

Shared Prosperity

Links to Growth, Inequality and Inequality of Opportunity

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Abstract

Focusing on the welfare of the less well off as a measure of real societal progress is the fundamental principle underlying the WBG indicator of “shared prosperity”, namely income growth of the bottom 40 percent in every country. This paper uses a database assembled by the World Bank Group to investigate some basic characteristics of shared prosperity, particularly its relationship with overall economic growth and inequality. Initial estimates using this dataset of 79 countries show that median income growth of the bottom 40 percent (circa 2005–2010) was 4.2 percent, a high number in comparison to the 3.1 percent per capita income growth of the overall population. In addition, the low and lower-middle income countries appear to be trailing the upper middle and high income countries in boosting shared prosperity. Establishing conceptual links between

income growth of the bottom 40 percent, the overall growth rate and reviewing existing evidence on how these relate to inequality, the paper discusses two main ideas. First, shared prosperity is strongly correlated with overall prosperity implying that the whole host of policies that are important to generate and sustain growth remain relevant. Second, boosting shared prosperity will also require a concerted effort to strengthen the social contract, particularly in the area of promoting equality of opportunity. Growing evidence suggests that improving access for all and reducing inequality of opportunities—particularly those related to human capital development of children—are not only about “fairness” and building a “just society”, but also about realizing a society’s aspirations of economic prosperity.

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I. Introduction

Promoting shared prosperity is about ensuring that everyone in society today as well as future generations participates in a dynamic process of continuing welfare improvement. The challenge facing the development community is not only to raise living standards in the poorest developing countries, but among poor people everywhere, continuously over time and across generations.

Raising the welfare of the poor in every country means ensuring that rising prosperity benefits the less well off. Consistent with this principle, the World Bank Group's (WBG) goal of promoting "shared prosperity" uses income growth of the bottom 40 percent of the population in every country as an indicator.¹ As described by the WBG, this simple indicator reflects the need for a growing economy, along with a fundamental concern for equity.² It captures the notion that for prosperity to be truly shared in a society, raising everyone above an absolute minimum standard of living and/or maximizing average income growth is not enough. Rather, for a society to become more inclusive, economic progress should lead to continuous increase in prosperity among the relatively poorer members of society over time. A focus on the incomes of the bottom 40 percent does not imply that economic growth is unimportant. Instead, the indicator signals the need to focus attention on the bottom two quintiles of the income distribution of a country, instead of the common practice of assessing economic progress by growth of GDP per capita and then expecting the benefits of growth to "trickle down" to those at the lower end of the distribution

The shared prosperity indicator is not intended to be comprehensive, in terms of including all relevant aspects of wellbeing. Rather, it serves as a "signal" of where the focus of governments and development agencies should be. The use of a money-based metric is not intended to ignore the many dimensions of welfare, but is instead motivated by the need for an indicator to be relatively easy to understand, communicate and measure, notwithstanding its own challenges of measurement. The essence of shared prosperity comprises the different dimensions of wellbeing of the less well off, today as well as sustainably for future generations.

This paper is a discussion piece on certain aspects of shared prosperity, which is primarily intended to start a discourse and hint at future areas of further research. In sections II and III, we discuss the principle and put forward some ideas on how the indicator can be measured consistently across countries, and highlight a few important trends and stylized facts emerging from a recently developed multi-country database (which remains a work in progress) on the shared prosperity indicator. Some of these results provide context to a discussion on how shared prosperity relates to growth and inequality. Section IV will briefly discuss some initial thoughts on how the agendas of economic growth, opportunities for all and shared prosperity form an interdependent cycle of progress, mediated by the role of state, markets and the social contract. Sections V and VI will focus in more detail on the links between shared prosperity and equality of opportunity, what these links could imply for the social contract, and how these links would matter for a policymaking process that seeks to promote shared prosperity. Section VII will conclude by summarizing the main insights of the paper.

II. Shared Prosperity: The principle and measurement

The shared prosperity indicator is based on the normative principle laid out by Basu (2001, 2006) that in evaluating a country's well-being, one should focus on the country's "quintile income" (per capita income of the poorest 20 percent of the country).³ The same principle of concentrating on the less well-off segment of society, but applied to a larger segment of the income distribution (bottom 40 percent instead of 20 percent), motivates WBG's goal of promoting shared prosperity.⁴

As mentioned above, the indicator is not intended to be comprehensive but rather serve as a "signal" of where the focus of governments (and its development partners) that share this objective should be. The indicator as defined is easy to understand and relatively easy to measure, albeit with its own challenges

(as the discussion below makes clear). Notably, the use of money-based metric is not intended to ignore the many dimensions of welfare. *First*, income itself is a multi-dimensional indicator of welfare because it aggregates the purchase of many commodities and services, including health and education. *Second*, a measure expressed in monetary terms has the advantage of approximating the notion of welfare in a single indicator. That said, as this paper will argue, sustainably ending poverty and sharing prosperity (the two goals set by the WBG) are unequivocally about progress in both monetary and non-monetary dimensions of welfare for the current and future generations. This includes, but is not limited to, education, health, nutrition, and access to essential infrastructure, as well as empowerment and enhancing voice and participation in economic, social, and political spheres. Hence, for shared prosperity to increase in a society, policymakers cannot just focus on maximizing income growth of the bottom 40 percent today.

Unlike the objective of minimizing poverty or inequality, the objective of maximizing the incomes of those at the bottom of the distribution has a natural dynamism, by virtue of it being a moving target. It is also consistent with the idea of prosperity being “unbounded,” as opposed to being defined by an absolute standard that everyone should reach, which is unlikely to remain constant as societies, along with the aspirations of people, evolve along the development path.⁵

In a country with gross inequalities, improving this measure will demand a focus on the conditions of the poorest segment of society. However, if the better off segments of society lag behind in the pursuit of prosperity for too long, they will fall into the bottom 40 percent and merit attention. This dynamic aspect of the indicator is a result of the bottom 40 percent of the income distribution being defined in an “anonymous” sense, which is to say, regardless of the *identity* of individuals in this group in any period (see below for more explanation). It also implies that economic growth, or overall increase in prosperity, is necessary for sustained progress in shared prosperity. Shared prosperity, therefore, is not an agenda of redistributing an economic pie of a fixed size. Rather, it requires expanding the size of the pie continuously and sharing it in such a way that the welfare of those at the lower end of the income distribution rises as quickly as possible. It also requires that progress is sustainable over time and across generations, in terms of the environment, social inclusion, and fiscal prudence. In fact, growth of the bottom 40 percent that comes only through redistribution is a process that is likely to collapse. Continued increase in incomes of the bottom 40 percent can only occur in the medium term through a process of sustained economic growth.

Measuring shared prosperity consistently across countries

The indicator to monitor shared prosperity, henceforth denoted as G40, is the growth in real per capita income (or its proxy, consumption) of the bottom 40 percent of the income (or consumption) distribution in a country. There are a few important facts about the indicator that affect its measurement, interpretation and aggregation across countries, and need to be stated upfront. *First*, this indicator is defined at the level of each country, which cannot be aggregated into an equivalent indicator at a higher level like a region or the developing world. Intuitively, this is because the bottom 40 percent in every country of a region does not add up to the bottom 40 percent of the region, given that within-country income distribution is vastly different from one country to another. *Second*, G40 must be derived from surveys that provide income or consumption data at the household level, which is essential for identifying the bottom 40 percent and their incomes. Therefore, G40 refers to growth in *per capita real household income* of the bottom 40 percent, which cannot be directly compared to growth in per capita GDP or GNI of a country.

Third, higher income growth of the bottom 40 percent is better for a society, given the normative principle stated earlier. But that statement must be qualified due to the indicator being insensitive to changes in income distribution *within* this income group. Growth in average income of the bottom 40 percent does not guarantee similar welfare gains in every segment within the bottom 40 percent.⁶ In fact, that the bottom 40 percent is quite a large part of the population makes it quite possible that the growth in average income of, say, the bottom five, 10 or 20 percent lags behind that of the bottom 40 percent.

Defining the indicator as growth in average income of a poorer group, like the bottom 10, 20 or 30 percent, would on the one hand reduce the extent of this problem. This advantage however has to be weighed against such an indicator being at the risk of high measurement errors (that are typically greater near the tails of the income distribution) and less appealing to the general population due to its focus on a smaller segment of the population. The choice of the bottom 40 percent as the “least well off” group to focus on is thus a compromise between these competing considerations. While the 40th percentile is admittedly an arbitrary threshold, the criticism of arbitrariness would apply to any such threshold.

Finally, as mentioned earlier, G40 is an anonymous measure, expressed as the growth in mean income of the bottom 40 percent of the income distribution between two periods irrespective of who the individuals belonging to this group are at either point of time. The distinction between anonymous and non-anonymous measures does not matter when repeated cross-section data is used for the calculation (such as the datasets we use in this paper), as there is no way of tracking households from one period to another. The distinction however matters if panel data were used to monitor shared prosperity, as it well might be in some countries for certain sub-populations. Even with panel data, the WBG indicator of shared prosperity would be growth in mean income of the *anonymously* defined bottom 40 percent between two periods. A non-anonymous measure – like income growth of those in the bottom 40 percent of the *initial* period’s income distribution – would instead reflect income mobility (or lack thereof) of a fixed group of individuals over time, which can be quite different from what the anonymous measure would convey.⁷

Comparable estimates across countries

Creating a cross-country dataset over time poses several comparability challenges. Since household surveys are infrequent in most countries and misaligned in terms of timing, perfect comparability is impossible without drastically reducing the number of countries for which the indicator can be reported. Moreover, while the indicator refers to “income growth”, in many cases household consumption must be used as a proxy for household income, particularly when income data are unavailable or of poor quality. The first and still provisional database used for the results reported in this paper, which is the result of an ongoing WBG initiative to create shared prosperity numbers, ensures some degree of comparability without making the criteria too restrictive. A clear and transparent set of criteria are adopted for selecting years/surveys, which goes some way toward ensuring consistency of estimates.⁸ Growth rates are computed as *annualized average growth rate in per capita real income (or consumption) over a roughly 5-year period during circa 2005-2010*, where only those countries with surveys that meet certain criteria for available survey data availability are included.⁹

For a global exercise, using annualized average growth rates over a (roughly) five-year is merited for a number of reasons. *Firstly*, annual household surveys are not available for most countries, which would imply that any degree of comparability between countries would only be possible using an annualized growth rate over a comparable length of time covering multiple years. *Secondly*, the choice of the length of the period reflects a balance between the competing considerations of “smoothing” and “stickiness”. Pursuit of shared prosperity is a medium-run proposition, where year-to-year fluctuations are less important for monitoring progress, since these can occur due to short-lived economic shocks (positive or negative) or one-time redistribution “events” that boost incomes of the less well off in unsustainable ways. An annual average rate over multiple years would tend to smooth out year-on-year volatility and thus preferable, even for countries where annual household data might be available. At the same time, averaging over too long a period (say, 10 years) would make the indicator resistant to change and likely to downplay (or reflect with a long lag) important movements.

