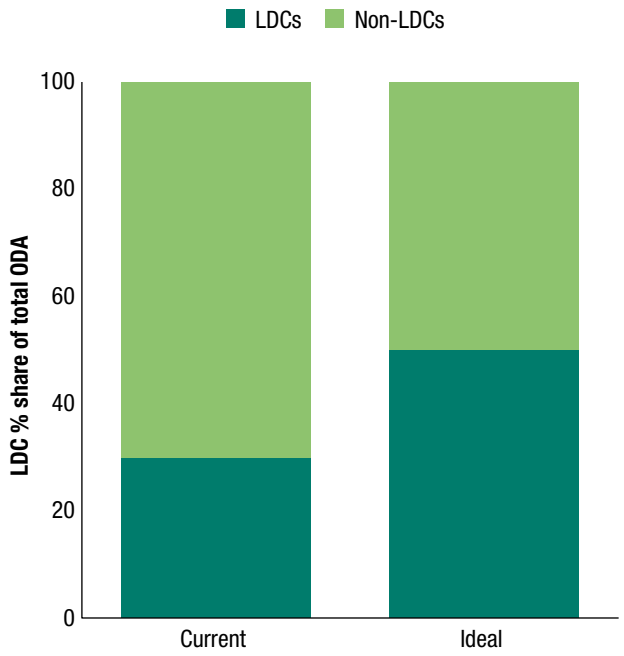
27 The previous ODI paper, *Financing the future*, estimated the gap at $84 billion (Greenhill et al., 2015).

28 Assuming 50% of donor funding – CPA – is used for these three sectors.

fund education, health and social protection transfers themselves. If most of this were reallocated (82%: $33 billion per year) and targeted towards the SFCCs, this country list would no longer exist: all could afford at least 50% of their costs. Under this option, the share of aid to LICs and LDCs would increase significantly, and these countries would receive the same additional amount of aid for infrastructure and other needs. But this reallocation of existing aid would only fill an eighth of the current funding gap for all 48 under-resourced countries.

Second, if in addition to this reallocation, all DAC donors met the UN target of 0.7% of gross national income (GNI), this would generate additional aid flows (net ODA) of $184 billion per year. Assuming that just 50% of this ($92 billion) were allocated to education, health and nutrition, and social protection, all countries would be able to meet at least 94% of their costs. All these countries would also have a matching level of additional resources for infrastructure and other priorities.[29] For all countries to be able to afford 100% of the costs, a further $30 billion would be needed. This second option would radically change both the volume and the share of aid. Aid to LICs would increase the most but there would also be a significant increase in aid to MICs as many of the under-resourced countries are LMICs. Aid to LDCs would also increase.

Figure 14 Current aid allocation vs ideal aid allocation



For DAC donors the share of total aid to LDCs would rise from 29% to 49% in the reallocation-only option, and to 59% in the combined reallocation and additional aid scenario.[30] This analysis gives further justification to the 50% target that the OECD and civil society organisations proposed for the AAAA (as well as reinforcing the same recommendation made in the earlier ODI paper, Greenhill et al., 2015) – and is much higher than the 29% target implicit in the SDGs.[31] The 50% share-of-aid target also implies that LDCs should receive a 0.35% share of DAC donor GNI, compared to the 0.10% they are currently receiving and the AAAA/SDG proposal for 0.20%. As current aid targets are expressed in terms of share of aid to LDCs, this would be a robust, consistent target, as both aid volumes and aid shares have increased. Any changes in aid allocations would have to be done gradually, ideally over a five-year period.

29 Another option would be to increase the proportion of aid for social sector investments and reduce the proportion for infrastructure and other needs. Whether such a switch would be a more effective way of reducing poverty, given the key role infrastructure plays in increasing growth and reducing poverty, is not clear and is also beyond the scope of this paper.

30 Figures refer to share of net ODA (including imputed share of multilateral aid).

31 SDG target 17.2 is for 'Developed countries to implement fully their ODA commitments, including the commitment by many developed countries to achieve the target of 0.7% of ODA/GNI to developing countries and 0.15% to 0.20% of ODA/GNI to least developed countries; ODA providers are encouraged to consider setting a target to provide at least 0.20% of ODA/GNI to least developed countries.' This implies the LDC share would be 29% (the ratio of 0.20% target to the 0.70% target). The indicator for this target is net ODA and is the total of a country's bilateral aid and multilateral contributions.

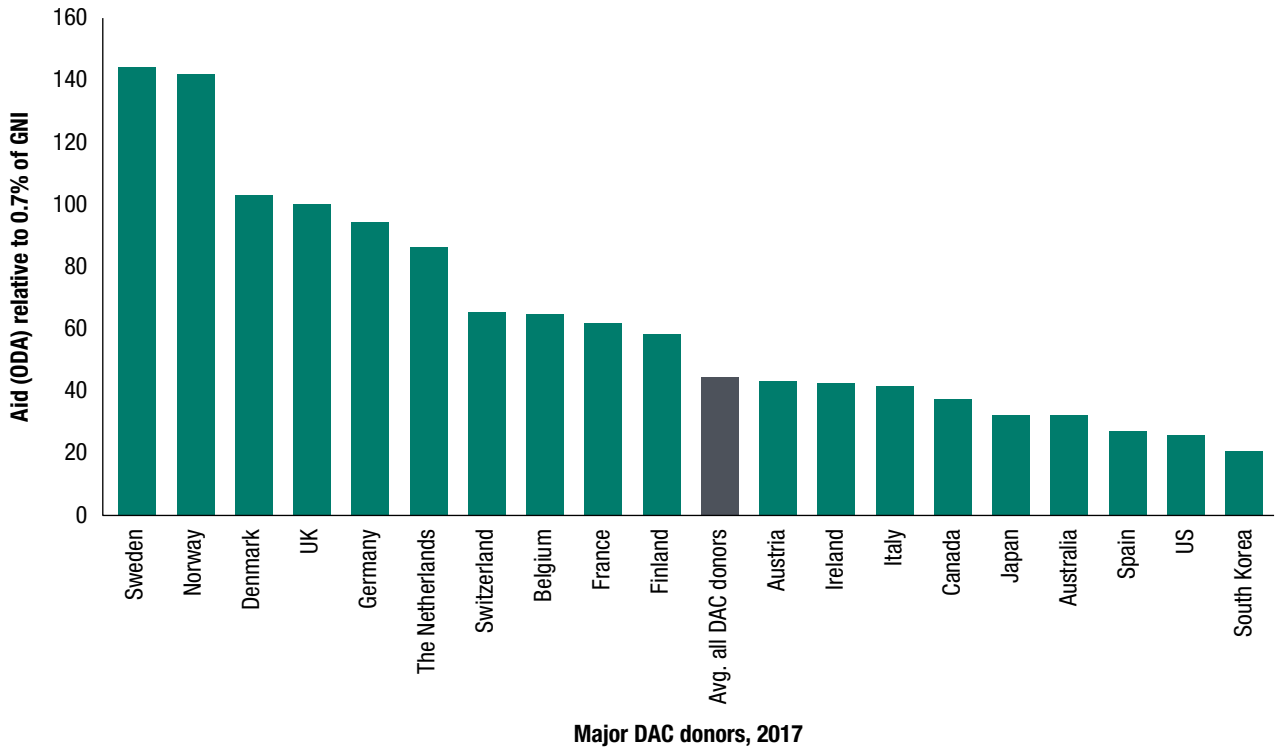
7 Assessing individual donor support for ending extreme poverty

