The (Indispensable) Middle Class in Developing Countries; or, The Rich and the Rest, Not the Poor and the Rest

Nancy Birdsall

Abstract

Inclusive growth is widely embraced as the central economic goal for developing countries, but the concept is not well defined in the development economics literature. Since the early 1990s, the focus has been primarily on pro-poor growth, with the "poor" being people living on less than $1 day, or in some regions $2 day. The idea of pro-poor growth emerged in the early 1990s as a counterpoint to a concern with growth alone (measured in per-capita income) and is generally defined as growth which benefits the poor as much or more than the rest of the population. Examples include conditional cash transfers, which target the poor while minimizing the fiscal burden on the public sector, and donors' emphasizing primary over higher education as an assured way to benefit the poor while investing in long-term growth through increases in human capital. Yet these pro-poor, inclusive policies are not necessarily without tradeoffs in fostering long-run growth. In this paper I argue that the concept of inclusive growth should go beyond the traditional emphasis on the poor (and the rest) and take into account changes in the size and economic command of the group conventionally defined as neither poor nor rich, i.e., the middle class.

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Introduction: From pro-poor to middle class growth

Growth that is shared, broad-based, inclusive—there are various terms—is now widely embraced as the central economic goal for developing countries. A key contribution of the Spence Commission on Growth (formally the Growth Commission) was its emphasis on shared growth.

But the concept of shared or inclusive growth is not well defined in the development economics literature. Since the early 1990s, (and probably best marked by the influential 1990 World Development Report of the World Bank), the focus has been primarily on pro-poor growth, with the "poor" viewed as people living on less than $1 day, or in some regions $2 day. The idea of pro-poor growth emerged in the early 1990s as a counterpoint to a singular concern with growth alone (measured in terms of increases in per capita income).[1] Pro-poor growth is generally defined as growth which benefits the poor at least as much or more than the rest of the population, and as the good outcome of policies and programs that are targeted to improving the lives and capacities of the very poor while not undermining growth itself. Examples include the emphasis on primary compared to higher education on the part of donors over the last several decades, as an assured way to provide a benefit to the poor while investing in long-run growth through increases in human capital, and the satisfaction with the successful implementation of conditional cash transfers, which are highly targeted to the poor while minimizing the fiscal burden on the public sector and thus any tradeoff with growth associated with a higher tax burden or reduced alternative growth-oriented public investment.

Yet these pro-poor, inclusive policies are not necessarily without tradeoffs in fostering long-run growth. [2] In this paper I argue that the concept of inclusive growth should go beyond the traditional emphasis on the poor (and the rest) and take into account changes in the size and economic command of the group conventionally defined as neither poor nor rich, i.e. the middle class. My main rationale is that growth driven by and benefiting a middle class is more likely to be sustained – both economically to the extent that the problems of rent-seeking and corruption associated with highly concentrated gains to growth are avoided; and politically to the extent that conflict and horizontal inequalities between racial and ethnic groups are easier to manage when

[1] World Bank (1990). See also Ravallion (1998) and Ravallion and Chen (2001) for two of those authors' singular contributions, and Kraay (2006).

[2] The emphasis on primary compared to higher education ignores the lack of clear evidence that the former has higher social returns than the latter, once unmeasured positive externalities are properly taken into account (Birdsall 1996), and may have led to the underfunding of higher education in developing countries in the last three decades. Levy (2008) suggests conditional cash transfers and other pro-poor programs in Mexico have not sufficiently taken into account tradeoffs in how "social" programs and subsidies affect economy-wide incentives for investment and productivity.

not only is the overall size of the pie growing but everyone is enjoying bigger slices. [3] On the positive side, sustained growth is arguably more likely where a politically salient middle class supports in its own economic interests the sound and stable political and economic institutions that encourage investment by ensuring the rule of law and recognition of private property rights.[4]

Both middle-income and low-income countries have been and are far more vulnerable to various economic shocks (weather, terms of trade) than are industrialized economies,[5] and recent studies suggest that sustained growth for prolonged periods of 10 years and more has been more elusive in the developing world than shorter periods of ―accelerated growth".[6] Short periods of growth are often due to in fact to positive shocks such as a favorable but temporary shift in the terms of trade for a country (as in the case of a commodity boom of 2002-2008), or the discovery of oil or another natural resource (whose world price may be volatile), or the arrival of a skilled and committed leader, or the resolution of a war or internal conflict. Particularly in the light of the 2008-2010 global economic crisis (as I write in mid-2009), the question is whether a good-sized middle class, however defined, makes countries more resilient in the face of shocks – internal political shocks as well as external financial and weather shocks.

The purpose of the paper is modest. I do not presume to make a larger and more economically commanding ―middle class" an input to any model of growth[7]. In fact as I will show, the emergence of a middle class using my definition is closely associated with growth, and is probably an outcome of growth as much or more than an input to growth. The same virtuous or reinforcing circle might be said of the middle class and democracy, the middle class and ―sound" institutions and so on.

Instead it is to suggest a definition of the middle class in developing countries that emphasizes the alignment of its economic interests with sound economic policies and good governance – and thus its indispensability to sustainable economic growth -- while allowing for the reality that it is subject to the risks as well as opportunities of a globally integrated economy. (Because this notion of its indispensable nature is a hypothesis not a finding, or a presumption not a conclusion, I hedge and put the term in parentheses in the title.) I first set out and defend my definition. I then provide some description of the size and economic command of the (indispensably) middle class across countries and over time. I conclude with some possible implications for domestic and international policy given the evidence of how small and fragile this class still is in developing countries.

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[3] Birdsall (2007) reviews and summarizes the literature on the effects of income distribution on growth. See especially Stewart (2001) on *Horizontal Inequality: A Neglected Dimension of Development*, as well as Rodrik and Alesina (1999) on inequality and managing policy tradeoffs.

[4] Acemoglu, Johnson and Robinson, 2004

[5] Perry (2009).

[6] Hausmann, Pritchett, and Rodrik (2004) report that ―external shocks tend to produce growth accelerations that eventually fizzle out, while economic reform is a statistically significant predictor of growth accelerations that are sustained."

[7] Easterly (2001) does so, defining the three middle quintiles which in many countries will include people living below the poverty line, as ―middle class".

This paper complements a small but growing literature by development economists defining and exploring empirically the "middle class" in developing countries.[8] It is recent and small because of the laser-like focus in the donor community on reducing absolute poverty and its curses of ill health and poor access to education; and to some extent because of a prevailing assumption that the middle class in developing countries competes with the poor politically and economically – preferring to enhance its own access to state jobs and spending, and to preserve its limited privileges. This may indeed have been and be the case, particularly in countries where the majority of households that appear to be "middle class" are highly dependent on the state. However, the fact is that the prevailing assumption refers only vaguely to who are middle class households in the first place.

But what about the absolute poor?

In any event, a focus on the middle class does not imply a lack of concern for the poor. To the contrary; in the advanced economies the poor have probably benefited from the rule of law, legal protections, and in general the greater accountability of government that a large and politically independent middle class demands, and from the universal and adequately funded education, health and social insurance programs a middle class wants and finances through the tax system.[9] A focus on the middle class does not exclude a focus on the poor but extends it, including on the grounds that growth that is good for the large majority of people in developing countries is more likely to be economically and politically sustainable, both for economic and political reasons.[10] The political economy of targeted transfers provides an example. Besley and Kanbur (1990) and Gelbach and Pritchett (2000) among others argue that "leakier can be better", i.e. attempts to tighten targeting to reduce fiscal costs and reach only the truly poor can be counterproductive if the programs as a result lose the political support of the middle class.

On the other hand, if a focus on the middle class is merely a simple extension of caring about the poor, then the question arises of whether the distinction between pro-poor and middle class growth has any implications for policy. Below I argue that in fact it probably does. In the case of cash transfers, the optimal degree of targeting depends structurally on the size and characteristics of the middle class. More generally a singular focus on the poor may from a policy point of view ignore tradeoffs that matter for the middle class, which in turn might undermine the macroeconomic stability and the social policies that the middle class tends to support – and that in turn may also benefit the poor (if perhaps less directly in the short run).

In the end, the possible tensions or tradeoffs between strictly pro-poor and more inclusive and sustainable "middle-class" growth policies cannot be generalized. They need to be assessed policy by policy in each country, and are likely to change over time as circumstances change. The implication is that policymakers in developing countries (and their international supporters and advisers) should be more systematic than has been the case in the last several decades in

[8] Including Birdsall, Graham and Pettinato (2000); Milanovic and Yitzhaki (2002); Banerjee and Duflo (2008); Ravallion (2009); and Silber (2007).

[9] This is one interpretation of Lindert's analysis (2004). See also Skopcol (1979). Provision of public goods is lower where there is inequality of income, especially between different ethnic or other groups (Alesina, et al. 1999)..

[10] Birdsall (2007) summarizes the evidence of this for Africa, based on Hausmann, Pritchett, and Rodrik (2004) who present evidence that many countries that have had long growth episodes subsequently have growth collapses.

considering weighted welfare outcomes when selecting and fine-tuning macro policies, rather than either unweighted growth outcomes or overly weighted poverty outcomes. A second implication is that where there are no obvious tradeoffs between benefits for the poor vs. the middle class, all the better. The real tradeoff may well be between the rich and the rest, and between short-term stability or high aggregate growth that preserves the status quo benefiting a small minority at the top of the income distribution vs. the political risks and lower short-run growth of financial, tax, social insurance, land market and other policies that are conducive to building a middle class and also, as it turns out, pro-poor as well. [11]

Defining the (indispensable) middle class in developing countries

Inclusive growth implies an increase in the proportion of *people* in the middle class (implying some exit of people out of poverty), and in the proportion of *total income they command*, implying gains in the middle at the "expense" either of the initially poor or the initially rich.[12] I define the "middle class" in the developing world to include people at or above the equivalent of $10 day in 2005, and at or below the 95th percentile of the income distribution in their own country[13]. This definition implies some absolute and *global* threshold ($10 day) below which people are too poor to be middle class in any society in today's globally integrated economy, and some relative and *local* threshold (the 95th percentile of income/consumption) above which people are at least in their own society "rich". Below I sometimes refer to the group as the politically potent or independent middle class to distinguish it from other definitions and to emphasize the logic behind this income/consumption definition.