III. Recent performance in Shared Prosperity

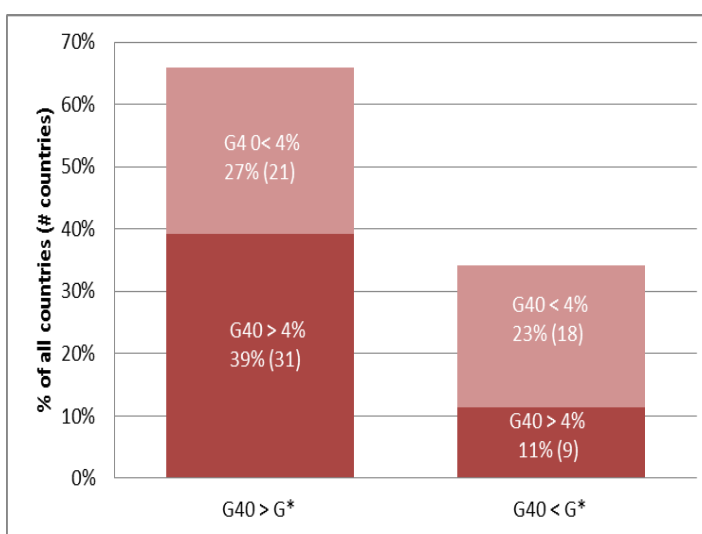
We use a database of 79 developing countries that have at least two household surveys that meet the criteria mentioned above, roughly five years apart during the period *circa* 2005-2010 (Figure 1). A number of interesting facts emerge. *First*, the median G40 in the sample is 4.2 percent, which is quite

high in absolute terms and higher than the annual growth in per capita income of the overall population (G^*), which is 3.1 percent. Overall, the less well off in developing countries have performed very well in the last part last decade despite the Great Crisis of 2008. This is consistent with the accelerated reduction in moderate and extreme poverty widely documented. *Second*, in almost two thirds of the countries, G_{40} was higher than the annual growth in per capita income of the overall population (G^*). The fact that the bottom 40 percent were “catching up” in some sense in these countries implies that inequality would have been declining. This result is consistent with the mixed picture on inequality reported by Olinto and Saavedra-Chanduvi (2012) for the last decade: except in Latin America, where the majority of countries witnessed a reduction in inequality, there is no clear pattern in other regions. They find that inequality fell in about two thirds of developing countries during the last decade; but when countries are weighted by population, about half the population of the developing world lives in countries where inequality has increased.

The final (and perhaps a bit more subtle) point that emerges is that G_{40} is positively correlated with reduction in inequality, at least in our sample of countries. Sixty percent (31 out of 52) of the countries with declining inequality were fast G_{40} countries (those with $G_{40} > 4$ percent) compared to only 33 percent (9 out of 27) of countries where inequality was increasing. While this correlation merits more attention (more on the later), fast growth in incomes of the poor seems to be more likely in countries where inequality is falling. However, the fact that inequality is actually increasing in nine countries with fast G_{40} (see Figure 1) suggests that inequality reduction is not *necessary* for boosting shared prosperity, at least in the short run.

To illustrate what these growth rates can mean for income trends in individual countries, the evolution of mean per capita household income of the bottom 40 percent and the overall population for 4 countries is shown in Figure 2. With the mean incomes of the initial year for each country normalized at 100, the graphs show relative growth of the two means over a period of roughly 20 years. The countries show widely diverging experiences. Among the two low-income countries, Bangladesh and Uganda, the former shows a steady but sedate pace of growth with the two means moving almost parallel after 1996, while the latter shows higher growth with much more variation in the relative rates of growth of the two means. Brazil and China, the two middle-income countries, offer a sharper contrast. In Brazil, after an initial period of stagnation in both means, the mean income of the bottom 40 percent has grown much faster than that of the overall mean. In China, while the gap between the two means has increased indicating rising inequality, both have grown much faster than have the means for any other country, including Brazil.

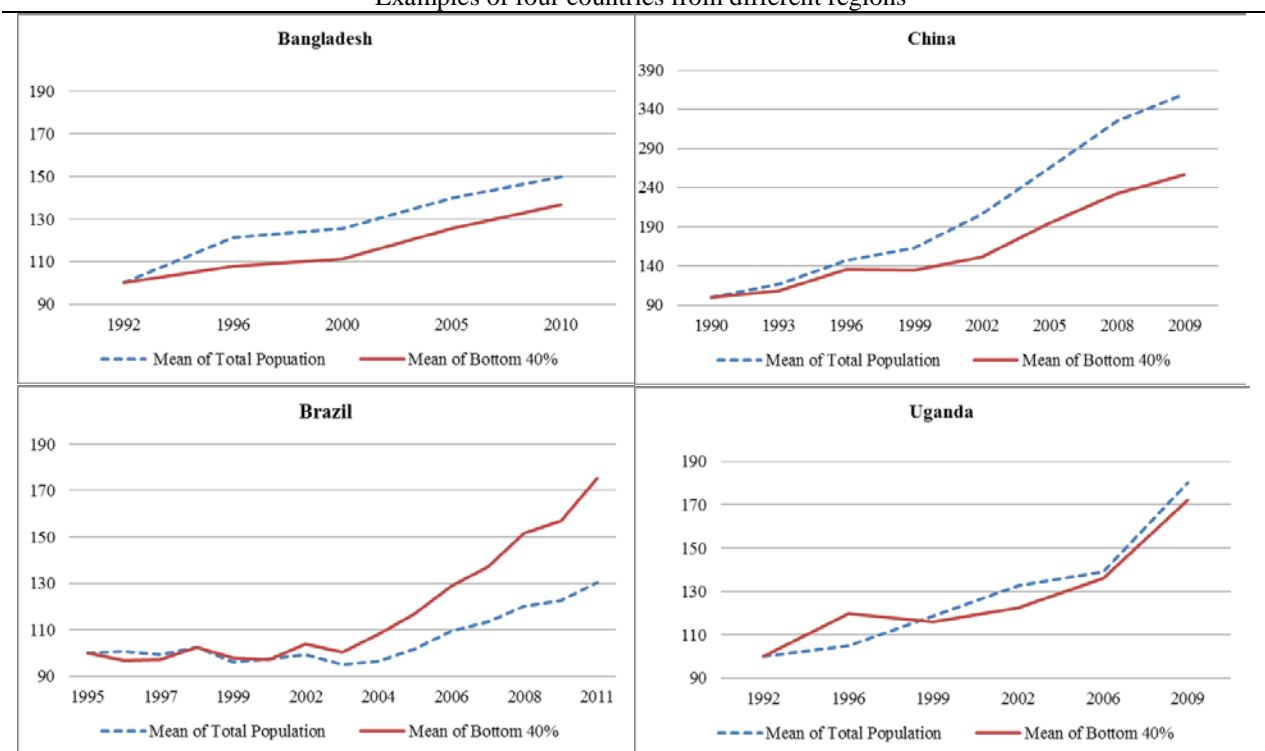
Figure 1: Income growth of bottom 40 percent, circa 2005-10
All countries with available data



Note: G^* : annual growth in per capita income of overall population and G_{40} is the growth rate of the bottom 40 percent. Sample of 79 developing economies.

Source: PovcalNet as of September 20, 2013 and micro data from regional databases of LAC and ECA regions

Figure 2: Evolution of mean incomes of bottom 40 percent and overall population during 1990s and 2000s
Examples of four countries from different regions

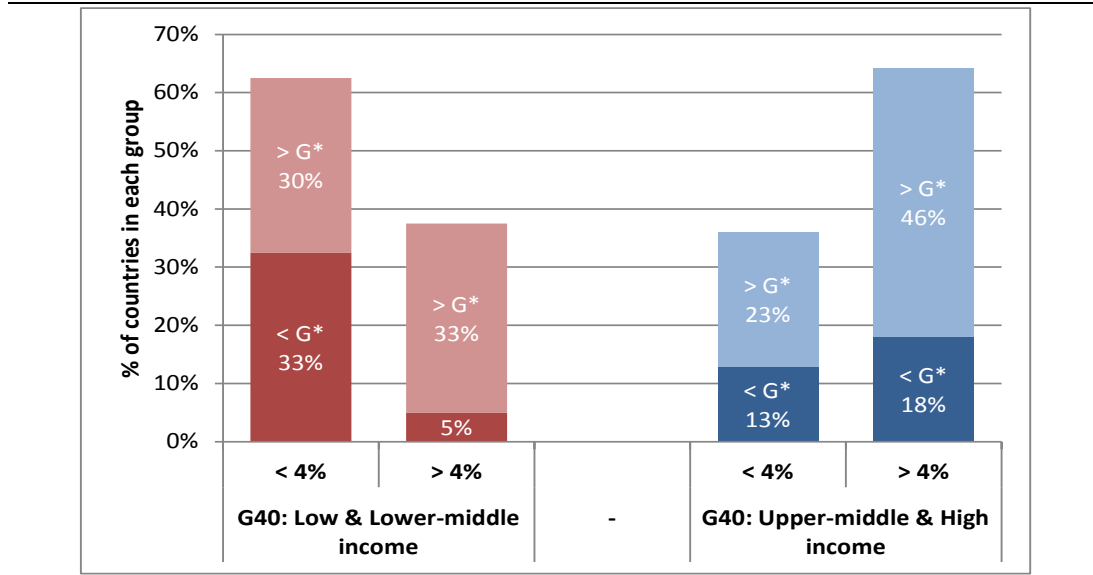


Note: Incomes are in real terms (constant 2005 PPP \$); and mean incomes of initial year for each country are normalized to 100.
Source: PovcalNet as of September 20, 2013 and micro data from regional database of LAC region

The well-established cross-country “convergence” seen in the growth literature suggests that countries with higher initial income might find it harder to achieve the same rate of GDP growth than a country with lower level of initial income. Whether such convergence carries over to household income growth of the bottom 40 percent among developing countries is an open question, for which our analysis provides some preliminary insights. Figure 3 shows the summary of results for two separate classes of countries, using WBG classification by per capita Gross National Income.¹⁰ Thus classified, there seems to be no pattern of cross-country convergence in income growth of the bottom 40 percent. G40 of four percent and above (a somewhat arbitrarily high threshold) is seen for 64 percent of upper-middle and high income countries, compared to 38 percent of lower-middle and low income countries (Figure 3). The median of G40 among the richer group of countries is five percent, compared to 2.9 percent among the poorer group. Lack of convergence is seen for G*, namely income growth of the overall population as well: median of G* is 4.5 percent for the richer group and 2.6 percent for the poorer group of countries.

These facts contrast with the commonly held perception of low income countries catching up with richer ones. While such convergence is occurring for some groups of countries, the results above suggest a more nuanced convergence story as there is much heterogeneity in the developing world. *Within* the diverse group of countries that make up the developing world, many low and lower middle-income countries seem to have fallen farther behind richer countries on growth of household incomes. While there has been a convergence in incomes between industrialized and developing countries, other inequalities are being created within the developing world. Moreover, and to make the inequality picture more complicated and also less encouraging, the less well off in the poor countries are still lagging behind those in richer developing countries.

Figure 3: Income growth of bottom 40 percent, circa 2005-10
Countries classified by GNI per capita



Note: 1) G^* : annual growth in per capita income of overall population. 2) World Bank classification of countries, by 2012 GNI per capita (Atlas method): low income, \$1,035 or less; lower middle income, \$1,036 - \$4,085; upper middle income, \$4,086 - \$12,615; and high income, \$12,616 or more.

Source: PovcalNet as of September 20, 2013 and micro databases from WB regional teams for Latin America and Europe and Central Asia.

How the two groups differ in overall performance in shared prosperity is best captured by two statistics from Figure 3. From a normative perspective, one can assume that unambiguously strong performers are those countries where incomes of the poor grow rapidly and faster than the mean, namely countries where G_{40} exceeds 4 percent annually and G^* . These “unambiguously strong performers” account for 46 percent (18 of 39) of upper middle and high-income countries, but just one-third (13 of 40) of low and low-middle income countries. Conversely, 33 percent (13 out of 40) of low and lower-middle income countries had G_{40} lower than 4 percent and below G^* , compared to just 13 percent (five out of 39) of upper-middle and high income countries. These differences do not seem to be driven by systematic differences in inequality trends between the two groups of countries – G_{40} exceeding G^* is seen for similar proportions of both groups of countries. For both groups, G_{40} is more likely to exceed G^* when it is high (above 4 percent), suggesting a positive correlation between inequality reduction and G_{40} for both groups of countries.

