



What if growth had been as good for the poor as everyone else?

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Key messages

- Over the last three decades, across 100 countries, consumption or income growth of the bottom 40% of the population roughly equalled average growth. In just over half of countries (55%) that accounted for nearly 80% of the global population, average growth exceeded that of the bottom 40%.
- If growth of the bottom 40% had equalled national averages in all countries, the world would be on track to reach zero poverty by 2030 and China would have no poverty today – but some countries would have higher poverty.
- If growth had been more equal, about two hundred million fewer people would be poor in many of today's middle-income countries. In most of today's low-income countries, growth was relatively pro-poor on average.
- Proposals that the growth of the bottom 40% within countries ought to exceed the national average must be sensitive to diverse potential outcomes – taking to account whether a growth gap will reduce poverty, to what extent, and how best to redistribute.

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¹ <http://www.odi.org/projects/2531-post-2015-millennium-sustainable-development-goals-poverty>

Table of contents

Acknowledgements	ii
Executive summary	iii
1 Introduction	5
2 Methodology	10
2.1 Dataset	10
2.2 Application of growth incidence curves	11
2.3 Making global poverty estimates using the country sample	14
2.4 Country experience over the last 30 years	14
2.5 Equal growth scenario	17
2.6 Extreme poverty headcount ratio in equal growth scenario	18
2.7 Pro-poor growth scenarios	22
3 Conclusion	31
Figures	
Figure 1: Extreme poverty headcount ratio in the developing world, 1990-2011	6
Figure 2: Number of people living in extreme poverty (millions), 1990-2011	6
Figure 3: Projections of extreme poverty headcount ratio in 2030 (%)	7
Figure 4: Projections of the extreme poverty headcount ratio (%) in 2030 under different inequality scenarios	8
Figure 5: World Bank (2014) scenarios for extreme poverty	8
Figure 6: Initial consumption distribution	11
Figure 7: Actual consumption growth	12
Figure 8: Scenario 1: Equal growth across distribution	12
Figure 9: Growth redistributed from the top 60%	13
Figure 10: Growth redistributed from top 10%	13
Figure 11: Growth rates under scenario 2 for China if share of distribution was different	14
Figure 12: Difference between growth of mean and bottom 40%	15
Figure 13: Distribution of countries' gaps between average growth and growth of the bottom 40%	17
Figure 14: Share of countries that experienced different levels of pro-poor growth	17
Figure 15: Equal growth scenario	20
Figure 16: Total poverty by income category	22
Figure 17: Extreme poverty headcount ratio in pro-poor growth (1pp) scenario	23
Figure 18: Pro-poor (1pp) scenario	24
Figure 19: Extreme poverty headcount ratio in pro-poor growth (2pp) scenario	24
Figure 20: Pro-poor growth (2pp) scenario	26
Figure 21: Extreme poverty headcount ratio in pro-poor growth (3pp) scenario	27
Figure 22: Pro-poor growth (3pp) scenario	29
Figure 23: Extreme poverty under different redistribution scenarios	30
Tables	
Table 1: Summary of findings on poverty impact of the different scenarios	iv
Table 2: Basic statistics concerning growth of mean, bottom 40% and gap between	16

Table 3: Poverty effects of equal growth compared with observed patterns over last 30 years	19
Table 4: Extreme poverty headcount ratios in selected UMICs based upon equal growth scenario	21
Table 5: Extreme poverty headcount ratios in selected LICs based upon Equal Growth Scenario	21
Table 6: Pro-poor growth (1pp) compared with observed patterns over last 30 years	23
Table 7: Pro-poor growth (2pp) compared with observed patterns over last 30 years	25
Table 8: Extreme poverty headcount ratios in selected LMICs based upon pro-poor growth (2pp) scenario	25
Table 9: Pro-poor growth (3pp) compared with observed patterns over last 30 years	28
Table 10: Extreme poverty headcount ratios in selected LICs based upon pro-poor growth scenarios	29
Table 11: Summary of findings on poverty impact of the different scenarios	31

Executive summary

World leaders are set to endorse an ambitious set of Sustainable Development Goals (SDGs) in September 2015. Proposed targets aim to, among other things, eliminate extreme income poverty (\$1.25 a day) by 2030 and ensure that the bottom 40% of the distribution experiences higher than average growth. Although extreme poverty has fallen considerably over the last thirty years, it persists at unacceptably high levels and inequality within many countries has risen. More equally distributed growth could reduce poverty further, in addition to having other positive spill-over effects.

Numerous projections have suggested that the world could come close to eliminating extreme poverty by 2030. However they tend to assume that growth will be shared equally by all people, regardless of where they are located in the income distribution. This report interrogates this assumption. It considers the implications of growth in which the bottom 40% of the population shares equally or more, taking a retrospective view.

First, we consider the range of country experience over the last three decades, in terms of the growth of the bottom 40% of the population relative to the societal average. On average, growth was equal for the bottom 40% and the average, but with a wide range of country experiences. The mean grew faster than the bottom 40 percent in just over half of countries (55%).

Around two hundred million more people would have escaped poverty in many of today's middle-income countries (MICs), if growth had not been so unequal. In contrast, in most of today's low-income countries (LICs), there would be relative little difference in the number of people in extreme poverty because growth was already relatively pro-poor on average. Country experiences over the last thirty years tend to fall in two distinct categories: those that have grown considerably, on average, and now are MICs, but where the poor did not benefit as much as the average person from growth, or those that have not grown significantly and have stayed LICs, but where the poor did not miss out disproportionately from the growth that did occur.

Second, the report asks what would have happened to poverty if the growth of the bottom 40% of the population had been equal to or higher than that of the average over the past thirty years for those countries that have reliable data. The analysis is based on the admittedly crude assumption that redistribution of the benefits of growth would not have affected overall levels; nonetheless, this may in fact result in an understatement of growth given considerable evidence that greater equality can enhance growth.

We explore two types of scenarios:

1. Equal Growth. All parts of the population experience average national growth.
2. Pro-poor Growth. Bottom 40 percent experiences higher than average growth – we select three plausible growth gaps (1, 2 and 3 percentage points) drawing on actual country performance over the last 30 years (Table 1).

We show that global poverty could have been significantly lower today had growth over the last 30 years been more equally distributed and that the world would be on track to

eliminate extreme poverty completely by 2030. Indeed, 1.25 a day poverty in some countries – including China – would disappear.

Table 1: Summary of findings on poverty impact of the different scenarios

	Actual	Equal growth b40%	1ppt	2ppt	3ppt/60%	3ppt/10%
2010	20.6	16.8	10.0	7.1	7.7	4.4

Had growth had been ‘pro-poor’, in particular if the bottom 40% had grown just 1 percentage point faster than the mean for those years for which we have data, global poverty would be half of what it is today. With a growth gap of 3 percentage points, which is towards the upper bounds of country experience, the effect on global poverty would depend on where in the distribution growth would be reduced to compensate. In other words, there may be a perverse effect on poverty when growth stays constant if reductions in income from the upper part of the distribution push people into poverty.

We illustrate this point by comparing the implications of a 3 percentage point gap in growth alongside redistribution from the top 60% of the population and top 10%, respectively. In the case of the former, global poverty would *increase* relative to the 2 percentage point scenario while in the latter, it would drop markedly – to one-fifth of the actual 2010 poverty level. The range of country experiences is diverse, suggesting that national policies need to account for whether a growth gap will be poverty reducing, the appropriate size, and how redistribution should be accomplished.

1 Introduction

World leaders are set to endorse an ambitious set of Sustainable Development Goals (SDGs) in September 2015. Proposed targets aim to, among other things, eliminate extreme poverty² by 2030 and ensure that the bottom 40% of the income distribution experiences at least average growth.³ Although extreme poverty has fallen considerably over the last twenty-five years, it persists at unacceptably high levels, and inequality within many countries has risen.⁴ It is argued that more equally distributed growth could have reduced poverty further, in addition to having other positive spill-over effects.⁵ For example, Hildebrand and Van Kerm (2009, p. 7) assert that globally, between 1981 and 2005, while the impact of economic growth was to lift hundreds of millions of people out of poverty, increases in inequality meant that nearly 600 million people who would have escaped poverty had inequality remained static were denied that chance.⁶

The available data⁷ suggests that the MDG target of halving extreme poverty was met five years ahead of schedule but with considerable regional variation (Figure 1). According to the \$1.25 a day measure, more than 4 in 10 people in the developing world (43%) were poor in 1990, while the most recent estimates suggest less than half that number (17%) remained poor in 2011.⁸ East Asia and the Pacific (EAP) and Sub-Saharan Africa (SSA) had similar poverty rates (around 55%) in 1990; by 2011, the poverty rate had dropped to less than 10% in EAP, but it remained just below 50% in SSA. The poverty rate declined steadily in South Asia (SoA). Elsewhere in the developing world, the poverty rate was low already in 1990 (less than 7%) and it declined to about 2.5% by 2011.⁹

² All reference in this paper are to income poverty and we focus on the \$1.25 a day metric as this was the focus of MDG target 1.1 and is likely to be the focus on a SDG poverty target.

³ Open Working Group of the General Assembly on Sustainable Development Goals (2014) Open Working Group proposal for Sustainable Development Goals. New York: UN Sustainable Development Knowledge Platform. (<http://sustainabledevelopment.un.org/content/documents/1579SDGs%20Proposal.pdf>)

⁴ The regional picture is diverse. Data for 141 countries since 1990 shows that inequality increased more in Eastern Europe and the Former Soviet Union as well as Asia, that it declined significantly in Latin America after 2000, and while Sub-Saharan Africa remains highly unequal, its Gini has fallen almost 5 points on average since 1990 (Ortiz and Cummins 2001). Ortiz, I. & M. Cummins, 2011. "Global Inequality: Beyond the Bottom Billion – A Rapid Review of Income Distribution in 141 Countries," Working papers 1102, UNICEF, Division of Policy and Practice.

⁵ See Samman, E. and C. Melamed (2014), "Equity, inequality and human development", in Jespersen, E. et al. (Eds), *Human Development for the 21st Century: Conceptualizing and measuring progress*.

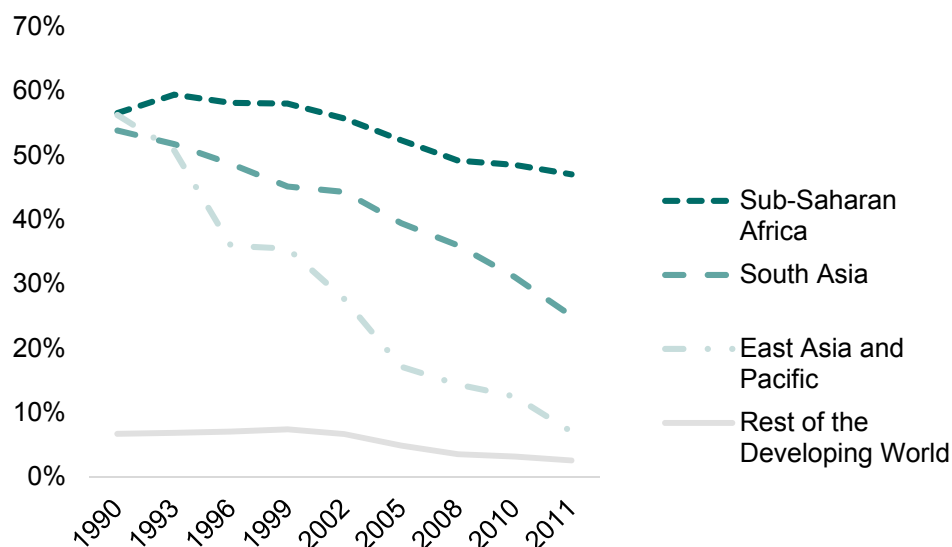
⁶ Hildebrand, V. and P. Van Kerm (2009), "Income inequality and self-rated health status: evidence from the European Community Household Panel", *Demography*, Nov; 46(4):805-25.