Why $10 day at the bottom?

I suggest $10 a day (in 2005 purchasing power parity terms) as the absolute minimum income for a person to have the economic security associated with middle class status in today's global economy – and therefore the incentives and the potential to exercise political rights in his or her own interests.

Why have an absolute rather than a country-specific minimum level? Many conventional definitions assign to "middle class" in each country those in the middle of the distribution in that country – whether the three middle quintiles or those between 75 and 125 percent of median income (though where I have used the latter the discussion was primarily of the "middle stratum"

[11] This may be the right way to assess the tradeoff the Obama Administration faces in the design of the TARP program for ridding banks of toxic assets. The private-public partnership as outlined appears to favor potentially high gains to those with current financial wealth and a potentially higher eventual tax burden (on the middle class) over a higher risk and less costly takeover or "nationalization" of the banks – in part because of the political limit to immediate additional funding of any bank "rescues".

[12] These implications depend in part on the relative gains or declines in income and share of the initially rich; the statements assume that the rich are not losing in absolute terms. Silber (2007) suggests an alternative measure of the economic command of the middle class which does not depend on what happens to the incomes of the poor or the rich.

[13] For other recent definitions, see World Bank (2007); Birdsall, Graham and Pettinato (2000); Banerjee and Duflo, 2008 and Ravallion (2009). Defining the top 5 percent of people in every country as "rich" implies that of the approximately 14 million people in the U.S with 2002 monthly income at or above $9,504 (2005 PPP) are "rich", while the approximately 26 million in urban China with 2005 monthly incomes of just $372 are rich, and the 40 million in rural China with 2005 monthly incomes of just $168 are rich.

not "middle class"). [14] I propose an absolute minimum on the grounds that in the relatively open economies of most developing countries today, with economic security to some extent vulnerable to external as well as internal economic and political shocks (including weather, financial crises and so on -- consider the food and fuel price spikes in 2008), as well as some consumption standards set at the global level (a car for example if not everywhere a Lexus), some absolute minimum makes sense.

Why $10? $10 a day is a high minimum compared to the conventional global absolute poverty line now used by the World Bank of $1.25 a day.[15] It is also high compared to the $2 day national poverty lines conventionally used in much of Latin America and in other middle-income regions and countries.

There is certainly no agreement among development economists of an income minimum of middle class status in a developing country. Banerjee and Duflo (2007) designate as middle class in developing countries people living between $2 and $10 a day – essentially assigning all those that have escaped the recognized poverty line of $2 a day (poverty but not extreme poverty) to "middle class" status. Ravallion designates as middle class in developing countries all those living between $2 and $13 a day, similarly defining the developing world's middle class as those who are not deemed "poor" by the standards of developing countries but are poor by the standards of rich countries, and capping the developing world middle class at a figure close to the poverty line in the United States – so by definition his middle class is meant to be non-Western and specific to developing countries.

However there are good arguments for rejecting the idea that anyone who escapes the absolute poverty associated with living on just $2 a day is a member of the "middle class" in his or her own country, let alone globally. Being a member of the middle class in the classic sense implies a reasonable level of economic security. Yet in most middle-income developing countries, even $3 day is not enough to be economically secure. Ravallion (2008), makes the point that national poverty lines rise markedly across developing countries with average income; that reflects the reality that security with respect to basic needs is difficult to define in absolute terms (as Adam Smith famously noted it is about the proper hat that makes a man feel presentable in his community). Moreover there is considerable evidence that the number of people that live below the international poverty lines of $1 or $2 a day is substantially greater over several months or years in developing countries than the number that are poor at any one moment. Pritchett, Suryahadi, and Sumarto (2000) use panel data to estimate, for example, that while the headcount poverty rate may be 20 percent in Indonesia in 1997, an additional 10 to 30 percent face an acute risk of poverty in the near future based on past churning of households in and out of poverty. Similarly, Kanbur and Lustig (2000) record substantial increases in "poverty" conventionally defined during crises, simply because a high proportion of the non-poor live so close to the poverty line – where they are vulnerable during a downturn, presumably because their permanent income is too low for them to have accumulated the precautionary savings or assets typical of middle class households to ride out a downturn.

[14] For an example using the three middle quintiles, see Easterly (2001); for those close to the median see Birdsall, Graham and Pettinato (2000). Thurow (1987) also uses the latter definition.

[15] Ravallion (2009) explains the basis for this measure of poverty; it is close to the median of the national poverty lines of the 15 or so poorest countries in the world.

In fact even $10 day is low compared to the national poverty lines of OECD countries. Aiming for a more globally comparable income standard, Milanovic and Yitzaki (2002) designate the middle class as those living between the mean incomes of Brazil and Italy, i.e. between about $12 and $50 (in 2000 purchasing power parity terms). With the exception of the United States, OECD countries define their poverty lines in relative terms, as 50 percent of median income. [16] That standard implies poverty lines in PPP terms of about $30 day. The U.S. poverty line is based on the cost of a minimum nutritional basket and has not been updated in many years to reflect real increases in costs; however even in the U.S. the poverty line for a single individual in 2008 was $29 per day and for each individual in a four-person household was about $14 per day.[17]

Finally it is likely that most people in developing countries living on $10 a day have surprisingly low (to many Western readers) social indicators. Infant mortality in the top quintile of households in Brazil (where daily income per capita is close to $10 or more among the least affluent) was above 15 per thousand in the mid-1990s – similar to the rate among the notoriously underserved (and generally poor) African-American population in Washington D.C. and twice the rate in the most ~~"d~~eprived" areas of Great Britain.[18] The ~~"r~~ich" in Bolivia and Ghana are even worse off – infant mortality of households in the richest quintile in Bolivia (2003) was 32 and Ghana (2003) 58 per 1,000, and in the 1990s in Ghana as many as 10 percent of children in the richest quintile were stunted, implying chronic malnutrition.[19] In fact the low social indicators among the richest 20 percent of households in low-income countries like Bolivia and Ghana are consistent with their income levels; it is just that except for a tiny proportion of households in those countries (far tinier than the 20 percent in the top quintile), as will be clear below, most people are income (or consumption) ~~"p~~oor" in the sense that their per capita daily income is far below $10.

In the end, $10 as a lower limit is admittedly ad hoc; it is in the right range – clearly on the low side by OECD standards but close to a minimum for a global standard. Behind this ad hoc number is the idea that somewhere around $10 a day per person household members are able to care about and save for the future and to have aspirations for a better life for themselves as well as their children – because they feel reasonably secure economically (short of the kind of global recession of today, a once in 60 years event). Economic security implies that during the downturns of the normal business cycle a household is unlikely to need to sell household or business assets or take children out of school, and is insured through savings or formal insurance arrangements against such idiosyncratic risks as a family health catastrophe or a brief spell of

[16] Pritchett (2003), Table 4, lists 50 percent of median incomes for 13 OECD countries in 2000 PPP terms, which have an unweighted average of the countries listed of $33.95 day. Ravallion, Chen, and Sangraula (2008) objects to this informal measure of poverty using one-half the median on the grounds that it implies that an equi-proportionate increase in all incomes across a distribution would not change the poverty rate, whereas above some level of income, the income elasticity of national poverty lines though positive is less than one.

[17] US poverty lines are extracted from the 2008 Health and Human Services Guidelines.

[18] As reported by Pritchett (2003). Pritchett also presents data showing that fewer than 25 percent of people in the richest quintile in India complete 9 grades of school, compared to nearly universal completion of basic education in industrialized countries.

[19] Birdsall and Menezes (2004), as reported by World Bank online data based on Demographic and Health Surveys (DHS). The child stunting statistics are from the DHS data on Bolivia (1998) and Ghana (1993).

personal unemployment. At an income level around $10 a day per person, feeling secure, people in this middle class are prepared to take reasonable business and other economic risks, and thus to be entrepreneurial capitalists. A measure of economic security also makes a household less vulnerable to patronage or clientelist political pressures and implies a greater likelihood of readiness to act politically to demand the economic policies that protect private property and encourage private investment.

And $10 has the advantage (like the original $1 a day poverty line) of being a round number.

Why the 95th percentile at the top?

The relative maximum, which obviously varies across countries, can be thought of as excluding that portion of the population within a country whose income is most likely to be from inherited wealth, or based on prior or current economic rents associated with monopoly or other privileges, and thus less associated with productive and primarily labor activity than for the non-rich.

In an earlier note I set the threshold above which a household would be defined as rich at the 90th decile of income; that seemed reasonable because across almost all developing countries for which there is information on the distribution of income, the ratio of average income (household income per capita) of the 10th to the 9th deciles ranges from two to more than five, and is far greater than the ratio of income of the 9th to the 8th deciles. (For OECD countries the 10/9 ratio also exceeds the 9/8 ratio but is usually below two.)

For two reasons in this paper I have modified the definition of the middle class to exclude only the top 5 percent of households. First, in most of the poorer developing countries (hereafter ―low-income" using the World Bank classification of countries[20]) household income per capita (in 2005) even at the 90th decile was below $10 a day; it seemed unreasonable to assume that 10 percent of all households in Ghana, Guatemala and India, with income or consumption below $10 day, were relying primarily on non-productive income. Second, further scrutiny of income distribution data for most developing countries suggests that the cumulative distribution has an inflection point (where the second derivative becomes positive) not at or around the 90th decile but at or even above the 95th decile (which in simplified form is evident by comparing the ratios in Figure 1). At and above that inflection point income tends to be even more concentrated.

At the same time, the 95th percentile is as arbitrary a cutoff at the top as is $10 at the bottom in defining a country-based indispensable middle class. There is no empirical basis to assume in any particular country that a household at the 96th percentile of per capita income or consumption is more reliant on income from capital or privileges or ―rents" broadly speaking than a household at the 94th percentile; in fact in low-income countries the relevant cutoff at the top may be much higher, as income/consumption per capita even at the 95th percentile is still below $10 a day (for example in Ghana and India -- more on India below). Ideally the threshold above which a household is too ―rich" to be ―middle class" would be estimated for each country on the basis of

[20] The World Bank income classification is based on 2007 GNI per capita. The low income classification is assigned to countries with a GNI per capita of $935 or less; lower middle income, $936 - $3,705; upper middle income, $3,706 - $11,455; and high income, $11,456 or more.

information about financial and other assets, sources of income and the nature of employment. [21] The advantage of choosing the percentile threshold is that it reflects the reality that within countries relative and not just absolute income matters, especially in the political context.