Comparing performance across countries – caveats and nuances

Certain qualifications are however important to note about the results above. *Firstly*, the classification of countries by GNI per capita of 2012 could have resulted in the exclusion of countries that had started the period in the poorer group but since achieved rapid economic growth to “graduate” out, which could have biased the median G_{40} (and G^*) of the lower and lower-middle income group downward. This turns out to be less of a concern though. G_{40} has a positive correlation with (log of) GDP per capita in the *initial* period (0.28), which is only slightly lower than its correlation with (log of) GNI per capita of 2012.¹¹ Thus on the average, countries that were richer *at the outset* appear to have had higher income growth for the bottom 40 percent than poorer countries. *Secondly*, since household income (as opposed to consumption) growth is used for a much higher share of countries in the richer group than in the poorer group, it is possible that part of the difference in growth rates between the two groups is driven by how the rates are measured. While the data shows some risk of this happening, preliminary analysis suggests

the results are not attributable to this measurement issue only. Including only those countries for which consumption is used to measure growth rates, median G40 among the richer group of countries is higher than that among the poorer group, although the gap is smaller than before.¹²

More in-depth analysis is needed to draw conclusions about relative performance across countries and country types, given that the two groups of countries used here are quite heterogeneous. This would, at the minimum, require a framework that takes into account a range of exogenous factors— such as initial characteristics; global or regional conditions; as well as systematic differences in measurement (such as household income versus consumption to measure growth). A careful development of such a framework should be the subject of future work. That said, results from some simple and preliminary analysis provide a starting point and interesting nuances to the convergence issue discussed above. These are Ordinary Least Squares regressions of G40 (and G*) on a minimalist set of variables that proxy the factors mentioned above.¹³

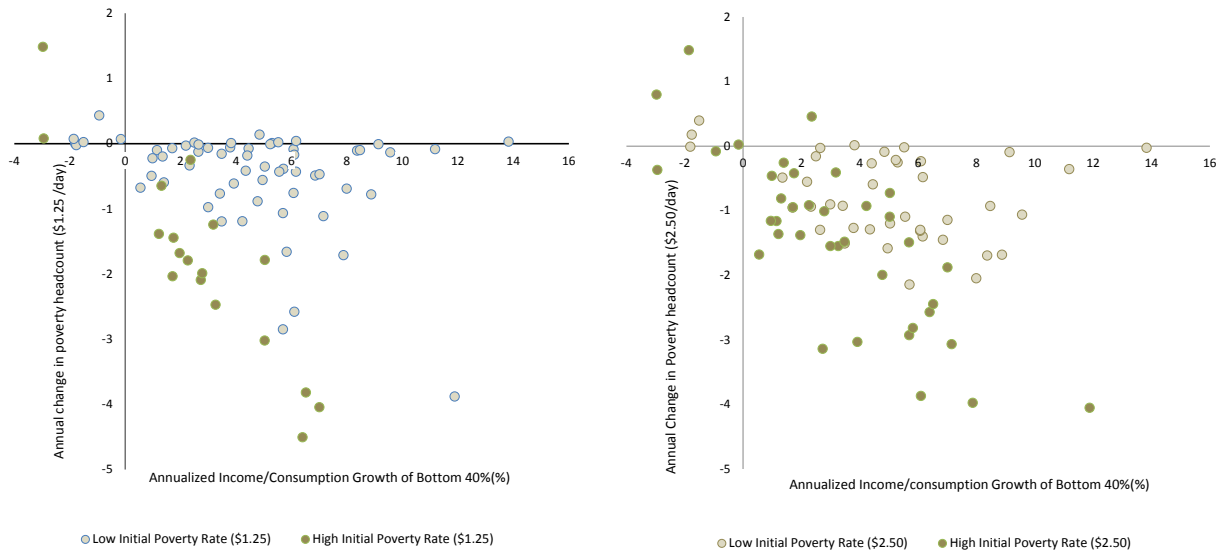
The results that are robust to different specifications suggest that lower initial dependency ratio (share of dependents to those of working age in the population) and the use of income to measure growth rates are associated with higher G40. Other factors – initial education endowment, global growth during the exact period for which G40 is measured for a country, and the region a country belongs to – are less important in all cases. Notably, net of the effects of all these factors, G40 is negatively related to (log of) initial GDP per capita or per capita household income (or consumption) of the bottom 40 percent, indicating convergence. Regressions of G* using similar specifications yield broadly similar results.

What do these results tell us about convergence across developing countries and about growth of the bottom 40 percent in general? The unconditional correlations quoted earlier, which are quite robust, indicate the lack of overall convergence – the bottom 40 percent of poorer countries catching up with the living standards of the bottom 40 percent of richer developing countries – during the second half of the 2000s. However, the regressions suggest that *net of the effect* of other factors (like dependency ratio, education endowment and how G40 is measured) that matter, income growth of the bottom 40 percent is faster in poorer countries relative to richer countries of the developing world. These are also the factors, along with a few others, that need to be taken into account in making a fair comparison of performance across countries, since they are either impossible to change in a period of five years. These preliminary results also suggest that while there is no guarantee that living standards of the less well off in poor countries will catch up with the incomes of richer countries, *if* the right conditions are in place (e.g., more human endowment in terms of education and labor resources), history suggests that such convergence is likely to occur. Finally, even with a sparse set of variables to capture “human endowments”, these results hint that non-monetary dimensions have important association with income growth of the bottom 40 percent, just as they do with average income growth of the population. This is particularly relevant for the discussion on the role of “opportunities” as a channel to increase incomes of the well-off in subsequent sections.

Shared Prosperity is positively associated with changes in poverty

A high correlation between G40 and change in poverty rates is expected, given that the bottom 40 percent of many countries overlaps strongly with those below the poverty line, depending on where the poverty line is placed. Figure 4 graphs the annual change in poverty headcount rate, measured with two different international poverty lines, against G40 for the same countries and years. The graphs also differentiate the countries by poverty rate in the initial period, with a darker colored dot indicating higher initial poverty rate.

Figure 4: Reductions in poverty are correlated with income growth of the bottom 40 percent
Correlation is stronger for higher poverty line and higher initial poverty rate



(a) \$1.25/day poverty reduction and G40

(b) \$2.50/day poverty reduction and G40

Note: Darker color indicates higher initial poverty rate (> 30 percent) for either poverty line.

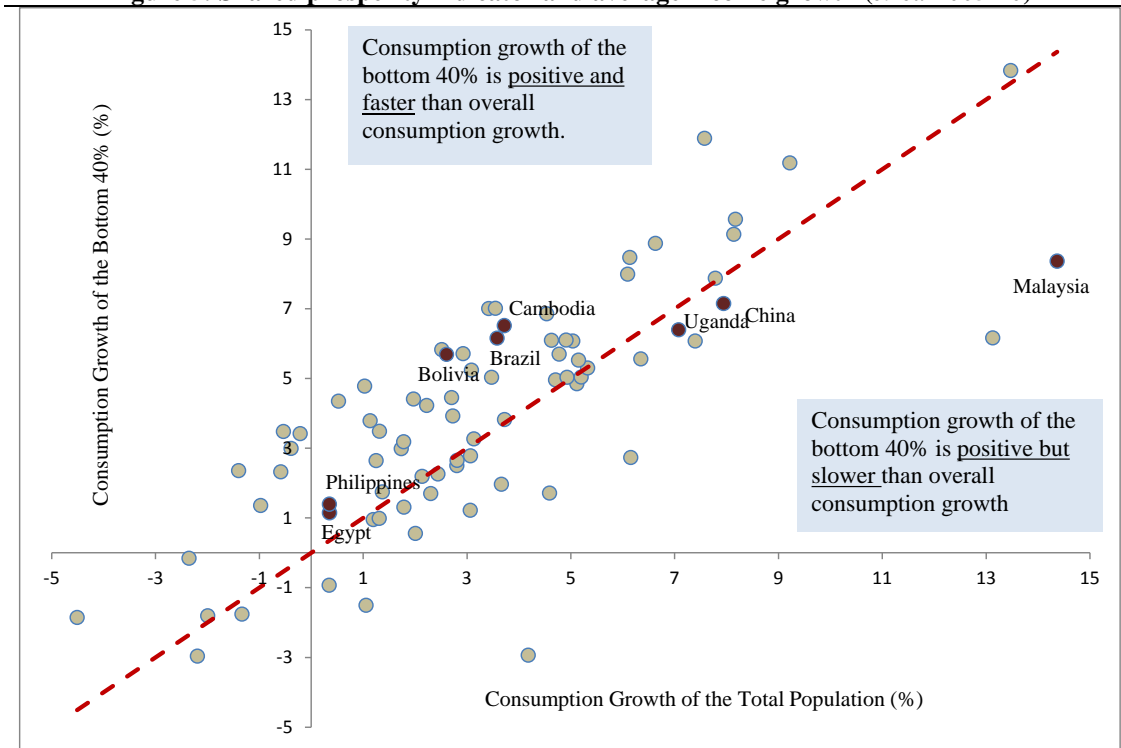
Source: PovcalNet as of September 20, 2013 and micro databases from WB regional teams for Latin America and Europe and Central Asia.

The correlation between G40 and poverty reduction is stronger (-0.44 versus -0.28) for the higher poverty line (\$2.50/person/day versus \$1.25/person/day). Thus on the average, the bottom 40 percent of a country has a larger overlap with the population living below \$2.50/day, which is closer to national moderate poverty line in middle-income countries. Correlation is also stronger for countries with higher initial poverty rate (for both poverty lines), which is intuitive. But the correlations are imperfect. The lower correlation between reducing *extreme* poverty and promoting shared prosperity (measured through income changes of the bottom 40 percent) demonstrates that these are distinct development challenges, with only a limited degree of overlap. Interestingly, regardless of which poverty line is used, the correlation between G40 and poverty reduction is higher for countries with higher rates of initial poverty.

Shared Prosperity, growth and inequality

Overall income growth is a necessary condition for rising shared prosperity. Data from circa 2005-2010 shows a positive association between income growth of the bottom 40 percent and growth in average income (Figure 5). A correlation coefficient of 0.77 suggests that the relationship is strong. Several papers by David Dollar and Aart Kraay have provided robust evidence of the impact of growth on poverty reduction. Similarly, Dollar and others (2013) argue that overall income growth is also sufficient for income growth of the bottom 40 percent thereby suggesting “overall prosperity” and “shared prosperity” are closely related. Another forthcoming work, by Skoufias and others (2013), broadly corroborates the close correspondence between growth rate of the mean and the growth rate of the bottom 40 percent across provinces in Thailand, but finds change in inequality to matter as well. Specifically, provinces in Thailand that made progress on reducing inequality were generally also the ones that experienced a faster growth of the bottom 40 percent. This finding appears to resonate, at least at the conceptual level, with the notion that in situations where inequality is high or rising, the growth rate of the average will not accrue proportionately to the bottom segments of the distribution. Economic research has also looked closely at the role of *initial* inequality in explaining how economic growth translates to poverty reduction, and generally found the effect of growth on poverty reduction to be greater in low-inequality countries.¹⁴

Figure 5: Shared prosperity indicator and average income growth (circa 2005-10)



Source: PovcalNet as of September 20, 2013 and micro databases for Latin America and Europe and Central Asia.

That economic growth does not necessarily translate to income gains among the less well off is also seen from the history of household income growth in the United States, where per capita household income of the bottom 40 percent increased by just 7.5 percent between 1975 and 2012, while overall mean per capita household income was rising by 40.5 percent. In the last decade (2003-2012), incomes of the bottom 40 percent fell by 7.3 percent and overall household income was flat, while the economy grew by around 23 percent. “The disconnect between overall growth and shared prosperity”, as Jared Bernstein calls it in a blog,¹⁵ raises doubts about whether economic growth is sufficient to raise incomes at the lower end of the income distribution. In our sample of countries for the period under consideration, the correlation between G40 and per capita GDP growth is only 0.12.¹⁶ This is partly explained by the fact that income growth from household surveys often does not match growth from national accounts due to a number of reasons, including measurement problems arising out of the use of two entirely different sources of data. However, the fact that G* and per capita GDP growth have a much higher correlation of 0.32 suggests that income growth of the bottom 40 percent and GDP growth have an even more tenuous association than what would be explained by differences due to data sources alone.