This report proposes a new index – donors' effective support for ending extreme poverty – to assess the extent to which donors are supporting the end of extreme poverty. The index has two components: the first measures aid volume – the donor's effort; the second measures how efficiently targeted a donor's aid is spent on countries that are the most financially disadvantaged.

7.1 Construction of donor effort index

The first component compares a country's aid effort to the ODA/GNI target of 0.7%. Among DAC major donors (that is, those donors that provide more than $500 million in ODA, on average over the period 2014 to 2016), the top three major donors are Norway, Sweden and Denmark. As all of the top three exceed the 0.7% target, they score more than 100%. The bottom three donors are South Korea, the United States and Spain. There is a wide range in the degree of effort: the average for all DAC donors is 44%, with the top three averaging 130% and the bottom three 25%.

Figure 15 Donor effort – volume of aid relative to 0.7% of GNI



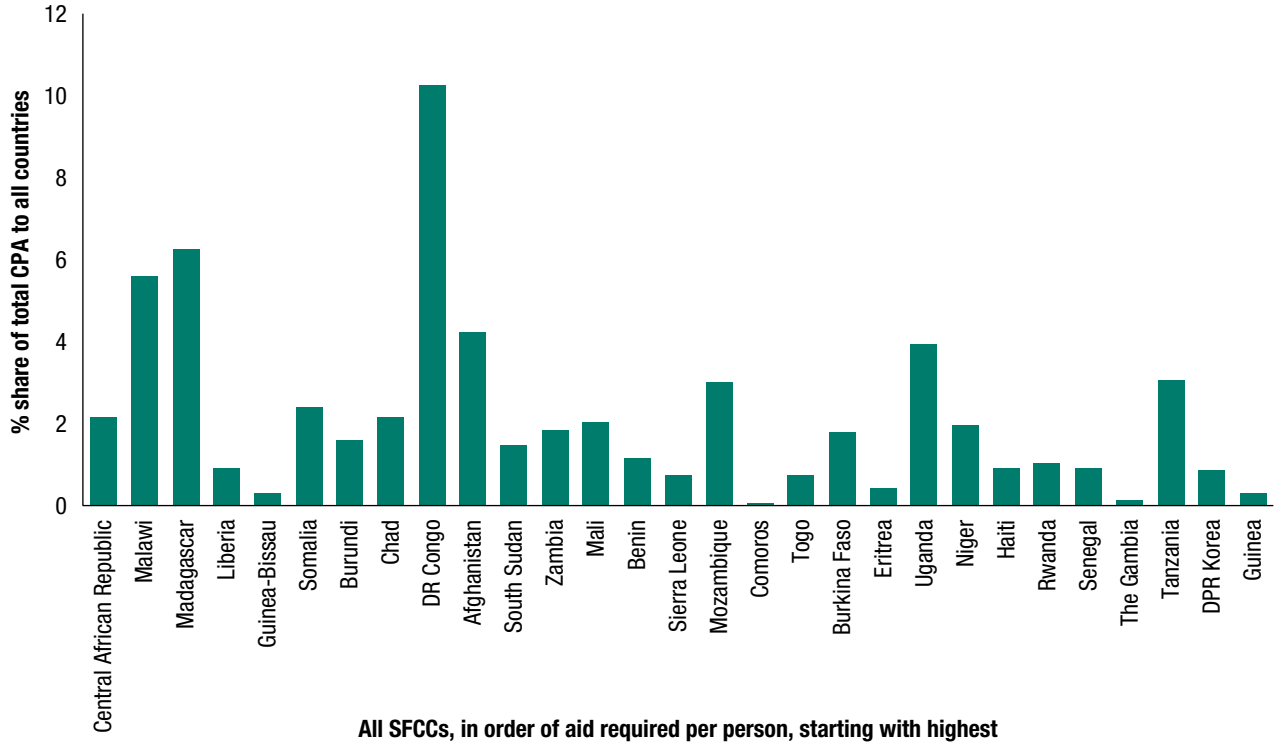
7.2 Construction of donor efficiency in targeting extreme poverty (DEEP) index

The second component of the overall index, which assesses a donor's efficiency, involved a more innovative approach. The efficiency of aid targeting has tended to be measured as the percentage of total aid that goes to either countries above a threshold of income (all LICs) or members of a specified group (all LDCs). However, both are just single point measures of the efficiency of targeting: when countries seek to tackle inequality in their own countries they look at the whole income distribution. The Gini coefficient is one of the most frequently used measures to do this. It is scored by comparing the actual distribution with an equally distributed income. As this ratio is used to judge income inequalities within a country and across countries, this would seem the most appropriate approach to use for aid distributions too.[32]

This new donor index – donor efficiency in targeting extreme poverty (DEEP) – looks at the overall distribution of aid drawing on a Gini-style approach. The index is based on the cumulative distribution of aid to countries with the greatest financing gaps, and is determined not only by which countries aid is given to but the extent to which aid given to any country matches the size of that country's financing gap of each country. A score of 100% indicates that a donor allocates all its aid in line with these countries' financing needs. A score of more than 100% would indicate its aid was targeted at the neediest within this group.