⁷ Data are available for 100 of 188 official IBRD countries – but these cover 91% of the population of the developing world. The specific time period varies depending on the country – see Appendix for more details.

⁸ Poverty figures are from the World Bank's PovCal Net, available at: <http://iresearch.worldbank.org/PovcalNet/index.htm?3>

⁹ The 'Rest of Developing World' category includes low- and middle-income countries in Latin America and the Caribbean, Middle East and North Africa as well as Europe and Central Asia.

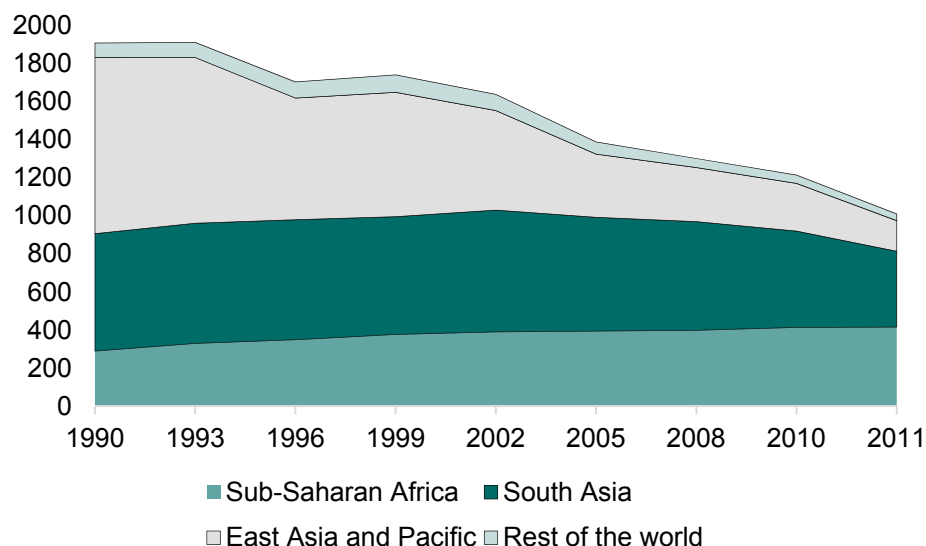
Figure 1: Extreme poverty headcount ratio in the developing world, 1990-2011



Source: World Bank's PovCal Net, available at: <http://iresearch.worldbank.org/PovcalNet/index.htm?3>

A focus on the share of people in poverty hides population change over the period, and therefore the number of people who are poor at any time. Almost 2 billion people were in extreme poverty in 1990, around half of whom were in EAP. The landscape changed dramatically over the two decades – as of 2011, about 1 billion people remained poor. Over 80% of these poor people lived in SoA and SSA (Figure 2). The number of people living in extreme poverty declined slightly in SoA, but increased in SSA by about 125 million.

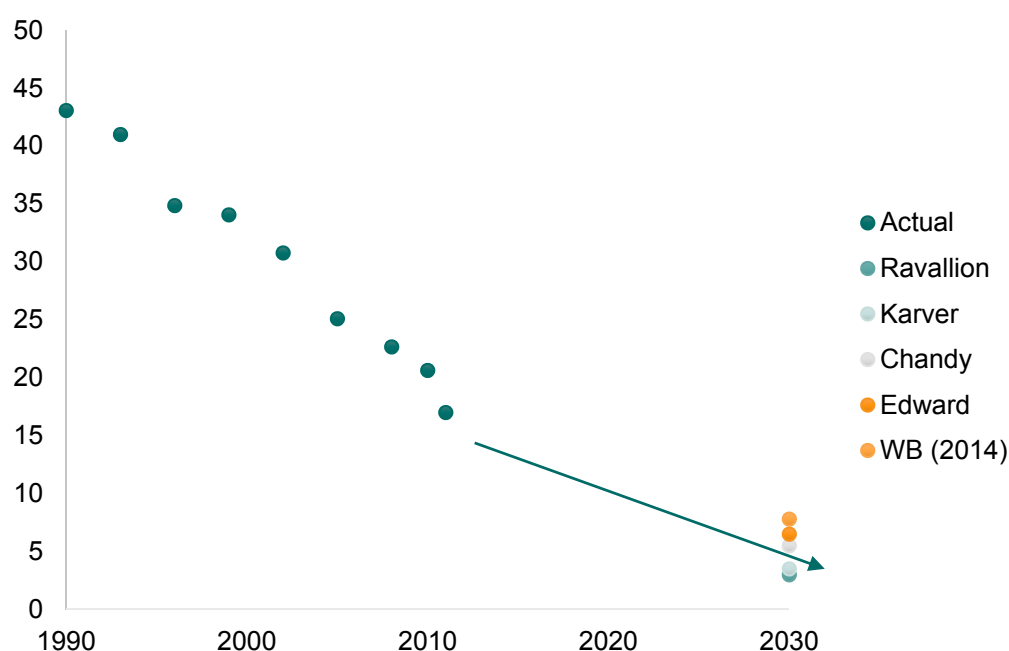
Figure 2: Number of people living in extreme poverty (millions), 1990-2011



Source: World Bank's PovCal Net, available at: <http://iresearch.worldbank.org/PovcalNet/index.htm?3>

Numerous studies have projected trends in extreme poverty to demonstrate that the world could come close to eliminating extreme poverty by 2030.¹⁰ Most of these studies include a ‘business as usual’ approach – they attempt to estimate future poverty by projecting past growth rates forward, holding inequality constant.¹¹ Estimates of extreme poverty based on this method vary only slightly: estimates for 2030 tend to be in the range of around 3-7% of the world’s population (Figure 3). This means that approximately 200-550 million people would be in extreme poverty, compared with 1 billion today.

Figure 3: Projections of extreme poverty headcount ratio in 2030 (%)



Sources: Please see footnote 10.

Most of these authors also present scenarios based upon changes in both growth and inequality and these illustrate that any poverty rate between 2010 levels and zero is possible in 2030 (Figure 4). For example, Ravallion (2013) provides optimistic and pessimistic scenarios, highlighting a potential gap of more than 30 years between them in the timeline to end extreme poverty. Along similar lines, Chandy et al (2013) show that changes in

¹⁰ Ravallion, M. (2013). How long will it take to lift one billion people out of poverty? *World Bank policy research working paper 6325*. Washington, DC: World Bank.

Karver, J., Kenny, C., and Sumner, A. (2012). MDGs 2.0: What goals, targets, and timeframe? *Working paper 297*. Washington, DC: Center for Global Development.

Chandy, L., Ledlie, N., and Penciakova, V. (2013). *The Final Countdown: Prospects for Ending Extreme Poverty by 2030*. Brookings Institution. Global Views. Policy Paper 2013-04.

Kharas, H., Rogerson, A. (2012). *Horizon 2025: Creative Destruction in the Aid Industry*. Overseas Development Institute, London.

Edward, P., and Sumner, A. (2014). Estimating the Scale and Geography of Global Poverty Now and in the Future: How much Difference Do Method and Assumptions Make? *World Development* Vol. 58, pp. 67-82.

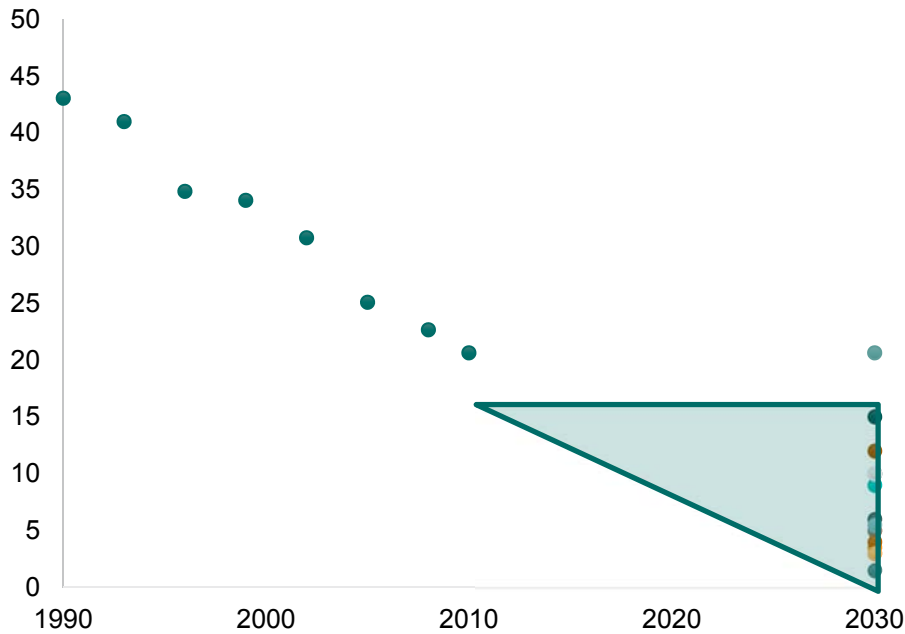
World Bank (2015). ‘A Measured Approach to Ending Poverty and Boosting Shared Prosperity: Concepts, Data, and the Twin Goals.’ Policy Research Report, World Bank: Washington D.C.

Lakner, C., Negre, M., and Beer Prydz, E. (2014). Twinning the Goals: How Can Promoting Shared Prosperity Help to Reduce Global Poverty? *World Bank policy research working paper 7106*. Washington, DC: World Bank.

¹¹ A main difference between the most commonly cited studies is the data used to project growth into the future. Chandy et al (2013) rely on growth forecasts until 2030 from the Economist Intelligence Unit, while Kharas and Rogerson (2012) adjust and project IMF forecasts forward to 2030 based upon assumptions about capital accumulation and labour force productivity. Karver, Kenny and Sumner (2012) use pre-financial crisis IMF forecasts of economic growth and project these until 2030. Edward and Sumner (2014) follow the same methodology, but use more recent data. Ravallion (2013) uses historical growth rates for the developing world as a whole (excluding China) from the 1980s and 1990s as the basis for his pessimistic scenario and growth rates from the 2000s for his optimistic scenario. In contrast, a projection in World Bank (2014) relies on country specific growth rates based upon the last 10 years.

inequality can matter just as much as changes in growth, and that extreme poverty could be almost twice as high in 2030 as their business as usual scenario if inequality worsens.