Why an income or consumption measure vs. education, occupation or other traditional measures?

I use information from household surveys to "count" the middle class and its proportion of total income in various countries and years based on household income or consumption per capita, between the early 1990s and 2005 or the most recent other year available. It would be better to "count" the middle class on the basis of a reliable measure of permanent income, but measuring permanent income is a task in itself, and no reasonable measures of permanent income are available over time and across countries. Consumption is a better measure of permanent income than current income, and is generally lower for households the lower their income. A still better measure is probably education of the household head or all adults in the household.[22] But education of the household head is not sensitive to changes in the economic environment except over longer periods. An index of household assets, such as that developed by Filmer and Pritchett (2001) would also provide a better indicator of permanent income than current consumption/income. Table 1 below provides some information on the types of assets owned by households in several countries.[23] This does not of course solve the problem of using current income to define the middle class, but it does provide some indicator of its reasonableness.

The middle class and income-based identity

Members of the middle class are more likely to play the positive political role in the provision of accountable government, e.g. in supporting the rule of law, property rights, and taxes to finance public goods such as education, to the extent they identify with each other as "middle class" with identifiable and distinct interests from the rich and the poor. Measures of income polarization are based on the relevance of such "identification"[24]. Ideas about "identity" by economists (the most notable being that of George Akerlof[25]) are also discussed in the context of ethnic or gender identity; but there is also the concept of income identity as in studies of the black or African-American middle class in the United States.

A simple measure of potential income/consumption identity is the Gini coefficient of the middle class itself. Table 2 shows the Gini coefficient of income/consumption inequality of the members of the middle class using my definition in each country/year. Except for several countries in Latin America, the Gini coefficients are generally between a very low 0.1 and 0.2 (and generally as would be expected lower for the consumption-based survey countries),

[21] Data on household wealth and its distribution are now available for a limited number of developing countries. See Davies et al. 2008.
[22] Sociologists have traditionally identified the middle class in Western societies on the basis of education and occupation in a white collar job.
[23] We identified the "middle class" in these countries by imposing the income/consumption distributions based on the World Bank PovCal estimates and my income/consumption cutoffs on the asset distributions developed by Filmer and Pritchett using the Demographic and Health survey data.
[24] See Foster and Wolfson, (1992), and Wolfson, (1994)
[25] See Akerlof and Kranton (2000)

suggesting an extremely narrow range of income/consumption among the (often) small (in proportionate terms) middle class in developing countries. The Ginis are clearly correlated with the overall income range within a country for this group, which is in turn correlated with the absolute size of the group. The Gini for the U.S. middle class is, not surprisingly, much higher, at .38– indeed it is higher than the Gini coefficient across all households in many countries.. That reflects the fact that along with the greater relative size of the middle class in the U.S., $10 a day at the bottom of the class, as noted above, is actually well below what would be considered middle class in high-income countries, and $312, the daily income per capita at the top of the class, is 30 times greater than $10. Differences between the bottom and top income/consumption households are probably too great to pretend that the group as a whole represents a single class. Indeed in the U.S. the terms lower and upper middle class are now widely used. The Gini for the middle class in Sweden is lower, at .23, but still higher than in most developing countries.

This (indispensable) middle class and growth

Defined in this manner, an increase in the size and economic power of the middle class is likely to signal that the underlying growth is based on wealth creation and productivity gains in private activities and is thus self-sustaining and transformative (politically as well as economically, as the more powerful middle demands government policies conducive to wealth creation), as opposed to being driven largely by exploitation of natural resources, by remittances, or by infusions of external aid.

Country estimates: economic size and share of the global middle class in developing countries

Figure 2 shows the economic command of the middle class so defined for selected countries, and the change in that indicator between 1990 (or close years to 1990) and 2005. (See also Table 3, which also includes the size of the middle class and the change in size between the two years. In the discussion below I refer mostly to the economic command variable, which is generally higher and shows a greater increase or decline compared to the size variable.)

The estimates are based on household surveys in developing countries of income or consumption in purchasing power terms for various years around 1990 and 2005, using the most recent (2005) PPP updates. Estimated distributions of household income or consumption for each country/year are available from the World Bank_s online poverty analysis tool, PovcalNet.[26] The resulting income/consumption country averages are lower than GDP per capita estimates, which include non-household production (and associated non-household income), and the overall estimates are systematically lower for countries where the data are for consumption rather than income. For these reasons alone it is not possible to compare the resulting country averages to standard measures of GDP per capita, or to make comparisons across countries – including of the size of

[26] PovcalNet provides the estimated distribution parameters and the survey-based average monthly income/consumption data for each survey, allowing calculation of the size and the share of income/consumption for the middle class as defined here, with its lower absolute and upper relative bounds.

the middle classes between the consumption-based and income-based country estimates. Perusal of the survey-based estimates also indicates less growth in household income/consumption than would be expected based on average measured GDP per capita growth over the relevant periods in some countries. In short, while the resulting estimates allow useful description in the broad sense, they are best thought of as illustrative not dispositive.

Several observations are in order. First is the lack of an (indispensable) middle class in some countries, and its relatively small size and economic command in low-income compared to middle-income developing countries.

In the figure, the daily per capita consumption/income of households in each country at the 95th percentile is shown. By my definition, Thailand and urban China in 1990 and urban India and Indonesia in 1990 and (about) 2005 have no middle class at all. In other words, all households in those country years with consumption at or greater than $10 a day are in the top 5 percent of all households and are thus in this context —rich". (The histograms included in the Appendix are a dramatic illustration of the missing middle class in many developing countries and its small size where it is present.)

(A long parenthetical comment: But what about India?

The resulting numbers will strike some readers as too low, for example for Thailand in 1990 and especially for the –country" of urban India. Any definition of the middle class that suggests there was no middle class at all in urban India (in 2005) is not credible.

First, it is likely that a large portion of people conventionally viewed as —middle class" in India are among the most affluent 5 percent of people that I have defined as –rich". McKinsey Global Institute (2007) reports a a –middle class", defined as people with disposable incomes from about $4,200 to $21,000, or about $11-$55 per day, of about 50 million people in India, which is less than 5 percent of India's total population of about 1.3 billion people.[27] Second, the survey data for India record consumption not income; consumption is for most households, particularly affluent households, consistently below income, which helps explain some of the shortfall in measured numbers of middle class people. Third, the distribution of income in India is relatively less concentrated than that of many developing countries with larger middle classes, for example in Latin America; that suggests that the appropriate cutoff for –rich" households is above the 95th percentile in India (and other South Asian countries). Indeed as noted above, ideally the threshold for –rich" would be country-specific.[28] [29]

[27] Shukla (2008) based on surveys of the National Council of Applied Economic Research (NCAER) estimates there are 120 million people in India in the middle class.

[28] As shown in Figure 2 per capita consumption for India at the 95th percentile is $5 a day. It is only at the 99th percentile that, using our estimates, per capita consumption reaches $10; above the 98th percentile, the functional form used to estimate the entire distribution probably dominates what are likely to be very noisy survey data at the top of the consumption distribution.

[29] In addition, our numbers reflect recent large downward adjustments in average dollar income in purchasing power terms for India (and China) based on 2005 price data that have only recently been incorporated; the new Penn World Tables with these PPP adjustments have not received yet the kind of scrutiny earlier adjustments are now getting (Johnson et al, 2009).

Among countries for which estimates are based on income, not consumption, data, Honduras in 1990 also had no middle class. Honduras (and Bolivia) are among the richest of those countries, most of which are in sub-Saharan Africa, classified by the World Bank as "low-income", that is with income per capita of less than about $800 a year at market exchange rates. Most still had no (indispensable) middle class in 2005. As in India, it is likely that in sub-Saharan Africa virtually all households in urban areas with apparent middle-class status (many as civil servants or working with the aid community or international NGOs) are among the 5 percent most affluent in their countries. Where 40 – 60 percent of all people are living below the international poverty line of $1.25 a day, this is not as surprising as it seems at first glance. It does suggest something about the political challenge inherent in creating and maintaining accountable government – particularly where a high proportion of the richest 5 percent of a nation's population are members of the political class, that is are directly or indirectly dependent on government for their income, whether as civil servants or working for parastatals or for formal institutions highly dependent on public policies such as banks and natural resource producers.[30]

The (indispensable) middle class is larger in most middle-income countries. Where it does exist in the developing world (leaving out the former socialist economies of Eastern Europe), its command of income or consumption in many countries is still small compared to the command of the "rich": 7 compared to 18 percent in China, 20 compared to 30 percent in South Africa, and 26 compared to 35 percent in Colombia (Table 7). Brazil, Chile, Mexico, Russia and Turkey are interesting exceptions, where the middle class economic command is equal to or greater than that of the "rich". They may be the countries where in political terms it is possible to distinguish three classes: the poor, the middle and the rich. Elsewhere in the developing world, the relevant political economy might better distinguish between the rich – with political salience -- and the rest.

A second observation has to do with the change in the economic command of the middle class over the period 1990 to 2005. In that period (of healthy growth almost everywhere and increasing integration of developing countries into the global economy) the economic command of the (indispensable) middle class increased in most middle-income countries, and notably increased in urban China. Exceptions include urban Argentina, Venezuela (income data) and Morocco and South Africa (consumption data). Though over the relevant period overall household consumption in South Africa grew at 2.35 percent and in Morocco at 3.39 percent (based on the household survey data), the size and economic command of the middle class declined in those countries. Sweden and the United States both also saw a decline in the economic command of the middle class – a phenomenon widely observed for the United States in the context of the 2008 presidential campaign (and often blamed on "free trade" and "globalization"). The increase in income inequality and the stagnation of median wages in the United States (since the early 1980s) have been attributed among other things to the decline in access to good education (Goldin and Katz, 2007); the decline in Sweden may be more of a surprise. It is notable that the proportion of income commanded by the middle class in Sweden

[30] Birdsall, 200?) presents data suggesting the heavy reliance of the top quintile in low-income countries on employment by the state or state-owned enterprises.

is higher than the United States, despite its lower per capita income; in 2005 average per capita income was about $32,000 in Sweden and about $42,000 in the United States.[31]

Third, the overall command of the middle class in all the developing countries is far lower than in the Sweden and the United States. This is mostly due to lower average income across the entire distributions. To the extent that the middle class more than the poor or the rich constitutes the bulwark of accountable government and sustained economic growth, it suggests the nature of the challenge in developing countries. Only in Chile, Russia and Mexico – the figures for Mexico and Russia are for consumption and would be higher in income terms) is the middle class command of total income/consumption close to or greater than 40 percent, compared to about 80 percent in the United States and close to 90 percent in Sweden.