The DEEP index assumes no increase in aid volumes and is based only on reallocating $33 billion a year from the $40 billion per year that is given to countries that can fully fund their own social sector costs countries and gives all of this to the SFCCs. As this means scaling back on aid to 98 countries, some form of graduation or tapering over a period of five years would be needed to ensure the transition was managed effectively. The shares of total ideal aid distribution used in the DEEP index for each of the 29 SFCCs are set out in Figure 16.

Figure 16 Required aid shares for all SFCCs to afford 50% of social sector costs



32 A full application of the Gini coefficient would mean developing financing needs weighted averages rather than the current simple country average.

The next figure compares the cumulative ideal aid distribution for all donors with the current aid distribution.

The DEEP efficiency score, as for the Gini coefficient, is based on the difference between the ideal and current distributions, and is measured by the ratio of the areas below each line. If the current aid allocation exactly followed the ideal allocation, the areas below each line would be the same and the ratio would be 100%. If the current aid allocation provided no aid to any of the 29 countries in the chart, the cumualtive line would be flat for the first 29 countries, the area below the line would be zero and the ratio of the two areas would be 0%.

Figure 17 Current and required cumulative aid shares for all SFCCs to afford 50% of social sector costs

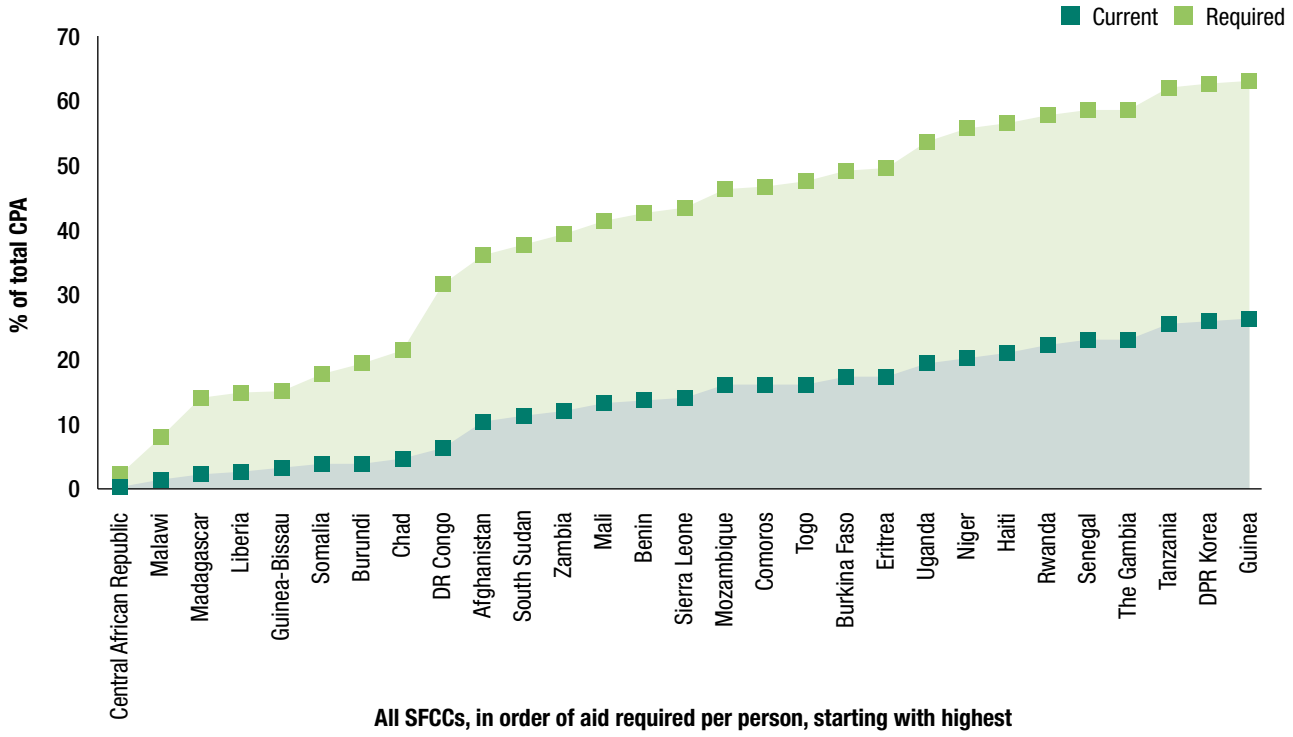
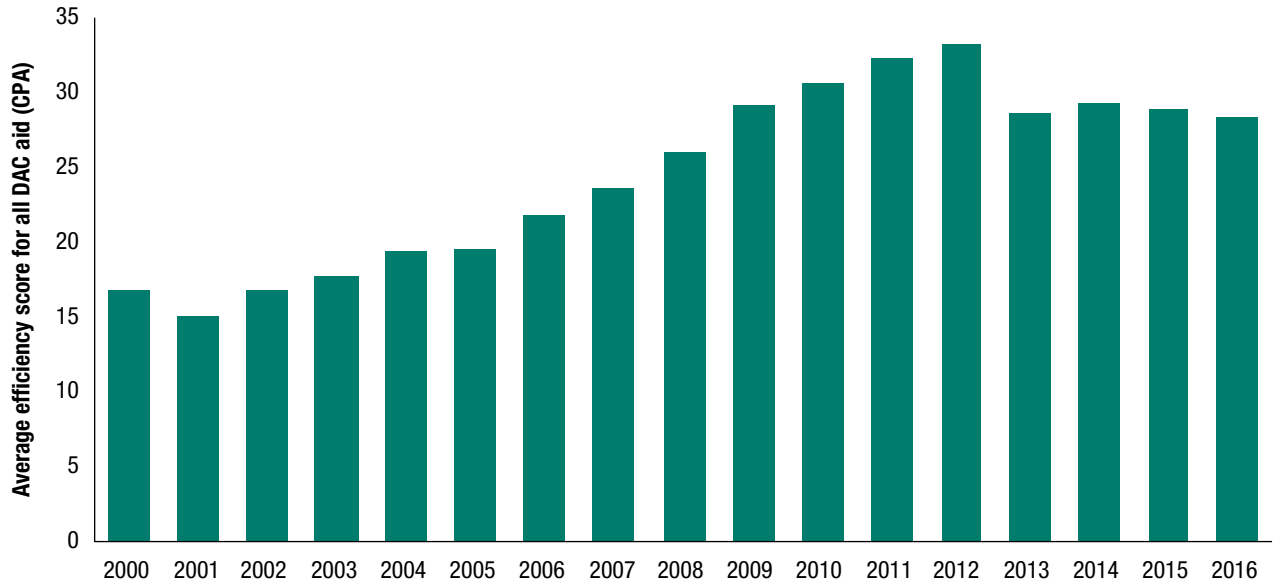