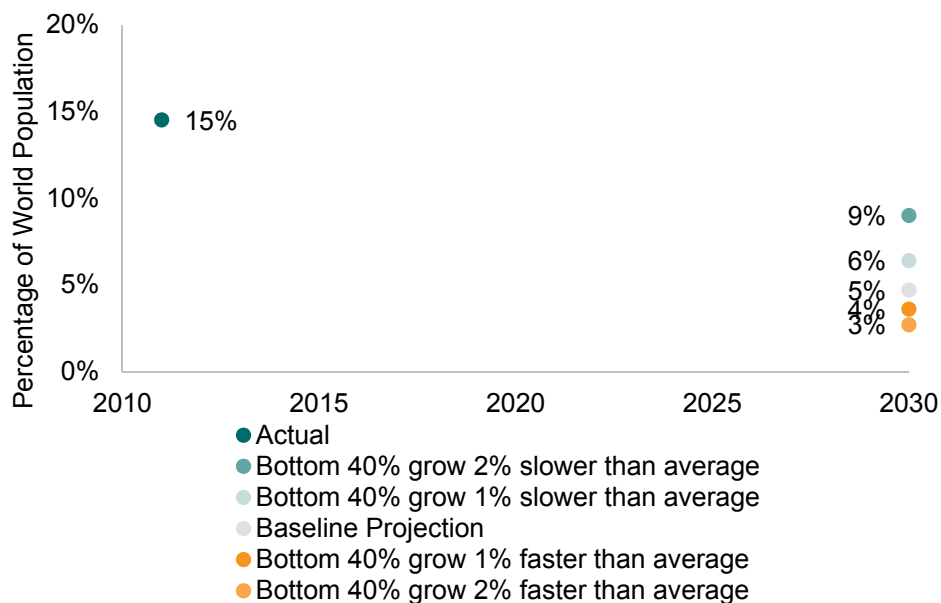
Figure 4: Projections of the extreme poverty headcount ratio (%) in 2030 under different inequality scenarios



Source: Please see footnote 9.

The World Bank (2014) projections look not just at the effects of inequality on poverty, but focus on income growth among the bottom 40% of the population, in line with the Bank’s new emphasis on ‘shared prosperity’. Their modelling suggests that a 2030 global poverty rate of anywhere between 3% and 9% appears plausible depending on whether the bottom 40% of the distribution were to grow by 1 to 2 percentage points faster or slower than the average growth rate (Figure 5).

Figure 5: World Bank (2014) scenarios for extreme poverty



Source: Lakner, C., Negre, M., and Beer Prydz, E. (2014)

In this paper, we take a different tack.¹² We frame what is likely to be possible over the next 15 years in the light of country experiences over the last three decades. In particular we assess how the bottom 40% of the income distribution fared in each country, relative to its average growth. We then ask what difference it would have made to poverty if the growth of the bottom 40% had been equal to or greater than the country average (holding growth constant). We believe it is a useful exercise to think about the counterfactual that might have resulted today, alongside the projections that others have made of what we can expect in the future.

To ground the analysis solidly in country experience, we identify pro-poor scenarios drawn from the experiences of the better performing countries in terms of the rate of growth for the bottom 40% relative to their national averages. We use this analysis to revisit the Open Working Group proposal that countries adopt a target specifying that the bottom 40% should grow faster than the mean, and consider the potential implications. The analysis is based on the admittedly crude assumption that redistributing the benefits of growth would not have affected levels. Nonetheless, this may in fact understate growth given considerable evidence that greater equality can enhance growth.¹³ We explore two possible implications – first that the increase in the growth of the bottom 40% is subtracted equally from the top 60%; and second, that the reduction is made just from the top ten percent of the distribution – a scenario that past experiences suggests is more fitting.¹⁴

¹² We are grateful to Ricardo Fuentes-Nieva who shared with us this idea– of taking a retroactive view of the situation of the bottom 40% relative to the mean and its likely implications for poverty.

¹³ See, for example, the review contained in Stewart, F. (2013). http://www.unicef-irc.org/publications/pdf/stewart%20inequality_inequity_layout_fin.pdf.

¹⁴ Palma, J. G. (2011), Homogeneous Middles vs. Heterogeneous Tails, and the End of the ‘Inverted-U’: It’s All About the Share of the Rich. *Development and Change*, 42: 87–153.

2 Methodology

The methodology of this report is similar to that taken in Lackner et al. (2014),¹⁵ who model the likely impact of changes in growth and inequality on global poverty in 2030 using various growth incidence curves¹⁶ that reflect plausible consumption distributions for a country. A number of assumptions are made to assist in operationalising this modelling, which they discuss in detail. An important assumption is that when applying growth rates to a section of the distribution (for example, the bottom 40%) they assume a constant rate across each percentile, i.e. all percentiles grow at the same rate.

Our most significant point of departure from this methodology is in modelling what would have happened if growth had been distributed more equally over the past three decades as opposed to what may happen in the future if certain assumptions hold. The retrospective nature of this paper is valuable for at least one important methodological reason. The scenarios we present can be directly compared to the actual historical change in poverty. In other words, a realistic counterfactual exists to measure the extent to which various scenarios would have altered reality. This overcomes a weakness of forward looking projections because comparing projections to one another require a greater leap of faith that the projections have estimated a reasonable counterfactual. Moreover, considering what could be the case for poverty today rather than projecting into the future may carry greater resonance for those concerned about who has benefited from growth.

2.1 Dataset

The data used in this analysis is from PovcalNET, which is the World Bank's publicly available database of all internationally comparable household surveys. The data was retrieved prior to the latest update of the database at the end of 2014. This means that the scenarios presented in this paper are likely to overestimate current world poverty levels because they are based on data for 2010, as opposed to 2011. Between 2010 and 2011 the developing world headcount ratio is reported to have fallen from 21% to 17% (a difference of around 200 million people). These differences are especially pronounced in China and India; the poverty headcount in these countries is reported as being 6% and 25% respectively in 2011, compared to 12% and 33% in 2010. A benefit of using this data, however, is that most of the well-known projections of extreme poverty in 2030 (see footnote 9) use the same dataset, so the figures can be compared.

A major strength of this analysis is that all the data are sourced from PovcalNET alone, even the growth rates, which is uncommon for poverty projections. Some authors choose to use national account growth rate data instead (including Lackner et al. 2014), citing the lack of availability of survey data. However by doing so they mix data sources that are not directly comparable.¹⁷ Some authors attempt to adjust for the observed discrepancies, e.g. Chandy et

¹⁵ Lakner, C., Negre, M., and Beer Prydz, E. (2014). *Twinning the Goals: How Can Promoting Shared Prosperity Help to Reduce Global Poverty?* World Bank policy research working paper 7106. Washington, DC: World Bank.

¹⁶ Growth Incidence Curves give "the rate of growth over the relevant time period at each percentile of the distribution (ranked by income or consumption per person)" See Ravallion, M. (2004), *Pro-Poor Growth: A Primer*. Development Research Group, World Bank.

¹⁷ It is well known in the literature that national account growth rates tend to be substantially faster than survey growth rates, especially in India and China. See Chandy, L., Ledlie, N., and Penciakova, V. (2013). *The Final Countdown: Prospects for Ending Extreme Poverty by 2030*. Brookings Institution. Global Views. Policy Paper 2013-04. Also Edward, P., and Sumner, A. (2014). *Estimating the Scale and Geography of Global Poverty Now and in the Future: How much Difference Do Method and Assumptions Make?* *World Development* Vol. 58, pp. 67-82.

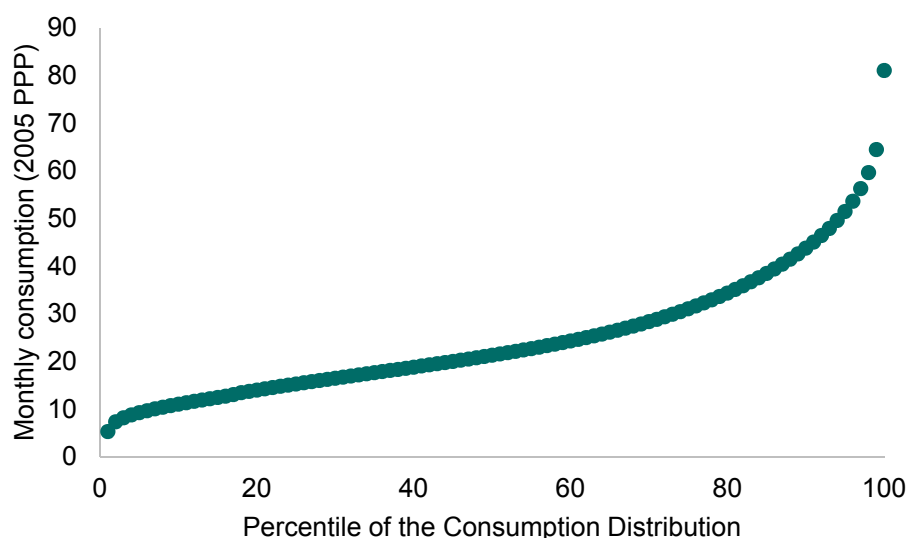
al (2013). However, given the large amount of survey data that are available, it does not seem necessary to use national accounts data in the first place, particularly for analysing poverty, which is measured through survey data alone. While fewer data are available from surveys than national accounts, adjustments can be made to enable reasonable estimates of global poverty, as discussed below.

All countries that had data on the World Bank's PovcalNET were included in this analysis as long as there were at least two surveys available. On average there were 17 years between surveys. We had to rely on different time periods for different countries, depending on data availability – the minimum gap is 4 years (Trinidad and Tobago) while the maximum is 32 years (India).¹⁸ The exercise is clearly illustrative rather than indicative. The PovcalNET dataset gives the most comprehensive insight possible into how poverty has changed over time (notwithstanding the most recent updates to the data mentioned above). As more data becomes available, especially following the release of the much anticipated 2011 PPP poverty estimates from the World Bank, we highly recommend that this analysis be repeated.

2.2 Application of growth incidence curves

Various growth incidence curves were applied to the earliest surveys' consumption levels to determine what the consumption level of each percentile would have been in the most recent survey if it had grown at a given rate. We illustrate these scenarios through the example of China. The initial consumption distribution for China is based upon the 1981 household survey available on PovcalNET (Figure 6).

