The Case for Economic Growth as the Path to Better Human Wellbeing

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Abstract. That higher levels of GDP per capita and consumption expenditures are empirically necessary and empirically sufficient for high levels of human material wellbeing is a fact, but not a theorem. That is, it is *possible* that economic growth might not deliver on normatively important goals, the strength of the relationship is an empirical question. Using data on three important normative measures: (i) headcount poverty, (ii) basics of material wellbeing and (iii) broad measures of social progress I show that the empirical association is very strong in all three cases. Nearly all cases of growth in a country's median level of household consumption are "inclusive enough" (which need not be "pro-poor" or "inequality reducing") that poverty is reduced and growth is empirically sufficient for poverty reduction. And increased levels of median consumption are empirically necessary for large progress in poverty reduction. In reaching basics of material wellbeing (health, education, shelter, living standards): no country reaches high levels of GDP per capita without reaching high levels of basics (with one illustrative exception) and conversely no country reaches high levels of basics without moving beyond low GDP per capita. More broadly, "national development"—the combination of higher productivity, a more responsive polity, a capable state, and more equal treatment of citizens—is empirically necessary and sufficient delivers the same for any measure of wellbeing: high levels of national development deliver on high levels of social progress.

The Case for Economic Growth as the Path to Higher Human Wellbeing[1]

Introduction

> *Is there some action a government of India could take that would lead the Indian economy to grow like Indonesia's? or Egypt's? If so, what exactly? If not, what is it about the nature of India that makes it so? The consequences for human welfare involved in questions like these are simply staggering: Once one starts to think about them, it is hard to think about anything else.*
>
> *Lucas (1988)*

No economist has ever thought that Gross National Product was, in and of itself, a measure of human wellbeing. And yet development economics and, more broadly, the efforts to promote "development"—by governments and development agencies--have nearly always taken economic growth as an important goal. This emphasis on economic growth as a development goal is based on the premise that growth in output per capita, proxied by GNP or GDP or by direct measures of household incomes, is a key facilitator of progress in human material wellbeing. Development economists (and others) have been focused on economic growth because, as Lucas (1988) puts it, the consequences for human wellbeing of sustained differences in growth rates are simply staggering.

The massive improvement over time in the existence and availability of cross-national data in three areas have vastly improved the ability to examine the key relationships. One, the creation and expansion of national accounts estimates that are internationally comparable in purchasing power through the International Comparisons Project (Kravis, Heston, Summers 1978, Feenstra, Inklaar, Timmer 2015) allows more relevant comparisons of national income for producing wellbeing than transforming national accounts in local currency to dollars (or any other currency) using market exchange rates. Two, the increase in more reliable and more accessible data on physical indicators of human material wellbeing (e.g. child mortality, child malnutrition, access to safe water, enrollment in school, crime rates, ambient air quality, etc.) allows the exploration of the association between GNP and both progress on specific goals (e.g. reduction in child mortality), and other aggregate measures of social progress, such as the Human Development Index or multi-dimensional poverty (Alkire, Sabina; U. Kanagaratnam and N. Suppa. 2021). Three, the expansion of data on the distribution of consumption and income across households has allowed the broader cross-national estimation of measures of income/consumption poverty and its severity (Foster, Greer, Thorbecke 1984, Ravallion 2016) and other "inequality adjusted" money-metric measures (Dollar, Kleineberg, and Kraay 2015).

The consequence of these improvements in measurement are that one can be more confident than ever that increased levels of economic productivity are central to gains in human wellbeing in the developing world. This paper summarizes new evidence about the relationship between various normative goals for human material wellbeing and the level of economic incomes and

[1] This paper was written as a contribution and background for the Growth Summit in Washington DC in October 2024 and is a synthesis and extension of previous work.

their distribution. The goal is to summarize these results in a way that is technically sound but at the same time clear and intuitive to the general reader interested in development, with an emphasis on graphs that convey the key results rather than the underlying mathematics or methods.

Part I sets up a an analytic frame for the impact of growth on normative measures of wellbeing that is general and allows both a broad array of indicators of wellbeing and allows complete flexibility in how the central tendency (e.g. mean, median) and the distribution of income (e.g. measures of inequality) affect wellbeing. This frame is then used to examine three different classes of indicators. Part II examines the relationship between a country's level of consumption and its headcount poverty rate, at various poverty lines, and shows that higher levels of median consumption are both empirically necessary and empirically suffiicent for substantial progress in poverty reduction. Part III examines the relationship between country level indicators of the satisfaction of "basics" in various domains of human wellbeing (health, education, shelter, access to water and sanitation, etc) and shows that the relationship across a very broad array of measures of basics and GDP per capita is strong and non-linear, such that growth matters more for basics at low and middle levels of income than at high income and again that growth is empirically necessary and sufficient for achieving broad based attainment of the basics withing countries. Part IV uses even broader measures of wellbeing and a broader measure of national development, of which GDPPC is one element, to show the strong relationship between national development and achieving a very broad array of normative goals.

Part I) Economic growth and human wellbeing: A simple graphical exposition[2]

The strong case for a focus on economic growth as a development objective is that "inclusive, sustained, economic growth is empirically necessary and empirically sufficient for reaching acceptable levels of human material wellbeing" or, equivalently, economic growth is empirically necessary and empirically sufficient for meeting the key normative goals of development. This case as made in this paper is an empirical assertion that is broadly true, but not a "theorem" that suggests it is *always* true. The simple graphical framework here shows cases in which this claim would not be empirically true as well as cases where it would be strongly true. The framing has two elements: (i) growth incidence, the growth rate across the income distribution rather than the usual growth of the average, (ii) the elasticity of any particular normative measure or development goal across levels of income or consumption, which can be either (ii.a) adopted as an assumption (as in poverty measures or Atkinson ( ) or Sen () indices or (ii.b) be empirically estimated.

I.A) Growth incidence

National accounts provide aggregates, like the consumption, C, of GNP, and one can calculate the growth of these in total or per capita and this the *average* growth (or growth of the average). The same average percentage growth of consumption (C) could be the result of a variety of different patterns of growth incidence. However, the wellbeing consequences of growth play out at the household and individual level and hence the distribution of gains in

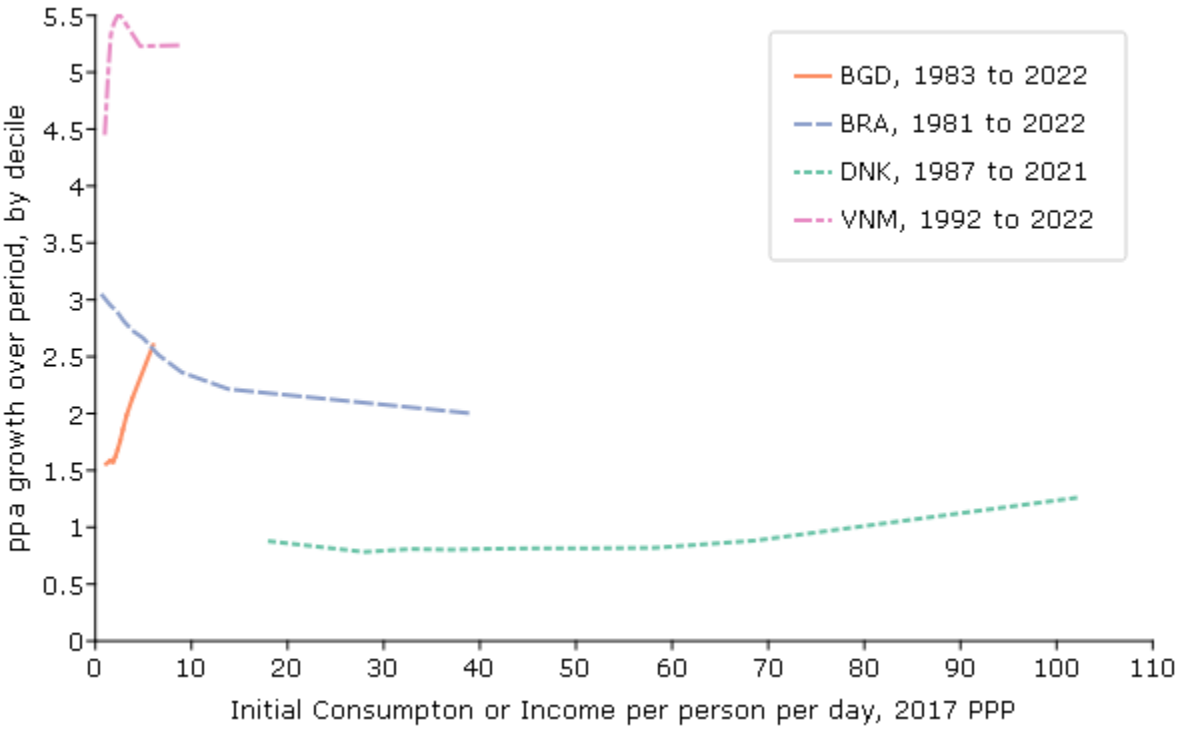
[2] This section draws on "Economic Growth in Five Figures (one with five variants)" that is a more detailed and technical discussion of these issues.

income or consumption across households matters for producing progress in wellbeing. "Growth incidence" is the concept that links the growth of average consumption per capita that national accounts or economy-wide aggregates report and the distribution of that growth.

Figure I.1 illustrates growth incidence curves over the longest available period of the data for four countries: Bangladesh, Brazil, Denmark and Vietnam. With the countries selected, Figure I.1 conveys five key facts, each of which is relevant to the empirical findings and discussion below.

One, the distributions of consumption/income are largely non-overlapping between the poorer countries and the developed countries. In 1987 the consumption of the *poorest* decile in Denmark had income of P$18.2 pppd and the richest decile in Vietnam had consumption of less than half that, P$8.7 pppd and in Bangladesh the top decile average consumption was P$6.0, a third that of the poorest decile in Denmark.

Figure I.1 Growth incidence curves for Bangladesh, Brazil, Denmark and Vietnam



Source: Author's calculations with data from World Bank (2024) PIP data.

Two, inequality is often reported in proportionate terms (ratios of 1st to 10th) or scaled numbers like the Gini coefficient but one consequence of being poor is that the *absolute* gap between "the poor" and "the rich" in moderate inequality countries is quite small compared to the absolute gap within even a low inequality country like Denmark. This is important when considering how important growth is to people at various absolute levels.

Three, inequality can create a huge spread within countries. Brazil is an (in)famously high inequality country (their Gini in 1981 was .578 versus, say Bangladesh at .258). The poorest decile in Brazil as poorer than the poorest decile in Bangladesh or Vietnam while the richest decile was substantially higher than the poorest decile in Denmark.

Four, each of these countries had a very different growth incidence pattern. While Brazil started with very high inequality its growth incidence was "pro-poor" (growth of the 1st decile was about 1 ppa higher than the 10th) and hence the Gini declined. In Bangladesh growth incidence was "pro-rich" as the growth of the 10th decile was about 1 ppa higher than that of the 1st decile and the Gini was rising from its very low level in 1983 to greater inequality. Vietnam's growth incidence was "pro-middle" as the growth of the middle deciles was higher than that of the poorest or the richest. And Denmark's growth was largely flat, with the 1st and 9th decile having almost exactly the same growth rate and the very highest decile about a half a point above that.

One adjective often applied to "growth" is "inclusive." However, like many popular rhetorical adjectival modifiers, "inclusive" has no agreed upon definition. This is likely a rhetorical "feature" than a "bug" as constructive ambiguity is an easy path to apparent consensus. Clearly economic growth than is accompanied by reductions in standard measures of inequality (which would be true of generally "downward sloping" growth incidence curves) is "inclusive." Equal or balanced growth is also widely accepted to be "inclusive" as (some) measures of income inequality remained unchanged from equal percentage growth rates across groups, even if absolute income gaps grow.

The unresolved question is "how steep can the growth incidence curve be before growth is not "inclusive" growth?" It is hard to make the case that there is some clear, sharp, line that separates "inclusive" from "not inclusive" growth. One could say that Vietnam's growth was not "inclusive" of the poorest as their growth rate was lower than the median (50th percentile) but it was absolutely very rapid growth and much higher than the growth of the 1st decile in the other countries. Or, one could say that Bangladesh's growth was not "inclusive" but the difference between rich and poor is modest and, as we will see more below, Bangladesh experienced massive reductions in headcount 'dollar a day' poverty over this period.

Five, the differences in growth across deciles within a country are generally small relative to the differences in average growth across countries. A very well, and long, known feature of the data on inequality is that there are very large differences in inequality across countries (e.g. between Brazil and Bangladesh) but these differences are largely persistent. Put another way, the changes in the average level of income across countries due to differences in growth rates over extended periods is very large relative to the changes in inequality within countries.

I.B) Normative measures of progress

Available normative measures of country-wide progress tend to be either: i) "money metric" or (ii) "physical" indicators or (iii) "subjective assessment."

Money metric is any measure of country aggregate wellbeing in a country that is a function of the distribution of consumption/income, including those that parametrically place different weights on gains to households at different levels of income, such as standard Foster Greer Thorbecke (1984) poverty measures, or inequality adjusted measures like the Atkinson (1970) index or Sen (1976) measure of "real national income."

Physical indicators are indicators at the household level in "natural" units, like child malnutrition or access/use of particular goods/services like sanitation or electricity. In addition some indicators of wellbeing are measured at the local/regional/national level like crime rates or ambient air pollution. And some indicators combine these, for instance combining official crime statistics with household reports of victimization or combining measures of air pollution with household reports of works days lost.

For any indicator that is a function of income/consumption, either analytically, like money metric indicators or empirically we can compute or estimate the elasticity of gains in the HMWB indicator with respect to income at the level of income of any consumption group, such as the elasticity of gains in sanitation coverage of those households at the average of the third decile of the consumption distribution

$$\epsilon_{HMWB,c}(c) = \frac{\%\Delta HMWB}{\%\Delta c}(c)$$

We can combine the growth incidence curve and the relationship (analytical or empirical) with any indicator of HMWB and compute the expected gain in a country over a given period from a given pattern of growth (which includes both magnitude and distribution) incidence curve

$$\frac{\%\Delta HMWB_{t,t+n}^{Ctry}}{Growth\ episode_{t,t+n}^{Ctry}} = \sum_{g=1}^{G} \alpha_{g,t,t+n}^{pop'l} * \%\Delta c_{g,t,t+n}^{Ctry} * \epsilon_{\overline{c(g)}}^{c,HMWB}$$

I expect that very few readers are interested in this equation per se, but it does create three important conceptual intuitions that are key to understanding the relationship between economic growth and measures of HMWB.

One, the standard measures of the growth rate of aggregate consumption or income per capita or of GDP per capita is not a "sufficient statistic" (in either the formal or heuristic sense) for the impact of growth on HMWB. For any measure of HMWB for which the elasticity of gains is higher for the poor than the rich in the country the impact of a give average rate of growth on HMWB will be larger the more the growth incidence curve is aligned with the elasticity of wellbeing. So, as a single special case, the impact of the same average growth on any measure of poverty will be larger the more "pro-poor" the growth, where "pro-poor" is not just generic but is specific to the poverty measure, so what is "pro-poor" growth is different for the headcount measure of poverty than, say, a poverty intensity measure.

This formulation is one way of emphasizing why people often express the goal to be "inclusive growth" on the well-founded belief that if all of the gains of growth accrue to the richest the overall gains to wellbeing will be smaller (perhaps near zero) compared to growth incidence that is more "inclusive"—which generally has no clear definition but here could be taken to mean that growth is more "inclusive" if it is a "a growth incidence pattern nearer the HMWB maximizing growth incidence."

Two, the sensitivity of the gain in any measure of HMWB from a given pattern of growth incidence depends on the specific indicator of HMWB. That is, if a HMWB measure is "steeper" in the relevant range of a country's income distribution such that the HMWB elasticity declines more rapidly than the sensitivity of the expected gains from the pattern of growth incidence is going to be larger. More simply put, the gains to HMWB are interactive in the growth incidence and the elasticity.

For instance, if one adopts a poverty line such than only twelve percent of the population is poor by this poverty line then the impact of growth on poverty depends just on the position of the lower tail of the growth incidence curve (those in the 12th percentile and below), whereas if, in the same country, one adopts a poverty line in which 63 percent of the population is considered poor then the growth of most of the population is relevant.

While the elasticity wrt to growth of the money metric indicators is determined by parameters that are ultimately a subjective value choice[3,4], the elasticity of various physical indicators of HMWB across income levels is an empirical question.

Three, the cross-national relationship between any given HMWB indicator and any summary statistic of the consumption distribution (e.g. mean, median, 40th percentile, Atkinson index) cannot be assumed to be linear nor that the relationship is constant elasticity (linear in natural logs). This is entirely an empirical question and the safest procedure is to allow a flexible functional form and let the data speak for itself, with a tendency for over, rather than under-parameterization[5].

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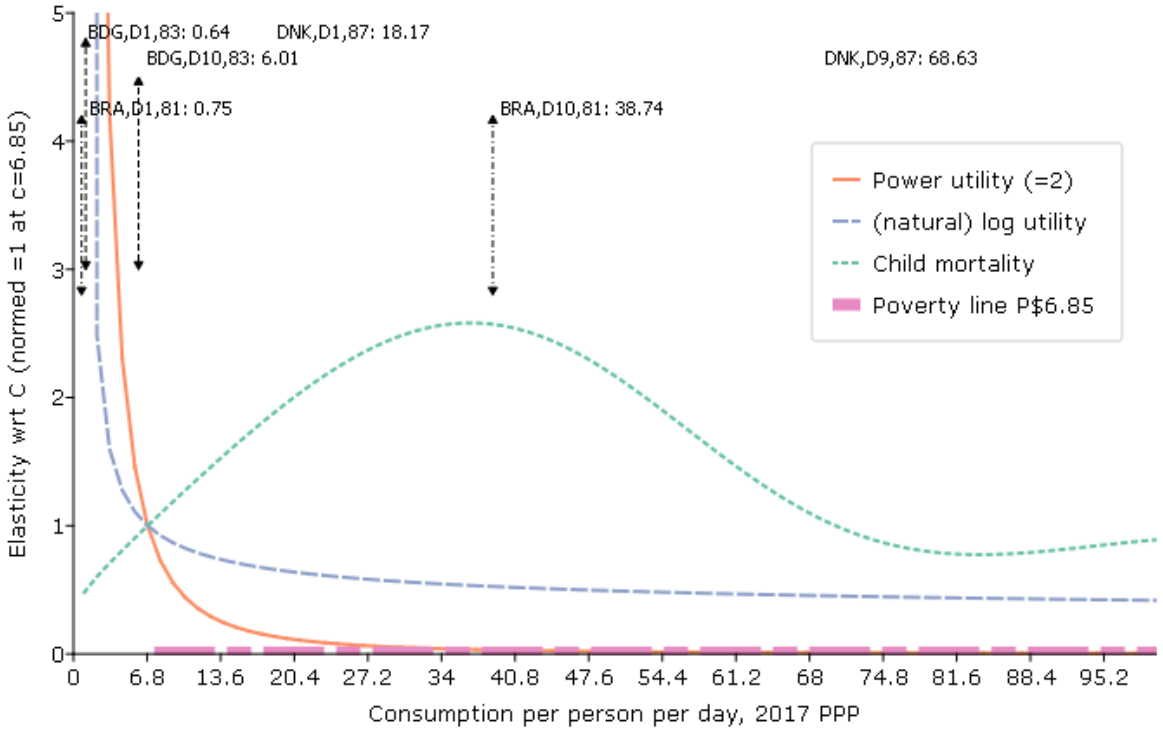
[3] The "poverty line" is, everywhere and always, a socially constructed choice and people have proposed a defended a wide variety of "global poverty lines" that differ by at least an order of magnitude. Moreover, even for a given poverty line the Foster, Greer, Thorbecke (1984) measures of poverty have a parametric choice to reflect aversion to the "depth" of poverty, where 0 is the "headcount" poverty measure, 1 is the "depth" of poverty and 2 is the "intensity" measure of each of these implies a different elasticity of poverty wrt to consumption.