Figure 18 Average donor efficiency at targeting extreme poverty (DEEP)



The current underfunding of the countries that most need external support – severely financially challenged countries – has persisted for many years. The index for all DAC bilateral donors rose from around 17% in the early 2000s to a peak of 33% before falling back slightly in recent years to 28%.

7.3 Individual major DAC donor DEEP scores

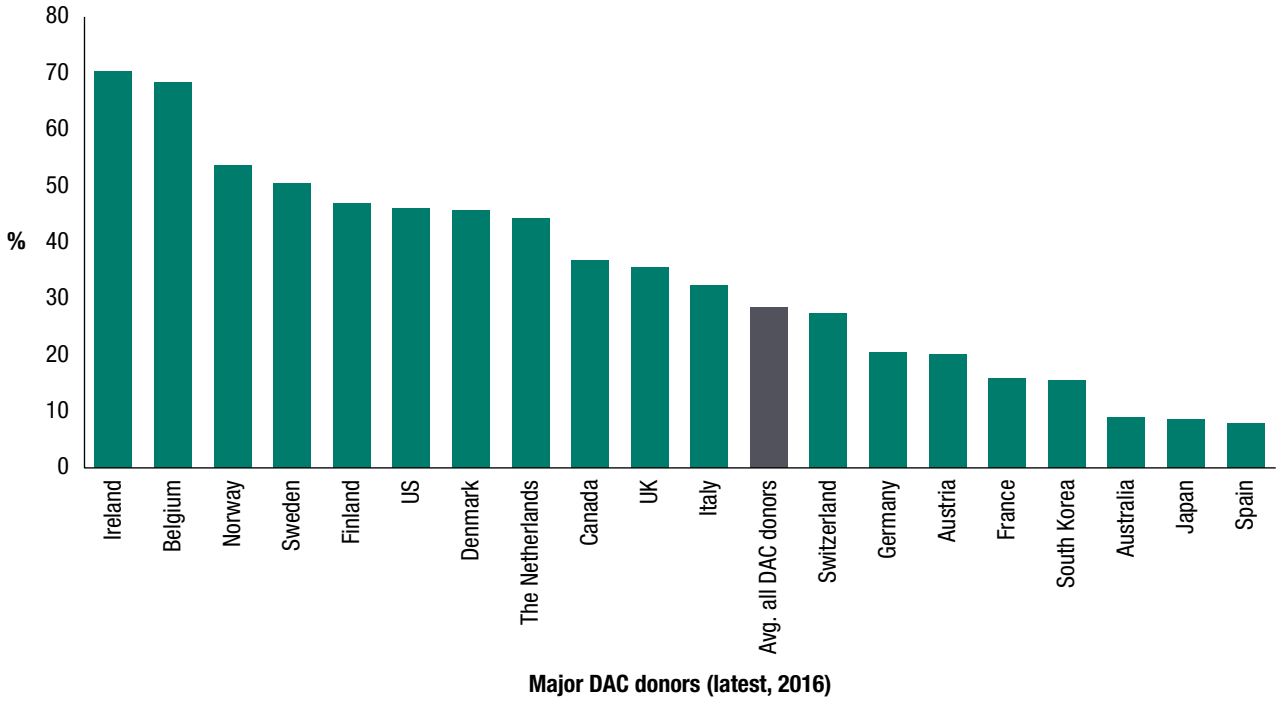
This section looks at all the major DAC donors that disbursed more than $500 million of ODA on average over the period 2014 to 2016. These scores are based on CPA and so do not include debt relief or humanitarian aid. Among the G7 countries, the US scores the highest at the moment, reflecting its large-scale support for two SFCCs: Afghanistan and Liberia. Canada is the second highest and the UK third. Japan scores the lowest, reflecting, in part, its long-term focus on Asian countries, while financially challenged countries are increasingly concentrated in Africa.

Among the non-G7 countries, highest scoring bilateral aid donors are Ireland, Belgium and Norway. Japan and Australia are the two other lowest scoring donors. Japan has a traditional focus on Asia and Australia on Southeast Asia and the Pacific. Most of these countries can self-finance the costs of the three core social sectors. The average score for all DAC bilateral donors is 28%; the three best average 63% and the three worst just 8%.

While there is only comparable data for a few non-DAC donors (those that report their figures to the DAC), the index also reveals the wide range of efficiency scores – from 4% (United Arab Emirates and Russia) to 51% (Turkey). Turkey's high score reflects its focus on Africa in general and on Somalia in particular.