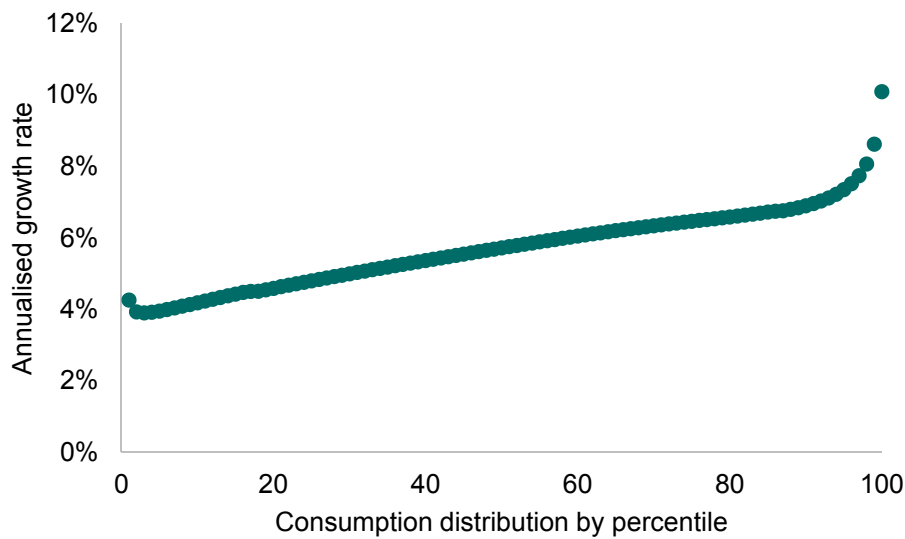
Figure 6: Initial consumption distribution



Using the actual consumption levels from the most recent survey in 2009, we can determine each percentile's average annualised growth rate (Figure 7). Clearly the growth is distributed in favour of the top of the distribution. In other words, the percentiles higher up the distribution tended to grow faster.

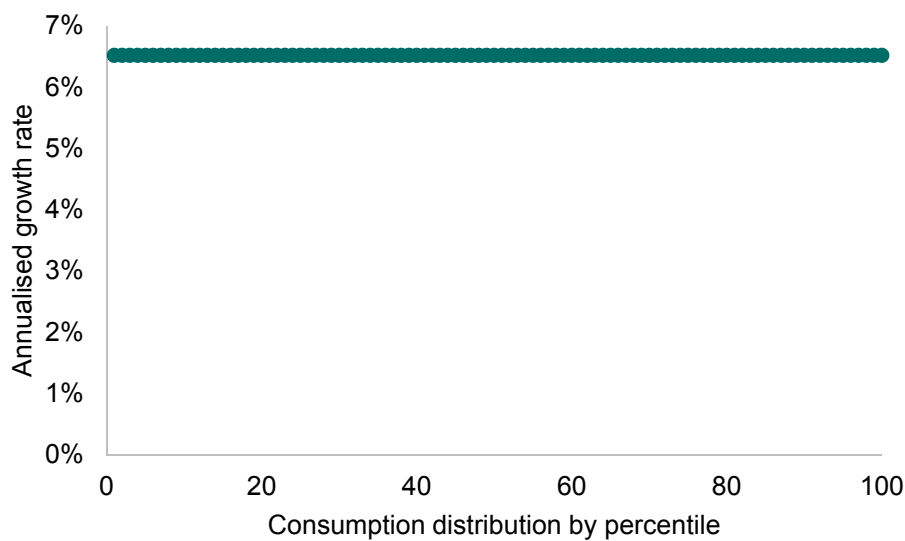
¹⁸ Equally because the data was so patchy, we did not attempt to analyse distinct sub-periods within the 30 year period.

Figure 7: Actual consumption growth



In our first scenario, we assume that the entire distribution had grown at the average growth rate of the country (6.5%) (Figure 8). This is clearly more pro-poor than the actual consumption growth experienced by China over the period.

Figure 8: Scenario 1: Equal growth across distribution



The pro-poor scenarios illustrate the potential impact of the bottom 40% growing faster than the average. We explore the impact of gaps between the growth of the bottom 40% and the mean of 1, 2 and 3 percentage points respectively, which derive from experiences of better performing countries over the last 30 years – as discussed below. The average growth rate remains constant. It is possible to calculate the growth rate of the upper part of the distribution by using a weighted average formula.

$$\mu_{T60\% (10\%)} = [\mu_{ALL} - (IncShare_{B40\%} \times \mu_{B40\%})] / (1 - IncShare_{B40\%})$$

In one variant, we assume the growth subtracts evenly from the top 60% of the distribution (Figure 9), while in another, it reduces the incomes of the top 10% of the income distribution only (Figure 10).

Figure 9: Growth redistributed from the top 60%

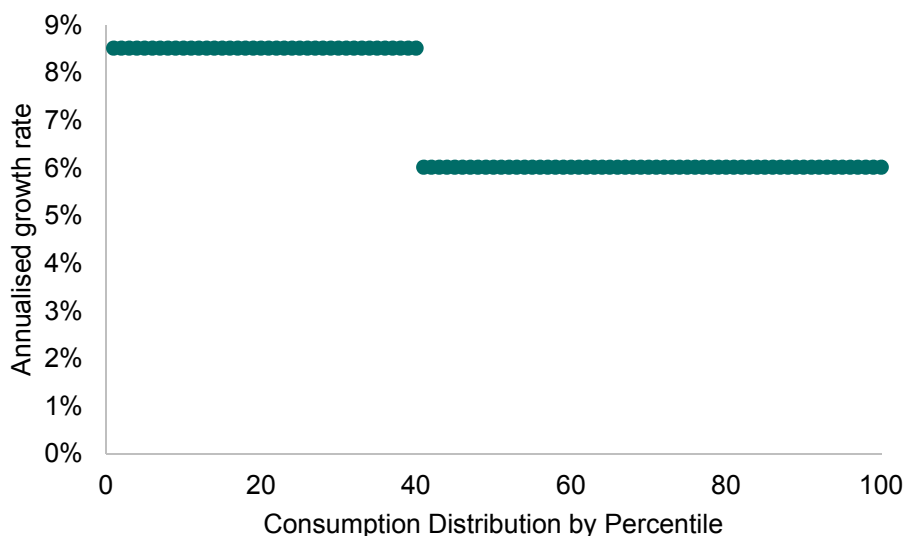
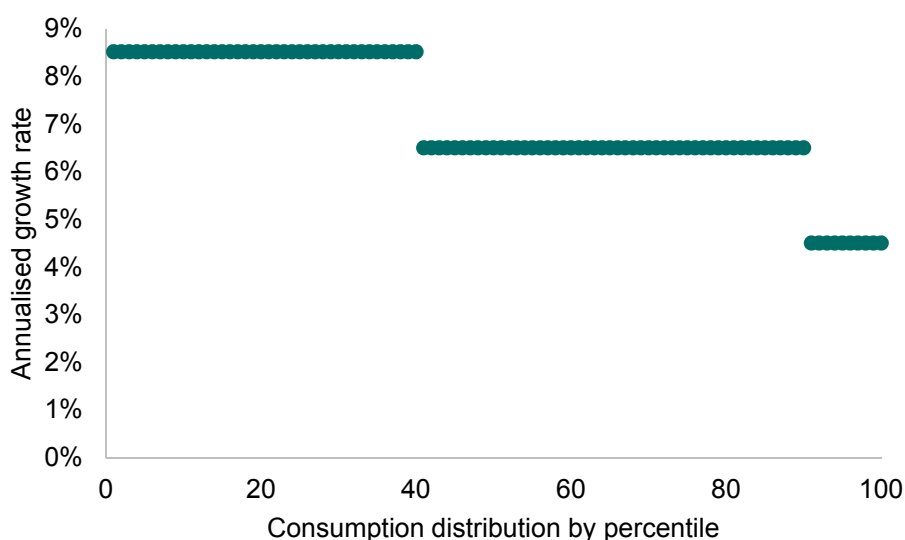


Figure 10: Growth redistributed from top 10%

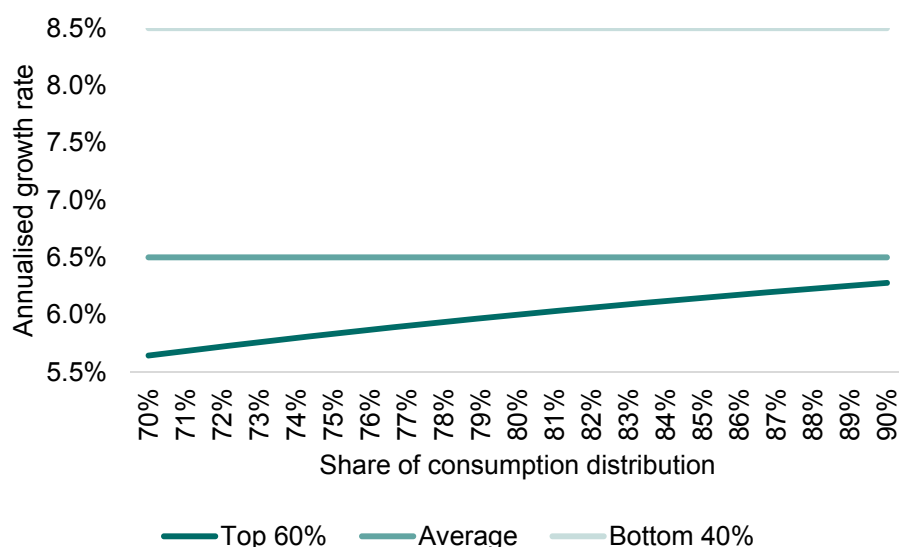


The reduction in growth experienced by the top 60% of the distribution to allow the bottom 40% of the distribution to grow 1, 2 and 3 percentage points higher than the mean tends to be quite small because they hold a large share of total income. Take the case of China. The share of the consumption distribution held by the top 60% was around 80% in 1981, and average growth for the country over the next thirty years was 6.5% per year. To enable the bottom 40% to grow at 2 percentage points higher than the average (8.5%), growth would need to fall only to 6% per year for the upper 60%.

However, even if the share of the distribution accruing to the upper 60% differed significantly from this, the growth rate would remain relatively similar (Figure 11). For example, under the same scenario, if this group had 70% of the wealth in place of 80%, then their consumption growth would fall to about 5.5% annually, to enable 2 percentage point

higher growth among the bottom 40%. Where reductions in growth come from the top 10%, the growth rate for the top decile would only need to fall from 6.5% to around 4.5%.

Figure 11: Growth rates under scenario 2 for China if share of distribution was different



Note it is of course possible that lowering the growth of the top 60% (and even the top 10%) of the distribution could push some people situated there into poverty, particularly where reductions are sizeable and the poverty line is relatively high. We take this into account in the analysis that follows.

2.3 Making global poverty estimates using the country sample

To estimate the global extreme poverty rate, a subset of all countries on PovcalNET was used (which again, included only those countries with at least two surveys available). In addition, no income surveys (when consumption surveys were also available) nor surveys broken into rural and urban dimensions were included in the global poverty headcount estimate to avoid double counting. Our analysis of country-specific poverty trends is based on this set of 100 countries.¹⁹

For these remaining 100 countries, we determined a revised country specific poverty headcount ratio. The population of each country was multiplied by the poverty headcount ratio to calculate the total number of poor people living in each country. The sum of these estimates provided a total number of poor people in the subset of countries. The global total number of people in poverty was determined by scaling up the total for the subset of countries by a factor of the fraction of poor people covered. The global poverty rate was determined by dividing the global total number of people in poverty by the total developing world population.