Table 3 summarizes our middle class indicators along with more traditional measures of income distribution. The middle class indicators provide information additional to that embedded in the Gini coefficient and other traditional measures of income distribution. For example, the change over the periods studied in the economic command of the middle class is not necessarily in the opposite direction as the change in the Gini[32] as might be expected – that is an increase in the middle class does is not always associated with a decline in overall inequality. In India and Brazil a rising middle class is not surprisingly associated with a declining Gini. However, for urban China (treated here as a country) the notable increase in middle class command (from zero in 1990) is associated with a substantial *increase* in the overall Gini, and that is also the case in Ecuador. In South Africa, the decline in middle class command is associated with a *decrease* in the overall Gini. The same is true for other measures of inequality (not shown).[33]

Characteristics of the global middle class

Table 4 provides information on the education of household heads and the size of households for the three groups (poor, middle class and rich) for countries based on survey data (the Living Standards Measurement Surveys, most from the 1990s and thus not reflecting the increases since in the size and command of the middle class shown in Figure 2). Other than the anomalous education numbers for Indonesia, the tables accord with priors. Except for Nicaragua and Guatemala, the middle class in most countries has close to or above 10 years of education (measured as grade completed in most surveys). The averages shown are for all heads of households. Using information on the distribution of income to define the three groups (low-income, middle class and rich) using DHS data, it is possible to compute years of schooling of household heads (aged 20-55) for each group. In Turkey in 2005 , 65 percent of household heads in middle class households had 11 or more years of education, and 32 percent had 16 years or more, compared to 26 percent and 5 percent respectively of adults in lower-income households. These averages are below but approaching those for the middle class in the more

[31] The quoted incomes are GNI per capita, PPP (current international $), as given by the World Development Indicators 2008.

[32] The Ginis shown are calculated from the same data (PovCal) used to identify the middle class. The Ginis match reasonably well the Ginis published in the World Bank World Development Indicators.

[33] In the case of India, South Africa, and Russia, the comparison is between an income-based Gini and changes in middle class command based on consumption survey data.

affluent OECD countries (where a high school education, about 12 years, is more of a minimum for middle class status).

In contrast, adults in ―middle-class" households defined as those above the international poverty line of $2, using the definition of Banerjee and Duflo (income of between $2 and $10 a day) are far less educated. They are likely to have attained educational levels no greater than and possibly below the averages for their countries of just 4.2 years in countries of South Asia, 5.7 years in Latin America, and 6.5 years in East Asia (compared to 9.8 years in advanced countries). [34] Those levels of education imply illiteracy in many low-income countries given scores on internationally comparable tests (Filmer, Hasan, and Pritchett 2006), so that whether in terms of income security or sufficient literacy to acquire information relevant to voting decisions, they are not likely to be a relevant group in terms of their economic interests or political ability to support institutions and policies associated with good governance, the rule of law, property rights and more generally a level playing field.

Table 5 shows the average number of people in households for the poor, middle class, and rich. Poor households are generally larger – to some extent reflecting the definition of income/consumption of household income per capita.

Table 6 shows the employment status of our middle class, compared to the poor and the rich, for the Dominican Republic and Turkey. In Turkey the poor compared to the middle class are more likely to be self-employed or receiving daily/seasonal wages vs. being salaried workers; between the middle class and the rich the difference in percentages of ―regular" waged or salaried workers is relatively small, reflecting the middle-income status of the diversified Turkish economy. In the Dominican Republic, the poor are more likely than the middle class to be self-employed or domestic workers. There is a surprisingly small distinction in ―employee" status between the poor and the middle class however – suggesting that many households with income/consumption above the conventional $2 day line but below my $10 minimum threshold enjoy regular if low-wage participation in the formal sector.

It is unfortunate that typical household surveys of income and consumption do not include information on public vs. private sector employment – which makes it impossible to assess the extent to which the income/consumption-based middle class as I have defined it is highly dependent directly or indirectly on the state for employment.

Finally returning to Table 1, at least for urban Indonesia and urban India, the items owned that appear to distinguish between the low-income vs. the middle class are a refrigerator and a telephone. However, the choice of assets for this table was largely arbitrary (principal components analysis is not appropriate since the information on assets is not common across the country surveys) and the number of countries shown is limited. It would be convenient to have a single, globally traded consumption good that would reliably ―mark" the indispensable middle class, but this is not it.

[34] Barro and Lee (2000).

Does absolute not relative size matter?

As an indispensable political class for its likely alignment of its own economic interests with sustainable economic policy and reasonable governance, perhaps what matters within countries is not the relative size or income/consumption share but the absolute size of the middle income population (and its absolute dollar command of income or consumption goods and services). In most developing countries the middle class by my definition is small in absolute terms. Only Russia, Mexico and Brazil (among countries studied) have more than 25 million people in the middle class; urban China has not quite 20 million (Table 7). By this measure Brazil and Mexico have a larger middle class than China, and Russia the largest among all the countries analyzed. If we treat all of sub-Saharan Africa has a single country, the numbers in Table 7 imply that of its approximate 300 million people, just 3.6 million in South Africa are "middle class" in the political sense. Of the 15 million I have called "rich" because they are in the top 5 percent of households in their own countries, perhaps another 5 to 10 million should be counted as middle class – suggesting at the moment a maximum of 20 million middle class people in the region, similar to urban China (treated as a country), but below the numbers in Mexico and Brazil.

From the point of view of the consumer market and for some aspects of economic policy such as openness to foreign direct investment on which the interests of the rich and the middle class are likely to be aligned, it may be the absolute size of the middle class combined with the absolute size of the "rich" within a country that is most salient. Table 7 shows the absolute size of the middle class plus the rich in countries around 2005. India's 55 million and China's 83 million (combining urban and rural in both cases) stand out.

The last two columns of Table 7 allow comparison in countries with absolutely large middle class and/or rich populations of the relative economic command of the two groups, as a kind of counterpoint to the view that it is their combined absolute income that matters for the politics of economic policy. As noted above, other than Sweden and the United States, in only a few developing countries does the middle class share exceed that of the rich.

Implications for policy – domestic and international

Does making a distinction between pro-poor growth and growth that increases the size and command of the ppp middle class (to remind: the potentially politically powerful) have any implications for policy? Are there any tradeoffs between policies that favor the middle class and those that favor the poor, or is a focus on the middle class merely a simple extension of caring about the poor?

Macroeconomic policy? At the most basic level – in terms of sensible macroeconomic policy – the distinction is not important. Inflation, high interest rates, overvalued exchange rates (increasingly a thing of the past), hurt the poor and the ppp middle class alike.[35] The increases (1990 -2005) in the size and economic command of the middle class in Chile, Mexico and Turkey, suggest that eventually – sometimes with a long lag – better macro policy (combined with a benign external environment and a commodity boom) brings growth that is inclusive both

[35] I discuss macroeconomic policy and its effects on the middle class in Birdsall (2007).

reducing poverty and increasing the size of the middle class. At the same time, for a period when the general trend across the developing world has been improved macroeconomic fundamentals, it is not possible at this level of crude analysis to distinguish across developing countries between the effect of good policy from the effect of overall economic growth (due in part to good policy), since the size of the middle class over the period and across countries is highly correlated with average per capita income for the country-years studied (Figure 4). In short, growth is not only ―good for the poor"[36] but is apparently good for building the indispensable middle class.

More to the point, for most low-income countries, the distinction between the poor and near-poor, living under $10 a day, and the non-existent middle class, is by definition irrelevant. All but the very rich, if not absolutely poor by the international standard of $1.25 a day, are in income terms living at levels well below poverty lines in the OECD countries.

Volatility and vulnerability. In welfare terms the poor suffer most when negative shocks derail an economy – whether those are external financial and economic or terms of trade or weather or internal political shocks. We know less about the extent to which such shocks set back an increase in the size and economic command of an independent middle class – partly because there is little consensus and therefore little systematic data on who or what that middle class is. Ravallion (2008) shows convincingly that in the period 1990-2002, almost a billion people moved from income just below to just above $2 a day – mostly in Asia (half in China). They are obviously vulnerable to the ongoing global recession. I defined the indispensable middle class in terms of its members' relative sense of economic security compared to those at lower income, in the face of typical cyclical downturns however, not in the face of a global recession. A rough estimate of the total size of this middle class in the developing world, including Russia, would be about 200 million (Table 7) of the almost 6 billion people in the developing world. To the extent they are heavily dependent for their security on formal sector employment (Table 6), particularly in tradable sectors, those numbers are likely to decline – and there are likely to be considerable tradeoffs between protecting their jobs and incomes during the downturn vs. extending in time and scope safety net programs for those already at lower incomes.

The tradeoff may be about the politics, especially in low-income and oil economies. However in the absence of this middle class the question is where good governance (and sensible economic policy) comes from. The relatively small size of the group in many low-income countries (including rural India and China were they to be countries) suggests considerable vulnerability to bad politics, including during periods of economic growth that over time is likely to undermine what in retrospect will have been unsustainable growth. Zimbabwe and Cote d'Ivoire come to mind, and perhaps Pakistan. Put another way for low-income countries there is a considerable premium on honest and competent leadership and in general on whatever it takes to sustain good government from the top – in the absence of the pressure for accountability from below. Alternative sources of accountability include market pressures for countries dependent on foreign investment and trade (in very small economies private foreign investors have considerable leverage, often untapped, in demanding the rule of law). Countries at higher average income levels that are heavily dependent on oil or other natural resources are similarly vulnerable – Venezuela where the middle class has shrunk (Figure 2) comes to mind. For the

[36] Dollar and Kraay (2002).

low-income countries that are heavily dependent on aid, primarily in sub-Saharan Africa and Central America, this suggests the logic of donors favoring those where the evidence of effective and honest leadership is clear – be it in terms of proportion of budgets spent on education and health, minimal corruption, fair elections or other measures. (The United States' Millennium Challenge Account program is an example where this basis for aid is the most explicit.)