Among the large multilateral agencies there is some variation in the scores. The scores for the EU institutions and the World Bank (International Development Association – IDA) are slightly above average for all bilateral donors. While IDA is focused on LICs, the combination of blended finance, the time it takes for countries to graduate and the even longer period before disbursements on past projects cease means that LMIC countries still receive significant levels of resources. Three of the eight

Figure 19 Individual donor efficiency at targeting extreme poverty (DEEP)



largest recipients of IDA finance are countries that are already able to fully fund themselves (India and Vietnam) or are close to being able to (Pakistan).

The Global Health Fund scores highly among the global funds, due to its current focus on countries such the Democratic Republic of Congo (DRC), Tanzania and Uganda. The Green Climate Fund scores very low – unsurprising given how vulnerable some of the most financially challenged countries are to climate change. Egypt, Morocco and Argentina account for much of the Green Climate Fund's flows in 2016, although it notably also allocates a significant amount to Bangladesh.

The donor efficiency index can also be used to assess the targeting of specific donor initiatives. For example, spending on support for countries trying to increase their levels of taxation – a key initiative within the AAAA – scores 30%, only just above the DAC average.

7.4 Should aid allocation account for effectiveness?

The DEEP index highlights the extent to which current aid allocations deviate from financial need. In the past, aid allocation models have been based on both need and effectiveness. A full discussion of whether effectiveness should be factored in is not possible in this report. However, the following points on factoring in aid effectiveness are worth noting

First, finding the best measure of aid effectiveness has provide challenging. The Burnside/Dollar/Collier model that is still the foundation of World Bank and other aid allocation models uses the Country Policy and Institutional Assessment score to measure aid effectiveness. Subsequent analysis has revealed a weak link between this score and aid effectiveness (see Sterck et al., 2016).

Second, there is also growing evidence of the effectiveness of aid even in adverse environments. The rate of World Bank project success in fragile states is now the same as for non-fragile states (Carter, 2016). Cash transfers are proving effective in a wide range of challenging environments including predominantly humanitarian ones – smart cards in Niger, mobile ATMs to reach ex-combatants in the middle of the DRC jungle and emergency programmes amid the Somalia conflict (Development Initiatives, 2015).

Third, there is also some evidence that the unit cost of interventions can be lower in adverse environments. UNESCO estimates reveal a wide range in unit education costs: Senegal is three times more expensive than DRC. At the margin, an extra dollar invested in DRC would have a larger educational impact.

Fourth, debate continues over the relevance and importance of aid absorption issues, particularly in countries such as Liberia that are recovering from conflict and where there is need for large-scale investment to rebuild the productive potential of the country (e.g. Schmidt-Traub, 2015; Addison et al., 2017).

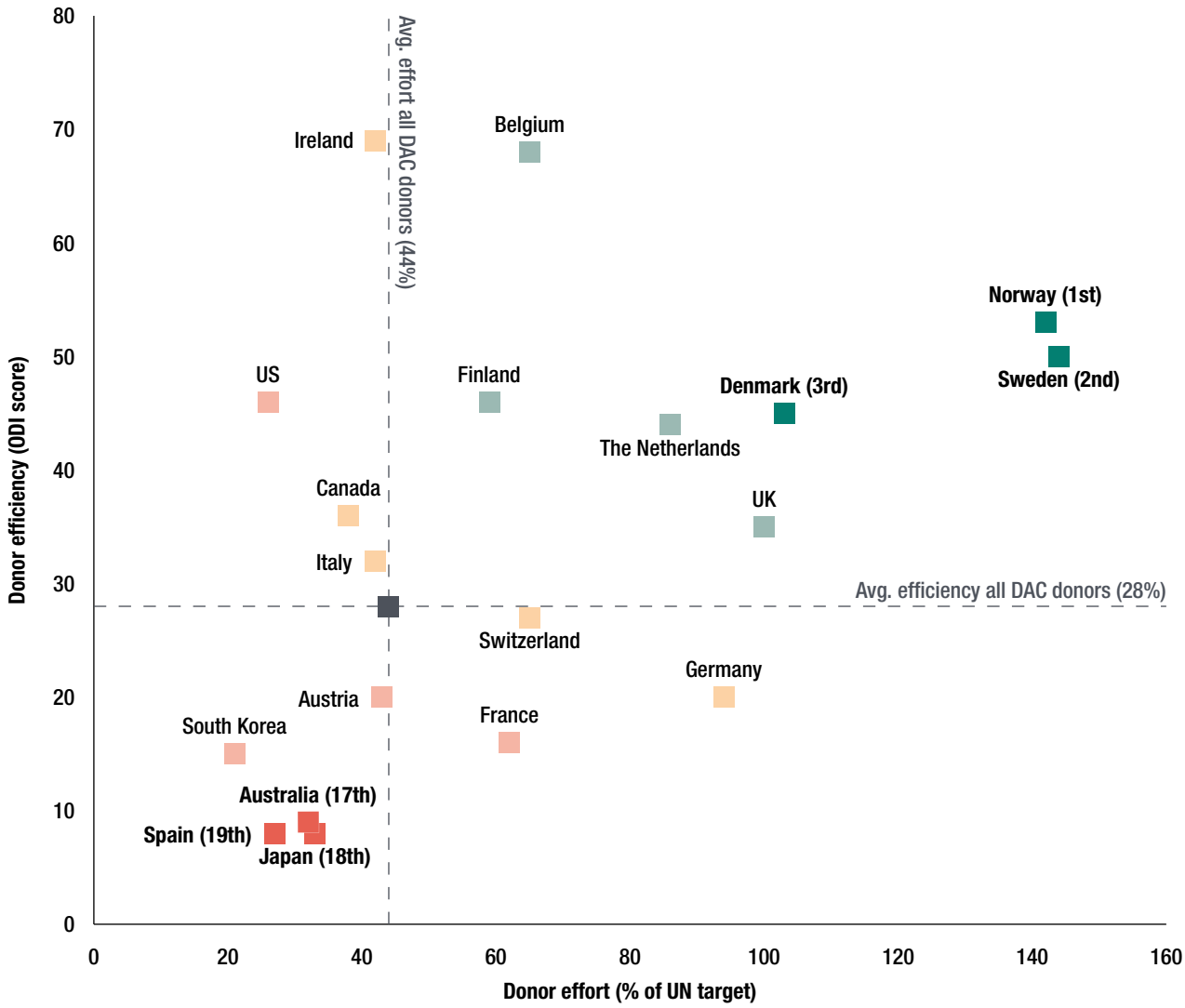
Finally, there is growing interest and concern about the implicit ethical choices that flow from a focus on countries with more effective governments (Guillaumont et al., 2015).[33] Some of the debate over aid effectiveness has echoes of the 19th century debate over the deserving poor. If the ending of extreme poverty were treated as a humanitarian emergency, need would be the only criterion.