[4] For instance, the Atkinson (1970) Social Welfare Function index as a parameter called the "inequality aversion" parameter that is a subjective choice.

[5] The Weierstrass theorem guarantees that some polynomial function is an adequate approximation to any continuous function over a closed interval. My pragmatic argument for a methodological bias towards over-parameterization is two-fold. One, including two few terms, like the popular choice of a quadratic, can allow outlying observations in the income dimension to have leverage on the entire shape of the function. The intuition behind a quadratic is a loose invocation of the Taylor's theorem but this is useful only locally, whereas GDP per capita differs across countries by two orders of magnitude. Two, most arguments for parsimony apply to choices of distinct variables, not terms of a polynomial to represent a global relationship.

Figure I.2 illustrates the interaction of the elasticities of the normative measures wrt to consumption/income, country inequality, and growth incidence.



There are four key insights from Figure 1.2.

One, the degree to which growth is going to be important to normative goals depends on how poor or rich a country is for any normative measure that counts gains in a way that declines (at some point) with income. No matter which indicator is used from Poverty to an inequality averse social welfare function to child mortality, the equivalent growth (both level and incidence) in Denmark is going to lead to a much smaller percentage gain in wellbeing than in Bangladesh because for at least the upper half of the distribution in Denmark they are in a range where the elasticity of wellbeing is low compared to the *entire* distribution of income in Bangladesh in 1983.

Two, inequality in initial conditions will make the responsiveness to growth more sensitive to growth incidence as the elasticity wrt to consumption is going to very different across the distribution in a high inequality country. So, with a consistently "steep" elasticity (e.g. log utility, power utility, or poverty) growth is going to be very important for Decile 1 in Brazil and much, much, less important in Decile 10. Hence if growth in Brazil were "pro-rich" it could produce very little gain. In contrast, in 1983 inequality in Bangladesh was low and hence the gap between poor (Decile 1) and rich (Decile 10) was absolutely small and hence even "pro-rich" growth would have a large impact.

Three, the "money metric" indicators shown have elasticities that are enormous at low levels and decline very rapidly whereas the empirical elasticity of child mortality wrt to

aggregate consumption across countries actually *increases* up to about P$40 per person per day (P$14,000 per year) and then declines slowly. The parameterization of inequality sensitive money metric indicator is subjective and hence not pinned down by empirical associations in the way that physical indicators are. This could mean that the high sensitive measures don't actually reflect the choices or preferences of people actually living at these standards of living and risk treating gains to income as *de minimis* to development indicators where they are hugely important to people and families.

Four, I don't show the elasticity of poverty below the poverty line as this depends on the subjective parameter choice of the poverty measure, but the unique feature of standard poverty measures is that this elasticity goes to *exactly* zero above the poverty line. This implies that, even by the World Bank's current "high" poverty line large numbers of households count for *zero* even when other inequality averse measures (like log utility) still count gains at relatively high rates at much higher levels of consumption and, again, physical indicators are completely inconsistent with the view that gains to households just above any of the World Bank poverty lines count for nothing in improving wellbeing (Pritchett and Viarengo 2024).

I.C) The impact on human material wellbeing of inclusive-enough, sustained, economic growth

Of course growth of GDP per person is not a goal in and of itself but rather is normatively valued to the extent it facilitates the raising HMWB. *Of course* the inequality of the distribution of the gains from growth matters to how much it improves HMWB. *Of course* there are important reasons to value the gains of those less well off more than of "the rich." *Of course* "basic needs" are more important than fancy cars or a second home. *Of course* economic growth is only a distal cause and one needs intermediating proximate causes to reach objectives (e.g. richer countries have higher life expectancy not because people swallow money when they are sick but because higher incomes facilitate the access to and use of higher levels of proximate causes of health improvement). *Of course* economic growth may be less important than other factors for producing wellbeing (both material and overall) at high levels of GDP per capita than at low levels.

I do not start from some premise or assumption that "growth is good" but rather that "growth is good to the extent it brings about good things." The question of how closely related "good things" are with standard measures of national economic growth (shifts over time in the central tendency in the distribution of measured consumption or income) is *entirely* an empirical question.

Here I use previous research to show that *empirically* the cross-national association between level of economic activity (either median consumption or GDP per capita) and three "good things": (i) headcount poverty rates, (ii) "basic needs" and (iii) a measure of social progress is very, very strong. The association is so strong one can show that economic growth is *empirically necessary:* no country achieves a low level of poverty, a high level of basic needs or high levels of social progress without achieving high levels of GDP per capita. And economic

growth is *empirically sufficient:* (almost) no country with a high level of GDP per capita has high levels of poverty, low levels of basic needs or low levels of social progress.

This very strong association of economic growth with high levels of HMWB reflects the role of economic growth as a *distal* cause and does not therefore decide questions about, say "state versus market." That is, one of the many pathways through which higher levels of GDP per capita bring about higher HMWB is through increased overall budgets of governments through which they provide public goods or publicly provided services or transfers which raise HMWB. Nor does the very strong association rule out that governments (and others) may be able to design programs that are much more cost effective at achieving goals than the existing programs and practices and that this might be an available channel of progress.

But the results do suggest that more rapid, more sustained, and inclusive enough (and perhaps more inclusive) economic growth in developing countries (those countries below the 80th percentile of GDP per capita) is perhaps the single largest factor is achieving the normative goals for human wellbeing.

Part II) Headcount Poverty

The first of the Sustainable Development Goals is the sweeping goal: "End poverty in all its forms everywhere." A key rationale for acceleration of economic growth in "developing" countries has always been the reduction in some notion of "poverty." Which raises the empirical question is: "just how strong is the relationship between economic growth and reduction in measures of poverty?" The answer given here, and supported with evidence, is: "when economic growth is defined as the increase in the income/consumption of the typical (median) household then the relationship with poverty at a variety of poverty lines is as strong as it could possibly be: essentially nothing else matters (much)."

II.A) Growth for the median household is empirically necessary and sufficient for poverty reduction

The standard Foster, Greer, Thorbecke (1984) class of poverty measures take a radical stance on the elasticity of HMWB wrt to income as it implies the elasticity of poverty wrt to growth of consumption or income above the poverty line is *exactly* zero. Each of the three widely reported poverty measures class (headcount, poverty depth, or squared intensity) are weighted sums of the distribution of income but *only* for those below the poverty line. One might think that therefore that since poverty reduction is, by definition, *only* about the improvement of those below the poverty line that general measures economic growth would therefore not be that important for poverty reduction. Empirically the exact opposite is true: *all* that matters for a country's level of poverty is the level of the median of the distribution of consumption (Pritchett 2020).

It is a long well-established fact that the association of GDPPC and headcount poverty rates is very strong, both in levels and in changes over time. Kraay (2006) using data from the 1980s and 1990s showed that: "In the medium- to long-run, most of the variation in changes in poverty can be attributed to growth in average incomes."

The shift from GDPPC to median consumption is not a sleight of hand but rather empirically more precise and conceptually clarifying in three ways. The measurement of poverty uses household surveys of consumption, not national account aggregates. One, GDP per capita includes private consumption (including, in principle, consumption made possible from transfers from government and net of taxes), government spending on goods and services (not transfers), and investment. Two countries with the same GDPPC could have very different ratios of investment to GDP and hence very different levels of consumption and we would not expect investment to affect poverty rates today. Two, measures of total consumption in the national accounts and total consumption derived from household surveys, even though conceptually similar can differ quite substantially, both in levels and in trends over time, for reasons that are often not very clear and it is not always obvious which measure is "correct." A country could have a higher level of poverty than their GDPPC would suggest because the survey measure of mean consumption is lower than mean consumption in the national accounts—and hence this poverty-GDPPC deviation may have nothing to do with inequality or the effect of poverty programs but rather is just measure error (in one or the other or both measures).

Third, using the median as the measure of the "central tendency" of the distribution of consumption focuses only on the gap between "the poor" and the "typical" (50^{th} percentile) person whereas the mean or arithmetic average consumption can be heavily influenced by that happens at the upper tail. One definition of "inclusive growth" or "shared prosperity" could be what happens to the median household (Birdsall and Meyer 2015), as if growth were "exclusive" in the sense that only the rich got richer the median would be unchanged. Measuring growth by the level (cumulative growth) or rate of change of the median therefore parses out changes in the upper tail and focuses on the question: "what is the connection between the consumption of the "typical" household and poverty?"

Figure II.1 uses the data from the World Bank on poverty for all countries and years with reliable surveys and which report poverty based on household consumption and not on income, which produces a total of 389 country/year observations. Figure II.1 shows that essentially *all* of the variation across countries and years in poverty at the P$5.5 poverty line is associated with variation in median consumption, which is illustrated in two ways.

One way this is illustrated is the scatter plot showing actual values and the predicted value based on median consumption alone. The R2 of regressing headcount poverty on a flexible functional form (a polynomial that allows for powers from -2 to 5) is .988, which implies the bivariate association of poverty and its value predicted by median consumption is .994. As the upper limit on correlation is 1, it is fair to say that essentially all of the variation in poverty across countries and years is associated with variation in the median.

The graph also shows two "data envelopment" curves with a lower bound and an upper bound. The lower bound is the lowest poverty is for any country with a median consumption of a given level or lower. This the best any country does on measured poverty at any given level of median consumption or a "frontier" of best observed performance. The upper bound is the converse, the *highest* poverty is for a level of median consumption or higher. The power of the

data envelopment curve is that is shows what combinations of median consumption and poverty have never been observed[6].

These data envelopment curves illustrate that high median consumption is both *empirically necessary* for low poverty and *empirically sufficient* for low poverty.

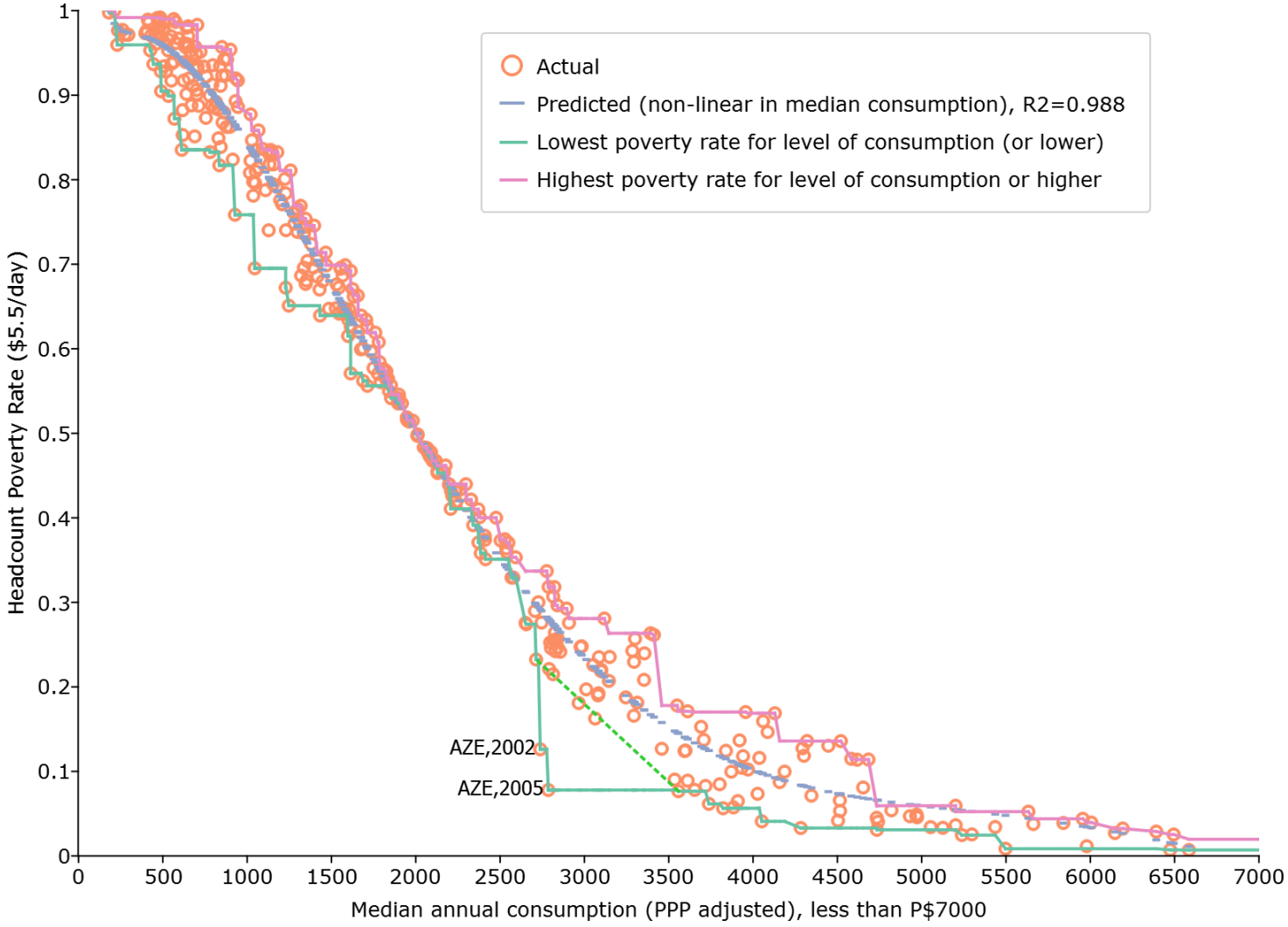
That growth in median consumption is *empirically necessary* for poverty reduction is illustrated by the white space (outside of the green lower bound) in the southwest of the graph. For any given level of consumption one can read off the graph the *lowest* poverty rate observed for any country at that level of consumption. For instance, in this data the lowest 20 percent of country median consumption (across countries and time) had consumption below P$1,353. At this level of consumption not country ever have poverty lower than 65 percent. The phrase "empirical necessity" conveys that it is not *impossible* that a country with median consumption of P$1353 might have poverty lower than 65.1 percent, one can *imagine* that might happen, but that there are no recorded instances so there is no *evidence* that it is practically possible.

For instance, there are two observations in the data for Azerbaijan in 2002 and 2005 that show extraordinarily low poverty rates for a given level of income, but this one particular case shows it appears to be possible for one country, but that, in and of itself, doesn't demonstrate that for any other country there is a feasible path to low poverty.

Similarly, that growth in median consumption is *empirically sufficient* for poverty reduction is illustrated by the white space in the northeast of the graph. The graph is truncated at a consumption level of P$7,000, which is roughly the 75th percentile of countries because at that level and above P$5.5/day poverty is *always* lower than 2 percent. It just isn't the case that countries have growth of the consumption of the typical person but leave the poor behind. So then people say that economic growth is not sufficient for poverty reduction this is a *possibility* if growth is excessively non-exclusive and concentrated only on the upper percentiles, but and economic dynamic that produces *inclusive growth,* defined as the growth of the median, is in practice empirically *sufficient* for poverty.

[6] This is different from the standard statistical approach of reporting standard error bounds around the predicted value which show what is "unlikely" at various levels of "unlikely." But in this case we are not "sampling" but rather the data represent the actual experiences of (nearly) all countries.

Figure II.1: Median consumption is empirically necessary and empirically sufficient for reducing headcount poverty



Source: Author's calculations.

There are two important points, both of which are implications of the very tight relationship between median consumption and headcount poverty. One, the countries that have had large success in poverty reduction (at whatever poverty line) have done it nearly all through increasing median consumption, not through achieving lower poverty rates at a given level of consumption. Two, prospectively the gains in poverty reduction available from countries getting to the "frontier" of low poverty for their current level of consumption are small compared to the gains from a long (25 year) episode of modestly faster (a standard deviation higher) growth.

Table II.1 shows all of the episodes in the World Bank data of countries with episodes with measured poverty over a period of 10 or more years that reduced poverty by 40 percentage points or more, for both "dollar a day" extreme poverty (which in 2011 PPP prices is P$1.9/day) or at a moderate global poverty line, P$5.5 day.

The three largest episodes of extreme poverty reduction in the World Bank data are China (1981-2015), Indonesia (1984-2015), and Vietnam (1990-2012). After the reforms launched by Deng in 1978 China launched into world history's largest, longest growth episode and from 1981 to 2015 extreme poverty went from nearly universal to nearly zero, falling from 95.6 percent of the population to 1.2 percent, a fall of 94.3 percentage points. If we ask, how much would we have expected China's extreme poverty to fall had it moved along the non-linear relationship with median consumption illustrated in Figure II.1 (but estimated for P$1.9/day poverty) the answer is 93.5 percentage points, which is 99 percent of the total (.99=93.5/94.3). So only .8 percentage points of the massive reduction in poverty in China need be attributed to anything other than its growth in median consumption.

Table II.1: In countries that made large progress in reducing poverty, nearly all of the gain from accounted for by the gain predicted from increase in median consumption