On the other hand, a fall in inequality is *neither a necessary nor a sufficient condition* for a rise in shared prosperity. Inequality can be functional to socioeconomic development at some stages, and can be a deterrent at others. In some countries, such as Egypt and the Philippines in Figure 5, annual income growth of the bottom 40 percent was just around one percent during 2005-2010, even though the rate was higher than the growth of average income of the population. By our measure, falling inequality did not translate to rising shared prosperity in these countries. Conversely, income growth of the bottom 40 percent in a country could occur, at least temporarily and especially in low-income countries, with average income growing faster than the income of the less well off. Uganda in Figure 5 is one such example. Some rise in inequality could well be necessary to generate growth, particularly in relatively stagnant economies trapped in a low-level equilibrium, by creating incentives that improve rewards to

innovation and risk taking and inducing firms and people to invest in human and physical capital.¹⁷ China saw a dramatic increase in incomes of the poor in the last 30 years amid a sharp increase in inequality. This increase in inequality may be related to increases in inequality of opportunity – a perception that has already generated a policy shift that emphasizes equitable growth to build what the Chinese call a “harmonious society”. Despite this shift, inequality has stayed persistently high between 2003 and 2012 (even while incomes of the poor continued increasing).

While a fall in inequality does not necessarily translate to higher income growth among the less well off (and vice-versa), sustained growth in incomes of the less well off does often occur during a time of falling inequality, as has been witnessed in a number of developing countries during the past decade. In fact, in 31 out of 40 developing countries where incomes of the bottom 40 percent grew at 4 percent or more annually, this rate was also higher than average income growth of the population (see numbers in Figure 1 earlier) – a list that includes countries as different as Brazil, Bolivia and Cambodia (Figure 5). These are countries where strong income growth among the bottom 40 percent was a result of not just overall income growth, but also some degree of redistribution in favor of the less well off.

The discussion above suggests that income growth of the bottom 40 percent is negatively but imperfectly correlated with change in income inequality. A correlation of -0.22 between G40 and percentage change in the Gini coefficient for income (or consumption, as relevant), is consistent with earlier numbers: in 78 percent countries with G40 above four percent, G40 was also higher than G*, compared to 54 percent of countries where G40 was lower than four percent.¹⁸

What are the implications of adopting inequality reduction as a development goal?

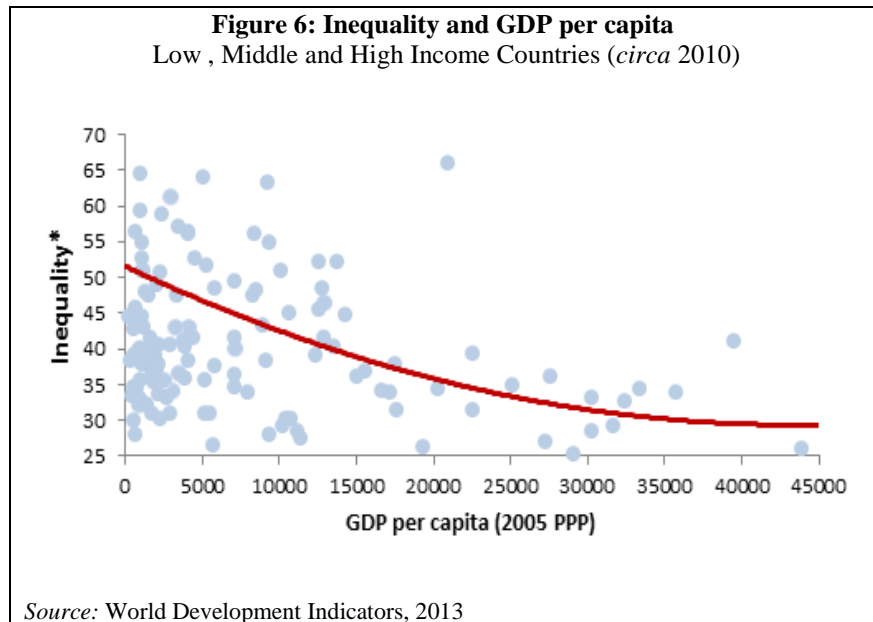
The recent exercise by the WBG of recasting its mission around poverty and shared prosperity, as well as the discussion about the post 2015 new set of Millennium Development Goals, have raised a debate on adopting inequality reduction as an explicit objective. There are many reasons why high inequality, on its own, is cause for serious concern. For many, high inequality is morally unacceptable and a symptom of a broken social contract. High inequality can lead to social conflict and instability that could lead to lower economic standards for everyone. In many cases, high inequality could be a reflection of the fact that not everyone has the same chance to reach their potential in life; that some have access to basic economic, social and human rights and others not; and that opportunities are related to where an individual was born, who the parents are, or an individual’s race or gender.

Should reduction in inequality in itself then be a goal rather than income growth of the bottom 40 percent, as the WBG has selected? One can argue, for example, that the goal should be to ensure that per capita income growth of the bottom 40 percent (G40) always exceeds that of the overall population (G*), which would be equivalent to reducing inequality.¹⁹ While this can indeed be a relevant goal for particular countries during certain periods, it is hard to see how it would work better than G40 when applied across all countries and over time. For example, if the goal were to maximize the ratio of (or difference between) G40 and G*, an economy with low average income growth and a slightly higher growth among those at the bottom would be ranked above an economy where income growth at the bottom is high but lagging behind (an even higher) average income growth. In Figure 4, it would mean Egypt and the Philippines ranking higher in “shared prosperity” than China, Malaysia and Uganda, which seems counter-intuitive.

Instead of being all about inequality, the shared prosperity goal is motivated by a normative principle that evaluates a society’s well-being by the welfare of the least well off. This has the implication that while inequality is undesirable, poverty is the greater evil; and while reducing inequality is in many instances instrumental to promote welfare of the least well off, increases in inequality may have to be “tolerated” sometimes to achieve that objective (Basu, 2006).²⁰ When the central concern of a society is welfare of the least well off, income growth of the bottom 40 percent (or any other indicator that applies to the bottom part of the income distribution) works better as a goal than inequality reduction. Higher growth of

incomes of the bottom 40 percent would always indicate progress consistent with the normative principle stated above, in any economy and any period without exception. The same cannot be said about reduction in inequality (applying the same normative principle), since reducing inequality is not always synonymous with raising the living standards of the poor.

The fact that income growth of the less well off and reduction in inequality may not go hand in hand in the short run, however, does not imply that the long-run relationship between the two is equally ambiguous. Economic progress that sustainably improves welfare of those at the bottom is incompatible with a long-term rise in inequality, indirect evidence for which comes from the fact that no country has transited beyond middle-income status while maintaining high levels of inequality (Ferreira and Ravallion, 2009). This is



shown in Figure 6, which shows a large variation in inequality among low and middle-income countries, but clearly a lower average inequality for high-income countries than low and middle-income countries (the outlier dot to the right is the United States).

While the causal relationship between inequality and long-term economic development has been a subject of considerable debate, recent empirical literature provides some evidence to suggest that inequality has a negative impact on economic growth on the average. For example, Herzer and Vollmer (2012) find that inequality has a negative long-run effect on income.²¹ Benjamin and others (2011), using a large longitudinal sample of households in rural China, find that households located in higher inequality villages experienced significantly lower income growth through the 1990s.²² Voitchovsky (2005) finds a more complex relationship – while inequality at the top end of the distribution is positively associated with growth, inequality lower down the distribution is negatively related to subsequent growth.²³ Berg and others (2012) find evidence to suggest that high inequality is associated with shorter growth episodes, which would lead to greater volatility and lower overall economic progress.

Researchers have advanced a number of theories on how high inequality may adversely affect economic development. These include theories that inequality can promote distortionary policies (Alesina and Rodrik 1994), limit cooperation among economic agents (e.g. Rajan 2009), and induce credit market failures (Banerjee and Duflo 2003). Easterly (2007) finds empirical evidence from historical data that high structural inequality is a significant barrier to prosperity as well as good quality institutions and schooling – identified in the literature as some of the *mechanisms* by which higher inequality lowers per capita income. Inequalities that arise from providing the rich with benefits that protect their power, influence and shield them from economic fluctuations can directly and disproportionately impact the poor. There is also some evidence to suggest that in countries with high inequality, a large share of the inequality is associated with inequality of *opportunity*, namely inequality arising due to differing circumstances at birth, such as parental background, gender and ethnicity (see section V below). This

suggests that high inequality is likely to perpetuate over time, trapping a certain segment of the population in a cycle of low income and opportunities across generations.

For all these reasons, income growth of the bottom 40 percent that is consistently lower than the average income growth in a country should raise concern, since it could stifle eventually the growth process itself by affecting the quality of institutions, causing political instability, and reducing economic and social mobility across generations. Thus in cases where inequality is already high, it appears that boosting shared prosperity would require that incomes of the bottom 40 percent grow faster than the average income of the population over the medium to long-term. That said, there are unanswered questions about the extent of the relationship between inequality and income growth of the less well off in the long run and the underlying factors that influence the relationship, which merit the attention of future research.

IV. Pathways to shared prosperity

The concept of shared prosperity is multidimensional, despite the use of a relatively simple monetary indicator. On the one hand, a monetary indicator is to some extent multidimensional by itself, as it indicates the ability to obtain many goods and services critical for welfare through market transactions. On the other hand, welfare includes many other dimensions that are of a public good nature, such as access to education, health, clean water, sanitation and electricity, which a monetary indicator may not capture. Moreover, shared prosperity has an intertemporal dimension, which is in turn a strong argument against unsustainable development paths that produce higher welfare today, while leaving future generations at a disadvantage in terms of human and natural endowments and financial sustainability.

The goal of promoting shared prosperity highlights the need for a social, economic and institutional arrangement that maximizes welfare of the less well off, along multiple dimensions of well-being and on a path that is intertemporally sustainable. Growth that is inclusive of the poor and accelerates progress towards a just society does not come automatically, but requires mechanisms to ensure that the less well-off are an integral part of the process. How a specific society chooses to provide these opportunities will be context and time dependent, with no single optimal institutional arrangement that would apply to all societies.

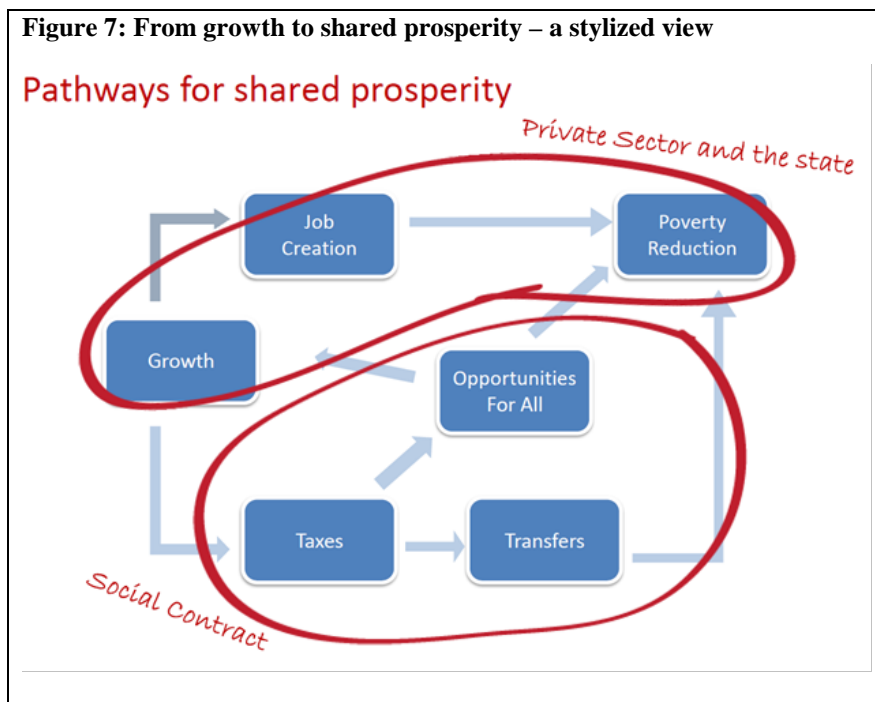


Figure 7 provides a schematic view of how economic growth can be translated into shared prosperity, which is but a highly stylized and simplified view of a much more complex process. One channel to link growth with incomes of the poor runs through jobs. Economic growth can lead to broad-based prosperity if the growth pattern generates more and better quality jobs and higher earnings for all segments of the population. The World Development Report of 2013 has persuasively argued that jobs are also a transformative force—jobs empowering women lead to greater investments in children and efficiency increases as workers get better at what they do and as more productive jobs replace less productive ones. In the decade of the 2000s, most of the reduction in poverty across the globe was related to better labor market engagement in the form of more and better paying jobs; only to a lesser extent did direct income transfers to the poor, remittances or changes in demographic patterns contribute.²⁴

Evidence also suggests that poverty reduction is higher when growth is biased towards labor-intensive sectors.²⁵ But for this to occur, growth needs to be diversified and generate employment opportunities in multiple sectors. While such economic transformation is led by the private sector, the state needs to play a crucial enabling role to improve competitiveness, promote investment climate and encourage innovation. This includes providing a regulatory and macroeconomic environment that provides stability and the right incentives to the private sector, and investing in public goods like physical infrastructure and in people to build a modern workforce.