Microeconomic policies: taxes, expenditures, trade and jobs, foreign aid. At the same time, in most developing countries, a singular focus on the poor is likely to ignore tradeoffs that matter for the incipient or small and fragile middle class. Choices on the expenditure side are the most obvious. There is the example of loss of political support for narrowly targeted cash transfer programs[37]; and less studied but equivalent the likely withdrawal of middle class support for spending overall on education in Latin America, when implicit subsidies at the higher education level from which they had benefited were reduced - - even though the truly rich had no doubt benefited far more. Perhaps the biggest tradeoff occurs when the middle class loses trust in government's ability to spend effectively at all, and withdraws support for tax collection in general. [38]There are also obvious tradeoffs on the revenue side, between taxes on labor and trade taxes (the latter usually a last-resort for lack of administrative capacity anyway) and taxes on capital and property (which may hurt most small businesses), and on how progressive the overall tax structure is.

Finally, for countries that have become heavily dependent on aid, there is the risk that aid to finance services for the poor keeps upward pressure on the exchange rate, hurting prospects for small businesses; though those pressures can be managed at the macroeconomic level by intelligent fine-tuning, that requires a steady hand at the top – on which there is already a scarcity premium in low-income countries.

In the end, as noted above, it is not possible to generalize about the possible tensions or tradeoffs between strictly pro-poor and more inclusive ~~"~~middle-class" growth policies. They need to be assessed policy by policy in each country, and are likely to change over time as circumstances change. The implication is that policymakers in developing countries (and their international supporters and advisers) should be more systematic than has been the case in the last several decades in considering weighted welfare outcomes when selecting and fine-tuning economic policies, rather than relying either on unweighted growth outcomes or overly weighted poverty outcomes.

Doing so systematically, however, will not be possible until there is far better information on the characteristics of the middle class in developing countries – and preceding that a consensus among economists on the concept itself.

My own conclusion, based in part on the combination of small numbers with their growth in the boom years since 1990, is that the real tradeoff in policy design is far better thought of in

[37]Gelbach and Pritchett (2000) introduce their analysis with an anecdote from Sri Lanka, where the switch from a broad food subsidy to a targeted program was associated over several years to a dramatic reduction in expenditures on the latter.

[38] Birdsall, de la Torre and Menezes (2007) provide a detailed discussion of this tradeoff in the case of Latin American countries.

developing countries as a tradeoff between the rich and the rest rather than, as has been the mindset in the international community for several decades, the absolute poor and the rest. The small size of what I have presumptively called the indispensable middle class in the developing world should be a telling reminder that the overwhelming majority of people in the developing world are poor by Western standards, and that in most developing countries, only a tiny proportion of households at the top of the income distribution, enjoy what Westerners think of as middle class living standards. The policy tradeoff in most countries is therefore usually between short-term stability or high aggregate growth that preserves the status quo benefiting a small minority at the top of the income distribution vs. the political risks and lower short-run growth of financial, tax, social insurance, land market and other policies that are conducive to building a middle class and are, it turns out, pro-poor as well.

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Table 1: Assets of Income/Consumption Groups for Selected Countries

Percentage of Classified Population Owning a Particular Asset									
	Indonesia, urban			**Turkey**			**India, urban**		
	Poor	*Middle*	*Rich*	*Poor*	*Middle*	*Rich*	*Poor*	*Middle*	*Rich*
Refrigerator	14	86	100	92	99	100	15	89	99
Car	1	22	98	8	41	85	1	16	75
Bicycle	40	49	69	11	26	46	43	47	55
Telephone	8	73	100	68	95	100	10	68	97

Source: Author's calculations based on DHS data and Povcal distributions

Table 2: Gini Coefficients of Income/Consumption of Middle Class, Selected Countries

	I/C		Pseudo-Gini for Middle Class	
Country	1990	2005	1990	2005
Ghana	C	C	-	-
India, urban	C	C	-	-
Indonesia, urban	C	C	-	-
Morocco	C	C	0.047	0.039
China urban	C	C	-	0.034
Thailand	C	C	-	0.082
Turkey	C	C	0.080	0.109
South Africa	C	C	0.127	0.103
Mexico	I	C	0.142	0.168
Russian Federation	C	C	0.146	0.141
Honduras	I	I	-	0.080
Bolivia	I	I	0.076	0.122
Paraguay	I	I	0.048	0.144
Colombia	I	I	0.101	0.131
Ecuador	I	I	0.090	0.123
Brazil	I	I	0.168	0.162
Venezuela	I	I	0.131	0.040
Argentina, urban	I	I	0.199	0.185
Chile	I	I	0.162	0.201
Sweden	I	I	0.235	0.231
United States	I	I	0.325	0.380

Source: Author's calculations, using Povcal data. A dash indicates that there was no middle class for accociated country-year.

Table 3: Distribution Statistics for Selected Countries

Country	I/C	MC Size (proportion of population)		MC Share (proportion of income/consumption)		Gini		Theil		Difference from 1990 to 2005		
		1990	*2005*	*1990*	*2005*	*1990*	*2005*	*1990*	*2005*	*MC Size*	*MC Share*	*Gini*
Ghana	C	0.000	0.000	0.000	0.000	0.381	0.428	0.24	0.31	0.000	0.000	0.046
India, urban	C	0.000	0.000	0.000	0.000	0.356	0.376	0.21	0.24	0.000	0.000	0.020
Indonesia, urban	C	0.000	0.000	0.000	0.000	0.347	0.399	0.20	0.25	0.000	0.000	0.053
Morocco	C	0.044	0.035	0.098	0.073	0.392	0.411	0.26	0.23	-0.009	-0.025	0.019
China, urban	C	0.000	0.034	0.000	0.070	0.256	0.347	0.10	0.20	0.034	0.070	0.091
Thailand	C	0.000	0.087	0.000	0.174	0.438	0.425	0.33	0.31	0.087	0.174	-0.014
Turkey	C	0.101	0.159	0.176	0.274	0.441	0.432	0.16	0.30	0.058	0.098	-0.008
South Africa	C	0.096	0.076	0.243	0.203	0.595	0.580	0.63	0.59	-0.019	-0.040	-0.016
Mexico	C	0.177	0.280	0.299	0.405	0.553	0.483	0.35	0.35	0.103	0.107	-0.070
Russian Federation	C	0.244	0.298	0.363	0.439	0.486	0.375	0.27	0.23	0.055	0.076	-0.111
Honduras	I	0.000	0.068	0.000	0.157	0.575	0.569	0.47	0.50	0.068	0.157	-0.006
Bolivia	I	0.082	0.122	0.176	0.254	0.420	0.582	0.29	0.56	0.039	0.078	0.162
Paraguay	I	0.048	0.180	0.109	0.315	0.397	0.541	0.26	0.44	0.132	0.206	0.143
Colombia	I	0.105	0.135	0.191	0.255	0.576	0.590	0.20	0.43	0.030	0.063	0.014
Ecuador	I	0.097	0.139	0.198	0.257	0.505	0.538	0.40	0.40	0.042	0.059	0.034
Brazil	I	0.164	0.194	0.317	0.331	0.606	0.566	0.65	0.47	0.030	0.013	-0.040
Venezuela	I	0.206	0.032	0.348	0.081	0.441	0.482	0.33	0.39	-0.174	-0.267	0.041
Argentina, urban	I	0.391	0.305	0.532	0.464	0.454	0.500	0.35	0.42	-0.086	-0.068	0.047
Chile	I	0.206	0.327	0.325	0.419	0.557	0.551	0.35	0.26	0.121	0.095	-0.006
Sweden	I	0.950	0.950	0.904	0.879	0.240	0.257	0.09	0.11	0.000	-0.025	0.017
United States	I	0.938	0.909	0.844	0.812	0.372	0.448	0.22	0.33	-0.029	-0.032	0.077

Notes: Authors calculations using Povcal data

Table 4: Average Education of Household Head, by class *(Selected Countries and Years)*

	Year	Source	MC Size	Education of Household Head		
				Poor	*Middle*	*Rich*
Malawi	2004	LSMS	0.000	4.58		9.64
Madagascar	1993	LSMS	0.000	3.50		4.05
Nigeria	2004	LSMS	0.000	2.72		4.60
Indonesia	2000	LSMS	0.000	8.19		14.45
Bangladesh	2000	LSMS	0.000	3.29		7.06
Vietnam	1998	LSMS	0.000	6.72		7.62
Pakistan	2001	LSMS	0.000	4.10		8.87
Nepal	2003	LSMS	0.000	3.20		9.61
Ghana	1998	LSMS	0.000	4.71		8.21
Nicaragua	2001	LSMS	0.035	4.01	7.43	8.33
Albania	2005	LSMS	0.060	8.91	11.37	12.17
Ecuador	1998	LSMS	0.027	7.00	12.03	9.50
Guatemala	2000	LSMS	0.119	3.33	7.32	9.80
Bulgaria	2001	LSMS	0.090	9.97	12.06	11.21
Panama	2003	LSMS	0.280	6.65	9.94	12.92
Morocco	2004	DHS	0.035	3.06	9.24	11.73
Colombia	2005	DHS	0.135	7.37	10.95	13.62
Peru	2004-2008	DHS	0.137	6.75	11.23	13.47
Dominican Republic	2007	DHS	0.167	7.88	11.29	14.43
Turkey	2003	DHS	0.159	5.98	10.01	13.28

Notes: For countries with no middle class, the education measure is left blank; the "poor" represent households below the 95th percentile on the income/consumption distribution.