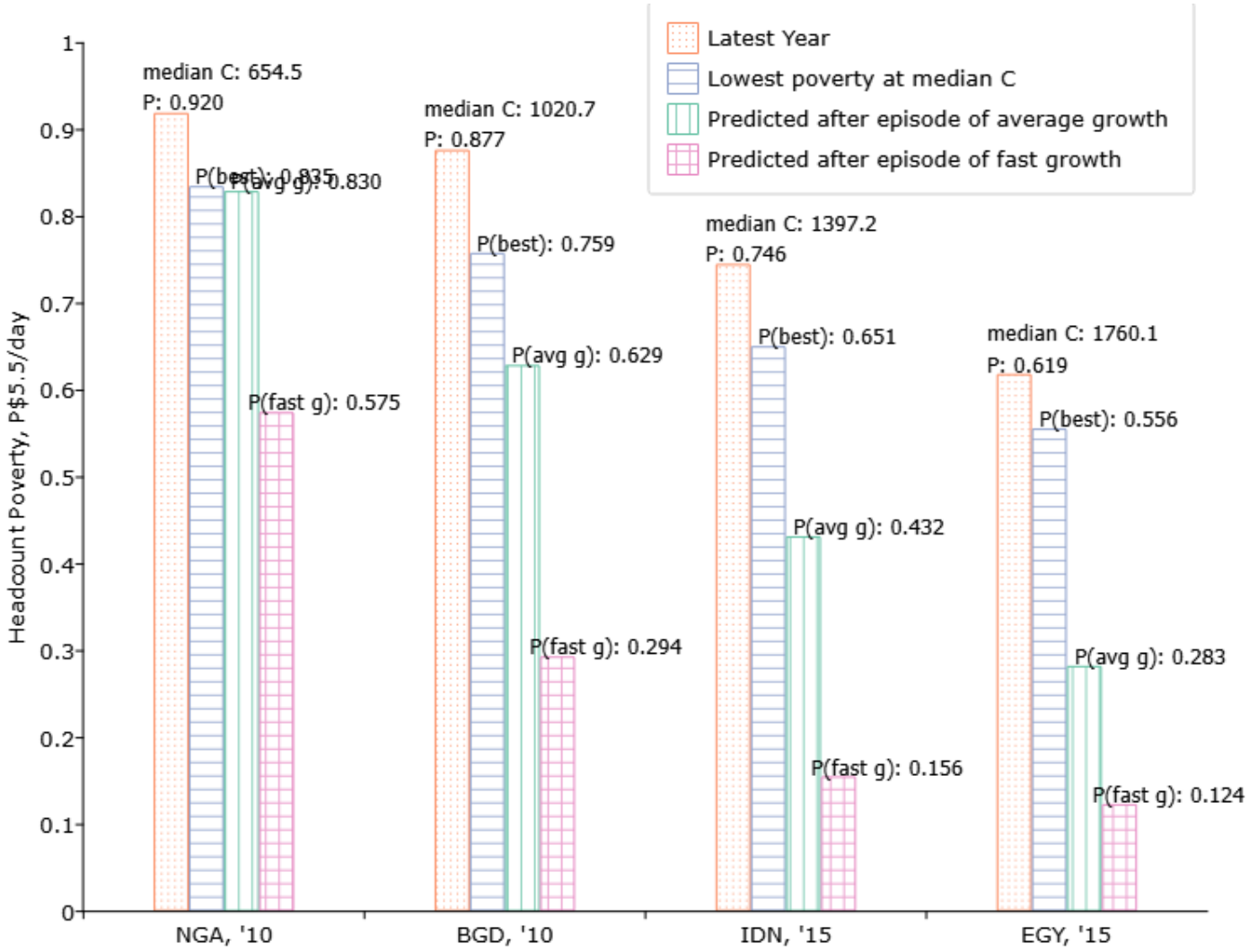
Country	Start year	End year	Percent per annum growth median cons-umption	Start Poverty	End Poverty	Change in actual poverty rate over the episode	Predicted poverty at start of episode	Predicted poverty at end of episode	Change in poverty predicted from median cons-umption	Change in predicted poverty as percent of total poverty reduction
All episodes with reduction in "dollar a day" poverty greater than 40 percentage points										
CHN	1981	2015	5.85%	95.6%	1.2%	94.3%	97.9%	4.4%	93.5%	**99.1%**
IDN	1984	2015	3.60%	79.2%	7.4%	71.8%	72.0%	15.4%	56.5%	**78.7%**
VNM	1990	2012	6.49%	62.3%	2.8%	59.5%	58.5%	3.7%	54.8%	**92.0%**
NPL	1987	2011	3.42%	72.6%	15.4%	57.2%	71.0%	22.4%	48.6%	**84.9%**
GIN	1990	2012	6.51%	91.1%	35.3%	55.8%	90.7%	36.0%	54.7%	**98.0%**
TJK	1999	2015	6.91%	54.4%	4.8%	49.6%	51.2%	7.4%	43.8%	**88.5%**
TMP	1999	2015	4.6%	79.0%	31.2%	47.8%	79.0%	35.3%	43.6%	**91.3%**
SWZ	1993	2010	6.8%	82.4%	41.3%	41.0%	97.1%	37.1%	60.0%	**146.2%**
BFA	1993	2015	4.4%	83.0%	42.8%	40.2%	95.5%	42.3%	53.3%	**132.4%**
Median										**92.0%**
Smallest										**78.7%**
All episodes with reduction in P$5.5/day poverty greater than 40 percentage points										
LTU	1993	2015	7.4%	71.3%	4.2%	67.0%	67.4%	3.6%	63.8%	**95.2%**
MDA	1996	2015	5.2%	79.2%	16.3%	62.9%	75.9%	25.6%	50.2%	**79.9%**
THA	1981	2015	3.5%	69.6%	7.1%	62.5%	70.3%	9.5%	60.9%	**97.5%**
CHN	1981	2015	5.8%	100.0%	43.2%	56.8%	100.7%	44.0%	56.7%	**99.8%**
VNM	1990	2012	6.5%	96.2%	41.5%	54.7%	95.1%	41.7%	53.4%	**97.6%**
CRI	1981	2015	4.0%	65.5%	11.5%	54.0%	71.0%	6.7%	64.4%	**119.3%**
MNG	1993	2012	4.5%	76.6%	24.8%	51.8%	71.6%	27.0%	44.6%	**86.1%**
KAZ	1993	2015	3.2%	58.8%	7.7%	51.1%	59.3%	18.0%	41.3%	**80.7%**
MAR	1981	2015	2.1%	75.4%	30.0%	45.4%	70.0%	32.0%	38.0%	**83.7%**
TJK	1999	2015	6.9%	98.1%	54.2%	44.0%	93.2%	52.7%	40.5%	**92.2%**
CHL	1987	2015	3.6%	52.8%	10.1%	42.6%	56.0%	7.5%	48.4%	**113.6%**
BRA	1981	2015	3.2%	60.4%	19.4%	41.0%	66.8%	12.0%	54.8%	**133.6%**
Median										**96.3%**
Smallest										**79.9%**

Source: Author's calculations with data from World Bank PovCal Net data, downloaded 2018.

The second point is that the tight relationship between poverty rates and median consumption implies that the gains to improving poverty by getting more poverty reduction out of the same median consumption seem, in actual practice, to be limited versus the essentially unlimited upside from growth. Figure II.2 shows for four countries at various levels of consumption their: (i) actual poverty rate and median consumption in the latest data yea, (ii) the best poverty rate for any country at their level of consumption, (iii) the predicted level of poverty if the country at 25 years of growth at the average observed level of growth, and (iv) the level of poverty if the

country managed to create an extended episode (25 years) of fast growth, defined as growth one standard deviation faster than the average.

Figure II.2: Only sustained growth can provide large reductions in poverty



Source: Author's calculations with World Bank PovCalNet data.

Figure II.2 illustrates that for a moderate poverty rate (P$5.5 in 2011 PPP) in lower middle countries like Indonesia and Egypt the responsiveness of poverty to growth is large and growth is much more important for poverty reduction than improving the poverty rate at a given consumption level, which produces modest and limited gains. Headcount poverty in Egypt in 2015 was 61.9 percent. The *lowest* observed poverty at Egypt's level of median consumption was 55.6 percent. An extended episode (25 years) of average growth would reduce poverty to 28.3 percent and an extended episode of rapid growth would reduce poverty to 12.4 percent. The poverty gains from an extended episode of rapid growth are 10 times as large as from moving to the best poverty rate at their current level of consumption.

For very poor countries, like Nigeria in 2010, headcount poverty rates at P$5.5 are so high (92 percent) that either moving to the best poverty rate or an episode of average growth barely makes a dent in the poverty rate, reducing poverty to only 83 percent in either case (as

seen in Figure II.1 above the slope is relatively flat when countries are very poor as growth pushes few people below the poverty line as the poverty line is into the long right tail of the income distribution). In this case only sustained rapid growth pushes Nigerian into the range where growth produces rapid reductions in poverty.

II.B) The "dollar a day" line is "a" poverty line, not "the" poverty line—and that matters for understanding the relationship of poverty and growth

The calculations in Figure II.1 and Figure II.2 did not use the "dollar a day" poverty line but the higher of the poverty lines routinely reported by the World Bank, the P$5.5/day poverty line (in 2011 PPP). Table II.1 used both the P$1.9/day and P$5.5/day poverty lines. This is to emphasize that in any debate about "is economic growth good for poverty?" one has to acknowledge that there are a whole variety of poverty lines, both global and national, which have different purposes and uses. While the "dollar a day" standard (updated for method and inflation) is one important threshold for poverty other poverty lines are equally legitimate and the world and the development community are, rightly, moving away from conflating "poverty" with "dollar a day poverty." (Pritchett 2024).

The "dollar a day" standard was first proposed and used in the World Bank's World Development Report 1990. The method that produced the "dollar a day" standard was not designed to choose "the" unique and only global poverty line or even the "best" global poverty line (whatever that might mean) but only to choose the *lowest* global poverty line that could plausibly be defended. Ravallion, Datt, van de Walle 1991 noted that, across the large range of national poverty lines used across countries, poverty lines tended to increase with national income but there was a lower bound, a bottom asymptote, and that even in the poorest countries tended not to go below a threshold poverty line. Hence, they argued that the *lowest* possible global poverty line was the average of the poverty lines of the world's poorest countries. The WDR 1990 adopted and published numbers of the world's poor based on this "dollar a day" standard. The use of the convention of the "dollar a day" poverty line as the standard for the *lowest* poverty line or defining "*extreme* poverty" spread.

While there is pretty wide consensus that "dollar a day" poverty line is a workable *lower bound* that defines a notion of *destitution* or *extreme poverty*—I have never seen anyone argue that a global or national poverty line should be substantially *lower*—there is also a wide consensus that it is not the *only* legitimate poverty line for defining global poverty, a poverty line to be used to measured national poverty in every country, or as the primary or unique objective of development organizations.

The Sustainable Development Goals adopted by the UN in 2015 have as the first goal: "End poverty in all its forms everywhere." And while the first target for that goal is eradication of "dollar a day" (now $2.15/day due to inflation) the second target within that goal is: "By 2030, reduce at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions." This is both a clear endorsement of the "dollar a day" line as identifying a lower bound that deserves special concern but also a clear

rejection of the idea that "dollar a day" is the *only* relevant or legitimate definition of global poverty.

A fruitful way to approach the construction of an array global poverty lines that reflect "poverty in all its forms" is to consider errors of inclusion and exclusion. A penurious low-bar line like "dollar a day" has very small errors of inclusion: a household with members living below "dollar a day" is *for sure* poor. But conversely "dollar a day" has massive errors of *exclusion.* As the relationship between all measures of material wellbeing and household consumption are continuous, it is impossible to argue that a household with consumption just above the "dollar a day" standard is *for sure* not poor. Any poverty line is necessarily just a social convention as *there is no line at a poverty line*. That is, some natural processes do have a line: water undergoes a phase transition from liquid to solid at 0 Celsius and from liquid to gas at 100 Celsius and so there is a "freezing point" and "boiling point" for water. But there is no level of consumption above or below which something discrete or special happens, and moreover, there has never been any argument that this level is "dollar a day.'

An upper bound global poverty line can be thought of as reversing the errors of inclusion and exclusion: "what is the poverty line such that a person living above this poverty line is for sure *not* poor?" If we think the opposite of "poverty" isn't, as with "dollar a day" being poor but not extreme poor, but rather as being "prosperous" or in the "global middle class" then one can define an poverty line for which errors of inclusion might be high (people may be classified as poor but are not) but errors of exclusion are low—no one who can be legitimately be called poor is excluded.

This is not a picayune debate that leads to nearly the same poverty lines or estimates of the number of people globally poor. Proposals for an upper bound global poverty line tend to be an *order of magnitude* (or more) higher than the "dollar a day" standard and hence while estimates of global "extreme" poverty are about a billion people, estimates of global "not prosperous" or "poor by a global upper bar poverty line" are the reverse: all but about a billion people can be considered poor. Pritchett (2006, 2013) proposed that a development organization like the World Bank should use the poverty lines of its richer shareholders as a global upper bound, which resulted in an upper bound roughly 10 times higher than the "dollar a day" standard and hence suggested while (at the time) 1.3 billion were in "dollar a day" poverty another 4.1 billion people were "globally poor."

Rozer (2021) updates the calculation of a poverty line based on rich country poverty lines and expands the range of comparisons to include not just national lines of the USA and European countries but also survey results, lines used for social programs in Europe, and calculations by other authors. Roser's calculations are that P$30/day as an "upper bound" poverty line, this in the PPP price levels comparable to the P$5.5/day line used here and hence is 16 times higher than the "dollar a day" line of P$1.9/day. By this standard 85 percent of the world, 6.5 billion people, can be considered at least "moderately poor."

In their book *Factfulness* Rosling, Rosling and Ronnlund (2018) argue that having a single dividing line between "poor" and "not poor" or "developed" and "developing" creates

widespread and damaging misperceptions about the basic facts of development. They propose dividing the experience into four ranges or spectrum of standards of living, the upper bound for level I is P$2/day, the range for level II is from P$2/day to P$/8 per day, and level III runs from P$8 to P$32 with level IV all those above that. Hence P$32 is their proposed upper threshold for achieving a globally adequate standard of living.

The use of an array of poverty lines in assessing the question of "how does growth impact poverty" is essential because, by the very nature of the standard measures of poverty the answer depends critically and completely on the poverty line. For instance, the headcount poverty rate is the sum of people living below the poverty line divided by the population. The formula for the responsiveness of poverty to a distribution neutral shift in consumption (just moving everyone in the entire distribution of consumption up by the same proportional amount) depends on how many people are near the poverty line, or equivalently, the height of the probability distribution function (pdf) of consumption at the poverty line. So, in a typical left skewed distribution of consumption (like the log-normal, which is often a reasonable empirical characterization of distributions of income and consumption (Lopez and Serven 2006) this means if the poverty line is very high relative to median or average consumption then the responsiveness of poverty to growth is going to be low as few people are near the poverty line. The responsiveness of poverty to (equal proportionate) growth is going to be at the mode of the distribution (which, by definition, is the consumption level where the highest concentration of people are) and then when poverty is very low compared to the mean (or mode or median) of the distribution then again poverty is going to have low responsiveness to growth. These differences are just mathematical and built in to poverty definitions, hence this pattern of responsiveness of poverty at different poverty lines relative to the distribution of income is not a "finding" but a straightforward implication.

Figure II.3 illustrates this dependence of the responsiveness of poverty to growth across the three poverty lines reported by the World Bank, P$1.9/day, P$3.2/day and P$5.5/day. For each of those poverty lines we estimate the same non-linear in median consumption regression as illustrated for P$5.5/day in Figure II.1 and the predicted values from these regressions are shown in Panel A of Figure II.3. Using the estimated regression coefficients, I compute the semi-elasticity of the predicted headcount poverty rate wrt to median consumption (which is the absolute change in the poverty rate divided by the percentage change in median consumption) and these are shown in Panel B.

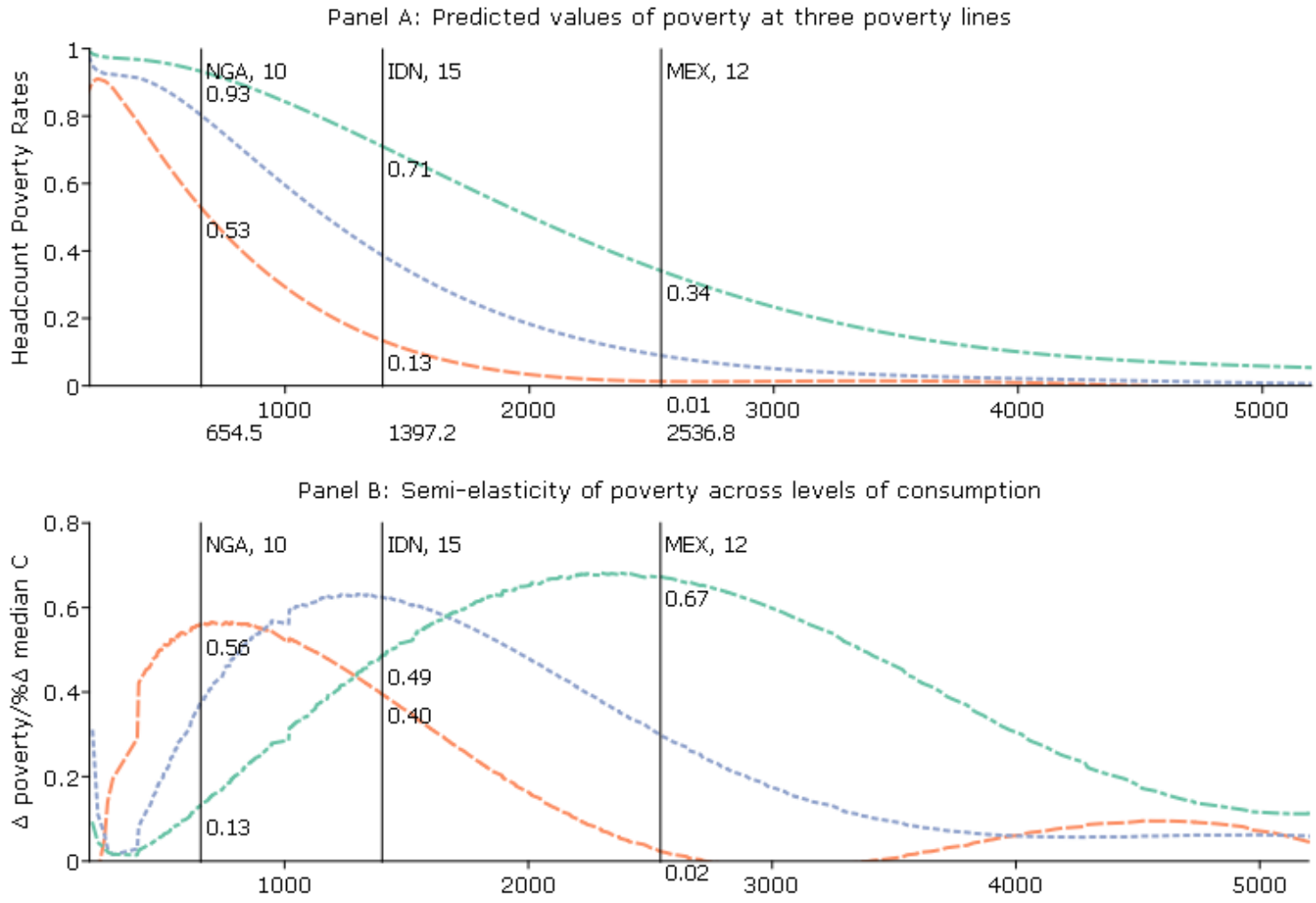
This illustrates that the question "how responsive is poverty to growth in median consumption?" depends completely on the country's level of consumption and the poverty line used to define poverty. For instance, Nigeria in 2010 had a very low level of median consumption, P$654. That implied that P$5.5/day poverty was very high, 93 percent and hence the responsiveness of P$5.5/day poverty was low, .13 while in contrast, P$1.9/day poverty was 53 percent and the responsiveness to growth in median consumption was also very high .56.

The opposite was true for Mexico in 2015 at median consumption of P$2536 as P$1.9/day poverty was very low, just 1 percent, so the responsiveness of this definition of poverty to median consumption was very low, .02. But P$5.5/day poverty was 34 percent of

the population and the responsiveness of this definition of poverty to growth in median consumption was very high, .67.

Indonesia, being between Nigeria and Mexico in median consumption (P$1397) had nearly equal responsiveness of both P$1.9/day and P$5.5 /day poverty.

Figure II.3: The responsiveness of headcount poverty rates to growth necessarily depends on the poverty line used and the country's typical/average level of consumption



Source: Author's calculations with World Bank PovCalNet data.

For any given poverty line, from "dollar a day" to P$5.5/day (now P$6.85 in 2017 prices) to P$30/day growth in median consumption ("inclusive growth") is an empirically necessary and empirically sufficient condition. The relationship between headcount poverty rates in a country and its median consumption is one of the empirically strongest relationships possible, as the association is very near its upper limit of 1.

It is also true that the impact of inclusive growth on the poverty rate (measured as the semi-elasticity) eventually declines to very low levels because poverty is very low. But a case against growth being important for developing countries would have to be based on both that fact *and* the choice of a very low poverty line, like "dollar a day" as the normative measure of human wellbeing. But, no one is in the position to insist that people or countries limit their aspirations to just not being destitute. So, while people and countries want to escape "dollar a day" poverty as it does measure an extremely low level of standard of living, there is no evidence that people or countries have ever limited their aspirations to just escaping that penurious poverty line. And hence there is no legitimate basis for development organizations to super-impose on countries limits on their aspirations of what it means to achieve "development." As countries aspirations growth with their economic progress and capabilities the case for inclusive growth as a needed instrument to achieve poverty reduction remains strong.

II.C) There is no inherent conflict between accepting the central role of inclusive growth for poverty reduction and efforts to directly address poverty and inequality

II.C.1) Targeted poverty programs and poverty reduction

There has been a large movement within development economics towards the use of more rigorous methods of impact evaluation to assist in the design and implementation of programs in developing countries generally and programs that are intended to directly benefit the poor in particular (Banerjee and Duflo 2011). A "pro-inclusive growth" focus and a "implement cost effective actions that benefit the poor" agendas are complements, not substitutes or in opposition. Three points.