2.4 Country experience over the last 30 years

On average, in our sample of 100 countries, the mean and the bottom 40% of the distribution grew at 1.8% (Table 1). This means that on average, there was effectively no difference between the growth of the mean and the bottom 40%. At one extreme, in Fiji, average growth was 4.8 percentage points lower than that of the bottom 40% each year; at the other extreme, in Bosnia and

¹⁹ We exclude 6 countries (Maldives, Sierra Leone, Namibia, West Bank and Gaza, Angola and Guinea-Bissau) because the data appears to be unreliable. In each of these countries, the difference in annual growth rates between the bottom 40% and the average was over five percentage points (almost 20 percentage points in the case of the Maldives).

Herzegovina, it was 4 percentage points higher (Figure 12). The mean grew faster than the bottom 40 percent in just over half of countries (55%), which together accounted for 79% of the world's population. We also examine initial levels of inequality for those countries where the bottom 40% grew at a higher rate than the mean, and those where it did not. The average Palma for those countries that enjoyed pro-poor growth was 3.0, twice that of the average for those countries that were less pro-poor. In other words, growth was much more pro-poor in those countries where initial inequality was higher – a seemingly counter-intuitive finding that we will revisit.

Figure 12: Difference between growth of mean and bottom 40%

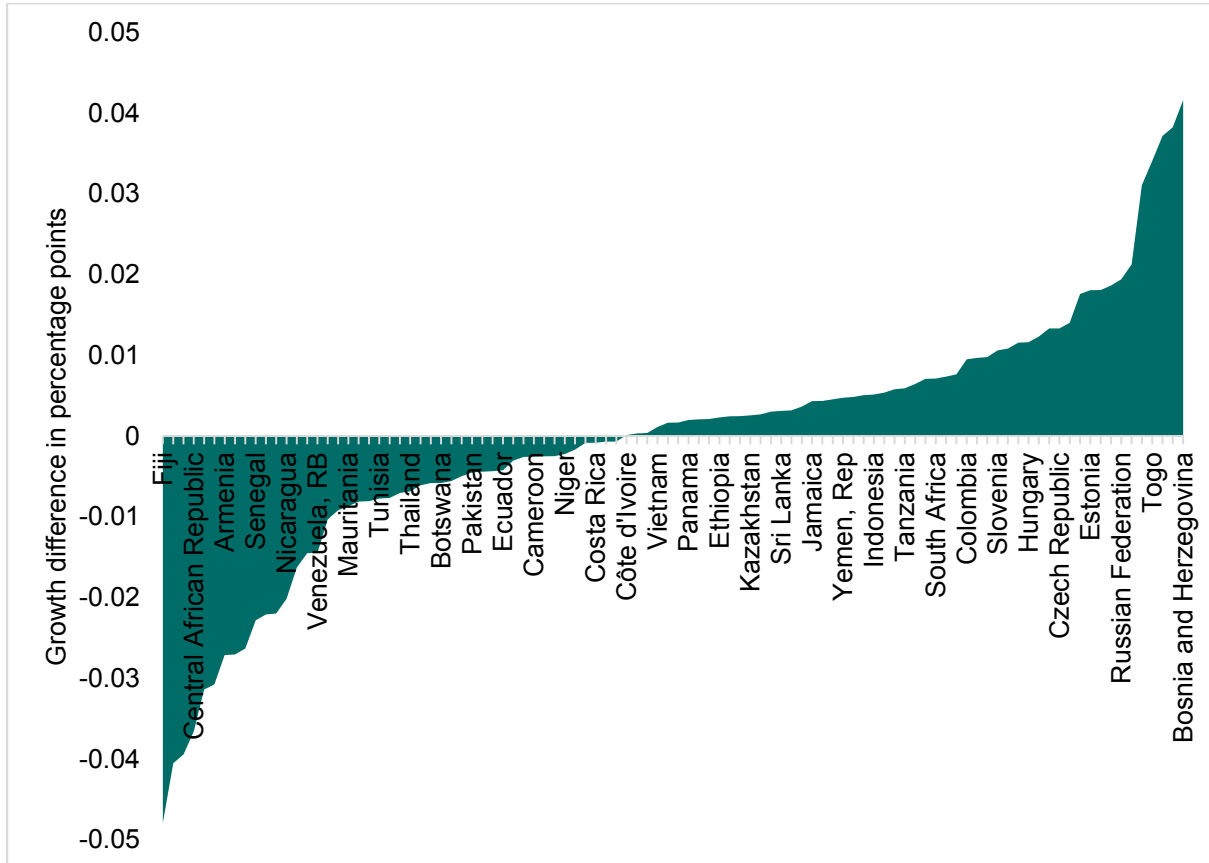
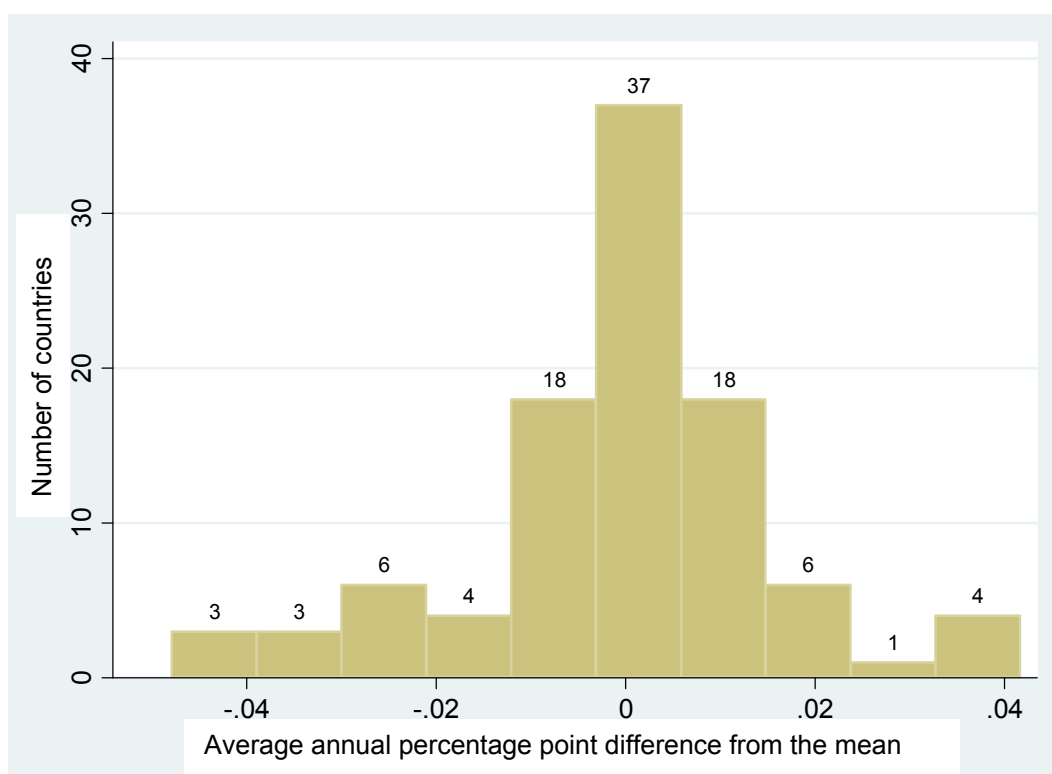


Table 2: Basic statistics concerning growth of mean, bottom 40% and gap between them

	Growth of mean	Growth of bottom 40%	Gap mean and bottom 40%
Average	1.78%	1.82%	-0.03%
Median	1.73%	1.48%	0.17%
Minimum	-8.58%	-7.11%	-4.79%
Maximum	14.21%	17.28%	4.16%
Countries where mean>40%			55
Share in global population			79%
Initial Palma			1.5
Countries where mean<40%			45
Initial Palma			3.0
Share in global population			21%
Total number of countries			100

There was a moderate standard deviation equivalent to 1.6 percentage points. The distribution is concentrated around zero with a slight left hand tail. This implies that in some countries, the bottom 40% grew faster than the average, but generally the mean and bottom 40% growth rates did not differ much (Figure 13).

Figure 13: Distribution of countries' gaps between average growth and growth of the bottom 40%



Source: World Bank's PovCal Net, available at: <http://iresearch.worldbank.org/PovcalNet/index.htm>

On the basis of this data, we identify a range of pro-poor growth rates that are plausible with varying degree of ambition (Table 3).

Figure 14: Share of countries that experienced different levels of pro-poor growth

Pro-poor Growth Scenario	1pp	2pp	3pp
Share of countries	34%	16%	12%

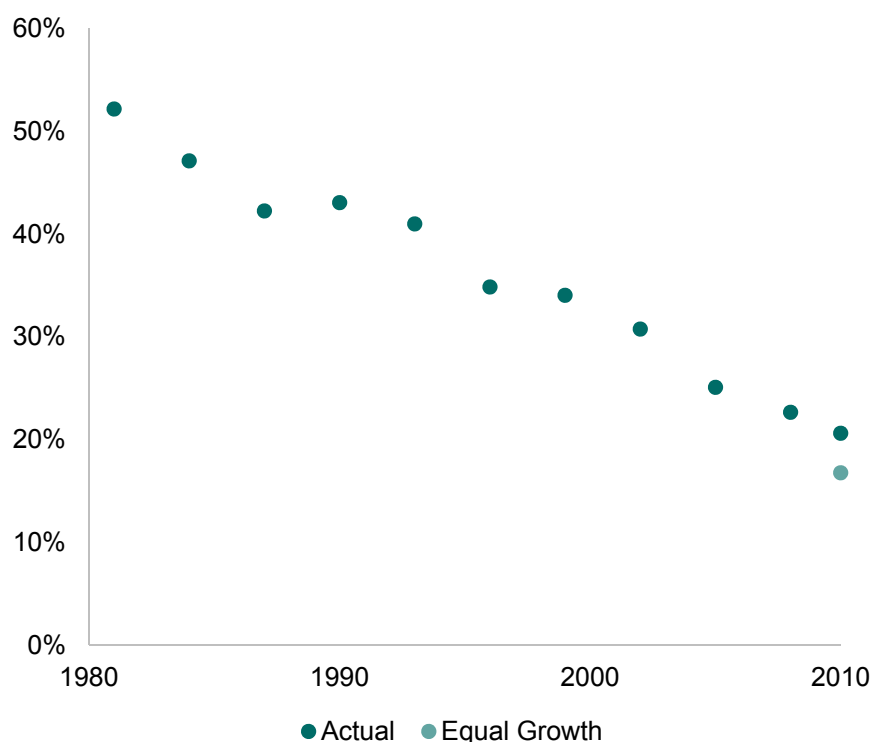
We pinpoint three gaps in growth between the mean and the bottom 40% to explore – 1, 2 and 3 percentage points. This roughly corresponds with the experience of the top third, 15% and 10%, respectively, of countries that experienced pro-poor growth.