Table 5: Number of Household Members, for Poor, Middle Class, and Rich
(Selected Countries and Years)

	Year	Average Per Capita Household Income	MC Size	Number of HH Members *Poor*	*Middle*	*Rich*
Malawi	2004	$1.12	0.00%	4.58		2.88
Madagascar	1993	$1.19	0.00%	5.11		2.68
Nigeria	2004	$1.30	0.00%	5.06		3.29
Indonesia	2000	$1.36	0.00%	5.40		2.79
Bangladesh	2000	$1.40	0.00%	5.23		4.23
Vietnam	1998	$1.64	0.00%	4.73		4.28
Pakistan	2001	$1.80	0.00%	7.33		4.48
Nepal	2003	$1.85	0.00%	5.24		3.67
Ghana	1998	$2.06	0.00%	4.38		2.29
Nicaragua	2001	$4.21	3.50%	5.56	3.47	3.03
Albania	2005	$5.33	6.00%	4.33	3.38	3.46
Ecuador	1998	$6.00	2.70%	4.56	3.08	4.26
Guatemala	2000	$6.08	11.90%	5.48	3.94	2.81
Bulgaria	2001	$6.81	9.00%	3.14	2.34	2.42
Panama	2003	$9.54	28.00%	4.71	3.16	2.26

Source: LSMS household survey data; the average income measure is daily.

Table 6: Household Characteristics for Occupation for Selected Countries

Turkey (2003)			
Occupation Categories	Poor	Middle	Rich
Employer (10+ employees)	0.007	0.026	0.080
Employer (1-9 employees)	0.050	0.139	0.219
Waged worker (regular)	0.320	0.362	0.310
Salaried, government official (regular)	0.096	0.268	0.266
Daily wage (seasonal/temporary)	0.092	0.014	0.004
Self employed (regular)	0.330	0.165	0.106
Self employed (irregular)	0.084	0.020	0.011
Unpaid family worker	0.021	0.005	0.004

Dominican Republic (2007)			
Periodicity of Pay	Poor	Middle	Rich
Hour	0.003	0.001	0.000
Day	0.269	0.111	0.045
Week	0.171	0.131	0.096
By week	0.100	0.102	0.069
Month	0.457	0.656	0.790

Dominican Republic (2007)			
Occupation Categories	Poor	Middle	Rich
Employee	0.491	0.581	0.568
Employer	0.070	0.115	0.192
Self employee	0.353	0.260	0.222
Member of cooperative	0.002	0.002	0.000
Work for family member	0.011	0.006	0.007
Domestic work	0.074	0.037	0.011

Source: Author‘s calculations, using DHS data. Reported figures as a proportion of total population.

Table 7: Absolute Size of Middle Class and Middle Class plus Rich

Country (year)	I/C	Middle Class Population	MC plus Rich Population	MC Share of National Income	Rich Share of National Income
Ghana (2005.5)	C	0	1,126,751	0.00	0.22
India, rural (2004.5)	C	0	39,000,000	0.00	0.18
India, urban (2004.5)	C	0	15,700,000	0.00	0.20
Indonesia, rural (2005)	C	0	5,723,481	0.00	0.16
Indonesia, urban (2005)	C	0	5,304,420	0.00	0.22
Morocco (2007)	C	1,044,183	2,551,319	0.07	0.23
China, rural (2005)	C	0	38,900,000	0.00	0.19
China, urban (2005)	C	17,800,000	44,100,000	0.07	0.18
Thailand (2004)	C	5,490,658	8,640,803	0.17	0.23
Turkey (2005)	C	11,400,000	15,000,000	0.27	0.23
South Africa (2000)	C	3,574,911	5,919,533	0.20	0.30
Mexico (2006)	C	28,900,000	34,000,000	0.41	0.27
Russian Federation (2005)	C	42,700,000	49,900,000	0.44	0.18
Honduras (2005)	I	461,337	803,043	0.16	0.32
Bolivia (2005)	I	1,115,742	1,574,843	0.25	0.32
Paraguay (2005)	I	1,060,418	1,355,351	0.32	0.30
Colombia (2003)	I	6,083,750	8,331,040	0.26	0.35
Ecuador (2005)	I	1,815,542	2,468,592	0.26	0.31
Brazil (2005)	I	36,300,000	45,700,000	0.33	0.33
Venezuela, RB (2003)	I	857,582	2,186,432	0.08	0.24
Argentina, urban (2005)	I	10,600,000	12,400,000	0.46	0.25
Chile (2003)	I	5,321,656	6,136,412	0.42	0.34
Sweden (2002)	I	8,572,838	9,024,040	0.88	0.14
United States (2000)	I	269,000,000	284,000,000	0.81	0.19

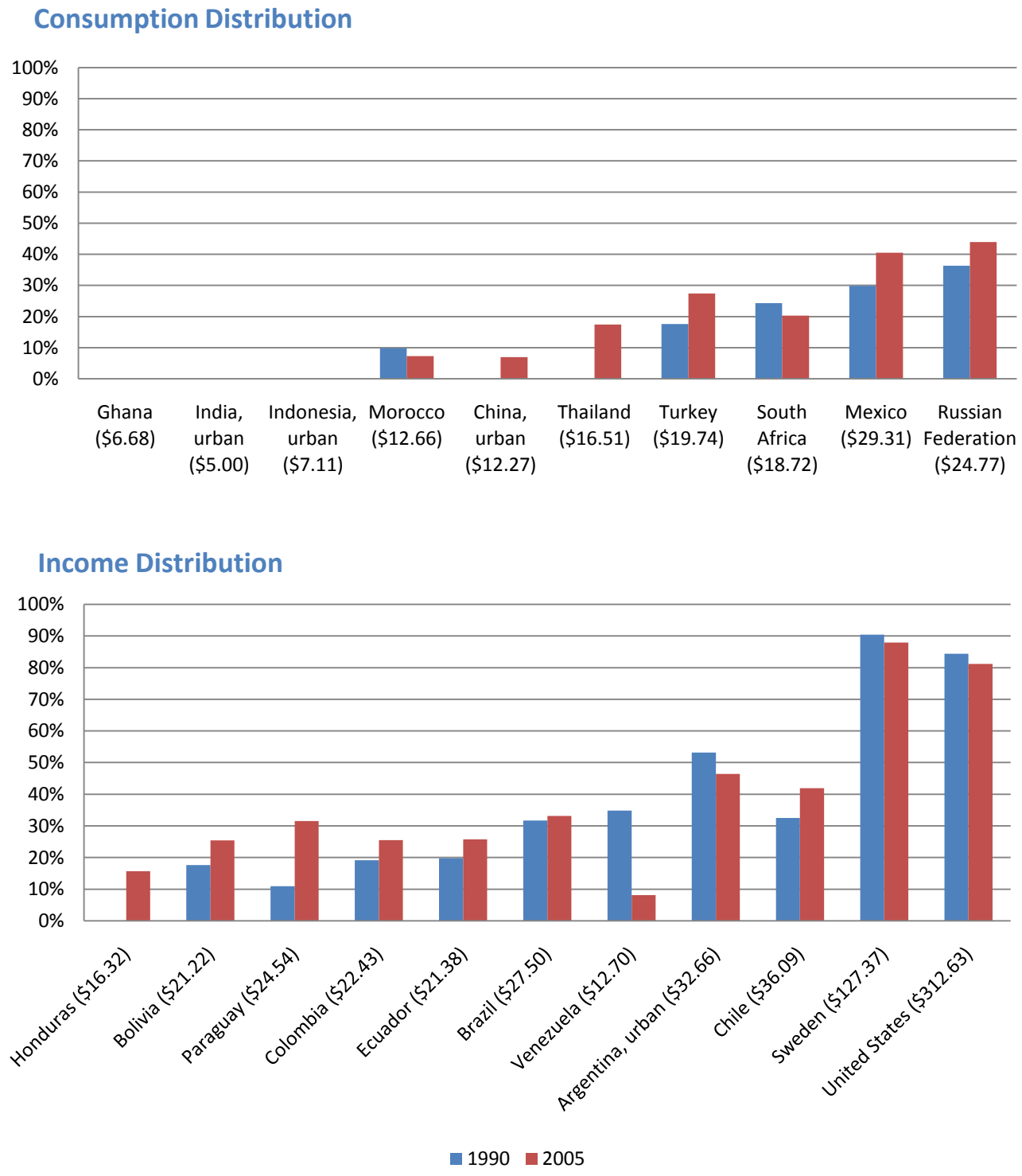
Notes: Population data comes from WDI. MC plus rich includes all households with per capita daily income above $10/day and/or above the 95th percentile on the income/consumption distribution.

Figure 1: Ventile Ratios for Selected Country-years

Notes: The countries are ordered by WDI mean income in 2005 – lowest to highest, left to right. The legend entry "(20/19)" indicates the ratio of average household income of the 20th ventile (above 95th percentile) to the 19th ventile (between the 90th and 95th percentile), effectively showing the increasing slope of the top-end of the Povcal Lorenz curves.

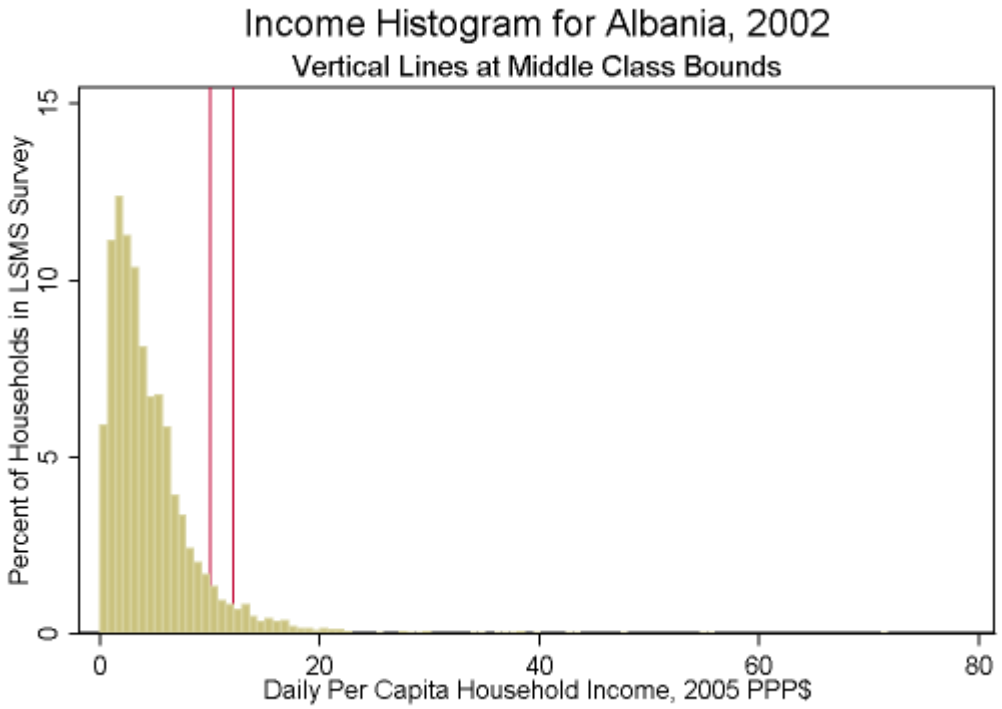
Source: Author's calculations using Povcal data.