One, an important part of the agenda for rigorous impact evaluation has been to emphasize that funds spent on poverty reduction, whether by governments or charitable organizations, should be both *effective* and *cost-effective.* Research has found that many anti-poverty programs are just not effective at all in producing sustained gains in the income of the poor. And even when programs are effective, in that they have *some* demonstrable impact, they are often not *cost effective* as the costs of achieving those gains are often much higher than alternative approaches with the same impact. The use of rigorous methods have established that cash transfers, just giving an unconditional grant to targeted households, are effective, and, by reducing the administrative and implementation costs of programs are often quite cost effective (Blattman and Niehaus 2014). Organizations like GiveDirectly argue there is a strong case that any proposed anti-poverty program should be able to beat the cost-effectiveness benchmark of cash transfers (and, more strongly, cash transfers should not just be the "thing to beat" but should be the default "thing to scale" (Wright 2023)). There is no contradiction between a pro-growth stance and the drive to use evidence to identify cost-effective anti-poverty programs

Two, a fair consensus of the learning so far is that, while there are anti-poverty programs that have been shown to be effective across a variety of settings, we cannot expect poverty impacts to be easy or to have dramatic impact. For instance, a widely cited study published in *Science* magazine used RCTs to estimate the impact of a program of livestock asset transfers to address chronic poverty across six country settings and found positive impacts on household incomes in year 3 of the program in five of the six countries (Banerjee et al 2015). Taking this as a success case, it is worth making four points. First, the total impact on households was modest compared to costs. Averaged across the five countries with success the average gain in household non-durables consumption in year 3 was $344 after a two-year implementation period with cost of $4545. Even assuming the gain of $344 from the program lasts forever this implies a rate of return of 7.4 percent (Pritchett 2018). This is not an argument against this program, as, if the costs come from richer people and the benefits are to the very poor this could be a very attractive program for a normative function that gives higher weight for gains to poor people. Second, the program was complex, in that it was a "multi-faceted" program with eight components and the complexity was the result of long trial and error of the NGO BRAC and the resulting complex design may well be "essential" in that the program would not be effective without all those components. So this finding should not be misconstrued as a success of simply "giving households livestock assets." Third, implementation with fidelity is an important part of success and hence, while this was successful in five different country settings, it was not implemented by governments in those countries and hence there is no evidence this is "scalable" except as it is done by a quality implementation partner, like BRAC. In particular, there can be no assumption that governments can do at scale what NGOs have demonstrated is possible (Vivalt 2020, Muralidharan and Niehaus 2017). Fourth, while this program was effective across an array of settings, a rigorous evaluation of this same type of program in south India found no positive impact (Bauchet et al 2015). These authors found that, while the livestock assets increased, in the context of a booming local economy that positive impact was offset by those receiving the livestock asset being less likely to increase their wages, so in this case the general opportunities from local economic growth exceeded those from even a well designed and implemented program.

Three, a cardinal insight of economics is to distinguish marginal from average and that distinction cautions against confusing "cost effective" with "total impact." There may be elements of programs that, particularly when added to an existing program design, can make the overall program more effective at relatively small marginal cost (as, with respect to design change the implementation costs can potentially be treated as fixed costs) and hence be cost effective even though the incremental impact is small. As an illustration , a paper in the prestigious journal *Nature* examined the impact of adding to an existing cash transfer program in Niger a capital grant, a psychosocial intervention, or both (Bossuroy et al, 2022). The paper finds that adding the psychosocial intervention is cost effective. But the absolute gains of the program and the incremental gains from the intervention are absolutely small. The per person per day consumption of the control group (getting only the cash transfer) was $1.70 whereas the group getting the psychosocial intervention on top of the cash transfer had consumption of $1.88, which, as the intervention was quite cheap, was enormously cost effective. But it is unlikely the impact of the psychosocial intervention is linear and one could achieve twice the impact with

twice the intervention, or ten times the impact (which would be adding $1.80 per day to reach $3.50/day) from ten times the intervention. Whereas in Vietnam the median income over their poverty reducing episode went from $1.87 (roughly the level in Niger) to P$8.87 by 2012, an increase of P$7. And the cost effective intervention might have reduced extreme poverty by a big, but almost certainly did nothing for P$5.5/day poverty nor did it close the gap between the control group's consumption of $1.7 and that of the median in Chile of P$17,5/day or much less Denmark's median consumption of P$48.5/day (Pritchett 2022). A perfectly valid response is "but this program wasn't meant to address higher poverty levels or cause massive increases in median consumption" and the response to that is, "of course not, that is why growth is needed."

The most important point is that while some times it is argued that "more" attention from a research point of view of "more funding" from philanthropists or governments should go to anti-poverty programs *because* "growth alone won't reduce poverty" this argument is unnecessary and inessential to the case for finding and funding cost effective programs. That is, even if this particular "growth won't work" argument for more anti-poverty programs is false (and it is) the implication is not "don't do cost effective anti-poverty programs." There is a very strong case for doing cost-effective programs (evaluated on a chosen normative valuation of effective) because they are cost effective and irrespective of the impact of growth on poverty.

The question "should the development community promote sustained inclusive growth or promote cost-effective anti-poverty programs (using rigorous methods to evaluate impact)?" is ill-posed as there is no argument why it should be one or the other, the question is to get the balance right. And to get that balance right one has to acknowledge that the strongly demonstrated fact is that there is no path to large reductions in poverty—particularly at higher poverty lines—through and "anti-poverty programs alone" strategy but that this isn't an argument against "inclusive growth *plus* cost-effective anti-poverty programs (and rigorous research into such)"

II.C.2) Growth and inequality in pre-tax and transfer incomes and poverty reduction

Perhaps in the service of constructive ambiguity, there are two very different meanings of "inclusive growth."

One construal of "inclusivity" of growth is the "inclusion into high productivity" and hence focuses on the distribution of market, pre-tax-and-transfer, incomes. This version of inclusion growth focuses on the assets households deploy (both human capital, physical, and financial capital) and the efficacy with which they can use those assets given the structure of the economy.

The other construal of "inclusive" growth is that the pattern of pre-tax-and-transfer incomes just are what they are, perhaps seen as determined by technological patterns of change or global trends beyond policy control, and that the "inclusivity" is created by progressive taxes and transfers.

While the data strongly suggest that growth that is sufficiently rapid and sustained in raising the income of the "typical" person tends to be "good enough" to reduce poverty, the

analytic framework in Part I is consistent with growth that is more pro-poor in its growth incidence having larger impacts on poverty than other growth.

This stance in favor of inclusive and, within that, pro-poor growth had been the dominant approach within development economics until quite recently. For instance, the 1990 World Development Report on Poverty, while it adopted the "dollar a day" poverty line, had as its main two policy domains for reducing poverty: inclusive growth and investments in human capital, with the idea that anti-poverty programs or taxes and transfers would play a significant role in poverty reduction was downplayed[7]. The WDR 1990 stressed that since the most valuable asset owned by the poor was they labor that policies that were pro-labor intensive growth (as opposed to many countries whose industrial policies were pro-capital intensity) were more likely to reduce poverty.

The work of David Dollar and Aart Kraay (2002) "Growth is Good for the Poor" was highly influential and widely cited showed that since the share of the bottom quintile was quite steady within countries over time, this implied that average growth and growth of the incomes of the poor were highly correlated. Moreover, they argued that what little variance there was in changes in the share of the bottom quintile was very hard to explain with any observable policies or country features and hence the most likely way to increase the incomes of the bottom quintile was to focus on policies shown to be instrumental in producing sustained rapid growth and high levels of incomes. Dollar, Kleineberg, and Kraay (2016) updated the earlier empirical work with the clear title "Growth is still Good for the Poor."

The "pro-growth" view does not "ignore" the impact of levels inequality and growth incidence on poverty but allows the data to speak to the question. Bergstrom (2022) models the elasticity of poverty with respect to mean income and inequality and finds that "changes in poverty were, in large part, explained by changes in mean incomes" and that this is not because changes in inequality do not *potentially* play a large role in poverty but because, as Bergstrom state: "This is a consequence of changes in income inequality being an *order of magnitude* smaller than changes in mean incomes."

This is a feature of the data that everyone has known for a very long time, that although there are large differences across countries in the *level* of inequality, the changes over time within countries are generally quite small relative to the cross-national differences. One implication is that it is possible to have very rapid poverty reduction with large increases in inequality. In Table

[7] As I was in the World Bank's research department at the time I was involved in some of those discussions and some were proposing that the overall strategy for poverty be expressed as a "three-legged stool" of inclusive growth, investment in human capital, and anti-poverty programs (and more generally taxes and transfers). This was strongly opposed as then, as now, there was little or no evidence that the role of anti-poverty programs was the same order of magnitude as the impact of growth. Some proposed keeping the metaphor of a "stool" but proposed it be a "two and half legged stool" with the "half a leg" being anti-poverty programs, but everyone soon realized a "two and a half legged" stool was a dumb metaphor. The other camp proposed the metaphor of a "walking on two legs" strategy of inclusive growth and investments in human capital, with specifically anti-poverty programs being mentioned and discussed but not forming a key part of the strategy or agenda, again as there was then, as now, little or no evidence of the overall empirical importance in poverty reduction of those types of programs.

XXX the three largest reductions in extreme poverty are China, Indonesia and Vietnam. In China the Gini in urban areas increased from .18 in 1981 to .361 in 2015—one of the largest increases in inequality ever—and in Indonesia from 1984 to 2015 the urban Gini increased from .332 to .422. In Besley and Cord (2007) review of eight country case studies five of the eight experienced poverty reduction and four of those five experienced an increase in the Gini.

II.C.3) Reducing inequality in post-tax-and-transfer income/consumption and poverty reduction

The rich industrial countries tend to have much smaller inequality in post-tax-and-transfer consumption than in market incomes. This is because they have a very large tax take (40 percent or more of GDP) and taxes that are modestly more progressive than are transfers. On the other hand, none of those conditions tend to be true in developing countries, and less true the poorer the country and hence the general impact of the system of taxes and government spending tends to leave inequality roughly the same.

The ability to have relatively high tax rates with relatively high compliance is, to a large extent, due to the structure of a modern economy having very high employment rates and mostly formal private sector which allows tax collection to be administratively feasible and cheap (Jensen 2022). This implies that, rather than seeing tax and transfer as a solution to poverty and inequality *instead of* economic growth it is economic growth that makes the high levels of inequality decreasing tax and transfer possible.

A report on a study of fiscal systems in 30 developing countries found that in 14 of the 30 countries the poor or moderate poor were, on a cash basis (not including "in kind" benefits) *net payers* into the fiscal system, that is cash measures of poverty were *higher* due to the fiscal system, mainly because the tax system relied on quite regressive taxes on basic goods (Inchauste and Lustig 2017).

III) Basics of material wellbeing[8]

There are many good reasons to be skeptical that a money metric indicator, like poverty but also including inequality weighted measures of consumption or income, captures all of the relevant dimensions of human material wellbeing. There is a widespread, and widely accepted, notion that some things are "basics" and that normative rankings of how well countries are doing, and hence how "development" is progressing, should be anchored in whether citizen's outcomes on these "basics" are being met.

This section takes those concerns seriously and addresses the question of the cross-national relationship of "basics" and economic growth. I propose a new measure of basics, but more importantly, argue that the precise construction of a measure of basics tends not to matter, as essentially all measures of "basics" are highly correlated. I show (or report) that for essentially any reasonable definition of "basics" the cross-country relationship between basics and GDP per capital is strong, non-linear, necessary and sufficient. Importantly, the relationship between the fulfillment of citizen's basics of human material wellbeing and GDP growth is

[8] This section draws heavily on Pritchett and Lewis (2023).

strong across the entire range of incomes of developing countries. So, as with poverty measures above, even if one defines one's normative objective as being more heavily weighted to basics—as opposed to counting all consumption equally—there still remains a strong and robust case that inclusive economic growth is an important path to reaching those goals.

III.A) Measuring satisfaction of basics across countries

There are two good reasons why the standard measures of "poverty" need to be supplemented with direct, physical (as opposed to money-metric) measures of outcomes on basics (like malnutrition or completing primary school).

First, consumption expenditures as typically measured in household surveys do measure the consumption of a wide range of goods (food, shelter, clothing, transport) but cannot reflect the value of access to a wide range of publicly provided goods, like education or health. Consumption measures also tend not to be good measures even of a concept like 'economic utility' when people lack access to improved infrastructure as they get "prices" wrong. For instance, if a house lacks access to indoor piped water (in the sense there it isn't an available water connection in their location) then they will meet their needs for water from other sources, like a natural source like pond or river, or a public standpipe. This may be "free" in direct monetary terms—and hence not show up as an expenditure in a household survey--but which can take up an enormous amount of time (a burden which often falls disproportionately on women in the household). The household might be much better off, and willing to pay, for indoor piped water, but not have access and hence access to water will not be accurately by consumption expenditures as a measure of household standard of living or money-metric poverty. Similar things are true of sanitation, electricity, and other infrastructure. Integrating these kinds of "access" issues into poverty measures is a complex problem and there is no standard procedure for how to address them.

Second, poverty lines, and particularly the low-bar "dollar a day" or "food adequacy" poverty lines are not set at levels that assure that households are meeting all of their basics at these levels. For instance, Pritchett and Viarengo (2024) show that in the Demographic and Health Survey data for Nigeria in 2018 that at the 2017 P$2.15/day poverty line only 29 percent of households had electricity, 19 percent had good sanitation, and only 53 percent access to an improved source of drinking water. Even at the World Bank's highest poverty line of P$2017 6.85/day (the same in real terms as the P$5.5/day above) only 52 percent had electricity, 25 percent sanitation and 62 percent safe water. So, while one might imagine that a household was "not poor" also was a household that "had basics fulfilled" there is nothing in the construction of poverty lines or the measures of poverty that would guarantee this and it generally is not true, particularly for low-bar lines but at the "high" World Bank global poverty line.

While the idea of "basics" is intuitive, it is, like "poverty" fundamentally a social construct. What might be a "basic" for a house in Denmark is likely a rare luxury for households in Ethiopia. To move from the widely accepted notion of "basics" to a specific aggregate country-level measure requires the specification of (a) domains, (b) indicators of what is basic within those domains, and (c) how to weight different indicators into an index.

Not surprisingly, given the importance of the notion, there have been many proposals for measures of basics. For a time when McNamara was its president the World Bank endorsed the "basic needs"[9] approach (which had previously been proposed by the ILO (1976)) and in 1981 the publication "First Things First: Meeting Basic Needs in Developing Countries" (Streeten et al 1981) articulated this approach. Their review of literature identified a number of already proposed measures, and while embracing none, suggested that any measure of basics needed to include as domains health, education, food, water, and sanitation (p 93). An alternative grounding for direct measures of wellbeing was Amartya Sen's "capabilities" approach and that inspired the creation of the Human Development Index in 1991 that combined GDP per capita with measures of deficits in health and education. Sabina Alkire has developed a multidimensional poverty index (Alkire and Foster 2011, Alkire, Kanagaratnam, Suppa 2021) reported by the Oxford Poverty and Human Development Initiative (OPHI) which includes tend elements: two for schooling, two for health, and six measures of living standards (electricity, water, sanitation, flooring, cooking fuel, and ownership of modern assets. The Social Progress Imperative includes as one of their three components of a Social Progress Index a measure of Basic Human Needs which has four domains (each with multiple indicators): Nutrition and Basic Medical Care, Water and Sanitation, Shelter, and Personal Safety.

In Pritchett and Lewis (2022) we built an array of country level measures of basics, not to argue for one over the other but kind of the opposite, to argue that: (i) a very wide class of measures would empirically be about the same, that is, highly correlated with each other and (ii) the of GDPPC and basics would be about the same for all them. We started from the collection of data in the Legatum Prosperity Index shown in Table III.1, that has four domains wellbeing (Living conditions, Health, Education, Natural Environment), each of which had elements (e.g. "Basic Health Services" is an element of the domain Health), and each element of which had specific indicators (e.g. "births attended by skilled health staff" is an indicator of the element "Basic Health Services").

With both the 22 elements and the 82 indicators we did the same procedure to build an index.

Step 1, we normalized each to be on a scale from 1 (worst) to 100 (best) so that each indicator, whatever its raw form had the same cardinal interpretation, which was that a one unit change was (roughly) one-hundredth of the gap between the best and worst country.

[9] In writing this paper I was reminded by a paper by Reinhart (2017) on basic needs my rationale for always putting "basic needs" in scare quotes. In Filmer, Pritchett and Hammer (2000) we write: "'economists tend to shy away from discussions of "need" because it is not directly observable and is an emotionally charged term" (p. 214). Reinhart dismisses that by claiming "need" is not more emotionally charged than economic concepts like "utility"—but I have yet to hear an argument that something is a "human right" because it provides "utility" whereas even in the "basic needs approach" literature they are clear in stating their use of the word "need" is a precursor to establishing actionable "right"—precisely because of the rhetorical power of the word "need." Recently I heard an even more cogent expression of the risk from an Democratic ex-governor of California decrying the dynamic where: "Desires become wants, wants become needs, needs become laws, and laws become lawsuits."

Step 2, for each of the 22 or 82 normalized measures we created a correlation matrix and then, for each of the measures (element or indicator) we took the average of the correlation between that measure and the N minus 1 other measures. The logic behind this was to let the data decide which measures were more basic than others. Under the simple economic notion of a basic, it should have a very high gain when at a low level but which declines over time. Two well known elements of economics are manifestations of this: Engel's Law (that the share of food in consumption declines as total consumption goes up because food is a basic) and the Water-Diamond paradox that water is incredibly more valuable in total than diamonds as we cannot live without it but has a much lower price because prices are determined at the marginal consumption so marginal utility of the incremental unit of water is low. With that simple logic, we should expect the budget expansion path of all basics to be similar and hence when compared across countries at very different standards of living the correlation of basics with each other should be very high. We then choose a threshold of correlation, $\rho^{critical}$, and all elements or indicators with an average correlation above this are basics and the rest are not. This technique produces a quite intuitive pattern as, say among the elements of the domain of health, "preventive health" is classified as a basic whereas "behavioral risk factors" (e.g. obesity, smoking) are not (which is not to say obesity isn't a serious problem when it exists, just that it isn't something that emerges as a basic). Similarly, in the domain of education, the element "primary school" is a basic and "tertiary" is not.

Step 3, we choose the weights to combine the elements or indicators that are basic using principal components, as we seek the linear combination of this indicators that best captures of "common factor" of all them.

Step 4, we re-normalize the resulting measure of basics to have value of 1 (worst), which happens to be Chad (TCD in graphs below) to 100 (best), which happens to be Japan but, as one might expect from an index of basics there are many countries very near the top with similar rankings as 17 countries are above 98.

The graphs below will show results for the Basics Index that was built from the 82 elements of the four domains of living conditions in the Legatum Prosperity Indicators with the correlation threshold, $\rho^{critical}=.65$, results. But the "new" result of Pritchett and Lewis (2022) is *not*, as one might expect, that this is the "best" index but, unlike most other authors, we argue that our index is just one of many and that all of the results I will discuss about the relationship of basics to GDPPC are robust to using a very wide array of indices, using different indicators, different thresholds, different weights. Or, using different measures like Basic Human Needs from the SPI or the Multi-dimensional Poverty Index from OPHI (with the limitation it is calculated for a limited set of countries). Pretty much every reasonable instantiation of the notion of "basics" gives the similar results.