2.5 Equal growth scenario

Global poverty today would have been around four percentage points lower if growth in all countries was equal across the distribution (Figure 14). At first glance a four percentage point reduction in global poverty might seem relatively small. However, this could have been enough for the world to reach zero poverty by 2030, if we assume that global poverty

continues to fall in a linear fashion as it has done over the last twenty years, a view supported by former World Bank economist Martin Ravallion among others.²⁰

2.6 Extreme poverty headcount ratio in equal growth scenario



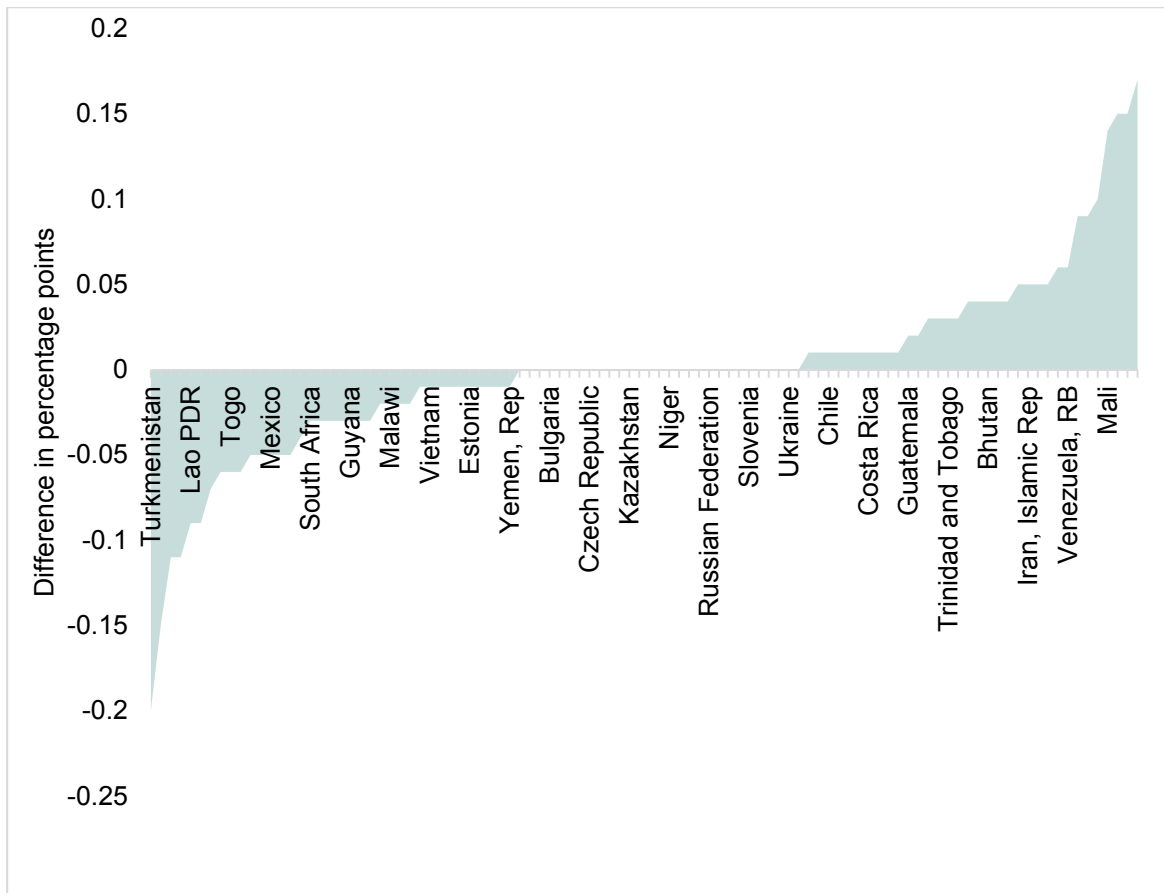
The range of country experiences is diverse (Table 3). On the one hand, poverty could have been at least 10 percentage points lower in Bolivia, Bangladesh and China, had the bottom 40% of these countries grown at national average; on the other hand, poverty would be at least fifteen percentage points higher in three countries: Nicaragua, Senegal and Armenia (Figure 15).

²⁰ Ravallion, M. (2013). How long will it take to lift one billion people out of poverty? World Bank policy research working paper 6325. Washington, DC: World Bank. Karver, J., C. Kenny and A. Sumner (2012), "MDGs 2.0: What Goals, Targets and Timeframe?" CGD Working Paper, Center for Global Development, Washington, DC. Rodriguez and Samman (Forthcoming), Patterns of progress on the MDGs and implications for target setting post-2015.

Table 3: Poverty effects of equal growth compared with observed patterns over last 30 years

	Actual	Equal Growth	Gap
Mean poverty level among countries	17.56	17.55	0.01
Median poverty	7	7	0
Minimum poverty	0	0	-17
Maximum poverty	81	82	20
Count			100
Number of countries where poverty with equal growth > actual poverty			18
Number of countries where actual poverty > poverty with equal growth > 40%			62
Number of countries where actual poverty = poverty with equal growth			20

Figure 15: Equal growth scenario



A particularly interesting pattern concerns MICs and LICs. In particular, equal growth would have had a dramatic effect on poverty reduction in most UMICs. Poverty would have been lower in all UMICs outside Latin America and would effectively be history in China, Mexico and Peru (Table 3).

Table 4: Extreme poverty headcount ratios in selected UMICs based upon equal growth scenario

Country	Earliest Survey	Most Recent Survey	HC Initial	HC Actual	HC If all grew at mean growth rate
Mexico	1984	2010	13	5	0
Peru	1986	2010	11	5	2
China	1981	2009	84	12	1

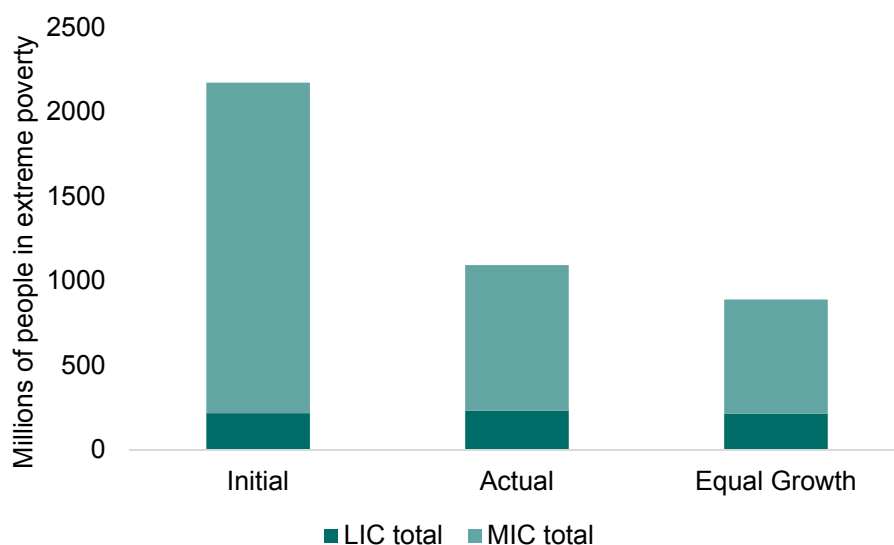
In many countries (45% of our total sample), the bottom 40% of the distribution grew faster than the national averages, including in around half of LICs (60% of LICs in Sub-Saharan Africa). Poverty would have been higher in these countries if growth had been equal across the distribution (Table 4). For example, in Burkina Faso, poverty fell from 71% to 45%, but if growth had been equal across the distribution, it would have only fallen to 54%. In this case, these countries actually counteract the overall reduction in global poverty rates discussed above. However in aggregate, this impact is limited because these countries tend to have relatively small populations and the poor tend to have only experienced slightly better growth rates than the average.

Table 5: Extreme poverty headcount ratios in selected LICs based upon Equal Growth Scenario

Country	Min year	Max year	Initial	Actual	If mean
Burkina Faso	1994	2009	71	45	54
Guinea	1991	2007	93	43	47
Mauritania	1987	2008	41	23	28

This analysis highlights how, crudely, the world's poor tend to live in two distinct types of countries that are either less equal MICs or more equal LICs. While the vast majority of poverty reduction over the last couple of decades occurred in countries that are now MICs, this was generally not due to equitable growth. If growth had been equal in all countries, the lower global rate of poverty would have been almost entirely due to further poverty reduction in MICs (Figure 16). There would have been effectively no further gains in poverty reduction in LICs from equal growth across the distribution because on average, this is what already occurred.

Figure 16: Total poverty by income category



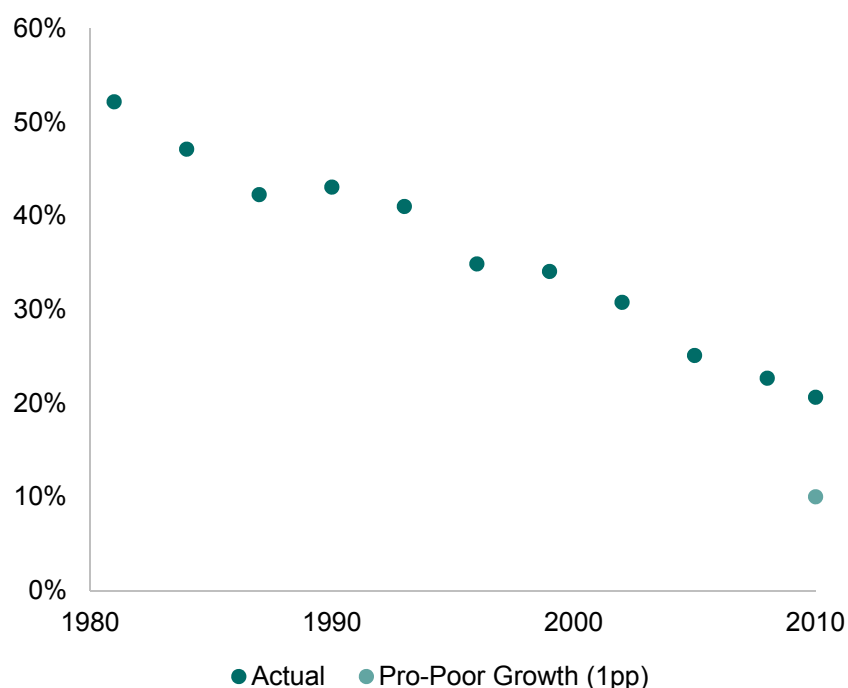
2.7 Pro-poor growth scenarios

This section outlines three pro-poor scenarios: we explore the potential effects for poverty if the bottom 40% of the distribution were to grow at 1, 2 and 3 percentage points higher than their national averages, respectively. In these scenarios the overall growth rate for countries is kept constant, which means the higher growth rates for the bottom 40% are offset by lower growth within the upper 60% (or 10%) of the distribution.

Pro-poor growth scenario 1

Global Poverty would be around half what it is now, if the bottom 40% of the distribution had grown just one percentage point higher than the average, while keeping the overall growth rate constant (Figure 17).