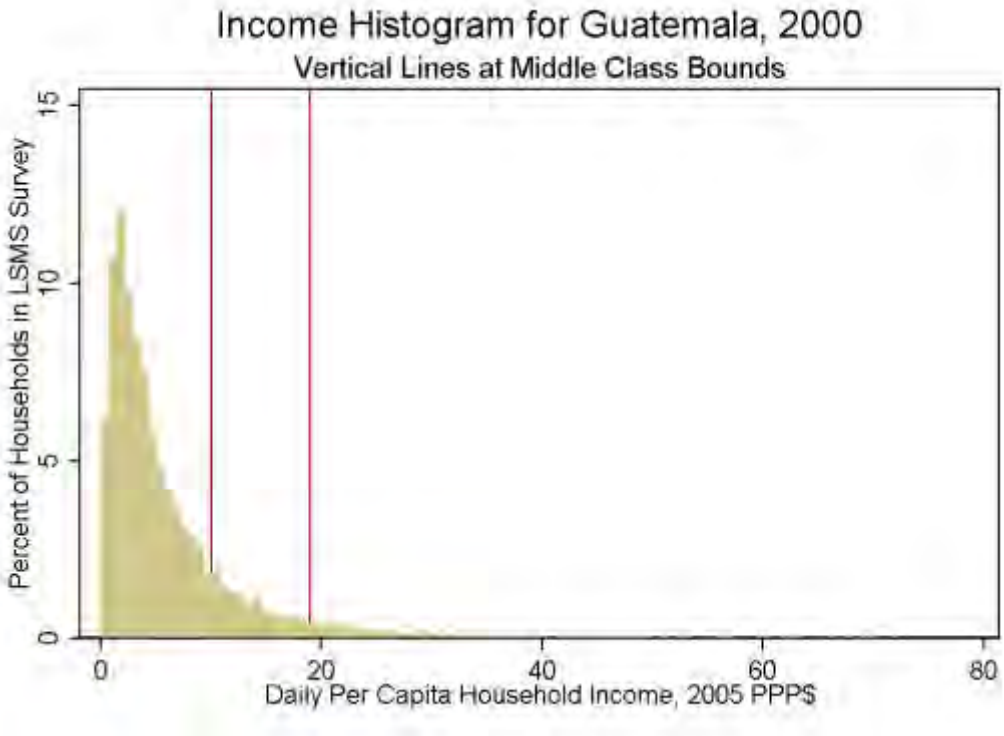
Figure 2: Proportion of Total Income/Consumption Held by the Middle Class

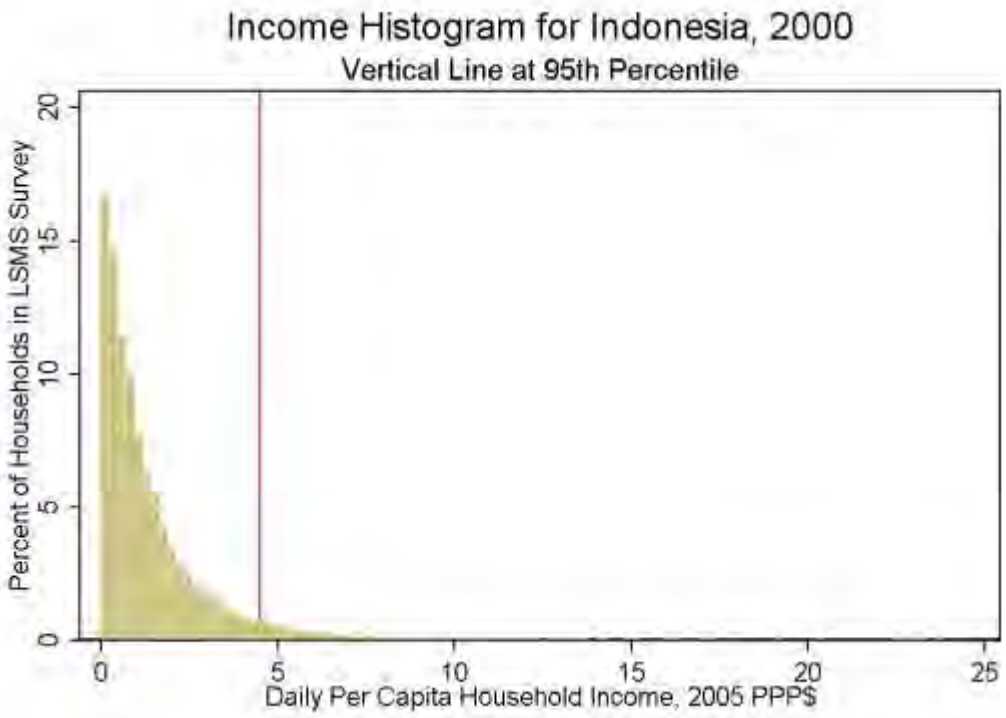


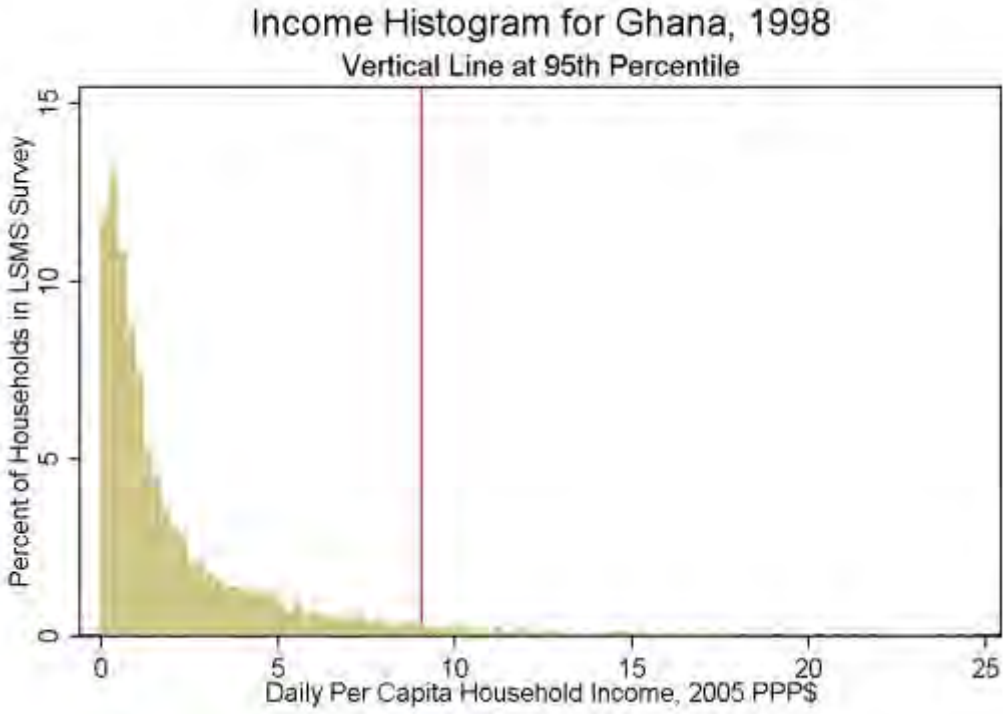
Notes: The countries are ordered by WDI mean income in 2005 – lowest to highest, left to right. The dollar amount in parentheses indicates daily per capita income of individuals at the 95th percentile of the country's income/consumption distribution, as reported by PovcalNet, in 2005. The survey data used are from the closest available survey year to 1990 or 2005.
Source: Author's calculations using Povcal data.