The second channel is that of a healthy and stable social contract to ensure that growth is inclusive of the poorer segments of society. The term “social contract” refers to some degree of societal consensus over the basic principles of the operation and role of the state vis-à-vis the private sector and citizens. In this usage, social contract refers to some aspects of a social equilibrium, including the beliefs and actions of citizens, key groups, and state actors. Some of the key elements that can be used to characterize the nature of a social contract are the structure of taxation and social expenditures, the performance of the state in using revenues to deliver and regulate the provision of public goods, and the structure and effectiveness of the social protection systems (Saavedra and Tommasi, 2007)

A social contract for promoting shared prosperity must include investments and building of institutions that improve opportunities for all citizens, and protect the vulnerable against extreme deprivation and shocks. It must also include mechanisms to raise resources to support these policies through a tax system that promotes fairness through progressivity and creates incentives for economic growth. The redistribution of resources this implies is not just about transferring income from one segment of the society to another at a point of time, but more about investing in improving the capabilities of people over time and across generations. An effective social contract is about creating a virtuous, self-sustaining cycle – leveraging economic growth to improve human capabilities, which in turn feeds back to growth, and so on. The next section elaborates on this argument in more detail.

V. Equality of opportunity and shared prosperity

The social contract to promote shared prosperity needs to be based on the principle of creating an “equal opportunity society”, where the human and productive potential of every individual is maximized, regardless of the disadvantages s/he is born with. In childhood and youth, this would imply providing universal access to early childhood development inputs, health, nutrition and education to build human capital and increase productivity. During adulthood, it would imply creating the opportunity to participate in labor markets, become entrepreneurs, develop skills to keep up with a changing economy, have access to productive assets, financial services, markets and infrastructure, and be active in the social and political spheres. Efforts to improve and equalize opportunities would lead to immediate rise in welfare along multiple (including non-monetary) dimensions, particularly among the poor and the excluded. Over the long term, it would also promote social mobility, reduce income inequality and enhance economic dynamism and prosperity for the economy as a whole.

The concept and measurement of equality of opportunity

Underlying the idea of an opportunity society is the principle of equality of opportunity (see, for example, Roemer, 1993 and 1998 and Van der Gaer, 1993), which states that the "circumstances" a person is born into, such as gender, location, and parental, social and economic background, should not determine opportunities, so that the individual's outcomes and achievements in life depends only on her effort and innate ability. The principle is based on ideas developed by a long list of influential thinkers on issues of fairness and rights that underscore fairness of process and opportunities rather than outcomes.²⁶ While the definition of "opportunities" is subjective and oft debated in the development literature, a minimal definition that most societies can agree on is that of a set of basic goods and services for children, such as (but not limited to) safe water, adequate sanitation, nutrition and primary schooling (see Barros and others, 2009). This minimalist view equates opportunity with access to basic goods and services in the early life of an individual, which improve the likelihood to maximize his/her human potential, and in most cases are considered basic economic and social rights. Focusing on access to basic goods and services also underscores the notion of *multi-dimensional welfare that lies at the heart of the idea of shared prosperity*.

Defined as above, most societies can also agree on equality of opportunities being a worthy goal to aspire toward. Promoting equality of opportunities has an intuitive appeal that transcends ideological difference, as it is fundamentally about equity – how level is the playing field for individuals – and not about equalizing outcomes. In many instances, it offers a way out of the sometimes politically polarizing debate over inequality. Agreement on the principle of equality of opportunity across the ideological spectrum can create a basis for action in society, even if there are still deep disagreements on the policies and the role of state vis-à-vis markets to translate these principles into action. To aid this process, systematic ways for countries to measure progress toward providing opportunities to all its citizens are needed. Responding to this need, researchers within the World Bank and outside have adopted a number of different ways to measure opportunities, including an intuitive measure named the "Human Opportunity Index" (HOI), which has been applied to a number of countries (Barros and others, 2009 and 2010).²⁷

Opportunities, growth and shared prosperity – a virtuous cycle

The arguments above make the case for how equality of opportunity is fundamental to the idea of an equitable society with a level playing field for all individuals. The World Bank's 2006 World Development Report argues that inequality of opportunity weakens prospects for overall prosperity and economic growth. While research on the causal impact of inequality of opportunity at the macro level is at a nascent stage, some evidence suggests that such inequality has an adverse impact on growth and development. Inequality of opportunity in education among children seems to have a negative impact on per capita income (Molina and others 2012). There seems to be a negative relationship between the component of income inequality attributable to circumstances and economic growth across the states in United States (Marrero and Rodriguez, 2010). *Inequality* in health, proxied by the gradient in child mortality over mothers' education groups, has a significant negative impact on economic growth, possibly explained by how health inequality affects average labor productivity (Grimm, 2011).²⁸ New research by Skoufias and others (as cited earlier) also finds some suggestive evidence on a robust negative relationship between inequality of opportunity and income growth of the bottom 40 percent of the income distribution across provinces (*changwats*) in Thailand.

Micro-level studies find strong evidence linking interventions to equalize opportunities earlier in life to better outcomes in adult life, and that early interventions are significantly more cost-effective and successful than those attempted later in life. Research shows that preschoolers with low levels of cognitive development have lower school achievement and earn lower wages in adulthood (Currie and Thomas, 1999; Case and Paxson, 2006); and that early childhood education has substantial long-term impacts, ranging from adult earnings to retirement savings (Chetty and others, 2010). Moreover, lost

opportunities during childhood cannot always be compensated for. Child malnutrition, for example, can generate life-long learning difficulties, poor health and lower productivity and earnings over a lifetime (Alderman and others, 2006 and Hoddinott and others, 2008).

James Heckman (2012) makes a compelling case that public policy interventions early in life can produce “positive and lasting effects on children in disadvantaged families.”²⁹ He stresses that both cognitive abilities and non-cognitive characteristics – such as perseverance, attentiveness, motivation, self-confidence, and other socio-emotional qualities that are highly important for social success – develop in early childhood. Early interventions can improve cognitive as well as socio-emotional skills, which in fact enhance the benefits of later interventions. To foster greater equality of opportunity and a more dynamic economy, he calls for a shift in social policy toward early intervention, with later interventions designed to reinforce those early efforts.

Therefore, improving opportunities for children – by improving coverage and reducing inequality of opportunity – is not just about building a “just society”, important as that is, but also about realizing a society’s aspirations of economic prosperity. Notably, the dividends of investing in opportunities among children are likely to accumulate over time and across generations. Heckman calls improving the early lives of disadvantaged children as “pre-distribution”, and argues that such pre-distribution “is far more effective than simple redistribution in promoting social inclusion and, at the same time, at promoting economic efficiency and workforce productivity”.

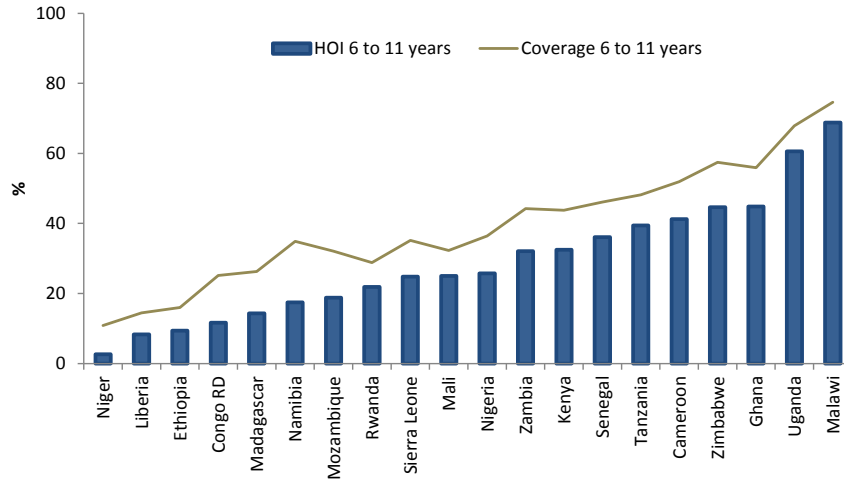
A focus on equality of opportunity in the social contract is thus necessary to promote shared prosperity from the point of view of equity and growth alike, as well as to sustain increases of the less well-off in the medium term. When the distribution of opportunities is linked to circumstances like gender, region, ethnicity, or parental background, the upward mobility of an entire group of people is impeded. Closing the opportunity gaps in society, and particularly so among children, is therefore necessary for promoting and sustaining income growth of the less well off in the medium term.

Addressing inequality of opportunity can also be optimal from a social and political economy perspective. Recent research for countries in the Europe & Central Asia region suggests that citizens of countries with higher inequality of opportunity are more likely to perceive their society as unfair and report lower life satisfaction. Moreover, perceptions of fairness seem to have a stronger correlation with inequality of opportunity than overall (or interpersonal) income inequality (Abramowitz and others, 2013).³⁰ Thus, when inequality of opportunity is high, building social stability and achieving consensus on a social contract can become more difficult. Breaking such a cycle would require a focus on reducing such inequities, in a visible way that mends perceptions, repairs trust and builds policy consensus among citizens. Just focusing on reducing opportunity gaps, however, would not be enough, since the *process* through which opportunities are equalized matters as well. This requires promoting the notion of “process freedom” or agency, which is based on the idea that individuals are also the agents of development, and the path of development needs to be one that enables them to have voice and to participate in the processes that affect their lives.

Opportunities for all is a distant goal in most developing countries

Inequality of opportunity is not a challenge for developing countries alone. Heckman calls “the accident of birth” to be a principal source of inequality in the United States, for example. The problem, however, is even more acute in developing countries. In many low-income developing countries, the goal of universal and equal opportunities, even in terms of access to the most basic goods and services, remains distant. For example, a study of 20 countries in sub-Saharan Africa (SSA) shows access to basic goods and services among children to be highly inadequate in almost all the countries and unequally distributed among children of different circumstances (Figure 8).³¹

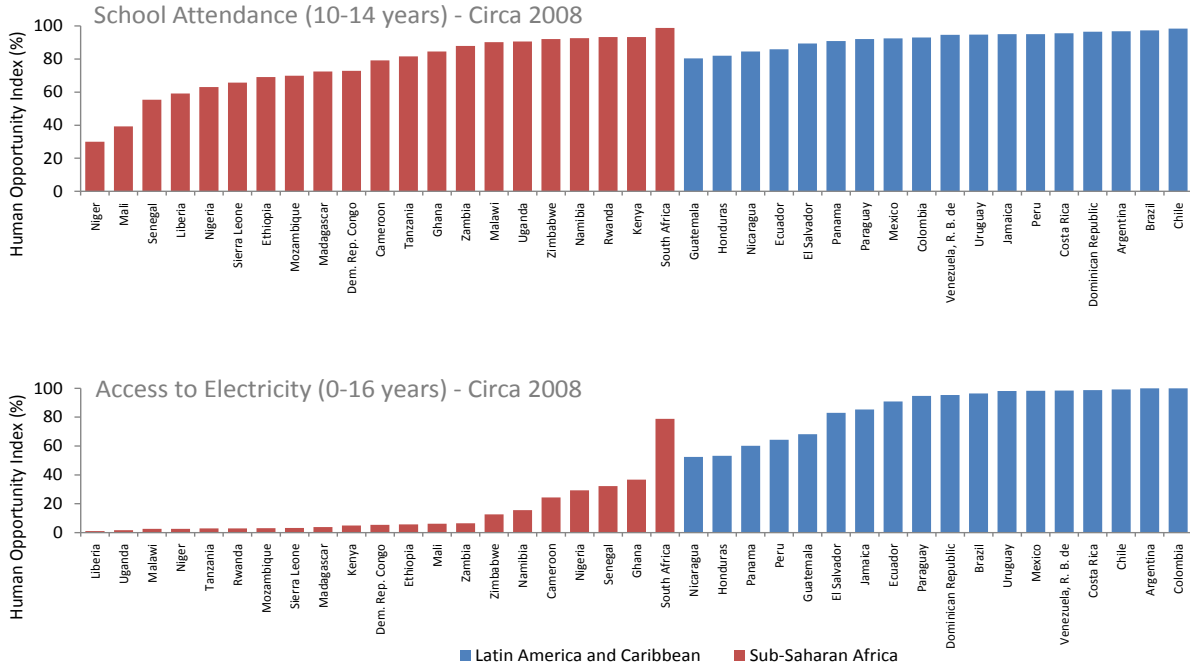
Figure 8: Access to a set of (three) basic opportunities
(children of age 6-11 years in 20 Sub Saharan African countries)



Notes: 1) A child has access to the set of opportunities if s/he is attending school, and has access to safe water (piped, well or rainwater) and adequate sanitation (pit or flush toilet) in the household; (2) Coverage refers to the percent of children with access to all three services; HOI refers to Human Opportunity Index; and the gap between coverage and HOI indicates the “penalty” due to inequality of opportunity.