Figure 17: Extreme poverty headcount ratio in pro-poor growth (1pp) scenario

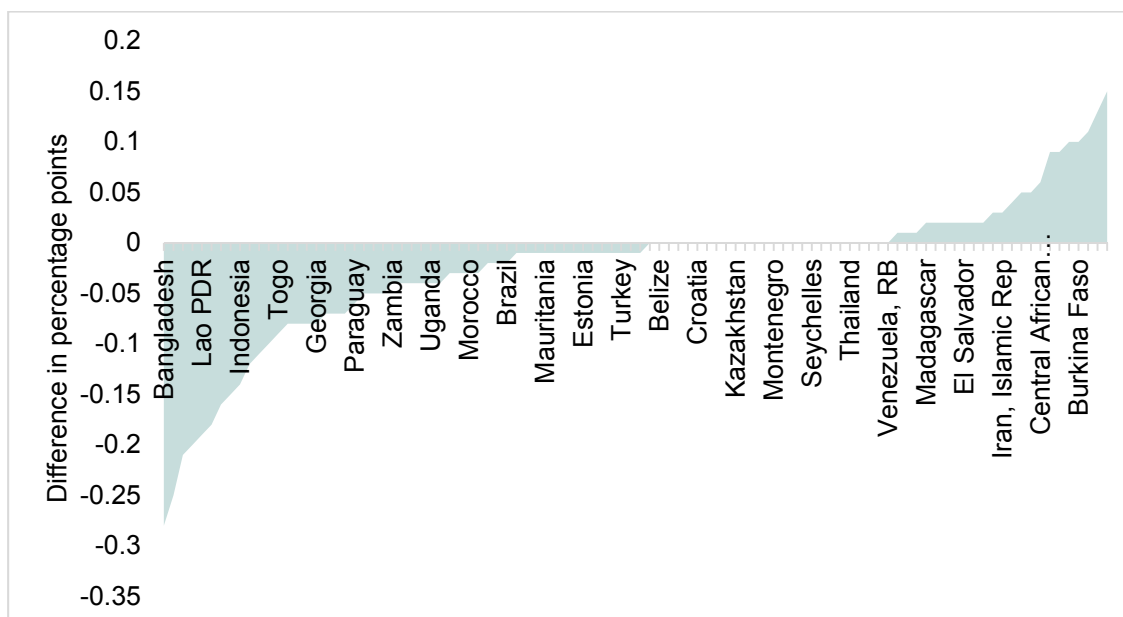


This relatively slight change in the distribution of growth to make it pro-poor would have had significant effects on poverty reduction in some countries, but not others (Table 6, Figure 18). Poverty would have halved in Cambodia, Ghana and South Africa, reduced by two-thirds in Nepal and would have been eliminated in Turkmenistan. However there would have been little difference in the levels of extreme poverty in many low-income countries, such as in Tanzania, Niger and Mozambique.

Table 6: Pro-poor growth (1pp) compared with observed patterns over last 30 years

	Actual	Scenario 2	Gap
Mean	17.56	15.28	-2.8
Median	7	5	-1
Min	0	0	-15
Max	81	83	28
Count			100
Number of countries where 1pp > actual			23
Number of countries where actual > 1pp			51
Number of countries where actual = 1pp			26

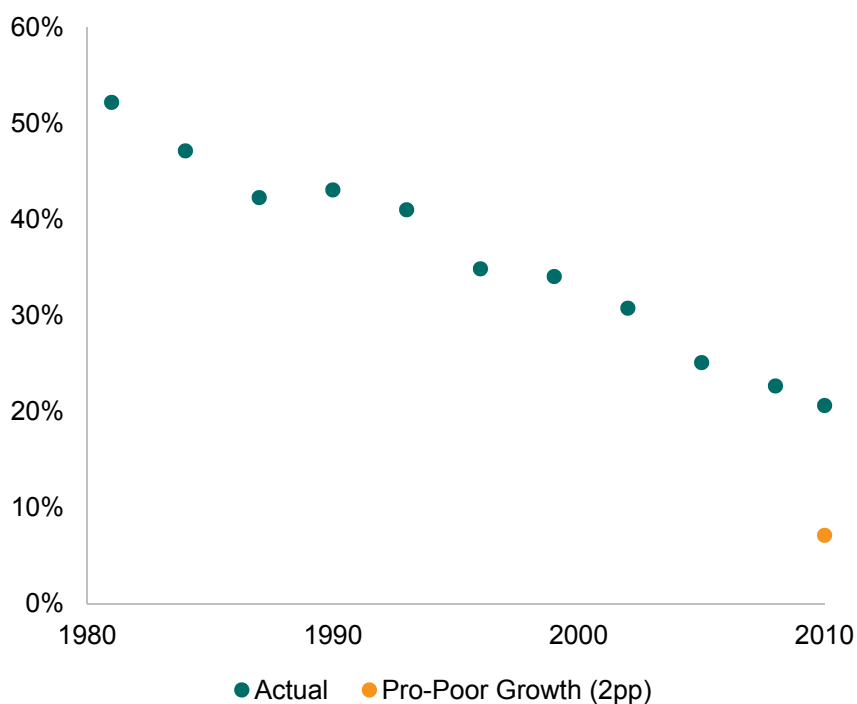
Figure 18: Pro-poor (1pp) scenario



Pro-poor growth scenario 2

Global poverty would be less than half its current level had the bottom 40% of the distribution grown two percentage points faster than their national average, keeping the overall growth rate of the country the same (Figure 18). This is the equivalent degree of pro-poor growth presented by Lackner et al. (2014) though, as noted, they use this to project into the future rather than to revisit the past.

Figure 19: Extreme poverty headcount ratio in pro-poor growth (2pp) scenario



We see a diverse range of country experiences (Table 6). In 2010, across our 100 countries, poverty would be on average four percentage points lower than the actual level. At one extreme, poverty in Bangladesh, Ethiopia, India and Lao PDR would be over 25 percentage points lower; at the other, it would be over 15 points higher in Mali (Figure 19).

Table 7: Pro-poor growth (2pp) compared with observed patterns over last 30 years

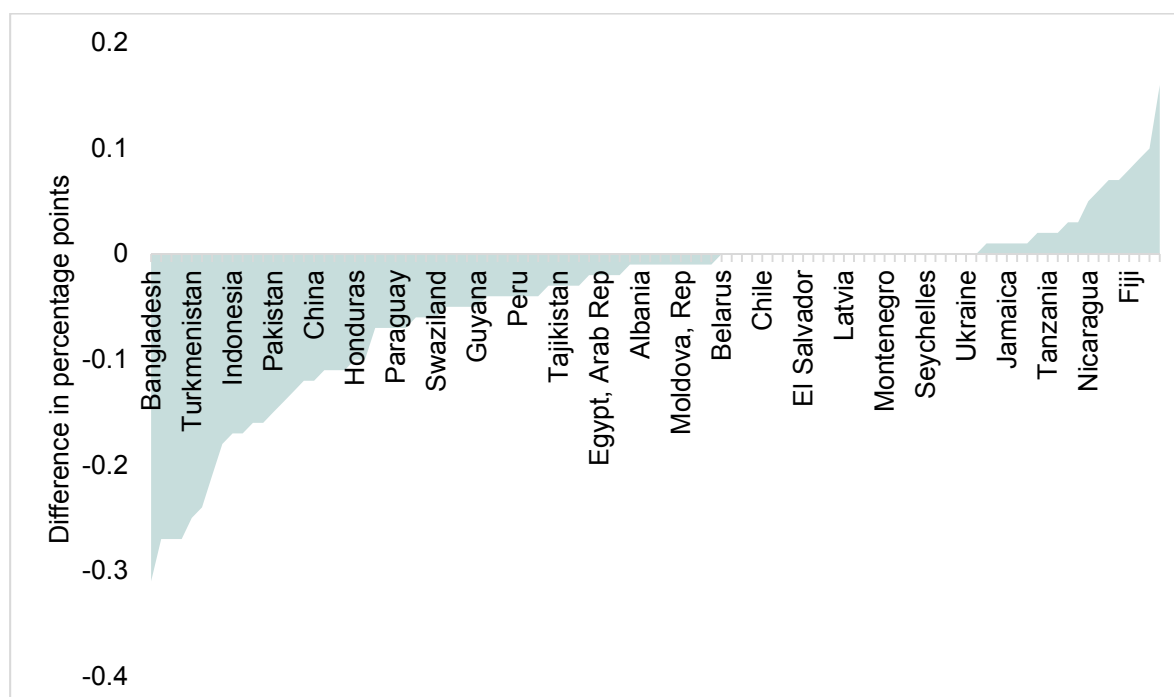
	Actual	Scenario 2	Gap
Mean	17.56	13.37	-4.2
Median	7	2.5	-1
Min	0	0	-16
Max	81	84	31
Count			100
Number of countries where pp2>actual			18
Number of countries where actual<pp2			56
Number of countries where actual = pp2			26

This degree of pro-poor growth has been uncommon in LMICs, especially over prolonged positive growth spells. As such poverty would have been lower in this scenario in around 80% of LMICs, including all LMICs in East Asia. There would effectively be no poverty in a number of LMICs such as Indonesia and Philippines (Table 7). Even in poorer LMICs, like India and Vietnam, the extreme poverty headcount would have fallen to around 5% if the bottom 40% had grown two percentage points faster than the average.

Table 8: Extreme poverty headcount ratios in selected LMICs based upon pro-poor growth (2pp) scenario

Country	Earliest Survey	Most recent Survey	HC Initial	HC Actual	HC if mean constant but B40% grow 2pp above mean
Indonesia	1984	2010	63	18	1
Philippines	1985	2009	35	18	1
Vietnam	1993	2008	64	17	5
India	1978	2010	66	33	6

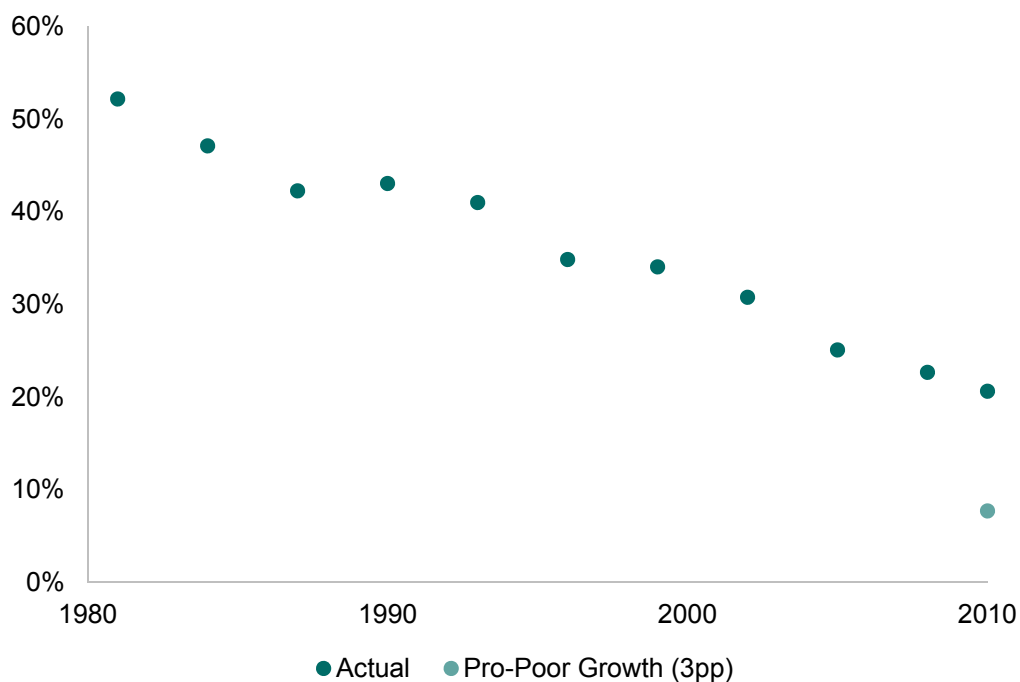
Figure 20: Pro-poor growth (2pp) scenario



Pro-poor growth scenario 3

If the bottom 40% had experienced growth that was three percentage points higher than the average, this would have actually resulted in a slightly higher global poverty rate than under the pro-poor growth scenario 2 (7.7% as opposed to 7.1% of the developing world population) (Figure 20). However, this assumes an equal reduction in the growth of the upper 60% of the distribution. This is because growth of the bottom 40% that is 3 percentage points faster than the average requires a significant reduction in growth for the upper 60%.