Table III.1: Pillars, elements and indicators for material living conditions from Legatum Prosperity Index		
Pillar	Elements (22)	Indicators (82)
Living Conditions (6 elements)	Material Resources (MRE):7	Poverty rate at national poverty lines, Poverty rate at $1.90 a day, Poverty rate at $3.20 a day, Poverty rate at $5.50 a day, Households with a refrigerator, Ability to source emergency funds, Ability to live on household income
	Nutrition (NUT): 4	Availability of adequate food, Prevalence of undernourishment, Prevalence of wasting in children under-5. Prevalence of stunting in children under-5
	Basic Services (BSC): 5	Access to electricity, Access to basic water services, Access to piped water, Access to basic sanitation services, Unsafe water, sanitation or hygiene
	Shelter (SHR): 4	Availability of adequate shelter, Housing deprivation, Access to clean fuels and technologies for cooking, Indoor air quality
	Connectedness (CTD): 6	Access to a bank account, Use of digital payments, Access to a cellphone, Rural access to roads, Satisfaction with public transportation, Satisfaction with roads and highways
	Protection from Harm (PHM): 4	Death and injury from road traffic accidents, Death and injury from forces of nature, Unintentional death and injury, Occupational mortality
Health (6 elements)	Behavioral Risk Factors (BRF): 3	Obesity, Smoking, Substance use disorders
	Preventive Interventions (HPI): 6	Diphtheria immunization, Measles immunization, Hepatitis immunization, Contraceptive prevalence, Antenatal care coverage, Existence of national screening programs
	Health Care Services (HCS): 7	Healthcare coverage, Health facilities, Health practitioners and staff, Births attended by skilled health staff, Tuberculosis treatment coverage, Antiretroviral HIV therapy, Satisfaction with healthcare
	Mental Health (MTH): 3	Emotional wellbeing, Depressive disorders, Suicide
	Physical Health (PHH): 5	Physical pain, Health problems, Communicable diseases, Non-communicable diseases, Raised blood pressure
	Life Expectancy (LEX): 5	Maternal mortality, Under 5 mortality, 5-14 mortality, 15-60 mortality Life expectancy at 60
Education (5 elements)	Pre-primary (PPE): 1 (1 Indicator)	Pre-primary enrolment (net)
	Primary (PRI): 3	Primary enrolment, Primary completion, Primary education quality
	Secondary (SEC): 4	Secondary school enrolment, Lower-secondary completion, Access to quality education, Secondary education quality
	Tertiary (TER): 5	Tertiary enrolment, Tertiary completion, Average quality of higher education institutions, Skillset of university graduates, Quality of vocational training
	Adult Skills (ASK): 5	Adult literacy, Education level of adult population, Women's average years in school Education inequality, Digital skills among population
Natural Environment (5 elements)	Emissions (EMS): 5	CO2 emissions, SO2 emissions, NOx emissions, Black carbon emissions, Methane emissions
	Exposure to Air Pollution (EAP): 3	Exposure to fine particulate matter, Health impact of air pollution, Satisfaction with air quality
	Forest, Land, Soil (FLS): 3	Forest area, Flood occurrence, Sustainable nitrogen management
	Freshwater (FWT): 4	Renewable water resources, Wastewater treatment, Freshwater withdrawal, Satisfaction with water quality
	Preservation Efforts (EPE): 6	Terrestrial protected areas, Marine protected areas, Long term management of forest areas, Protection for biodiverse areas, Pesticide regulation, Satisfaction with preservation efforts
Source: Pritchett and Lewis (2022) Table 1.		

III.B) The association of GDP per capita and any *overall measure of basics of material wellbeing is very strong and non-linear*

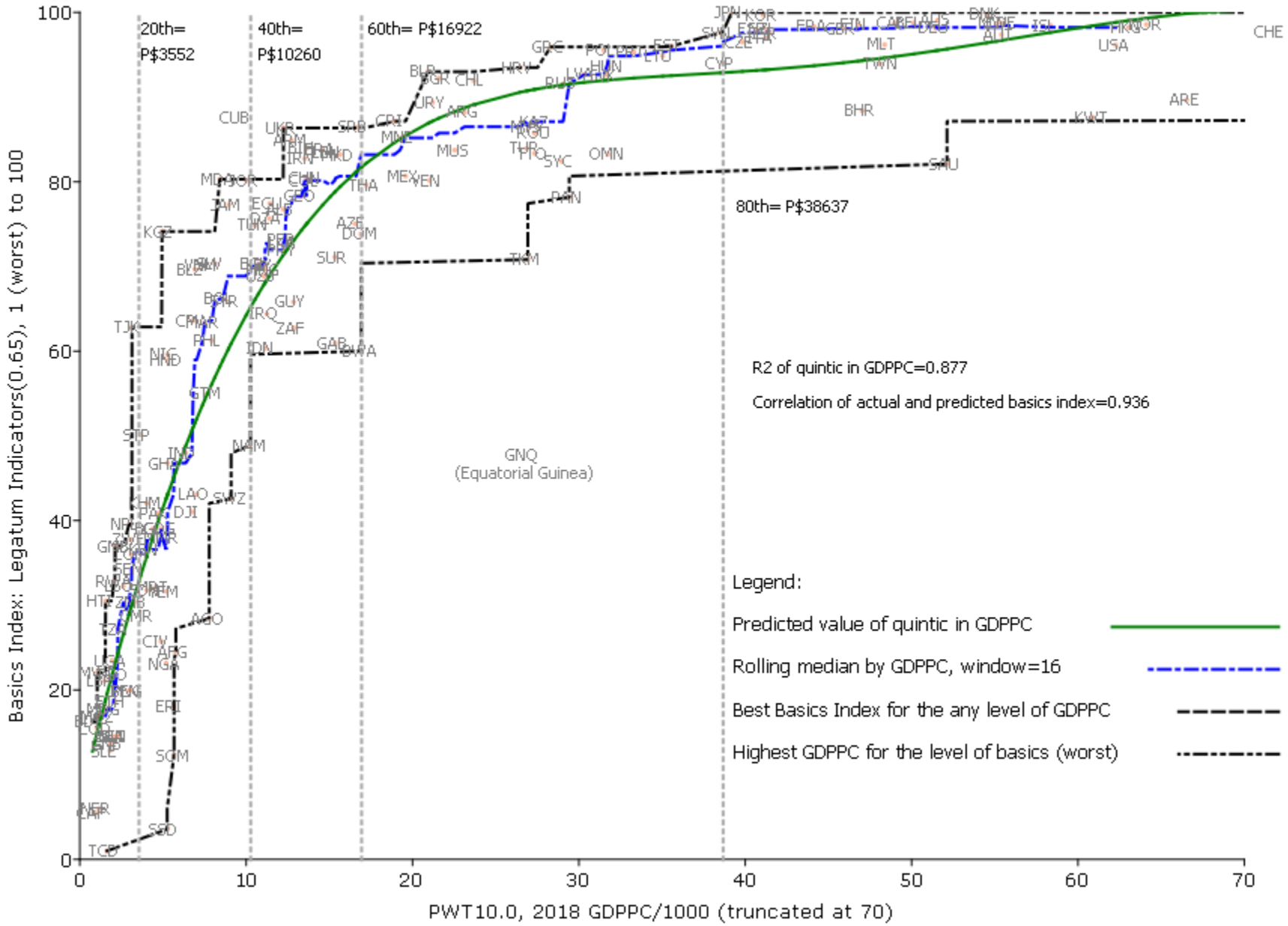
Figure III.1 shows the estimated non-linear (quintic) relationship between real GDPPC from the Penn World Tables 10.0 and the Basics Index built from the Legatum indicators of wellbeing. The association is very strong and highly non-linear.

The regression R-Squared with just GDPPC is .877. This implies the association between observed level of basics and the level predicted just from GDPPC is .936. An alternative to a non-linear regression that assuring of the robustness of the association is a median of basics across GDPPC, which could be described more technically, but is just sorting countries by GDPPC and taking the median across 16 countries. As can be seen (in the blue dotted-dashed line) this non-parametric estimate fluctuates more than the regression line and reveals how hard it is for even a higher order polynomial to capture all of the variation in the data, but the two largely agree. Again, the association between a countries actual level of basics and the median level of basics of the countries with similar GDPPC is very strong, .927.

As we would have expected for a measure of basics (as these are *defined* as goods that are very important and have high priority at low incomes) the relationship between this basics index from 1 (worst) to 100 (best) is very non-linear. Either a simple linear association or the commonly used double log (constant elasticity) functional form fits the data much less well than a high order polynomial.

While I present the association for just one measure of basics, A group called the Social Progress Imperative (on which more below) has constructed an measure of Basic Human Needs using only physical (non-money metric) measures and the results of the association with GDPPC are nearly identical. Pritchett and Lewis (2022) do an exercise an "data under-mining" exercise, which is the opposite of "data-mining" that looks for the best possible fit for the authors' hypotheses and show that *all* reasonable combinations of measures of what are "basics" and weights of those into an index of basics have a strong, non-linear, association with GDPPC.

Figure III.1: The relationship of basics of material wellbeing and GDP per capita is strong and non-linear



Source: Pritchett and Lewis (2022)

III.C) The response of basics to economic growth is quite large up to a very high level of GDPPC

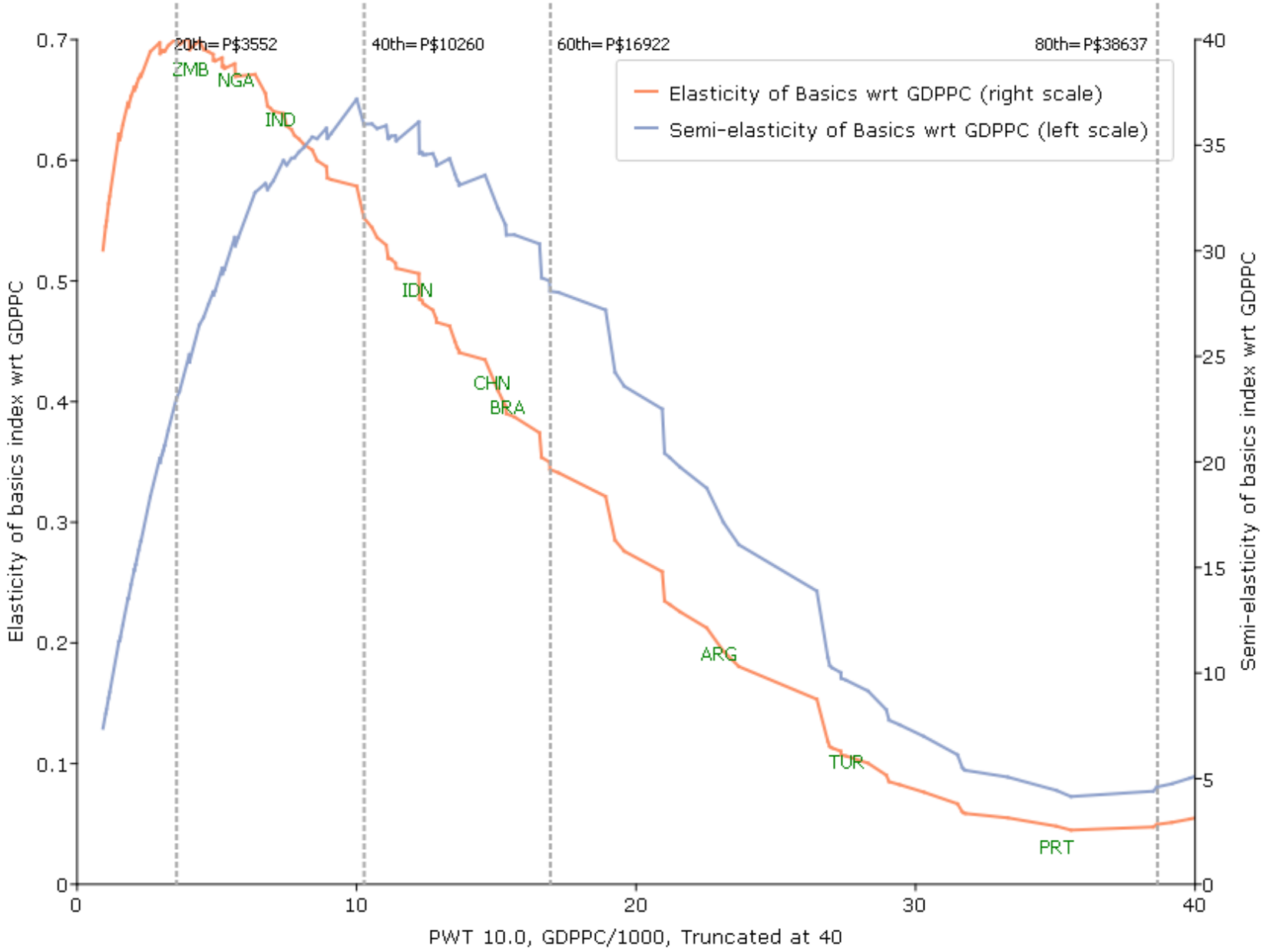
The most important part of the relationship between basics of material wellbeing and GDPPC is to go back to the framework in Part I that the importance of economic growth to the improvement of human wellbeing depends on the combination of: (i) how responsive our chosen normative measure is to economic growth across levels of income and (ii) the growth incidence across the income/consumption within the country.

A legitimate argument against economic growth would be that (a) I care about all people having access to certain basics (e.g. decent shelter (e.g. safe water, adequate sanitation, not high levels of indoor air pollution from cooking), opportunities for education, decent health conditions and access to basic health care, etc.), and (b) these are achieved at a very low level of income and hence beyond that the gains from growth to 'what really matters' is low. This implies that, in the analytics of Part I, the normative evaluation of performance/outcomes is downward sloping so that gains on basics matter more than other goods or luxuries.

Figure III.2 shows the responsiveness of the basics index to increases in GDPPC, measured either as the semi-elasticity (absolute change in basics for a given percent change in GDPPC) or elasticity (percent change in basics for a given percent change in GDPPC), across levels of GDPPC. The elasticity (or semi-elasticity) is downward sloping, but does not reach a "low" or nadir until a quite high level of GDPPC. The elasticity is rising across the bottom 20 percent of countries (as, perhaps, at very low levels even these "basics" are dominated by just raising say, food consumption). In the second quintile of countries Zambia, Nigeria, India, say, the elasticity is above .6 so very 10 percent rise in GDPPC is associated with a .6 percent rise in basics (and for these countries the "percentage change" in basics is still small and the semi-elasticity, which is the absolute change in basics is still rising). Only in the middle quintile of countries (40^{th} to 60^{th} percentile of GDPPC)—Indonesia, China, Brazil--does the semi-elasticity reach its peak and the elasticity is still above .4. For countries above the 60^{th} percentile (above GDPPC of about P$17,000) the elasticity begins to decline and once countries reach the top quintile of "developed" country status, e.g. Portugal (PRT), and GDPPC of about P$40,000[10].

[10] The graph is truncated at P$40,000, which is a rough threshold for "developing" countries (or "non-high-income") but with the non-linear functional form of a quintic polynomial in GDPPC after dipping to a low level at around P$40,000 the elasticity rises again and then falls. This is visible in Figure III.1 where the "predicted" stagnates and then rises again before tapering off again. I have to admit, I don't understand this.

Figure III.2: Repsonsiveness of Basics Index to growth at various levels of GDPPC



Source: Author's calculations.

III.D) More inclusive or pro-growth is better for basics, but for developing countries even moderately pro-rich growth is also very good

One objection to the idea that economic growth would be very good for the basics of human material wellbeing is that most economic growth is "pro-rich" and only growth that is "pro-poor" is good for basics because only the poor spend on basics. It is certainly the case (kind of by definition) that the marginal propensity to spend on basics deciles with income and hence "the rich" spend less as a proportion of their income on basics than "the poor" as many basics are like food and have an Engel's law like pattern.

But I think the scope of this idea is based on two empirical misperceptions which Figure III.3 addresses.

One general misperception is that "the poor" are different from "the middle" and "the rich." But on this point the novelist F. Scott Fitzgerald had it right: it is *the (very) rich* who are different from both the middle and the poor[11]. A second general misperception the confusion between those who are *relatively* richer within their country and those who are *absolutely* rich on a global scale.

Figure III.3 combines the estimates of (i) average consumption per person from the PWT10.0 national accounts with (ii) distributional data from the World Bank to estimate a national accounts compatible estimate of the spending of the average household in each decile[12]. These data for Bangladesh are on the horizontal access and labeled in green. Those in the 9th decile (between the 80th and 90th) percentiles have an estimated consumption of 2017 P$5390. This is relatively quite a bit higher than that of the 1st decile of P$1365, about four times as high, but it is absolutely small gap (around P$4,000). The 9th percentile in Bangladesh has consumption lower than that of the 1st decile in Portugal of P$7194. And the 10th percentile in Bangladesh, those between the 90th and 100th percentiles and the category that includes the very rich, while they have 7 times the consumption of the poorest decile in Bangladesh (P$9909 vs P$1365) has *lower* average consumption than the 2nd decile in Portugal and *lower* than the 1st decile in Denmark P$13261. In a country like Bangladesh with low(ish) consumption levels and moderate inequality "the poor" (P$1366), "the median" (P$2963) and the "upper middle class" (the 9th percentile (P$5390) are all, on a global scale in which average consumption ranges from

[11] The extended quote from Fitzgerald's 1926 short story "The Rich Boy" is: "Let me tell you about the very rich. They are different from you and me. They possess and enjoy early, and it does something to them, makes them soft where we are hard, and cynical where we are trustful, in a way that, unless you were born rich, it is very difficult to understand. They think, deep in their hearts, that they are better than we are because we had to discover the compensations and refuges of life for ourselves. Even when they enter deep into our world or sink below us, they still think that they are better than we are. They are different."

[12] As mentioned above the discrepancy between HH surveys estimates of consumption and national accounts are large, in the case of Bangladesh the national accounts estimate is twice as high as the survey estimate.

P$910 in the DR Congo to P$40,000 in Switzerland or Norway and in absolute terms pretty close.

The vertical axis of Figure III.3 shows the predicted value of elasticity of basics to income at the levels of consumption by decile. If we make the not quite solid but not quite wild-assed assumption that elasticity would be the same for deciles of consumption as for country GDPPC we can calculate the elasticity of basics to growth under different scenarios of growth incidence.

Table III.2 shows the calculation of the elasticity of basics with respect to the exact same average growth rate of the economy but with different growth incidence. The elasticity of basics wrt to equal growth is just the average of the predicted elasticities (column VI times column V) and is .66 (which is therefore also the predicted value at mean consumption).

Table III.2: The overall responsiveness of basics to the same economic growth rate depends on the growth incidence across the income distribution…but in a relatively poor and relatively equal country like Bangladesh the differences are not large as the elasticity is large in all deciles

Deciles Deciles	Consumption per year (2018)	Shares of consumption	Predicted elasticity	Decile growth rates in different scenarios		
				Equal growth rates	Pro-poor (1st 2X 10th)	Pro-rich (10th 2X 1st)
I	II	III	IV	V	VI	VII
1	$1,366	3.7	0.60	1.00	1.51	0.60
2	$1,824	4.94	0.64	1.00	1.42	0.67
3	$2,141	5.8	0.66	1.00	1.34	0.73
4	$2,452	6.64	0.68	1.00	1.26	0.80
5	$2,773	7.51	0.68	1.00	1.17	0.86
6	$3,153	8.54	0.69	1.00	1.09	0.93
7	$3,633	9.84	0.69	1.00	1.01	0.99
8	$4,279	11.59	0.69	1.00	0.92	1.06
9	$5,391	14.6	0.67	1.00	0.84	1.13
10	$9,910	26.84	0.56	1.00	0.76	1.19
Growth rate is equal in the scenarios (by assumption)				1	1	1
Elasticity of Basics wrt to Growth				0.66	0.74	0.59

Source: Author's calculations as described in the test. Shares of consumption is data from World Bank Poverty and Inequality Data, estimate of consumption per person is form PWT10.0.

But suppose, hypothetically, that the same 1 percent growth happened in a pro-poor manner such that the growth rate for the first decile was twice as high for the 1st decile as for the

10th and the over deciles were linear between those two high and low rates (and, since the aggregate growth rate is the share weighted average, this needs to be adjusted so the aggregate growth is unchanged). This implies the growth for the 1st deciles was 1.51 percent and their elasticity wrt to basics was .6 so the percentage gain in basics was .90(=.6*1.51) and the growth for the 2nd decile was even slightly higher .91(=1.42*.64). The result was that the overall percent gain in basics was .74 percent from 1 percent growth as the growth rate was above 1 percent for the income groups for whom the elasticity was the largest.

Conversely, suppose growth was pro-rich as the 10th decile was twice as high as the 1st decile (and all other deciles linear between those two). In this case the 10th decile grows as 1.2 percent (since it has a very large share in the growth, 26.8 percent it does not have to grow as fast to make the overall growth rate just one percent) and hence the basics of the rich grow .66(=.56*1.19) but the basics for the poor grow only at .36(=.6%*.6). The growth of basics is therefore only .59 percent from one percent growth, lower than equal incidence growth or pro-poor growth. But an overall elasticity of .59 from pro-rich growth is still quite high.