Source: Demographic & Health Surveys for different years (circa 2008), from World Bank (2013, forthcoming).

Figure 9: Opportunities in school attendance and access to electricity: Sub-Saharan Africa and Latin America



Source: Demographic & Health Surveys for different years (circa 2008), from World Bank (2013, forthcoming).

There are sharp differences in opportunities of children across the developing world, as shown by examples presented in Figure 9. Primary school attendance of children presents an encouraging picture, with a majority of the 20 Sub-Saharan African countries and Latin American countries having achieved a high level of access (HOI near or above 80). Access to electricity for children provides a stark contrast. Sub-Saharan African countries are characterized by extremely low access to electricity and the gaps in HOI between the two regions are vast, to the extent that every country in this region with the sole exception of South Africa has an HOI lower than that of any Latin American country. Similar gaps are seen for access to other types of basic infrastructure as well, such as safe water and adequate sanitation.

Even in most middle-income countries, where access to the most basic of goods and services is near universal, inequality of opportunity is widely prevalent in access to early childhood inputs, quality schooling, health services and infrastructure. In Vietnam, while primary schooling is nearly universal, nearly 40 percent of children in Grade 5 exhibit inadequate mathematics or language skill to progress to lower secondary level. These children are disproportionately likely to belong to poorer households (bottom two quintiles of wealth), belong to an ethnic minority, live in rural areas, and have parents with low education (primary school or less).³² In South Africa, completion of primary school on time and exposure to coverage of early-childhood programs (among 0-4 year olds) are far below universal and unequal, with most of the differences being associated with socioeconomic background, location and ethnicity of the children (World Bank, 2012).

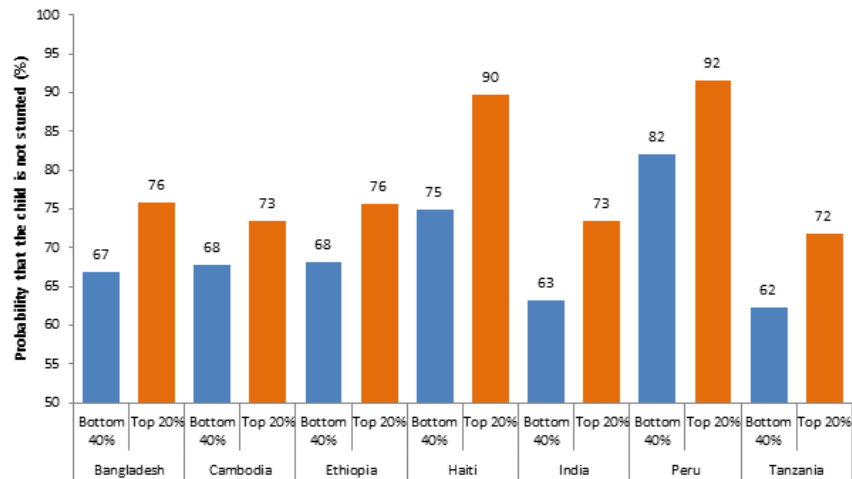
Opportunity gaps among children and the importance of economic status

Circumstances like where an individual was born, his/her parents' education and income, and the individual's race and gender, can contribute in varying degrees to inequality of opportunity. For example, in sub-Saharan Africa, household wealth, parental education level and location (urban/rural) are the most important contributors to inequality in the opportunities related to starting primary school on time, completing primary school (between age 12-15 years), being fully immunized (at age 1 year) or having access to safe drinking water, adequate sanitation and electricity in the household. In countries such as Cameroon, Nigeria and Rwanda, for a girl born in a rural household in the lowest quintile of wealth where the household head has education below primary level, the likelihood of completing primary school on time is roughly *an eighth* of that for a boy born in an urban household in the highest wealth quintile and headed by a highly educated head. Even among the better performing countries in the region, such as Kenya and Tanzania, the child who belongs to the disadvantaged group has one-third the likelihood of finishing primary school in time than if she had been born with the attributes of the advantaged group.

In almost all cases where opportunity gaps are significant, differences in household income or wealth have a large role. Consider, for example, the opportunity to grow up through childhood without being scarred by chronic malnutrition. As Figure 10 shows, children from the wealthier segments of society generally have significantly better chances of not experiencing stunted growth. One in *ten* children from the wealthiest 20 percent in Haiti, is stunted, compared to one in *four* children from the bottom 40 percent segment. Differences are stark in many countries. To the extent that stunting during childhood manifests itself in lower learning outcomes, poorer health and lower productivity in adulthood, these gaps represent significant disadvantages to children born to poorer households and are likely to restrict their economic mobility perennially trapping them in poverty.

Figure 10: Poorer children have lower opportunities

Likelihood that a child drawn at random from different ends of the wealth distribution will not be stunted



Note: Authors' calculations based on the DHS for various years. The bottom 40 percent and top 20 percent of the wealth distribution is calculated using a wealth index computed for each country

Inequality of opportunity can recur in different stages of life

Opportunity gaps are also large in the labor market. Analyzing inequality of opportunities for adults is fraught with difficulties, as the confounding effects of effort and talent and real lack of opportunities are hard to disentangle. That said, some indicators are useful to illustrate the extent to which circumstances that should not have an impact on opportunities (such as socioeconomic status, where a worker was born or lives, gender or ethnicity) can lead to differential access to economic opportunities.

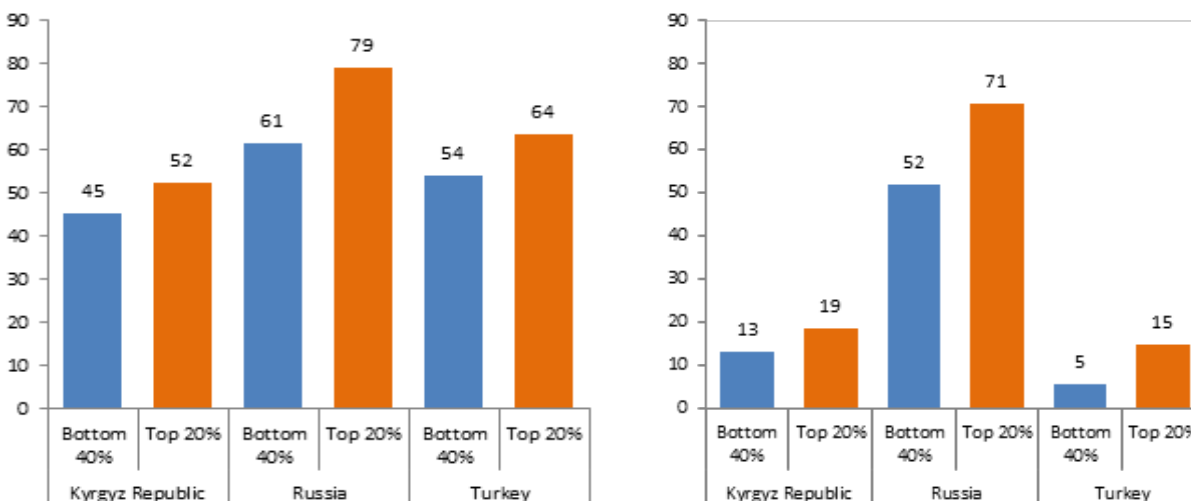
Using a random sample of individuals active in the labor market in three countries (Russia, Kyrgyz Republic and Turkey), we calculate the likelihood of having a job that offers at least 20 hours of employment per week and of having a professional job with a contract (Figure 11).³³ Individuals from the richest income quintile have much higher likelihood of holding full time jobs (more than 20 hours a week) and salaried jobs with contracts, compared to those in the bottom 40 percent. There is no suggestion of causality here, since the employment status of an adult also influences his position in the relative income distribution of his country. Nevertheless, these charts show that socioeconomic status not only influences opportunities in childhood but is also correlated with access to good quality jobs.

Figure 11: Wealthier adults have better job opportunities

Employment opportunity for adults broken down by the top and bottom end of the income distribution

(a) Jobs with >20hrs a week of employment

(b) Salaried/professional job with contract

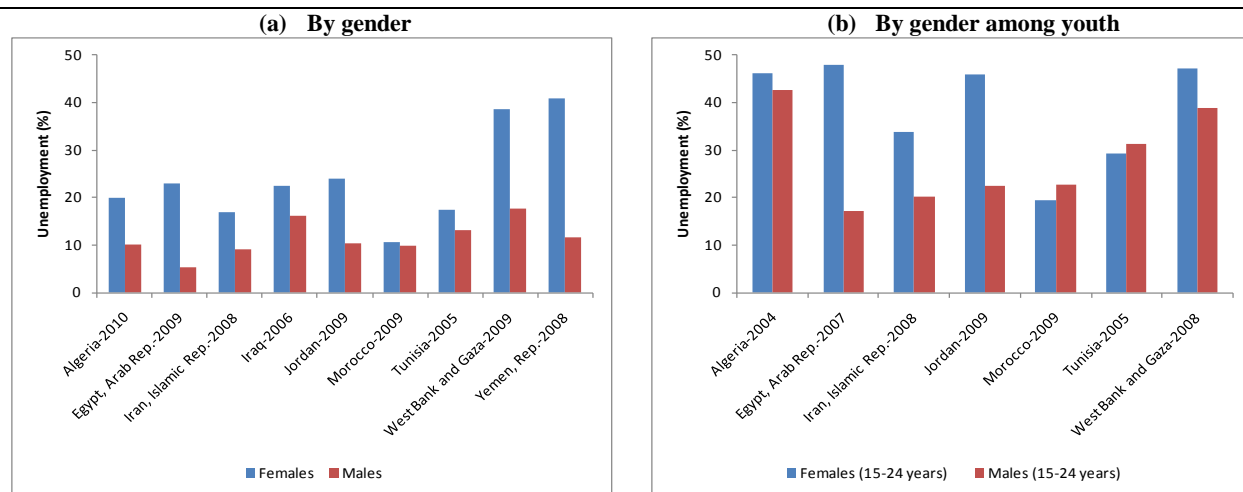


Note: Authors' calculations based on data from the 2006 round of the Life in Transition Survey in ECA region. The universe is adults 18-64 years of age who are in the labor force (working, without work but looking for a job, or not looking for job because of discouragement). Panel (a) shows proportion of individuals that have jobs that allow them to work at least 20 hours a week and Panel (b) shows proportion of individuals that have a job that is either salaried with a contract or self-employed in a professional occupation. The income groups are based on household per capita expenditures.

Opportunity gaps in the labor market are often associated with circumstances beyond economic status. Gender is one such circumstance. In the context of high unemployment rates in Middle East countries, women face an additional disadvantage (Figure 12a). This gap does not even account for low labor force participation of women partly due to discouragement – just one-fourth of working age women in this region participate in the labor force (World Bank, 2013). Unemployment rates are even higher among the 15-24 year age group, with the gender gap being particularly large in some countries (Figure 12b). In South Africa, an unemployment rate of 25 percent is exacerbated by large differences between workers of different characteristics. Even after accounting for the effects of education and experience of workers, being a resident of an urban township or village, being a woman or from a non-white ethnicity is associated with a much higher likelihood of being unemployed or underemployed (World Bank, 2012).