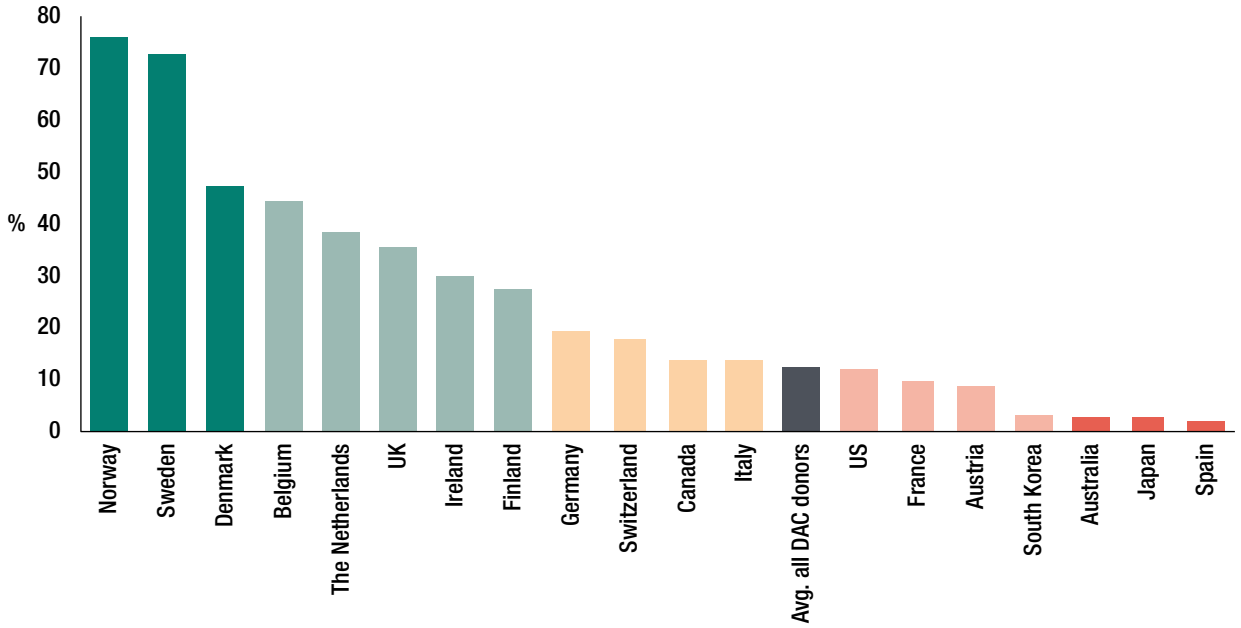
33 See, in particular, the case for taking human capital into consideration.

7.5 Construction of overall donors' effective support for ending extreme poverty index

The overall effective support index is formed by multiplying the effort score (a measure of aid volume) and the efficiency score (a measure of aid share). Based on the latest figures (2017 for effort and 2016 for efficiency), the top three DAC donors are Norway, Sweden and Denmark. The average score for all DAC bilateral donors is 12%, with the top three averaging 65% and the bottom three 3%. The bottom three are Spain, Japan and Australia. These overall effectiveness scores highlight the considerable potential for both improving aid efficiency and increasing aid effort. The effective support from the best three donors is 22 times greater than for the worst three.

Figure 20 Donor effective support on ending extreme poverty – combined aid effort and efficiency
Major DAC donors (latest, 2017 (effort), 2016 (efficiency))





8 Recommendations and conclusions

This analysis clearly shows that the world is not on track to end extreme poverty by 2030. But this target can be within reach if donors and their partners focus their aid efforts on the counties that are projected to need the most support, and on the sectors that are known to lift people out of poverty in the long term.

The first change needed is to rebalance the global debate around aid. The current conversation focuses on identifying which countries are in most need without reference to their ability to self-finance. Multiple efforts have been made to identify the countries in most need – the number of poor, the degree of fragility, the vulnerability to climate change, etc. The lists of the neediest countries are then used to determine aid flows. The fact that 60% of the extreme poor currently live in MICs is used to justify 66% of all CPA going to middle-income countries. The fact that MICs have 10 times the level of taxation resources (per person) to tackle extreme poverty is not factored in. The debate needs to be rebalanced and a similar level of investment made in understanding countries' ability to self-finance. This report aims to start that process. Aid is a scarce financial resource and it should be directed primarily to countries with the greatest financial need. One starting point is for all presentations of aid flows to include the two key metrics: amount of aid per person living in extreme poverty and a country's own ability to pay. This report's new aid allocation efficiency index is a comprehensive way to bring both extreme poverty and taxation front and central to aid debate.

The second change is to correct the relative imbalance on funding for the social protection transfers that are critical for ensuring no one is left behind, especially no child and no one living with disabilities. Recent international initiatives have focused on addressing the critical underfunding of education and health and nutrition. While these sectors are still severely underfunded in LICs and need to be addressed, social protection programmes fare even worse. One key related change that would help deliver this change is to correct the imbalances on international climate finance. The mobilisation and disbursement of additional climate adaptation finance has been slow to date. It has also been poorly targeted at countries that need additional finance the most. If the Green Climate Fund were scored as a donor on country allocative efficiency, it would rank as one of the five worst. Yet climate finance is ideally suited to supporting poverty transfers and is already been used to do this in Ethiopia. Climate change is recognised to be a long-term issue and hence long-term financing commitments are appropriate. Many countries are reluctant to scale up such programmes as they are uncertain about donors' long-term commitments to support.