Panel B of Figure III.3 shows these three scenarios for three countries: Bangladesh (which is poor and equal), Brazil (which is a high average country but with very high inequality), and Portugal (which is a developed country).

Comparing Brazil to Bangladesh shows that the elasticity of equal growth is much lower (.53 vs .6) because the average consumption in Brazil is higher. But the pro-poor growth scenario in Brazil is almost as high as Bangladesh. This is because, as can be seen in Panel A of Figure III.3 the lower deciles in Brazil have consumption actually quite close to that of Bangladesh because of the much higher inequality (in fact the 1st decile in Brazil is lower than in Bangladesh) so being pro-poor matters much more in a high inequality context. And conversely, the pro-rich elasticity is much lower (.42) and with a bigger gap between equal and pro-rich than in Bangladesh, falling from .53 to .42 (.11) versus from .66 to .59.

I realize the explication of these calculations is a bit tedious, perhaps borderline pedantic. But the conceptual intuition behind this empirical example is vitally important to a discussion of the benefits of growth, in ways.

First, the differences in the gains to human wellbeing across different growth incidence is a matter of degree and arithmetic, not a sharp discrete line. Sometimes the rhetoric makes it sound as if "pro-poor" growth is good and "pro-rich" growth is bad. The reality is that pro-poor growth is, for a given rate of growth, *better* for raising most indicators of wellbeing because poorer people are spending generally on high priority goods (e.g. food, basics). But *inclusive* growth in which all deciles are benefitting, even it is modestly pro-rich is still very good for raising human wellbeing in poor countries because most of the population is still at levels of wellbeing in which the marginal gains from additional income are high.

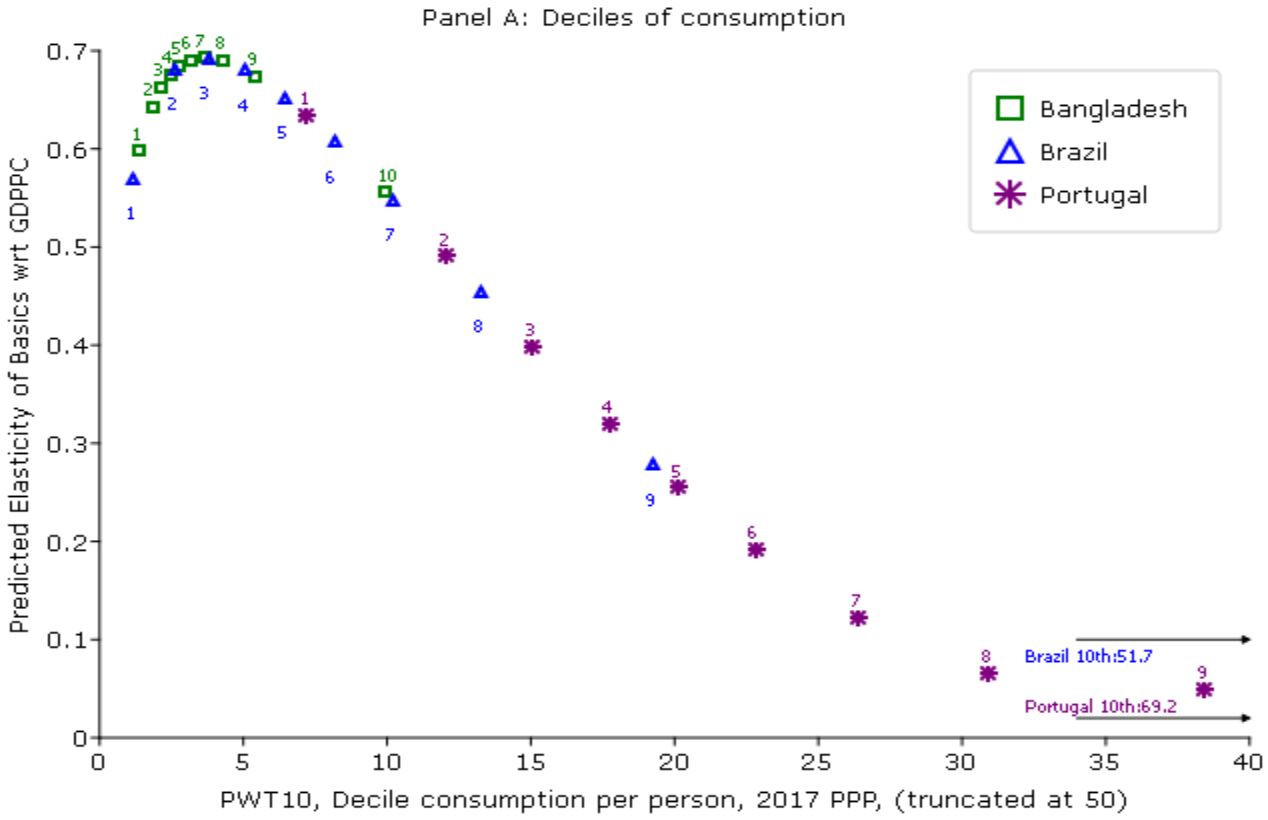
Therefore, being "pro-growth" is not a matter of "ignoring" concerns about the distribution of gains and the "pro-growth" stance is typically the faster (sustained) growth the better for any given incidence *and* the most inclusive the better for any given rate of (sustained)

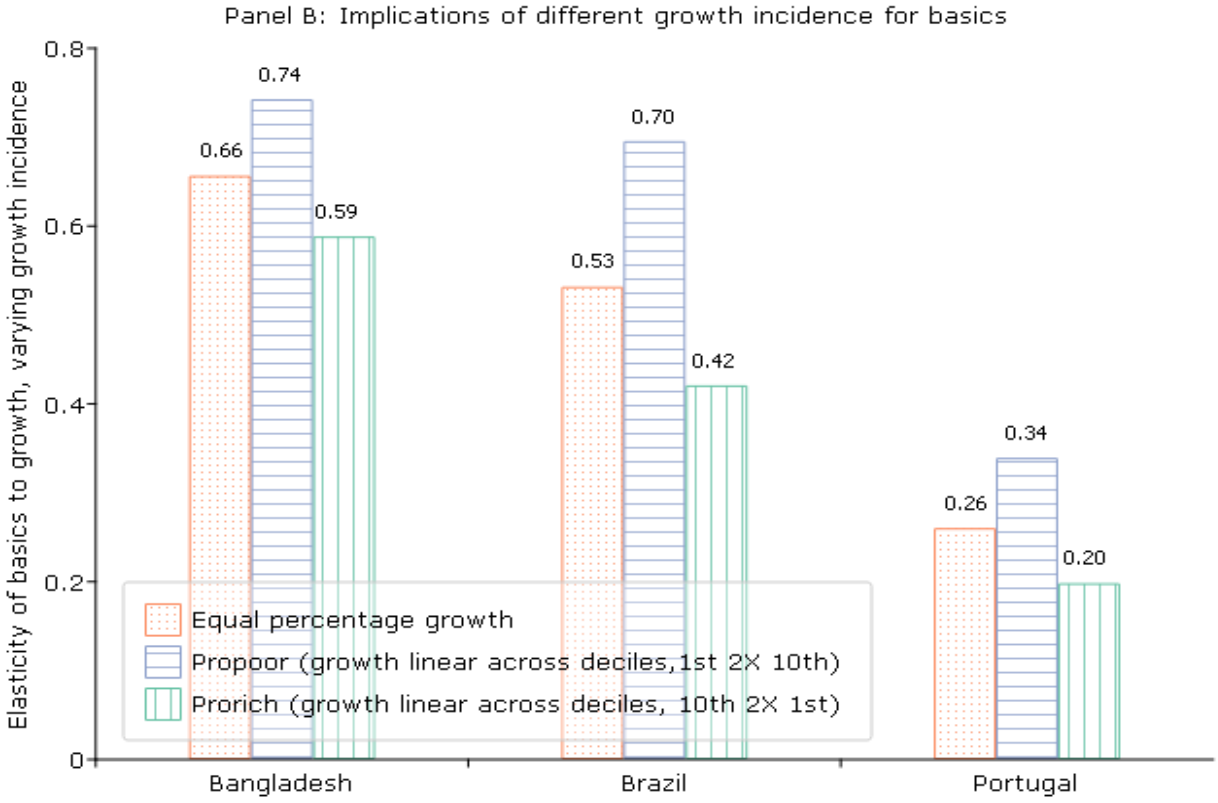
growth. Economic growth isn't black and white judged by its incidence, it is shades of "green" (in the sense of "green means go").

Second, there can be "all rich" growth that is not inclusive at all and this is bad, in several senses. If one looks back at Figure III.1 one can see a counter-example to a blanket claim that "high levels of GDPPC produce high levels of basics" which is Equatorial Guinea. But that this is possible is hardly surprising. If anyone asked you: "Suppose a country is controlled by a narrow clique around the President and measured GDP is high because they pump out oil but (nearly) all of the gains from that oil go to only a few people, will the basics of material wellbeing be high?" The answer would be "of course not." The question would then be: "To what range of countries is this "all rich" scenario of economic growth be relevant?" Maybe to other highly extractive natural resource, non-democratic, kleptocratic, weak capability nations—although basics are low for their income they are absolutely high in other oil-rich nations like Kuwait, Bahrain, Saudi Arabia). But should we *generally* be skeptical that economic growth would be beneficial in say, Bangladesh, Indonesia, Ethiopia because of the special case of Equatorial Guinea? Again, of course not.

Third, the question of "how important is the growth incidence for assessing how good growth is?" depends on the shape of how one normatively assesses growth. It is possible that one's normative valuation of additional material wellbeing falls to low levels (even close to zero) at levels of consumption of P$40,000 or P$100,000. Hence how one values growth as a priority for Denmark or New Zealand or Canada is an interesting question. But this evidence about the elasticity of basics and the achievement of basics suggests (again) that having *exclusively* as a goal low-bar poverty rates is very hard to defend. These imply that the gains go to *zero* above a very low-income threshold. The World Bank's estimate of "dollar a day" (P$2.15 in 2017 PPP) poverty in Bangladesh is 5 percent. But at that level of income only 63 percent have electricity, only 26 percent have sanitation, only 20 percent of children complete secondary school (Pritchett and Viarengo 2024). I would argue that to claim that gains in consumption are normatively unimportant at the 5th percentile of households in Bangladesh is both economic nonsense and a morally repugnant stance (Pritchett 2024).

Figure III.3: Growth incidence makes some difference to responsiveness of basics to growth, but even prorich growth that reaches the middle groups is good for basics in poorer countries





Source: Author's calculations

III.D) How could anything else be true?

One key social indicator is child mortality. I have done a number of empirical studies of the relationship between child mortality and GDP per capita and other factors (Pritchett and Summers 1996, Filmer and Pritchett 1999, Pritchett and Viarengo 2010). The child mortality-GDPPC relationship is a very robust association: it is present in cross-section in current data, it is present in cross sections of countries 100 years ago, it is present in long term changes on changes, and in medium term changes (if one does the dynamics right).

In Filmer and Pritchett (1999) we showed that the variation in child mortality across countries could be explained by GDPPC, women's schooling, regional effects, and a categorical variable for Muslim countries (which, at the time, some but not all, had very high female child mortality) at an R2 of .95. This finding of the very high strength of the relationship (and that it was mostly causal from growth to health) was regarded as controversial. I never understood that. I believe that nearly all parents deeply care for their children and want to avoid a child death if they at all can and hence it seems natural that, while there is lots of randomness of health outcomes at the individual level, at the aggregate level it seems to me almost inevitable that the variation in aggregate child mortality would be heavily dependent on the resources parents could deploy (GDPPC) and the knowledge they had (particularly mothers). In fact, the opposite view seemed completely implausible, that, somehow as economic growth gave parents (and via taxes governments) more resources they would not use those resources to reduce child deaths?

As with poverty I want to emphasize I am not making a "growth only" argument. *Of course* if there are cost-effective things governments can do to raise child health then those would be among the highest priorities for government spending. And there are cost effective things governments can do and governments have done these things and child mortality has fallen rapidly in part due to growth but also has fallen because advances in health science and medicine has invented effective vaccines and low-cost treatments for many of the causes of child death.

My argument is, as with poverty, "growth plus effective collective action." But, as with poverty, sometimes people tend to argue that achieving sustained rapid growth is hard but that, somehow in those same conditions in which sustaining growth is hard, the "plus" of cost-effective (or even effective) action would be easy—or even possible. And, as with poverty, this can lead to a mindset of good intentions in which progress is measured strictly on *inputs* and not on outputs and outcomes. Smallpox was not eradicated by just *spending* on eradicating on smallpox, it was done by concentrated, effective action. Polio has been nearly eradicated in the same way. The Expanded Programme of Immunization launched in 1974 is estimated to account for 40 percent of the global decline in infant mortality and 10.2 billion full life years saved (Shattock 2024) but this wasn't because of inputs, it was because of effective implementation that achieved outputs (children vaccinated) of a medically effective intervention. That said, this doesn't mean that just "more spend on health" is a reliable recommendation as there many, many ways to spend on inputs and not achieve outputs or to spend on outputs and not affect outcomes as there can be many "weak links in the chain" of causation from spend on inputs to improve health outcomes (Filmer, Hammer and Pritchett , Filmer 2000, 2002).

And health is just an example to make two points.

One, I think a reasonable expectation is that people are striving to make themselves better off and hence if they have higher incomes they will devote at least some significant part of that income to improving their achievement of "basics." The conjecture that basics are income elastic at low levels of income and price inelastic has been the conventional wisdom (backed by lots of evidence) for decades and this microeconomics produces the aggregate outcomes across countries we observe. And, for those basics that require public action we should expect that, to the extent governments are responsive to their citizens and are capable that more resources in the hands of governments through tax buoyancy should also, at the margin lead to improvements in outcomes on basics from low levels.

Two, we should expect some actions to be effective and some actions to be easy, but we should also expect organizing effective collective action to be hard, perhaps as hard as creating the conditions for economic growth. And we should expect that there are lots and lots of ways to spend money that are not effective so assuming that "spend on basics" is, in and of itself, good policy advice does what the word assume implies.

The debate between "growth" and progress on "basics" is more rhetorical than real. Sometimes it is portrayed that economists who favor growth are opposed to spending money on effective actions that would advance substantially outcomes on basic goods because it would result in high taxes or cause a macro imbalance. But nearly all economists I know that are "pro-growth" are pro-inclusive growth and pro "growth plus" and the debate is really about whether the spending really goes to things that are effective at raising outcomes on basics.

IV) Growth—and national development—are empirically necessary and sufficient for broad measures of social progress[13]

The sections on poverty and basics discussed normative measures of progress that are deliberately constructed to focus on the wellbeing of the global poorer population. For these measures I looked at the association of these measures with GDPPC alone. This section zooms out from that narrow focus in two ways: to a broader measure of human wellbeing, for which I will use the Social Progress Index, and to not just the association with economic growth but with the broader measure of countries status on national development.

This section emphasizes that I am not advocating a "growth only" strategy or the notion that markets alone, without collective action via governments, will solve all ills. I am arguing in favor of a "growth plus" strategy against the notion that there is a "non-growth" or "de-growth" approach to meeting the aspirations for raising human wellbeing in the developing world.

IV.A) Measuring Social Progress and National Development

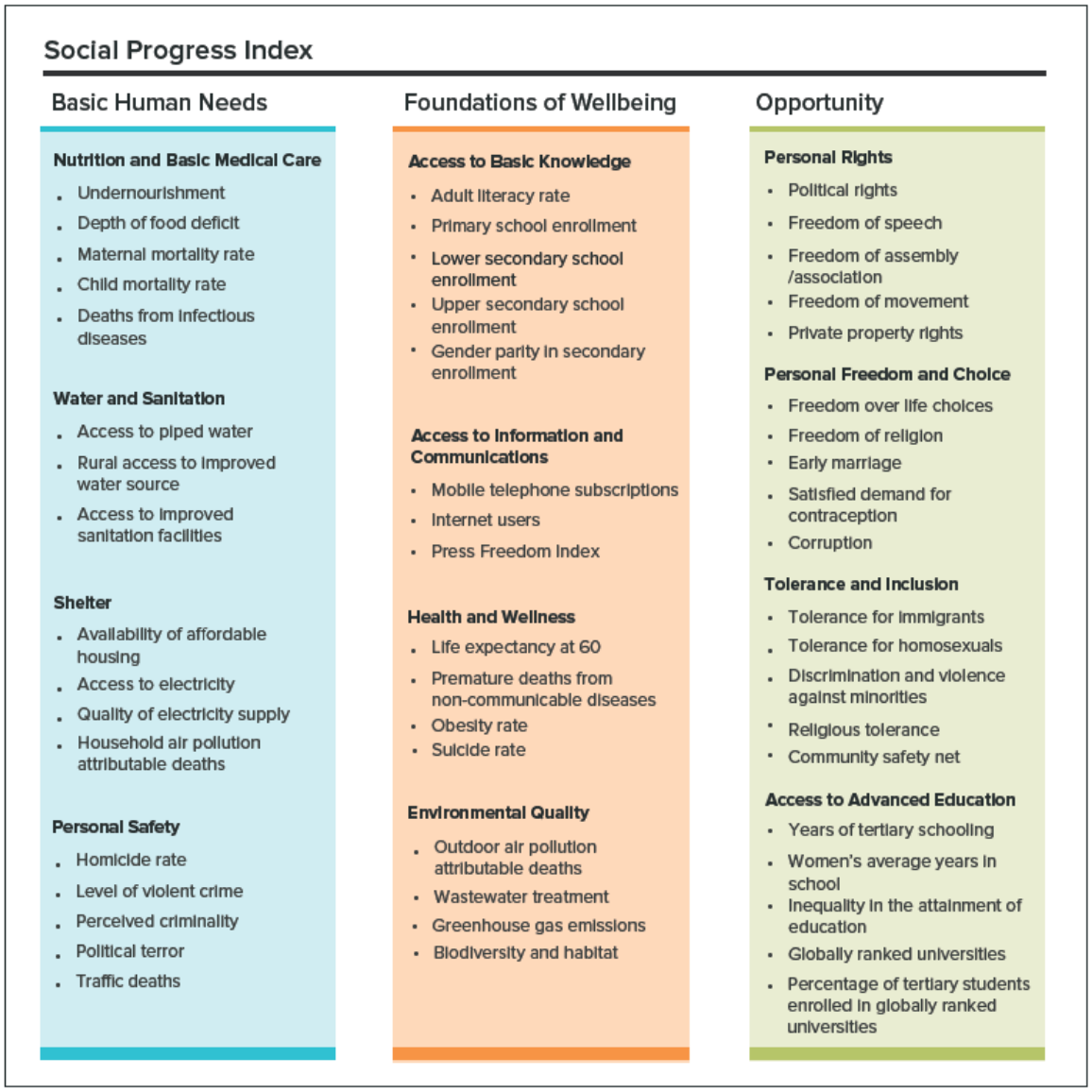
IV.A.1) The Social Progress Index and its construction

[13] This section draws heavily on Pritchett (2022b).

The Social Progress Imperative organization has constructed a Social Progress Index as a measure of development progress. I have chosen this measure from among a number of similar omnibus measures of human wellbeing because it is the stated premise of this organization that development *overstates* the importance of economic growth. Their goal was to build an index of country performance that was based exclusively on non-economic indicators: no use of GDP, no use of consumption expenditures, no use of wages, no use of poverty. Using this index assures the reader that I am not loading rabbits into hats only to pull them out later, but rather am taking critics of growth and GDPPC seriously and on their own terms.