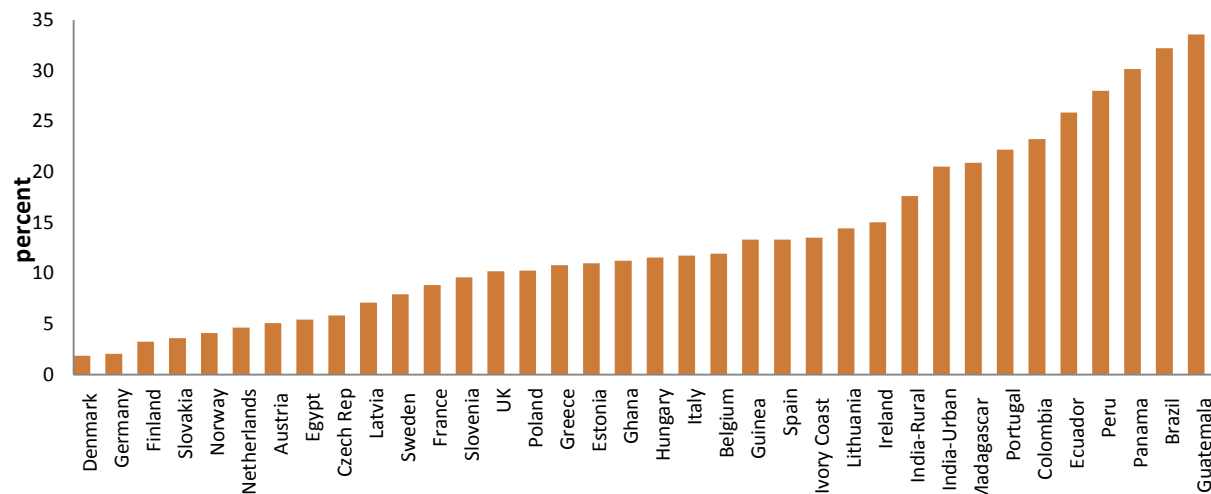
The above are just a few examples of unequal opportunities in the labor market, which manifest in various dimensions and forms across countries. Since a job befitting one's acquired human capital is often the surest path to economic mobility, any society where these opportunities are restricted for particular types of individuals, such as women or those born into poorer families or living in depressed locales, is likely to see inequality replicate itself over generations.

Figure 12: Women have lower job opportunities than men in Middle East & North Africa region:
Unemployment and youth unemployment rates in selected countries



Source: World Development Indicators (2012)

Figure 13: Proportion of total inequality attributable to inequality of opportunity



Note: The plotted values are between group shares of total inequality measured by the mean-log deviation (Theil-L). Theil-T is used in the case of Ghana, Guinea, Ivory Coast and Madagascar

Source: Adapted from Ferreira, F.H.G. (2012), "Inequality of Opportunity Around the World: What Do We Know So Far".

Opportunity gaps in different stages of life add up to systematic differences in the earnings of adults with different circumstances. Figure 13 makes a comparison of the share of inequality in income that is due to inequality of opportunity across a selection of countries featured in five different studies (adapted from Ferreira, 2012). Inequality of opportunity is measured here as the share of overall inequality that is associated with between-group differences, where each group is defined by a unique set of circumstances

related to race, gender and parental education.³⁴ Since these are but a *subset* of possible circumstances that can matter, the results should be interpreted as lower bound estimates of inequality of opportunity: *at least* this share of overall inequality should be considered unfair (Ferreira, 2012).³⁵ The share of inequality of opportunity ranges from 2 percent of the total inequality in Denmark and Germany to 30 percent or more in Latin American countries such as Panama, Brazil and Guatemala.

Nine of the ten countries in this dataset with the *highest* share of inequality of opportunity in total inequality are developing countries. Interestingly, there is a positive and high correlation (coefficient of above 0.8) between total inequality and the *share* of inequality of opportunity in total inequality. In other words, in countries with higher inequality, the role of circumstances at birth – relative to that of talent, effort and random luck – in overall inequality is likely to be higher than in countries with more equal income distribution. While the correlation based on a small sample of countries cannot be considered as definitive, the result is significant enough to merit further exploration using larger datasets.³⁶

VI. Applying a lens of equality of opportunity to the social contract

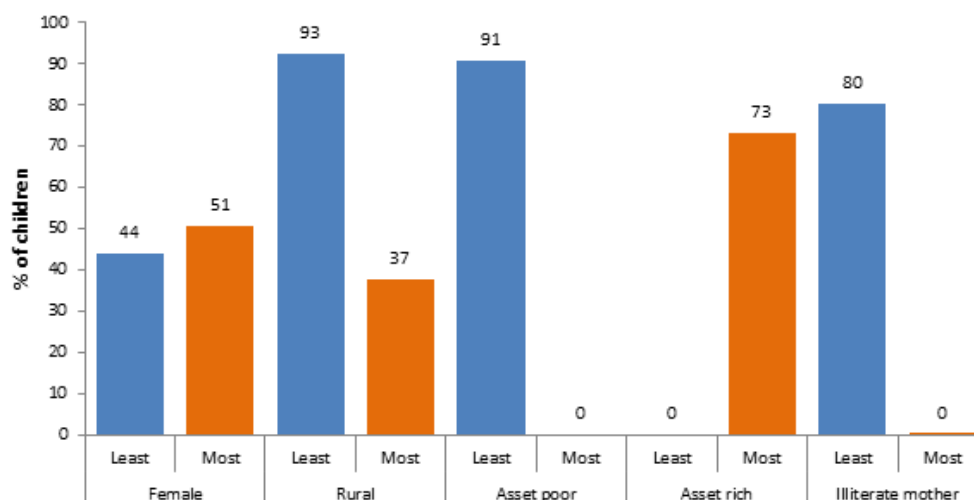
In translating the idea of shared prosperity to policy, adopting a lens of equality of opportunity implies a view of the “less well-off” that does not have to be limited to the bottom 40 percent of the income distribution, but to the distribution of other indicators of welfare. It could imply, for example, extending the concept to access to basic goods and services, or opportunities.

From a public policy point of view, focusing on the bottom 40 percent in terms of probability or likelihood of access to a basic good or service would make sense for three main reasons, briefly articulated below. *Firstly*, the bottom 40 percent in terms of probability of access to an opportunity is likely to have a strong overlap with the bottom 40 percent of the income distribution. This would in turn imply that improving opportunities in this group is likely to improve their upward mobility over time and across generations. *Secondly*, targeting groups defined by extent of access to opportunities broadens the concept of shared prosperity to take into account a more multi-dimensional view of welfare that includes (but is not necessarily limited to) education, health and access to basic infrastructure. These can at times reflect structural or chronic deprivations better (and more directly) than a single income measure, particularly when these deprivations are caused by lack of public services that cannot be substituted by private goods acquired from markets at a reasonable price. *Thirdly*, targeting policies toward a group defined by low opportunity would also imply that circumstances other than household income that influence opportunities, such as parental education, location, gender, ethnicity and so on, are taken into account when deciding how to use public policy in leveling the playing field in society. Therefore, a lens of equality of opportunity in effect broadens the concept of shared prosperity, not only to take into account a more multi-dimensional view of welfare, but also the different dimensions of inequality in society that matter in addition to income differences.

Figure 14 illustrates the points above by showing a summary profile of Indian children whose circumstances make them the most and least likely to escape chronic malnutrition. Children with the strongest chances of escaping malnutrition in India are disproportionately likely to live in urban areas, belong to the richest 20 percent of households, and have a literate mother. On the other hand, children who are most likely to be stunted are disproportionately from rural areas and belong to the poorest 40 percent of households; and 80 percent of them have illiterate mothers. Importantly, while a child’s parental wealth is an important factor determining his/her chances of avoiding chronic malnutrition, other factors matter as well. For that reason, nine percent of the children with the lowest likelihood (bottom 40 percent in terms of probability) of escaping childhood malnutrition in fact do not belong to the poorest 40 percent of households.

Figure 14: Opportunity Deprivation in India – Not Just About Income and Wealth

Characteristics of children most (top 20 percent) and least (bottom 40 percent) likely to *escape* chronic malnutrition in India



Note: Authors' calculation using DHS data. This chart plots the characteristics of children with the highest (top 20 percent) and lowest (bottom 40 percent) likelihood of being stunted in India. Rich and poor are defined using distribution of wealth index. Top 20 percent in terms of wealth are classified as rich whereas the bottom 40 percent is defined as poor.

What can the equality of opportunity lens contribute?

Equality of opportunity can act as a key guiding principle for policies to promote shared prosperity in a dynamic and sustainable way, when the state is constrained by availability of resources and/or institutional capacity, as is usually the case in developing countries. Because of these constraints, achieving universal coverage of a particular basic good or service, while desirable, may not be a realistic near term goal. The equality of opportunity framework can address an important question: given limited resources and capacity, which types of investment should be prioritized, and which groups (in terms of the circumstances) should be the priority of public policy to improve equality of opportunity in a given society? In addition, an index like HOI offers a way to measure access to opportunities in countries, taking into account how far a country is away from universal coverage of a service as well as how available services are distributed among children of different circumstances. HOI would improve less than the average coverage rate for a service, for example, in a country where an increase in coverage has been accompanied by a widening of the rich-poor or urban-rural gap.

A few broad principles seem to be relevant for social policies to promote shared prosperity through more equitable distribution of opportunities. *Firstly*, a basic goal of policy should be to level the playing field in opportunities, in *different stages of life*, starting with access to basic goods and services early in the lives of children – including nutrition, health and education inputs, safe water and sanitation. The case for interventions early in life is particularly strong, as academic research has found, which would often justify prioritization of such investments from public resources. It would also include policies to level the playing field in terms of access to economic opportunities, such as removing distortions in the labor market that lead to rewards being correlated with circumstances, rather than skill, experience and effort. Policies to create a level playing field for all individuals particularly need to take into account those circumstances that can place individuals at disadvantage not only at childhood, but at different stages of life. *Secondly*, there is a need to identify circumstances that make children vulnerable to deprivations in *multiple dimensions simultaneously*. A household's economic status, such as belonging to the bottom 40

percent of the income distribution, is one of such circumstances in most cases, but rarely is it the only one that matters.

Finally, there needs to be awareness about potential complementarities, as well as trade-offs, between policies that promote economic growth and those that promote equality of opportunity through the social contract. Policies that promote a level playing field, by improving human capital, are also likely to lead to sustainable growth and poverty reduction over time. Conversely, policies to improve competitiveness, investment climate and growth would sustain this dynamic process and allow for the generation of the resources needed to provide opportunities to all. But there are potential trade-offs as well, some of which are temporary: investments in early childhood education may leave less resources to invest in boosting economic growth in the short-run, but have a positive impact on growth in the future. However, in other cases, policies that increase incomes of the poor directly could have a negative impact on growth, particularly if they are ill designed – for example, by being fiscally unsustainable or by reducing incentives for productive activities.

VII. Conclusion

Focusing on the welfare of the less well off as a measure of real societal progress is the fundamental principle underlying the WBG indicator of “shared prosperity”, namely income growth of the bottom 40 percent in every country. In addition to what it monitors directly, it also implies a complex policy agenda. Sustainably ending poverty and sharing prosperity (the twin goals set by the WBG) are unequivocally about progress in both monetary and non-monetary dimensions of welfare for the current and future generations, including, among others, education, health, nutrition, and access to essential infrastructure, as well as empowerment and enhancing voice and participation in economic, social, and political spheres.

In a sample of 79 developing countries (covering roughly five years during *circa* 2005 -2010), the less well off seem to have performed well despite the 2008 crisis. The median growth of per capita incomes of the bottom 40 percent, at just above four percent, is high in absolute terms and about a percentage point higher than per capita income growth of the overall population. In almost two thirds of the countries, incomes of the less well off increased faster than those of the overall population and these countries with falling inequality are also more likely to have experienced rapid income growth among their bottom 40 percent.