In addition, as climate change is an externally generated problem, it is easier from a domestic political perspective to accept external financing support to tackle it. By contrast, the development of national social protection programmes is much more politically contentious. While global historical trends clearly point to an eventual rollout of such programmes, at the current rate of change it could be decades before some of the poorest countries will have large-scale schemes. Climate finance could

prove a valuable mechanism for accelerating the delivery of programmes, at least to those households that are clearly affected by climate finance (which might mean focusing on rural households first).

The third change needed is to rebalance global aid allocations. Focusing on severely financially challenged and other under-resourced countries implies that the share of aid to LDCs should increase. The share of funding to LICs and to fragile states should also increase. The current allocation of aid needs to be shifted so that those counties that can least afford to finance the ending of extreme poverty are prioritised. One entry point is the aid allocation models used by many international organisations. Most models have aid gradually declining as countries become richer, and a critical choice in these models is the rate of this decline. Generally, most models adopt a very gradual rate of decline. But this is in contrast to the approach of most governments, which tackle poverty by setting floors to make sure no one falls below a minimum level of income and/or food supply and a minimum level of access to services – education, health and housing. This is the foundation of the new ODI aid efficiency index proposed here. Its spending components are universally recognised as being critical for poverty eradication: education, health and nutrition, and some form of social protection.

The fourth and most critical change needed is to rebalance the global burden-sharing of supporting countries to end extreme poverty. Rebalancing existing aid will generate only an eighth of the aid needed by all the under-resourced countries for them to afford 100% of the costs; only if all donors meet the 0.7% ODA/GNI target will all countries be able to afford the costs of ending extreme poverty.

To enable the ambition to end extreme poverty for everyone in every country, donors and their partners should therefore:

1. focus global aid on those countries that, even after maximising their own taxation, are least able to finance their own public spending to end extreme poverty. Over the next five years share of aid to LDCs should increase from 30% to 50% of all ODA
2. increase funding in these countries for core social sectors: health (including nutrition), education and – particularly – social protection transfers, so that no one, especially no child and no one with disability – is left behind
3. increase global aid from OECD DAC donors to 0.7% of GNI (and aid to LDCs to 0.35% of GNI) to ensure all countries can both afford to end extreme poverty by 2030 and invest in their human capital to secure their own future growth thereafter
4. include aid per person in extreme poverty as a standard metric for all analysis and presentations on aid flows.

Extreme poverty will not be eliminated in many countries without a radical increase in funding for the countries that cannot afford to do this themselves – even if they do increase their taxation to the maximum level possible. All countries face funding constraints and poverty challenges. But as long as aid remains a scarce resource, the first priority should be the countries that are least able to help themselves and the critical sectors that are least well funded. More efficient targeting will take us only part of the way, however: ending poverty will also require greater donor effort.

Annex 1 Methodology for poverty projections

These projections were prepared by Emma Samman, ODI Research Associate in the Growth, Poverty and Inequality programme.

The most common way to forecast poverty rates is to project future levels of growth and inequality based on assumptions about how present average incomes and the income distribution are likely to change (e.g. Karver et al., 2012; Chandy et al., 2013; Edward and Sumner, 2014; World Bank, 2014).[34] For most countries, we update a scenario provided in World Bank (2014), which estimated poverty rates for 2030 by projecting the rate of growth of per capita mean income over the previous 10 years under various assumptions about how this growth might be distributed (characterised in terms of growth of the incomes of the bottom 40% of the population relative to the mean).[35]

In particular, we assumed that per capita mean incomes will grow at the same annual rate that was experienced between 2002 and 2013 through 2030. We opt for the assumption that the growth is distribution-neutral in that the growth of the incomes of the bottom 40% of the income distribution is equal to that of the mean. We do this because the relationship between the growth of mean income and the growth of the incomes of the bottom 40% of the distribution over a recent period conforms most closely to this pattern, on average. According to the World Bank's Global Index of Shared Prosperity, on average, the incomes of the bottom 40% of the population have grown at a rate that is 0.3 percentage points higher than the mean for 91 countries circa 2010–2015.

All data for reference year 2013 are from the PovcalNet database (as of July 2018), with two types of exceptions. For 31 countries, the 2013 poverty estimates are interpolated, given that earlier and later surveys are available. In these cases, the 2013 estimates are modelled using the latest distributional information. For the following LICs or MICs, for which PovcalNet data was either missing or deemed unreliable, the following procedures were used:

- For countries in active conflict, where it is known poverty rates will have increased, but it is impossible yet to measure the change, the proportion of the population receiving humanitarian assistance is used (South Sudan, Syria, Yemen).

34 Two other (less common) methods are the estimation of semi-elasticities – how changes in growth have corresponded with absolute changes in poverty – using historical data (Dercon and Lea, 2012) and complex models such as World Poverty Clock or International Futures (IFS), which factor in the interaction of hundreds of variables based on historical trends (on IFS, see CPAN, 2014). The use of semi-elasticities of poverty on growth is considered less relevant over longer time periods, and complex models are often not overly transparent, which can generate scepticism over their reliability (Edward and Sumner, 2014). See Hoy and Samman (2014).

35 We opted for changes in income (or consumption) as recorded in household surveys as opposed to national accounts – given the latter may not adequately reflect changes in consumption for the poorest households, especially in South Asia, where they generate much lower estimates (see, for example, Deaton and Kozel (2005) on India) (Hoy and Samman 2014).