Figure IV.1 shows the structure of the Social Progress Index (SPI), which is the average of three sub-indices: Basic Human Needs, Foundations of Wellbeing, and Opportunity. Each of those three is in turn built up from four domains of wellbeing and are ranked from more "basic" (more or less in the sense I use "basic" above) to more "advanced" components of wellbeing. As mentioned above their index of *Basic Human Needs* has the four domains Nutrition and Basic Medical Care, Water and Sanitation, Shelter and Personal Safety. Each of those four domains of Basic Human Needs in turn has specific indicators, so the domain Shelter includes four indicators (affordable housing, electricity access, quality of electricity supply, and household indoor air pollution). The four domains of *Foundations* are: Access to Basic Knowledge, Access to Information and Communications, Health and Wellness, and Environmental Quality. The four domains of *Opportunity* are Personal Rights, Personal Freedom and Choice, Tolerance and Inclusion, and Access to Advanced Education. The Opportunity sub-index clearly goes beyond material measures or physical indicators to higher order goals and articulates popular, if not universal, components of social progress.

Figure IV.1 Structure of the Social Progress Index



Source: Social Progress Imperative Website.

IV.A.2) Measuring National Development

While I have argued above that economic growth is empirically sufficient for achieving certain normative goals such as poverty reduction and material basics, I also was clear that being "sufficient" for those does not preclude that there are other important distal causal determinants nor it is an argument against cost-effective actions of governments or others to improve on the "market only" outcomes. Economic growth is *not* synonymous with *national development.* As I have argued elsewhere (Pritchett 2009) one construal of national development has been that it is a historical transformation of countries along four dimensions: from lower to higher economic productivity, from lower to larger state capability, from polities less responsive to more

responsive to citizen wants, and towards a common identity and acceptance of equal treatment of all citizens.

For empirical analysis I need reliable and valid indicators for those concepts. For "higher productivity" I will use the same PPP measures of GDP PC from above (although one could easily make the case for other measures of higher economic productivity that treat high GDP from natural resources differently and hence net out mineral extraction or use an indicator of economic complexity).

In *Building State Capability* (Andrews, Pritchett, Woolcock 2016) we explored a wide array of potential indicators of overall state capability and found that most of these indicators had high correlation amongst themselves and that there was a common component of state capability measures that was conceptually and empirically distinct from either GDP PC or measures of polity. In the empirical analysis reported here I use a simple average of four of the six components of the World Governance Indicators (Kaufmann, Kraay and Mastruzzi 2005): *Rule of Law*, *Government Effectiveness, Regulatory Quality,* and *Control of Corruption.*

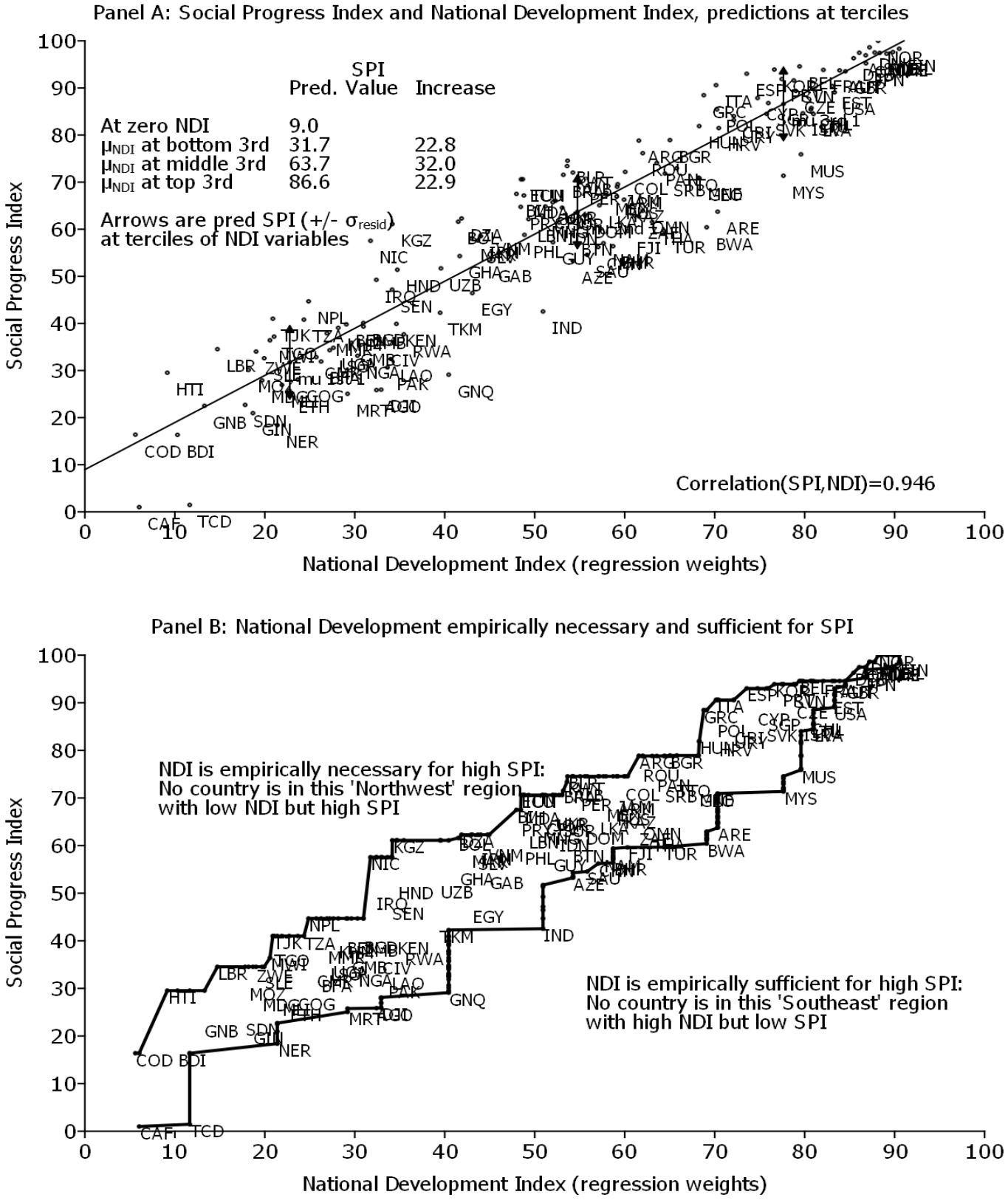
Measuring whether a country has a "responsive polity" is the most difficult and I defaulted to using the POLITY data on democracy as the raw input and created an estimate of the "stock" (rather than current "flow") of democracy by creating a weighted average of democracy over time.

In order to make these variables comparable I re-scaled each these three variables representing national development from 1 (worst) to 100 (best) so that for each variable of GDPPC, State Capability, and Polity a one-unit change has the same cardinal interpretation as a movement of $1/99^{th}$ from the worst to the best country in 2018.

IV.B) National Development Delivers: Empirically necessary and sufficient for high SPI

The first level of analysis is to just use a simple OLS regression of the SPI on the three elements of National Development (where GDPPC is allowed to have a non-linear functional form whereas, after exploration of alternatives, State Capability and Polity are linear) to ask "how much of the observed variation across countries in the SPI is associated with variation in National Development?" Panel A in Figure IV.2 shows a standard scatterplot of the actual level of SPI against is value predicted by national development, or, equivalently, a National Development Index where the weights on the three elements are those that best predict the SPI. As can be seen, the fit is very association is very strong: the correlation of the actual and predicted values of the SPI is .946.

Figure IV.2: National development is empirically necessary and empirically sufficient for achieving high levels of the Social Progress Index



Source: Pritchett 2022, Figures 2 and 3.

Panel B of Figure IV.2 shows the "data envelopment" curves. National Development is empirically necessary for a high level of Social Progress—there are no countries in the "northeast" of this graph with high SPI and low national development. National Development is empirically sufficient for high levels of the SPI—there are no countries in the "southeast" of this graph with high levels of National Development and low levels of the SPI.

This "sufficiency" is stronger for NDI than growth alone in part because by adding the components of State Capability and Polity to the National Development Index the high-income oil rich countries are less "high national development" (as they are low Polity and low State Capability for their level of GDPPC) than they are "high GDPPC" and hence are less obviously anomalous as they were in Figure III.1 showing just basics and GDPPC.

IV.C) Decomposing the relative contributions of growth and governance to the different stages of social progress

Discussions of the relative importance of the contribution of economic growth to raising wellbeing often get caught up in a framing of "state versus market" on the mistaken notion that proponents of growth are necessarily of the view that a "small state" or even "laissez faire" are necessary conditions for economic growth. But the strong consensus view among modern economists has always been that there are "public goods," that "externalities" exist, and that provision of redistributive social programs exist and each of these make strong cases for the *possibility* that effective state action may improve on outcomes.

The empirical relationship of the Social Progress Index with these three elements of National Development is constructed so that each are on a scale of 1 (worst) to 100 (best) and this allows a comparison of the relative strengths as a 1 unit change in GDPPC or State Capability or Democracy is a $1/100^{th}$ move across the range of those indicators.

Figure VI.3 estimates for the SPI, and for each of the three subcomponents separately, the expected gain from improvement in each of the three elements of National Development. Since the relationship with GDPPC is allowed to be non-linear, this will be different at different levels of GDPPC. We estimate the SPI at three ranges of the National Development components. I divide the countries into terciles on each indicator (GDPPC, State Capability, Democracy) and estimate the gain from: (i) a move from the 1 (the lowest value) to the average of the 1^{st} tercile, (ii) from the average of the first tercile to the average of second tercile, which is the key range for "development" as the average of the second tercile is roughly the typical (median) country value, and (iii) the movement from the middle of the second tercile to the mean of the third tercile, which goes from the typical country to the low end of the "developing" countries.

Table IV.1: Illustrating the differences across the levels (terciles) of the three components of National Development

Level of indicator	State Capability		Democracy (weighted average)		GDP per capita (PPP)		
	value	countries	value	countries	value	countries	Years
Minimum	1.0	Central African Rep., DR Congo, Haiti	1.0	Saudi Arabia, Oman	$763	Burundi, Central African Rep., DR Congo	
Mean of first tercile	19.1	Myanmar, Madagascar, Nigeria, Mozambique, Cameroon	16.1	Algeria, Gabon, Vietnam, Chad, Iraq	$3,419	Zambia, Cameroon, Sudan, Cambodia, Kenya	31
Mean of second tercile	39.6	Mexico, Mongolia, Tunisia, Sri Lanka, Peru	41.8	Ghana, Thailand, Lesotho, Zimbabwe, Dom. Rep.	$13,477	Georgia, Fiji, Iran, Colombia, China	28
Mean of Third tercile	71.4	Spain, Slovenia, Czech Rep., Latvia, Lithuania	87.5	India, Colombia, Estonia, France	$41,493	Czech Rep., Spain, Korea, Italy, New Zealand	23

Source: Authors calculations with data from Pritchett (2022)

Table IV.1 shows concrete examples of these movements with countries that surround each range of the three National Development indicators. As an illustration to give some intuitive feel for the results in Figure IV.3, we use the estimates of the association of, say, Basic Human Needs to ask "how big would be the expected gain in Basic Human Needs of a country moving from the level of state capability in the first tercile (countries like Myanmar, Madagascar, Nigeria, Mozambique, Cameroon) to the state capability on average in the second tercile of countries by state capability (countries like Mexico, Mongolia, Tunisia, Sri Lanka and Peru?" And we can compare that predicted gain to that from increasing GDPPC from the average of the first tercile (P$3419)—countries like Zambia, Cameroon, Sudan, Cambodia, Kenya)—to the average of the second tercile—countries like Georgia, Fiji, Iran, Colombia, China. And for GDPPC we can do the calculation of "how many years of rapid (5 percent per capita growth) would it take to raise GDPPC by this amount?"

Figure IV.3 illustrates a number of important points.

Let me start with how Panel B of Figure IV.3 relates to the results in Part III above on the impact of just GDPPC on basics and highlight four key findings.

First, Panel B shows that a country that increased GDPPC from P$3419 to P$13477 would be predicted to increase the level of the Social Progress Index component of Basic Human Needs (composed of Nutrition and Basic Medical Care, Shelter, Water and Sanitation, and Personal Safety) by about 29 points. To illustrate just what a huge change in living conditions this abstract number represents, the level of Basic Human Needs is about 37 in Ethiopia, Haiti, and Nigeria, in which most people (even the "typical" (median) household) face just very difficult living conditions. Increasing that by 29 points takes the predicted Basic Human needs to 66. Countries with a Basic Human Needs index around 66 are the Philippines, Honduras, Botswana, and South Africa. No one would argue that these countries are paradise or that the are done with development, but they difference in living standards is just night and day between Haiti and the Philippines or Ethiopia and Botswana.

The second key finding from Panel B is that the empirical fact that economic growth is empirically necessary and sufficient for raising wellbeing is not a claim for these broader measures that it is the *only* factor (as it empirically seems to be for a distribution sensitive money-metric measure like headcount poverty and the median of the income/consumption distribution). In particular, countries having higher State Capability is strongly associated with higher levels of Basic Human Needs. Countries at the mean of the second tercile of State Capability had Basic Human Needs about 7.4 points higher than those at the mean of the first tercile. So, a level of State Capability higher by about 20 points on a 1 to 100 scale, hence from countries like Myanmar or Nigeria to countries like Mexico or Tunisia (Table IV.I) is associated with a 7.4 unit gain in Basic Human Needs (conditional on GDPPC and Democracy).

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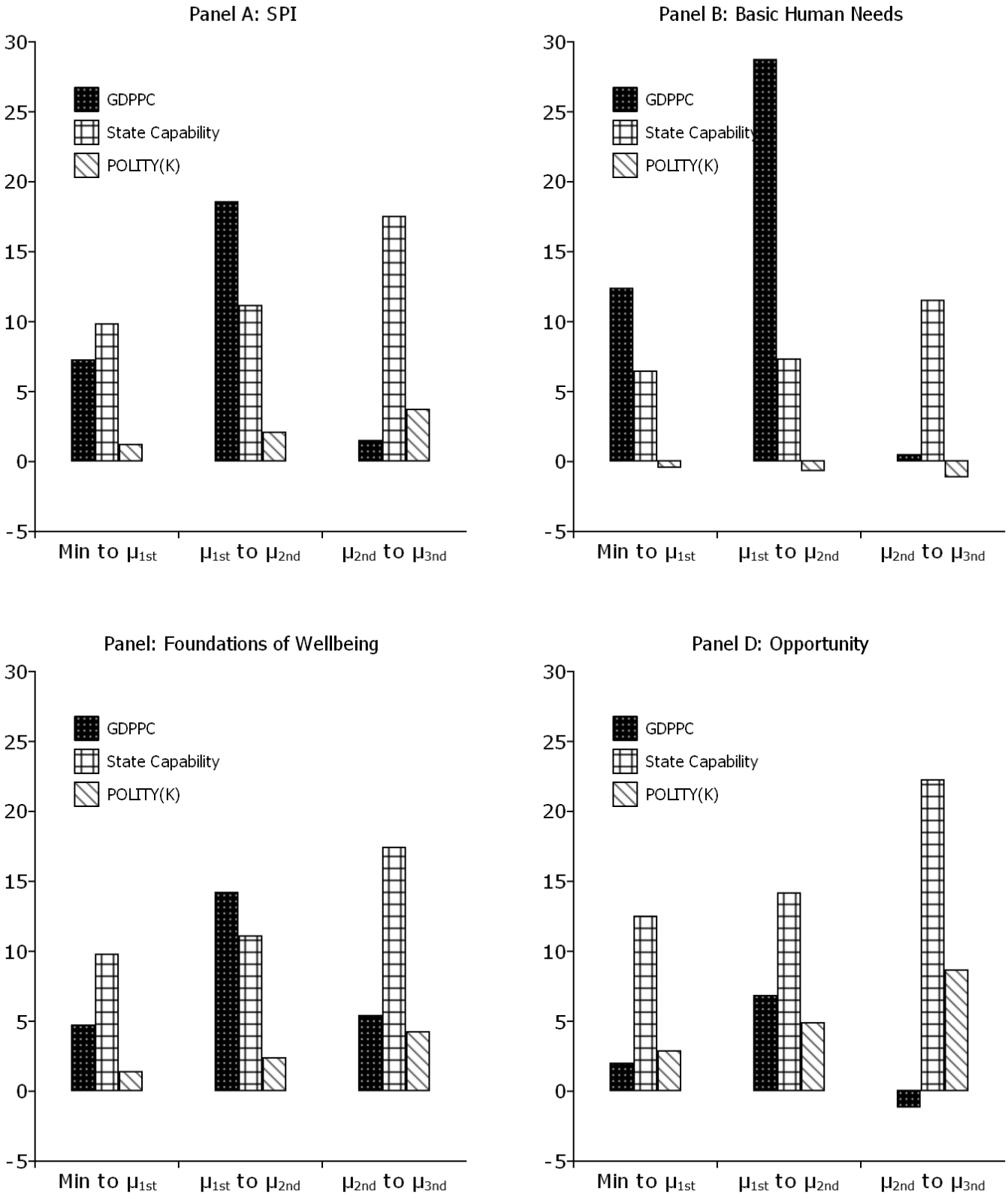
Figure IV.3: The three components of national development matter differently for different indicators and at different levels of GDPPC: Growth is important for basic human needs in the middle of the GDPPC distribution



Source: Pritchett (2022), Figure 7

A third key finding is that the effect of GDPPC on Basic Human Needs is highly non-linear whereas the effect of State Capability is roughly linear (explorations with allowing for non-linear effects did not suggest any strong differences with linearity). The elasticity of BHN with respect to GDPPC actually is not the largest at low levels of GDPPC but rather rises and then peaks and then falls. This has two implications. One, unlike the impression one might get from very penurious, low-bar measures of human flourishing like "dollar a day" poverty, the normative impacts of economic growth on human wellbeing do not go to very low levels in a very steep way for basics. This combination of estimated associations with State Capability and GDPPC implies that growth is more important than State Capability at very low levels, but not by that much. At very low levels it appears quite important to create some quite basic levels of state capability. Then as development proceeds growth gets much more important than state capability than basics and then at very high levels State Capability it still roughly as important and the positive association with basics tapers off.

A fourth key finding from Figure IV.3 is that the relative impacts of GDPPC, State Capability, and Democracy vary across the three components of the overall Social Progress Index. So if we compare the middle range of development, from the middle of the bottom third to the middle of the second third, then growth is far more important than State Capability for Basic Human Needs (at the association with Democracy is essentially zero). The results for Foundations in Panel C suggest that growth is also more important than State Capability, but not by as much, as growth improves Foundations by 14 points whereas State Capability is associated with an improvement of 11 points. And for Opportunity, shown in Panel D, it is the rise in State Capability rather than GDPPC that is associated with the bigger gains.

The data strongly support a view that broad measures of human wellbeing that growth does matter, importantly, but do not support the view that growth is all that matters, or than growth matters the same at all levels. Rather, even a pretty simple empirical approach provides a nuanced, if common sense, view that when levels of GDPPC are low and growth is going to be very important for material wellbeing but that the ability of governments to act effectively also supports gains. As GDPPC is higher and as the measured components of Social Progress are less "material" (e.g. access to sanitation in Basic Human Needs versus tolerance of immigrants in Opportunity) then "governance" both in State Capability and Democracy matter relatively more than just more GDPPC.

IV.D) Decomposing the relative contributions of growth and governance

Moving beyond the four large aggregates gives a nuanced view of the relative importance of growth versus governance (combining State Capability and Democracy) in the improvement of various indicators from progress on national development in developing countries (that is, moving from the first to second tercile). Figure IV.4 shows for the SPI, each of the three sub-aggregates, and each of the 12 constituent indicators, the total gain of moving each element of National Development (GDPPC, State Capability, and Democracy) from the mean of the first tercile to the mean of the second tercile, with that total gain broken into the component from

growth and the component from improved governance.

Two key points emerge from Figure IV.4.