However, that is where the good news ends. Income growth of the bottom 40 percent is slower, on the average, in poorer developing countries: the median growth rate in low and lower-middle income countries (3.1 percent) is almost two percentage points lower than in richer developing countries. A similar pattern is observed for overall growth, suggesting that the perception of convergence of between the north and the south has to be nuanced by recognition of the heterogeneity among developing countries. While there has been a convergence between developing and industrialized countries on the average, other inequalities are possibly rising *within* the highly diverse group of developing countries.

It is almost impossible for incomes of the bottom 40 percent to rise in the absence of growth. But when growth is measured by changes in GDP, the statistical relationship is at best tenuous. The best-documented case of economic growth not being “shared” is perhaps the United States, where in the last decade median income of the population was almost flat while incomes of the bottom 40 percent fell by around seven percent, during a time when GDP grew by more than 20 percent. That GDP growth often does not translate to household income growth is seen in our sample of countries as well, where the correlation between the two is just 0.32. In the same sample, the correlation of (per capita) GDP growth with per capita income growth of the bottom 40 percent is just 0.12, suggesting an even weaker relationship between GDP growth and shared prosperity. The correlation between growth in per capita household income and that of the bottom 40 percent, on the other hand, is high but not one-to-one,

according to our dataset and other evidence. Reduction in inequality has a smaller, but still significant correlation with progress in shared prosperity.

Should reducing inequality be the goal, rather than improving welfare of the less well off? While growth is not sufficient for incomes of the less well off to improve, reducing inequality is neither a necessary nor a sufficient condition for the same. Even though reducing inequality could be a valid objective on its own, it does not meet the standard of a clear indicator of progress, given our basic normative principle of judging societal progress by the welfare of its least well off. On the other hand, with the same normative principle, increase in incomes of the poor would indicate progress in all circumstances and at all times.

While inequality reduction is not a primary goal, income growth of the bottom 40 percent that is consistently lower than the average income growth in a country should be a cause for concern. There is increasing evidence to suggest that the economic and social distortions created by rising disparities can eventually limit economic progress of all in a society. In many countries with high inequality, a large share of the inequality is associated with inequality of opportunity, attributable to differing circumstances at birth, such as parental background, gender and ethnicity. High inequality in such cases is likely to perpetuate over time, trapping a certain segment of the population in a cycle of low income and opportunities across generations. This is why reducing inequality of opportunities is a crucial pathway to shared prosperity.

There are many pathways to shared prosperity. Economic growth can lead to broad-based prosperity if it generates more and better quality jobs for all segments of the population. The state needs to play a crucial enabling role to improve competitiveness, promote investment climate and encourage innovation in the private sector, which is where most jobs are created. The second channel is that of a healthy and stable social contract to ensure that growth is inclusive, through a specific structure of taxation, expenditures, and social programs that evolves as a consensus among citizens. A social contract for promoting shared prosperity must allow for societal investments in institutions that improve opportunities for all, including disadvantaged groups, and protect the vulnerable. More than redistributing resources from one segment of the society to another, such a social contract is about investing in improving the capabilities of people over time and across generations, so people can better their lives on their own. The evidence presented in this paper abounds in examples where inequality of opportunities is still very high; and despite progress, circumstances such as where an individual was born and the status of parents, the individual's gender or ethnicity still have high influence on his or her opportunities in life.

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Endnotes

¹“A Common Vision for the World Bank Group”, Development Committee Paper, Spring 2013.

²“The World Bank Group Goals: End Extreme Poverty & Promote Shared Prosperity”. World Bank, April 2013.

³ This normative principle is referred to as the “quintile axiom” in Basu (2001, 2006 and 2010).

⁴ Development economists have used “the bottom quintile” to refer to the group who should receive more attention from policy makers. But in many low-income countries this is close to the percentage of people of in extreme poverty, and therefore covered by the extreme poverty indicator. We choose the 40th percentile as a cutoff, since it currently roughly coincides with the proportion of the population that is considered moderately poor in middle-income countries.

⁵ Changes in aspirations of people, and of what societies consider to be the minimum basis of the construction of the “weakly relative poverty lines” proposed by Ravallion (2011)

⁶ This is because the measure “growth in per capita income of the bottom 40 percent” does not satisfy the “Weak Transfer Axiom” of welfare economics. For this axiom to be satisfied, the measure must decline if income distribution among the bottom 40 percent worsens, which is not the case.

⁷ It is easy to construct hypothetical cases where good performance in non-anonymous G40 is accompanied by poor performance in the anonymous version of G40, or vice-versa. Imagine a (very) small island with 5 individuals, whose incomes are given by the vector {2, 2, 3, 3, 4}. Let the income of the bottom 40 percent double from year 1 to year 2, whereas incomes of the rest fall by 50 percent, so that the vector of income becomes {4, 4, 1.5, 1.5, 2}. A non-anonymous G40, for the bottom 40 percent of the initial period, would be 100 percent. The anonymous G40, in contrast, would be -25 percent. The first measure reflects high upward mobility for the “less well-off”. The second measure shows that the bottom 40 percent of the income distribution is much worse off in period 2 than in period 1.

⁸ “Computing Shared Prosperity Indicator for a Global Database”. Draft (September 2013). The World Bank Group.

⁹ For each country, annualized growth rates of real income or consumption per capita for the bottom 40 percent (G40) and the total population (G*) are computed between two survey years, using a compound growth formula. The primary data source is the World Bank’s PovcalNet database, complemented by updated data from ECA and LCR regional departments. The indicators are computed only for those countries that meet the following criteria: (A) the latest household survey for the country (year T_1) is no older than 2008; (B) the survey for the initial period (year T_0) is close to ($T_1 - 5$), within a bandwidth of ± 2 years; and (C) welfare aggregates (consumption or income) for T_0 and T_1 are comparable with some degree of confidence; if not, the first two criteria are re-applied to select the next best survey year(s).

¹⁰ The classification is not perfect for our purpose, particularly because per capita GDP (from national accounts) often do not match up well with household income from surveys. That said, classifying countries by a common standard (per capita GDP) used by the World Bank for all operational purposes, is attractive for a number of reasons.

¹¹ “Initial period” here refers to the initial period for each country, which may vary depending on the exact period over which G40 and G* are measured. The correlation between G40 and log of per capita GDP in initial year is 0.28, compared with a correlation of 0.33 with log of GDP per capita in the final year, and 0.34 with log of GNI per capita in 2012.

¹² Including only those countries for which G40 is measured with consumption, median of G40 among the high and upper-middle income group (18 countries) is 3.5 percent, compared to 2.5 percent among the low and lower-middle income group (35 countries). When countries using only income are included, median of G40 among the richer group is 5.5 percent (22 countries), compared to 4.5 percent among the poorer group (only six countries).

¹³ These are OLS regressions of G40 (or G*) on different permutations of the following variables: Log of Initial GDP per capita (or Log of Initial Mean Income/Consumption of the bottom 40 percent); dependency Ratio (initial Year); average years of education (initial year); GDP growth (Global) during the period; type of data to measure G40 (income or consumption); and dummy variables for five regions. The preliminary regressions have a sample size of 67 countries (out of 79 in the database of G40 and G*), and are only for the period *circa* 2005-2010. R-squared range between 0.26 and 0.30 for G40 regressions, and between 0.15 and 0.31 for G* regressions.

¹⁴ See, for example, Ravallion (2007), Bourguignon (2004) and Ravallion and Chen (1997).

¹⁵ Jared Bernstein writing in Economix blog, The New York Times, September 17, 2013.

¹⁶ In calculating the correlations, per capita consumption from national income accounts is used in lieu of per capita GDP for countries where consumption of the bottom 40 percent is used as a proxy for income.

¹⁷ For example, this occurred in some East Asian countries a few decades ago, when income growth of the bottom 40 percent was strong but lagging behind the growth of average income.

¹⁸ Interestingly, the correlation does not seem to change significantly with initial inequality in a country, in contrast to what is seen for changes in poverty.

¹⁹ The ratio of (or the difference between) the growth of per capita income of the bottom 40 percent and that of the overall population is highly correlated with changes in more common measures of inequality, such as Gini and Theil indices in a cross-country sample, making this ratio a crude proxy of the more complex indices.

²⁰ In Basu's words, "...a society of perfect equality (at least given our contemporary values and preferences) would be crushingly poor" (Basu 2006, page 1365).

²¹ Using a panel of 46 countries over the period 1970-95, they find that inequality has a negative long-run effect on per capita income, for the whole sample and important sub-groups (developed countries, developing countries, democracies, and non-democracies).

²² They estimate the relationship between initial village inequality and subsequent household income growth using a rich longitudinal survey spanning the years 1987-2002, controlling for a number of household and village characteristics.

²³ She investigates the importance of the shape of the income distribution in determining economic growth in a panel of countries, using comparable data on disposable income from the Luxembourg Income Study. Her findings suggest that relying on a single inequality statistic to explore the impact of inequality on growth may be limiting, as it can mask the underlying complexity of the relationship.

²⁴ Inchauste and others (2012); Azevedo and others (2013).

²⁵ Loayza and Raddatz (2010).

²⁶ For example, Rawls (1971) and Nozick (1974) had brought to the forefront the question of fairness of process, rather than outcomes. Sen (1979, 1985) had argued for an equitable distribution of "capabilities," which refer to sets of functionings effectively available for a person to choose from, so that they can pursue "life plans", they have reason to value (Basu and Lopez Calva, 2010; Sen, 2001). Roemer (1993) characterizes their proposals essentially as attempts "to equalize opportunities, rather than outcomes....".

²⁷ Originally created by researchers in and outside the World Bank, the HOI synthesizes in a single indicator how close a society is to universal coverage in a given opportunity, along with how equitably coverage of that opportunity is distributed among groups with different circumstances. It is an inequality-sensitive coverage rate, which discounts the overall coverage rate by an inequality of opportunity index that takes into account the inequality in coverage rates between different circumstance groups (characterized by differences in circumstances at birth). The HOI improves when inequality of opportunity decreases with a fixed number of opportunities, or when the number of opportunities increase and inequality stays constant (Barros and others 2009, 2010)

²⁸ This research uses a cross-national panel data set of 62 low and middle-income countries between 1985 and 2007. A reduction in health inequality, equivalent to a 5 percent reduction in the mortality rate of children (under-5 years of age) born to mothers with a low education level, is estimated to lead to an almost 8 percent increase in GDP per capita after a period of 10 years. Impact of health inequality on labor productivity is identified as a possible channel. Microeconomic evidence suggests that labour productivity rises with health but at a decreasing rate (see, for example, Thomas and Strauss, 1997), which would imply that a more unequal distribution of health would result in lower average productivity and therefore, lower economic growth.

²⁹ "Promoting Social Mobility" by Heckman. Boston Review online forum. September 1, 2012.

³⁰ Inequality of opportunity here refers to inequality in income (or employment status) between groups differentiated by circumstances, which are father's education, gender, self-reported minority status, and whether any parent is a member of the communist party. Interpersonal inequality is measured by the Gini index of income (Abrás and others, 2013).

³¹ World Bank (2013), forthcoming.

³² "Opportunities of Children in Vietnam". Report by Vietnamese Academy of Social Sciences (VASS) and the World Bank (2012)

³³ Data from Life in Transition surveys <<http://www.ebrd.com/pages/research/economics/data/lits.shtml>>

³⁴ For a detailed discussion of this measure, see Ferreira and Gignoux (2011) and Ferreira and others (2011).

³⁵ Each group, defined exclusively by a unique set of circumstances, is what is called a “type” in the inequality of opportunity literature. A key assumption in measuring inequality of opportunity is that any differences between the group averages is driven by circumstances, while differences within groups is due to effort (or luck, or other circumstances we somehow were not able to observe or measure). To associate all between-group differences with inequality of opportunity implies that systematic differences in average *effort* across groups are assumed to reflect the indirect effects of circumstances (see Ferreira 2012).

³⁶ Although this correlation is not enough to establish that higher inequality of opportunity leads to higher overall inequality of income, it is at least consistent with that hypothesis.