Figure 21: Extreme poverty headcount ratio in pro-poor growth (3pp) scenario



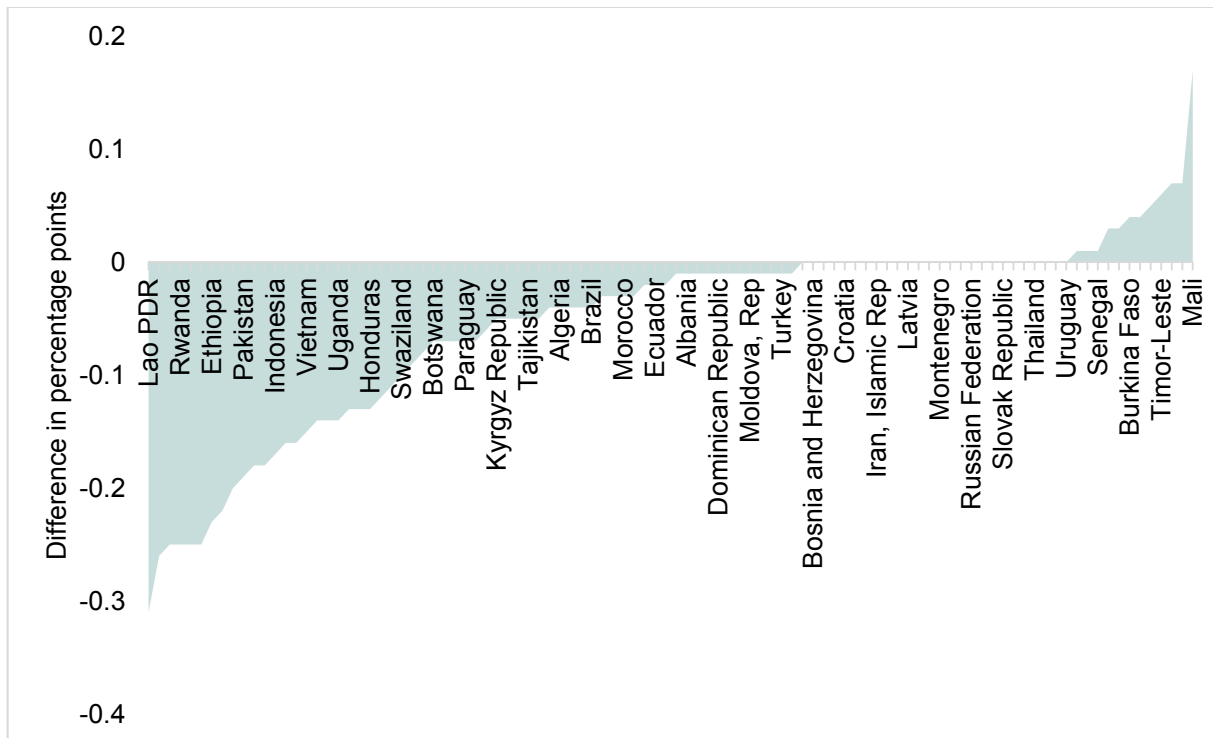
This very pro-poor growth scenario illustrates some important points. Firstly, increasing growth for the bottom 40% of the distribution is likely to be pivotal in making significant headway toward reducing global poverty, but will not be enough to eliminate extreme poverty in many poorer countries. Furthermore, unless overall growth rates are higher in these very poor countries, then focusing on just the bottom 40% would actually keep many people in the top 60% of the distribution in extreme poverty for longer *if the reduction is taken equally from that part of the distribution*.

Once more, country experiences vary greatly (Table 8), but while for the world as a whole, poverty would be higher under this scenario than under a 2 percentage point gap, the same does not hold for the simple average across countries. Under this scenario, poverty would be 5.3 percentage points lower than the status quo, on average, and around 1 percentage point lower than under the 2 percentage point scenario. Again the range is very wide – poverty would be 10 percentage points higher than it is presently in Mali but over 25 percentage points lower in Lao and Bangladesh (Figure 21).

Table 9: Pro-poor growth (3pp) compared with observed patterns over last 30 years

	Most recent	Scenario 3	Gap
Mean	17.56	12.27	-5.29
Median	7	1	-1.5
Min	0	0	-17
Max	81	86	31
Count			100
Number of countries where pp3>actual			12
Number of countries where actual>pp3			61
Number of countries where pp3=actual			23

Figure 22: Pro-poor growth (3pp) scenario



In around 10% of countries, the poverty headcount ratio would not have been lower under this scenario than what actually occurred. A trade-off arises between average growth and growth for the bottom 40% as some very poor countries may actually lift more people out of poverty by focusing on growth for the entire distribution. For example, in the case of Mali or Central African Republic, less poverty reduction would have occurred under this scenario than in reality or in any of the other scenarios (Table 10). However even in these cases, if policies are intended for the poorest of the poor, then targeting the bottom 40% would always be better than focusing on the entire distribution.

Table 10: Extreme poverty headcount ratios in selected LICs based upon pro-poor growth scenarios

Country	Earliest Survey	Most Recent Survey	Initial	Actual	Equal Growth Scenario	Pro-Poor Growth (1pp) Scenario	Pro-Poor Growth (2pp) Scenario	Pro-Poor Growth (3pp) Scenario
Mali	1994	2010	0.86	0.5	0.64	0.65	0.66	0.67
Central African Republic	1992	2008	0.83	0.63	0.69	0.69	0.7	0.7

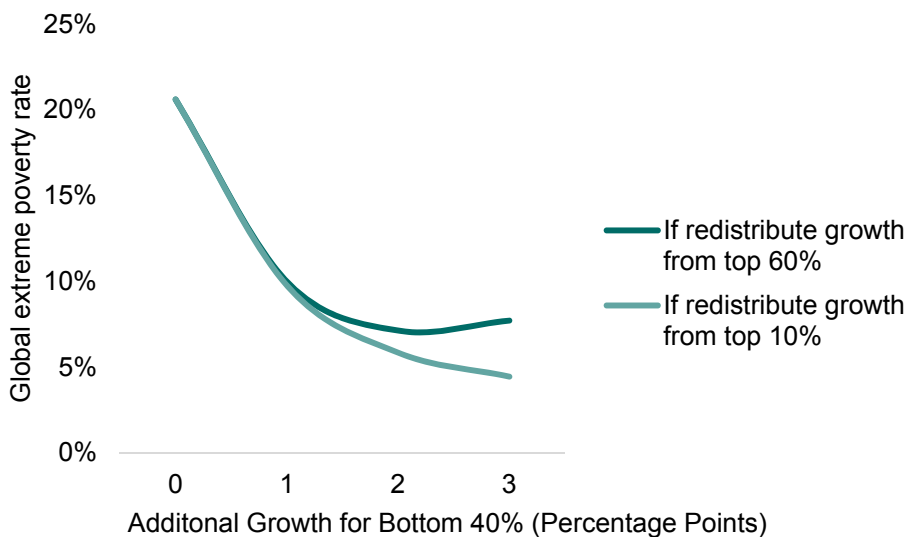
These scenarios illustrate that the greatest gains in terms of poverty reduction would have been made by changing the distribution of growth in most MICs, while in many LICs this would have done very little towards (even harmed in some cases) efforts to eliminate extreme poverty.

Redistributing growth from the top 10% vs 60%

In the analysis to date, we have assumed that the loss in growth is redistributed equally away from the upper 60% of the distribution. In reality, countries have a range of redistributive strategies open to them and the evidence suggests that redistribution often occurs between the top 10% and the bottom 40% of societies (see footnote 13). Consequently, we consider the implications of a redistributive scenario in which the growth that is gained by the bottom 40% within countries is redistributed from the upper 10 percent only.

The impact of these different pro-poor growth scenarios on the global extreme poverty rate is noticeably different (Figure 22). If growth is redistributed away from top 60%, then global poverty starts to increase after a certain point (less than 3 percentage points higher growth for bottom 40%). In contrast, if growth is redistributed away from top 10% the global poverty rate continues to decline (until a gap of more than 3 percentage points higher growth for the bottom 40%).

Figure 23: Extreme poverty under different redistribution scenarios



At the same time, even with the threshold for redistribution set extremely high, the amount of redistribution could still make people poor – as in Rwanda and Bangladesh, where the reduction in incomes of the top 10% would be sufficient to push 3 percent of people into poverty in each country if the bottom 40% grew 3 percentage points above the average. In short, changing whether to redistribute growth way from the top 60% or top 10% matters in high poverty countries (headcount ratios > 35) but it makes no difference in lower poverty countries (headcount ratios < 35).

3 Conclusion

Our key finding is that global poverty could be on track to be eliminated if growth had been as good for the poor as it was for everyone else. Global poverty could have been considerably lower had growth been more equal in MICs, however unequal growth was not a major constraint to poverty reduction in LICs. We have shown this by examining retrospectively four key scenarios – in which all incomes within each society grew at the average rate and the bottom 40% grew at 1, 2 and 3 percentage points higher than the mean (Table 11).

Table 11: Summary of findings on poverty impact of the different scenarios

	Actual	Equal gr b40%	1ppt	2ppt	3ppt/60%	3ppt/10%
2010	20.6	16.8	10.0	7.1	7.7	4.4

In these scenarios, we sought to hold growth constant. In the pro-poor scenarios, we looked at the impact of two types of redistribution – a reduction in incomes that would take place equally across the top 60% of the distribution, and a reduction that would take place equally across the top 10%. The emphasis on redistributing away from the upper part of the distribution highlights the potentially perverse impact of higher growth among the bottom 40% of the population in pushing people into poverty in some circumstances. When growth is subtracted instead from just the top 10% of the distribution, this problem is effectively eliminated in nearly all countries. This finding, alongside the diverse array of country experiences, suggests that the potential benefits of a pro-poor growth strategy are vast, but that attention needs to be paid to country-specific circumstances in deciding what type of growth to aim for and how to redistribute its gains.



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