- For Nigeria, the latest better-quality household survey is used (GPS-Panel for 2013) (see Beegle et al., 2016).
- For Uganda, the headcount is adjusted upward to reflect the results of the most recent household survey.
- For the 22 countries identified by World Poverty Clock for which either no survey data exist or the existing data are deemed unreliable, we use their 2016 estimates, which are based on a regression model that accounts for GDP per capita, whether the country is an oil exporter and other exogenous factors: Afghanistan, Antigua and Barbuda, Bahrain, Barbados, Cuba, Democratic People's Republic of Korea (DPKR), Equatorial Guinea, Eritrea, Grenada, Kuwait, Lebanon, Libya, Malaysia, Myanmar, Oman, Qatar, Saudi Arabia, Somalia, St Vincent and the Grenadines, Taiwan, United Arab Emirates and Zimbabwe.
- For Cambodia, the 2011 assumption of a 10% headcount ($1.25 a day) was scaled in relation to the decline in the national poverty rate observed between 2011 and 2014.
- For four small UMICs for which no data were available, the poverty rate is estimated based on the headcount in countries with a similar GNI per capita. These are American Samoa, Dominica, Marshall Islands and Nauru. The same procedure was used for St Lucia, also a small UMIC, for which PovcalNet estimates, derived from a 1995 survey, were judged to be too dated.
- For Timor-Leste, the headcount is adjusted upward in line with the latest 2014 household survey – as opposed to the 2007 survey upon which the PovcalNet household survey is based.
- For rural Argentina, poverty was imputed based on an estimate of the rural:urban poverty ratio for the Latin America and Caribbean region from Ravallion et al. (2007).

In PovcalNet, estimates are provided separately for rural and urban areas in China, India and Indonesia, and the poverty headcount is a weighted average. For 2030, the same procedure is followed: poverty estimates are computed separately for urban and rural areas and the national poverty headcount is constructed based on projections about the rural/urban distribution of the population from World Urbanization Prospects (2014 revision).

For countries that are not designated as LICs or MICs, and for which there are no PovcalNet data, we assume no poverty. The resulting dataset covers the whole of the global population.

To project 2030 poverty rates for LICs and MICs lacking PovcalNet data, we used the following procedures:

- For Syria, South Sudan and Yemen, we make the (arbitrary) assumption that poverty rates – currently based on the share of the population in need of humanitarian assistance – will be halved by 2030, slightly below the anticipated rate of decline in global poverty. This results in all three having poverty rates of between 30% and 40% and being included in the group of severely off-track poverty countries. In Syria and in Yemen, this results in clearly higher poverty rates than in those that prevailed pre-conflict. The position in South Sudan is less clear cut but is consistent with poverty estimates for 2013 (pre-conflict) that were used in the Greenhill et al. (2015) report, based on PovcalNet and national household surveys.
- For countries where the initial headcount data is from World Poverty Clock, we use their 2030 headcount estimate.
- For Nigeria and Timor-Leste, we assume the rate of change mirrors that included in World Poverty Clock.
- For Cambodia, we assume the rate of change mirrors the regional average (East Asia and the Pacific).
- For American Samoa, Dominica, Marshall Islands, Nauru and St Lucia, we use a regression-based method.

Finally, we imputed missing poverty gaps – for 2013 and 2030 – based on fitted values from a regression of the poverty gap on headcount among the 122 countries that had a poverty headcount higher than zero and both data points in 2013.

Annex 2 Data coverage and main sources

The dataset includes 145 countries and territories: 34 LICs, 103 MICs and 8 high-income countries that are recipients of ODA. Countries are classified using the World Bank's latest available FY19 country classifications by income level.[36] The dataset thus captures all 47 LDCs,[37] 58 OECD fragile states,[38] 31 severely off-track countries (Gertz and Kharas, 2018) and 20 g7+ countries. Each country has data on population, GNI per capita, tax revenue and capacity, aid, poverty, costs for attaining education and health-related SDGs, and spending on social protection programmes relative to beneficiaries of such programmes.

The main sources are:

- **Population.** Population figures for 2018 from the United Nations Department of Economic and Social Affairs (UNDESA) World Population Prospects 2017 (medium variant).
- **GNI per capita.** GNI per capita (Atlas method) values for 2016[39] from the World Development Indicators. For the 19 countries/territories where this value is unavailable, either 2016 GDP per capita figures (current US$) or the most recent available GNI per capita (Atlas method) values are used instead.[40]
- **Tax revenue and capacity.** The main source for data on revenue (tax and non-tax) is the ICTD's Government Revenue Dataset, released in July 2017. This is supplemented by a country's latest IMF Article IV report if data are not available in the ICTD dataset or if the latest Article IV report postdates the release of the ICTD dataset and data on more recent years are available. Tax effort efforts are based on Langford and Ohlenburg (2016), Fenochietto and Pessino (2013) and Le et al. (2012). Potential revenue capacity, is a country's latest tax revenue divided by its tax effort, plus its latest non-tax revenue.[41]

36 Found here: https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups.

37 As defined by the UN's List of LDCs, last updated March 2018, found here: www.un.org/development/desa/dpad/wp-content/uploads/sites/45/publication/ldc_list.pdf.

38 As defined by the OECD's list of fragile states, found in its States of Fragility Report 2016: www.oecd.org/dac/states-of-fragility-2016-9789264267213-en.htm.

39 Found here: https://data.worldbank.org/indicator/NY.GNP.PCAP.CD.

40 Found here: https://data.worldbank.org/indicator/NY.GDP.PCAP.CD.

41 The equation is: (tax revenue) / (tax effort) + (non-tax revenue) = (tax capacity).

- **Aid.** All data on ODA, CPA and humanitarian flows is from OECD.stat, using 2015$ disbursement figures.[42] The Creditor Reporting System is the source for estimates of aid to social protection by donor/recipient pair. Other sources are DAC 1, DAC 2a, DAC 5 and CPA tables.
- **Poverty.** See Annex 1 for details.
- **Costs for education.** These come from UNESCO (2015) and are in 2007$ prices (adjusted to 2017$ prices).
- **Costs for health.** Costs of achieving universal health coverage come from from Jamison et al. (2017).
- **Spending on cash transfer programmes.** The main source is the World Bank's 2018 State of Social Safety Nets report, especially tables C.1, C.2, C.3, and D.1, which uses data from the World Bank Atlas of Social Protection Indicators of Resilience and Equity.[43]

42 To the extent possible, all estimates are net flows. However, according to the OECD, CPA flows are expressed in terms of gross disbursements.

43 Found here: http://datatopics.worldbank.org/aspire/.

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