First, Figure IV.4 is sorted from top to bottom by the magnitude of growth (over this range) on the normative indicator (all of which share the same 1 to 100 scale). The overall impact of national development varies widely across the indicators. For Basics and three of its indicators: Shelter, Water and Sanitation, and Nutrition and Basic Medical Care the total gain is more than 33 points. Improvements in National Development move a country more than a third across the entire range of countries. In contrast, for some indicators National Development is less strongly associated. For Personal Safety, Tolerance and Inclusion, and Environmental Quality (which includes Greenhouse Gas emissions[14]) the total gain is 13 points or less. So, while the data show that national development strongly raises an *overall* measure of wellbeing, this does not imply it raises them all equally.

Second, Figure IV.4 also shows the decomposition of the total gain into growth (conditional on governance) and governance (conditional on growth) and the domains and indicators break into three basic groups. In one group growth is much more important than governance (a ratio >1.3). These are six indicators (Shelter, Water and Sanitation, Nutrition and Basic Medical Care, Access to Basic Education, Access to Advanced Education, and Personal Freedom and Choice and the domain indicator of Basic Human Needs and the overall SPI. The astute (and even non-astute) reader will notice this looks a lot like what shows up what people regard as "basics."

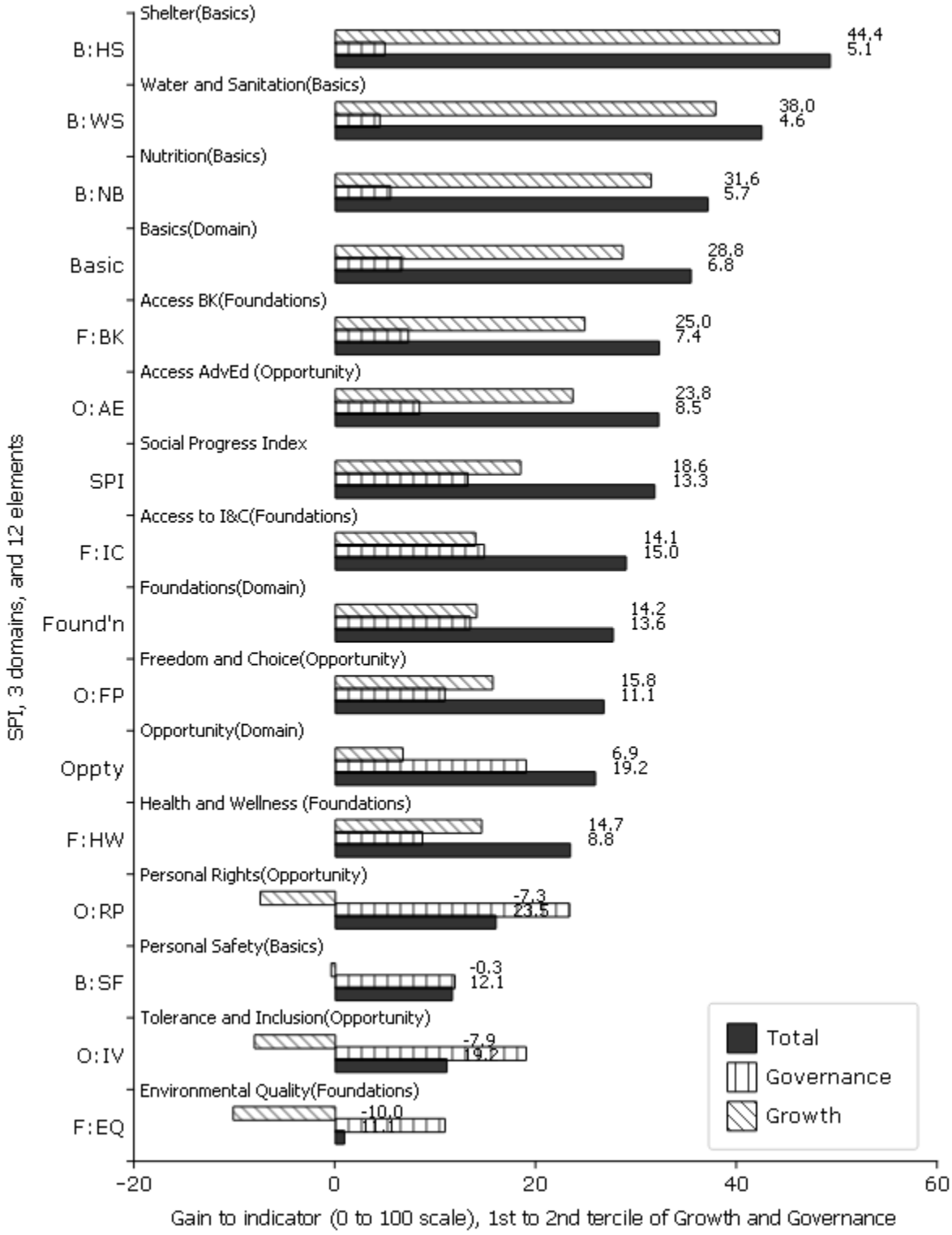
Another group, just one indicator and one domain has growth and governance about the same, are about the same, Access to Information and Communications (ratio is .94) and the domain Foundations (ratio is 1.05).

In the third group the impact of governance is much larger than growth (because the estimate of grown is small or negative): Personal Rights, Personal Safety, Tolerance and Inclusion, and Environmental Quality and the domain Opportunity.

This decomposition is important because it highlights that some goods are predominantly "private goods" in the economist analytic sense of rival and excludable and some goods that affect wellbeing are "public goods" or "externalities" in the sense they are not rival and excludable. On the simplest of theories or models one would expect private goods to be more responsive to income gains than public goods, for which collective action is essential.

[14] Strictly speaking of course Greenhouse Gas Emissions are not an indicator of country level wellbeing but rather a measure of the country's contribution to a *global* negative phenomena of climate change. But for nearly all developing countries the negative impact on their wellbeing from climate change is overwhelmingly determined by the past and future emissions of *other* countries, particularly of course the now rich countries plus the population giants of China and India, and not their own past or future emissions. This is not denying that the consequences of climate change may well be very, very, negative but just the widely accepted point that this is a *global* phenomenon caused by the *stock* of greenhouse gases, not a national or local pollution problem related to a current (or recent past) flow.

Figure IV.4: Decomposition into gains from National Development into Growth and Governance



Source: Pritchett and Lewis (2023).

IV.E) National Development as a Measure of Country Ability to Provide Wellbeing

The core assumption between most people working in development is that national development is a machinery or system for producing human wellbeing. Put another way, national development is instrumental as it is a way people living in countries can nominate and solve barriers to improving their wellbeing. Saying that growth is important or even that it is necessary and sufficient for many measures of wellbeing is not saying growth is the *only* thing that matters for *all* elements.

There are two ways though that we would expect growth would raise human wellbeing.

First, an expansion in their private incomes (inclusive growth) allows them to direct those resources to the uses they find most pressing. Hence a tight association between the resources households and individuals control and their material wellbeing is common sense, vindicated by research.

Second, an expansion in economic productivity and particularly structural transformation is usually associated with tax buoyancy in that taxes rise at least proportionately with GDP per capita and usually the tax elasticity is larger than 1. This allows governments who are concerned with the wellbeing of their citizens (a responsive polity) and who are able to implement effectively (state capability) to channel more resources into activities that raise wellbeing.

Third, acknowledgement of the key role of inclusive growth in raising wellbeing is not "growth fundamentalism" or a belief that governments do not play a key role both in creating the conditions for growth—after all three of Adam Smith's three keys to "carry a state to the highest degree of opulence" were all governmental: "peace, easy taxes, and a tolerable administration of justice" as "all the rest being brought about by the natural course of things." So the data do show that governance matters even conditional on GDPPC, more for some aspects than others, but overall quite strongly.

A final three observations about national development and human wellbeing.

One, there is again a risk of confusing what is easy and what is hard and assuming that "growth" is hard but raising state capability or moving to effective and stable democratic governance in easy. The data suggest quite the opposite. The World Governance Indicators and other measures of "state capability" are consistent with a view that overall, for at least the last 20 years, the level of state capability has been roughly stagnant, with more than half of countries recording a deterioration in their measured state capability. And, while "democracy" in the narrowest sense of holding elections expanded, there has been retrogression in both form and function. The empirical association of growth and governance with wellbeing does not in and of itself produce "recommendations" as to what are the actions most conducive to raising wellbeing. And, as above, there is no empirical question that the level of per capita spending by governments, either in aggregate, or even on specific sectors, cannot be assumed to be effective and efficient and hence a "summary statistic" of effort to attain outcomes (Filmer and Pritchett 1999 (about health), Pritchett 2009, Pritchett and Aiyar 2014 (about basic education))

Two, development economics has seen a movement that suggests that producing rigorous evidence about the causal impact of specific actions or "interventions" can lead to significant improvements in wellbeing. Which may be true for specific problems and in specific contexts. But this approach is often quite (deliberately) naïve about where and when "rigorous evidence" is truly the binding constraint to more effective actions that raise wellbeing and in general lack a coherent and evidence based model of the exogenous impact of evidence (Pritchett 2009). After all, countries that are repressive autocracies are unlikely to suddenly adopt a concern for their citizen's wellbeing simply because some programmatic approach has been "proven" effective. And when countries lack capable public sector organizations they are often unable even to carry out simple tasks and the *generalization* that "what works" in one context (perhaps with NGO implementation) will work in another context (or in governments) has pretty conclusively been proven empirically false (Vivalt 2020, Pritchett 2023, Angrist and Meager 2023, Masselus, Petrik, and Ankel-Peters 2024). It is at least plausible that a better approach to raising wellbeing is to focus on the capability of public sector organizations and the governmental systems they are embedded in rather than "recommending" what works when what is actually done is endogenous.

Three, although "development" work and "charity" work are both often focused on raising wellbeing in development countries they are not at all the same thing (Pritchett 2022). "Charity" work often focuses on mitigating the worst consequences for human wellbeing of the lack of national development, often using private sector philanthropic funding and delivering benefits in ways that bypass existing governmental (and social) structures. These charitable actions can be (though also can not be) very effective and even cost effective at raising wellbeing. But, in the long-run what raises wellbeing in a sustained way to high levels has to be national development. These two can be intertwined, but are often, for legitimate strategic reasons of funders, not linked at all.

Conclusion

There have, rightly, always been vigorous debates among those engaged in development about possibilities and priorities, as resources, both financial and human, including the resource of time and attention, are always scarce. Historically these debates were about *how* to achieve economic growth. It was broadly accepted that broad-based or inclusive economic growth would be instrumentally important in raising human material wellbeing to the levels enjoyed by the "developed" countries. More recently however there has been the contention about *whether* growth is important at all and claims that, not only is growth not necessary but even that it does not contribute to higher wellbeing. Also, there are claims that "growth is not enough"—that even if growth does contribute to wellbeing it is not sufficient.

On one level these claims seen odd, if not self-negating. The claim that there is something, call is X (like indoor piped water or access to electricity or available health care or adequate nutrition) that is very important to how people assess their wellbeing but that even if people had more resources this would not lead to their taking actions that increased their utilization/access/consumption of X seems internally contradictory. Or, if not contradictory, depends heavily not just on the idea that not only do people not perfectly *maximize* their wellbeing but that people are quite terrible stewards of their own lives.

But there is a strong case that a standard measure of the *average* growth of an economic measure like consumption or income or wages or GDP per capita could not lead to gains in wellbeing if all or nearly all of that growth went to people who were already so well off that the normative gains would be small even if growth was large. As articulated in the simple framing in Part I, there are three (non-exclusive) ways this "growth without normative gain" could happen:

(i) the normative measure used to assess wellbeing declines very sharply to very low levels of gain at low levels of income.
(ii) The growth is happening in countries in which nearly everyone is already quite well-off versus poorer countries (e.g. growth in Norway versus Ethiopia)
(iii) The growth incidence is very pro-rich so that average income rises only because those at the very top of the income distribution are gaining.

The claim that growth is good for raising human wellbeing is therefore an empirical claim based on the empirical associations of wellbeing and levels and distribution of income (which are the cumulative result of growth and on growth incidence), not a theorem that claims growth is logically *necessarily* good however, whenever, and to whomever it happens.

This framing then grounds the presentation of the evidence on the relationship of measures of growth and three, increasingly broad, measures: (i) headcount poverty, (ii) country indicators of meeting basics, and (iii) omnibus measures of wellbeing.

I show that, for headcount poverty measured an any given poverty line the empirical relationship between poverty and median consumption (a measure of economic growth that is robust to inequality and hence a good proxy for "inclusive growth") is as strong as it could possibly be.

References

Alkire, Sabina and James Foster. 2011. "Counting and Multidimensional Poverty Measurement." *Journal of Public Economics*, 95(7), 476-87.
Alkire, Sabina; U. Kanagaratnam and N. Suppa. 2021. "The Global Multidimensional Poverty Index (Mpi) 2021." *OPHI MPI Methodological Note 51, Oxford Poverty and Human Development Initiative, University of Oxford.*
Andrews, Matthew; Lant Pritchett and Michael Woolcock. 2016. *Building State Capability: Evidence, Analysis, Action*. Oxford, UK: Oxford Univerity Press.
Banerjee, Abhijit and Esther Duflo. 2011. *Poor Economics: A Radical Rethinking of the Way to Fight Global Poverty*. New York: Public Affairs.
Banerjee, Abhijit; Esther Duflo; N. Goldberg; Dean Karlan; Robert Osei; William Pariente; Jeremy Shapiro; Bram Thuysbaert and Christopher Udry. 2015. "A Multifaceted Program Causes Lasting Progress for the Very Poor: Evidence from Six Countries." *Science*, 348(6236).
Bauchet, Jonathan; Jonathan Morduch and Shamika Ravi. 2015. "Failure Vs. Displacement: Why an Innovative Anti-Poverty Program Showed No Net Impact in South India." *Journal of Development Economics*, 116, 1-16.
Bergstrom, Katy. 2022. "The Role of Income Inequality for Poverty Reduction." *The World Bank Economic Review*, 583-604.
Birdsall, Nancy and Christian J. Meyer. 2015. "The Median Is the Message: A Good Enough Measure of Material Wellbeing and Shared Development Progress." *Global Policy*, 6(4), 343-57.
Bossuroy, Thomas; Markus Goldstein; Bassirou Karimou; Dean Karlan; Harounan Kazianga; William Parienté; Patrick Premand; Catherine C. Thomas; Christopher Udry; Julia Vaillant, et al. 2022. "Tackling Psychosocial and Capital Constraints to Alleviate Poverty." *Nature*, 605(7909), 291-97.
Dollar, David; Tatjana Kleineberg and Aart Kraay. 2016. "Growth Still Is Good for the Poor." *European Economic Review*, 81(C), 68-85.
Dollar, David; Tatjana Kleineberg; Aart Kraay and Sergei Guriev. 2015. "Growth, Inequality and Social Welfare." *Economic Poliy*, 30(82), 335-77.
Dollar, David and Aart Kraay. 2002. "Growth Is Good for the Poor." *Journal of Economic Growth*, 7(3), 195-225.
Feenstra, Robert C.; Robert Inklaar and Marcel P. Timmer. 2015. "The Next Generation of the Penn World Table." *American Economic Review*, 105(10), 3150-82.
Filmer, Deon and Lant Pritchett. 1999. "The Impact of Public Spending on Health: Does Money Matter?" *Social Science & Medicine*, 49(10), 1309-23.
Filmer, Deon; Hammer, Jeffrey; Pritchett, Lant. 2000. "Weak Links in the Chain: Diagnosing Health Policy in Poor Countries." *World Bank Research Observer*, 15(2), 199-224.
Foster, James; Joel Greer and Erik Thorbecke. 1984. "A Class of Decomposable Poverty Measures." *Econometrica*, 52(3), 761-66.
Inchauste, Gabriela; Nora Lustig and 2017 September 18. 2017. "How Do Taxes and Transfers Impact Poverty and Inequality in Developing Countries?," *Let's Talk Development.*
Jensen, Anders. 2022. "Employment Structure and the Rise of the Modern Tax System." *American Economic Review*, 112(1), 213-34.
Kaufmann, Daniel; Kraay, Aart; Mastruzzi, M;. 2005. "Governance Matters V: Governance Indicators for 1996-2005,"
Kraay, Aart. 2006. "When Is Growth Pro-Poor? Evidence from a Panel of Countries." *Journal of Development Economics*, 80(1), 198-227.
Lopez, Humberto and Luis Serven. 2006. "A Normal Relationship ? Poverty, Growth, and Inequality." *World Bank Policy Research Working Paper Series*, 3814.

Lucas, Robert E. 1988. "On the Mechanics of Economic Development." *Journal of Monetary Economics*, 22(1), 3-42.
Masselus, Lise; Christina Petrik and Jörg Ankel-Peters. 2024. "Lost in the Design Space? Construct Validity in the Microfinance Literature." *Ruhr Economic Papers, No. 1097*.
Muralidharan, Karthik and Paul Niehaus. 2017. "Experimentation at Scale." *Journal of Economic Perspectives*, 31(4), 103-24.
Pritchett, Lant. 2018. "Alleviating Global Poverty: Labor Mobility, Direct Assistance, and Economic Growth." *HKS Working Paper*, RWP18-013.
____. 2022a. "Development Work Versus Charity Work,"
____. 2024. "'Dollar a Day' Was a Mileage Marker, Not a Destination."
____. 2009a. "Is India a Flailing State: Detours on the Four-Lane Highway to Modernization." *HKS Faculty Research Working Paper Series*, (RWP09-013).
____. 2013. "Monitoring Progress on Poverty: The Case for a High Poverty Line." *ODI Working Paper*, (2).
____. 2022b. "National Development Delivers: And How! And How?" *Economic Modelling*, 107, 105717.
____. 2009b. "The Policy Irrelevance of the Economics of Education: Is 'Normative as Positive' Useless, or Worse?," W. Easterly and J. Cohen, *What Works in Development: Thinking Big and Thinking Small.* Washington DC: Brookings Institution Press,
____. 2020. "Randomizing Development: Method or Madness?," F. BÉDÉCARRATS, I. GUÉRIN and F. ROUBAUD, *Randomized Control Trials in the Field of Development a Critical Perspective.* Oxford UK: Oxford University Press, 79-109.
____. 2023. "“Rely (Only) on the Rigorous Evidence” Is Bad Advice." *Review of Development Economics*, n/a(n/a).
____. 2006. "Who Is Not Poor? Dreaming of a World Truly Free of Poverty." *The World Bank Research Observer*, 21(1), 1-23.
Pritchett, Lant and Yamini Aiyar. 2014. "Value Subtraction in Public Sector Production: Accounting Versus Economic Cost of Primary Schooling in India." *Center for Global Development Working Paper*, 391.
Pritchett, Lant and Addison S Lewis. 2022. "Economic Growth Is Enough and Only Economic Growth Is Enough,"
Pritchett, Lant and Lawrence H. Summers. 1996. "Wealthier Is Healthier." *The Journal of Human Resources*, 31(4), 841-68.
Pritchett, Lant and Martina Viarengo. 2010. "Explaining the Cross-National Time Series Variation in Life Expectancy: Income, Women’s Education, Shifts, and What Else?" *Human Development Research Papers*, HDRP-2010-31.
Ravallion, Martin. 2016. *The Economics of Poverty: History, Measurement, and Policy*. Oxford University Press.
Ravallion, Martin; Gaurav Datt and Dominique van de Walle. 1991. "Quantifying Absolute Poverty in the Developing World." *Review of Income and Wealth*, 37(4), 345-61.
Roser, Max. 2021. " Global Poverty in an Unequal World: Who Is Considered Poor in a Rich Country? And What Does This Mean for Our Understanding of Global Poverty?".
Rosling, Hans; Ola Rosling and Anna Rosling Rönnlund. 2019. *Factfulness: Ten Reasons We’re Wrong About the World - and Why Things Are Better Than You Think*. London, England: Sceptre.
Vivalt, Eva. 2020. "How Much Can We Generalize from Impact Evaluations?" *Journal of the European Economic Association*, 18(6), 3045-89.