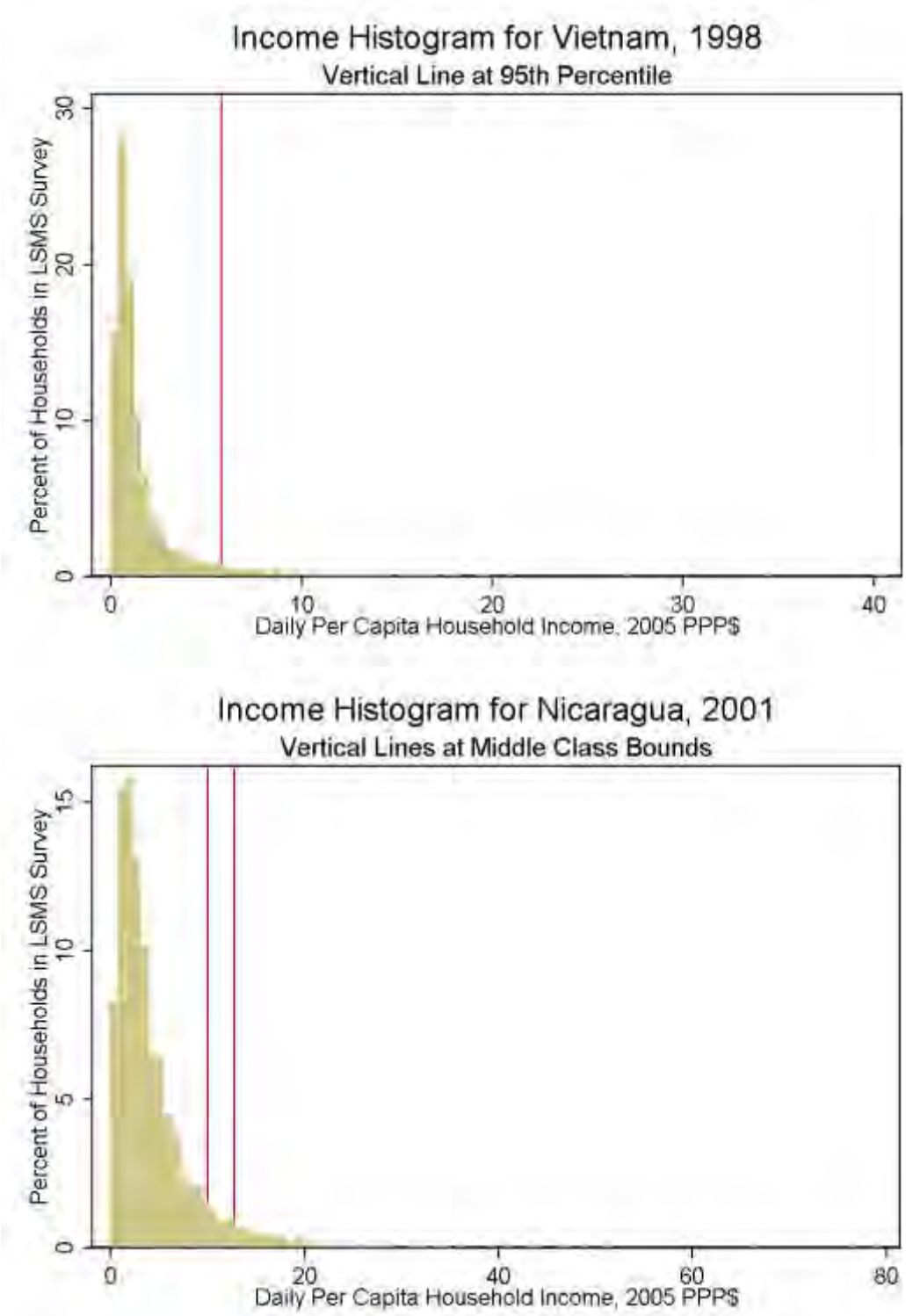
Figure 3: Income Histograms for Selected Country-years





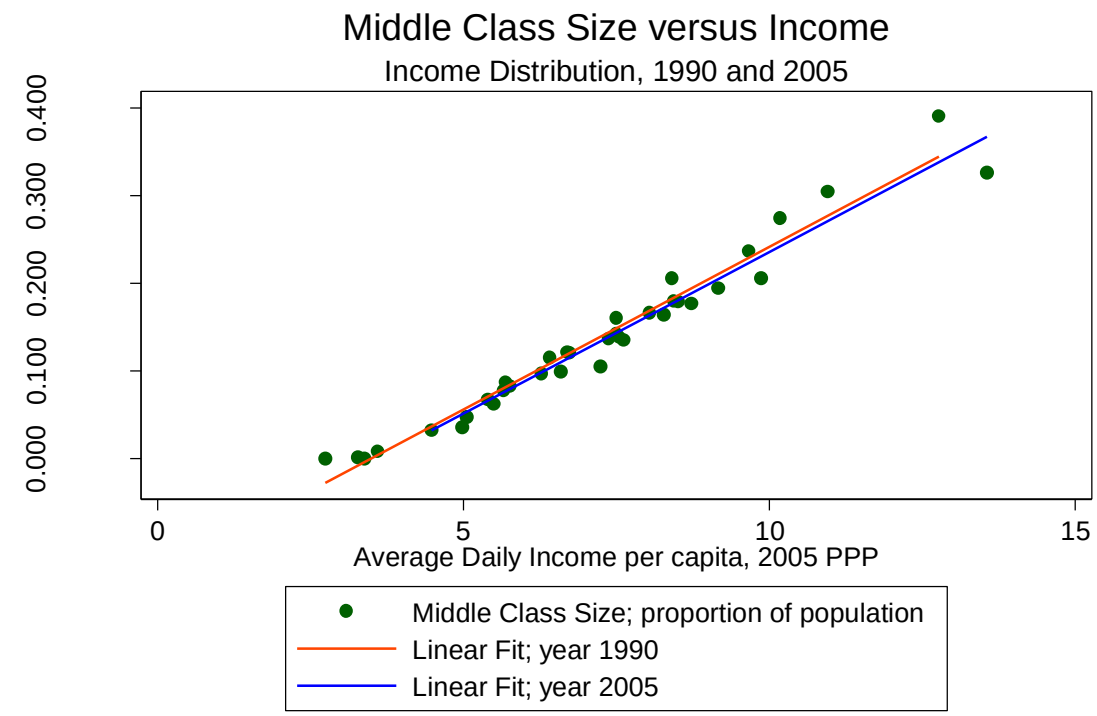

Income Histogram for Indonesia, 2000
Vertical Line at 95th Percentile
Percent of Households in LSMS Survey
0
5
10
15
20
0
5
10
15
20
25
Daily Per Capita Household Income, 2005 PPP$

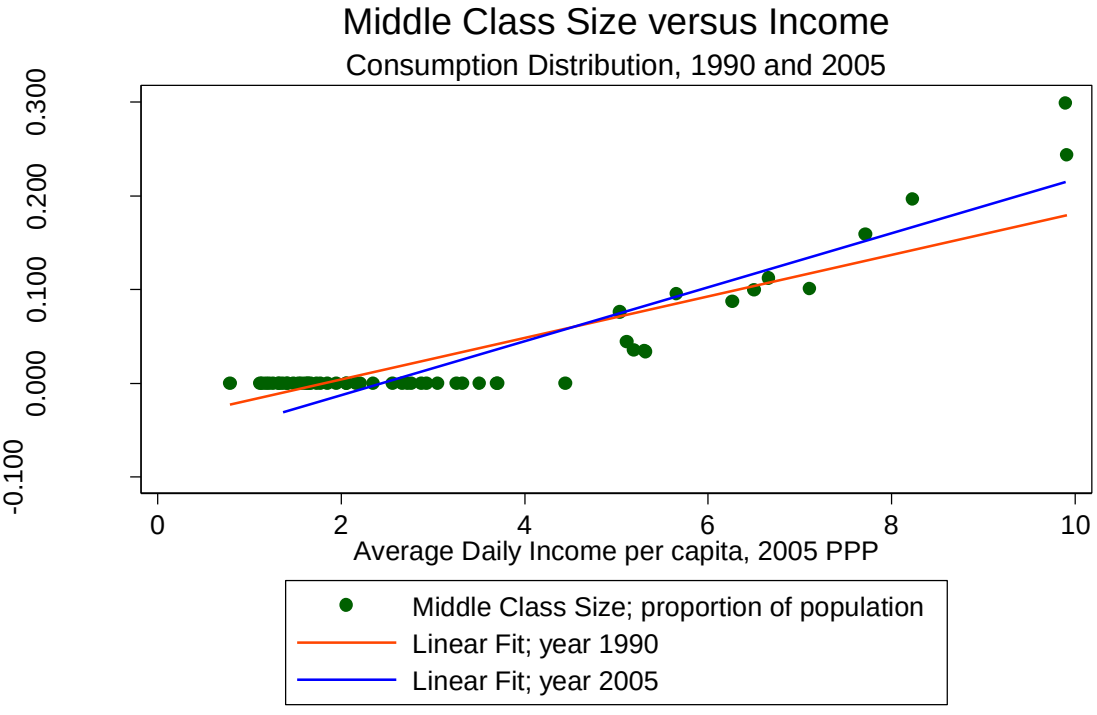

Income Histogram for Ghana, 1998
Vertical Line at 95th Percentile
Percent of Households in LSMS Survey
0
5
10
15
0
5
10
15
20
25
Daily Per Capita Household Income, 2005 PPP$

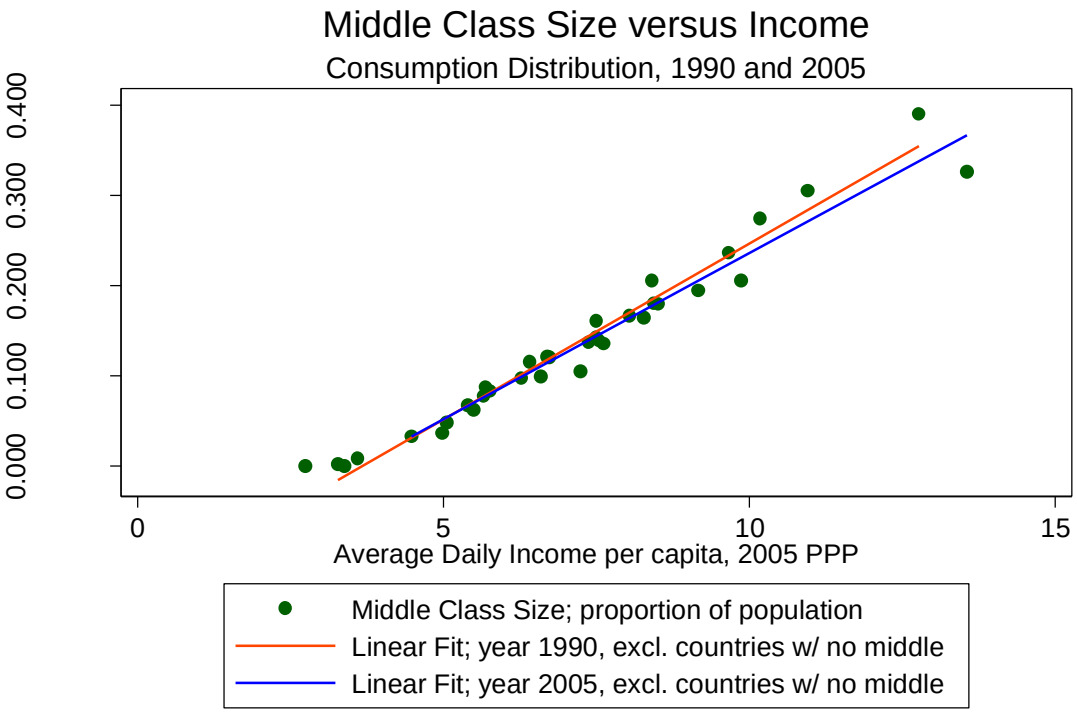


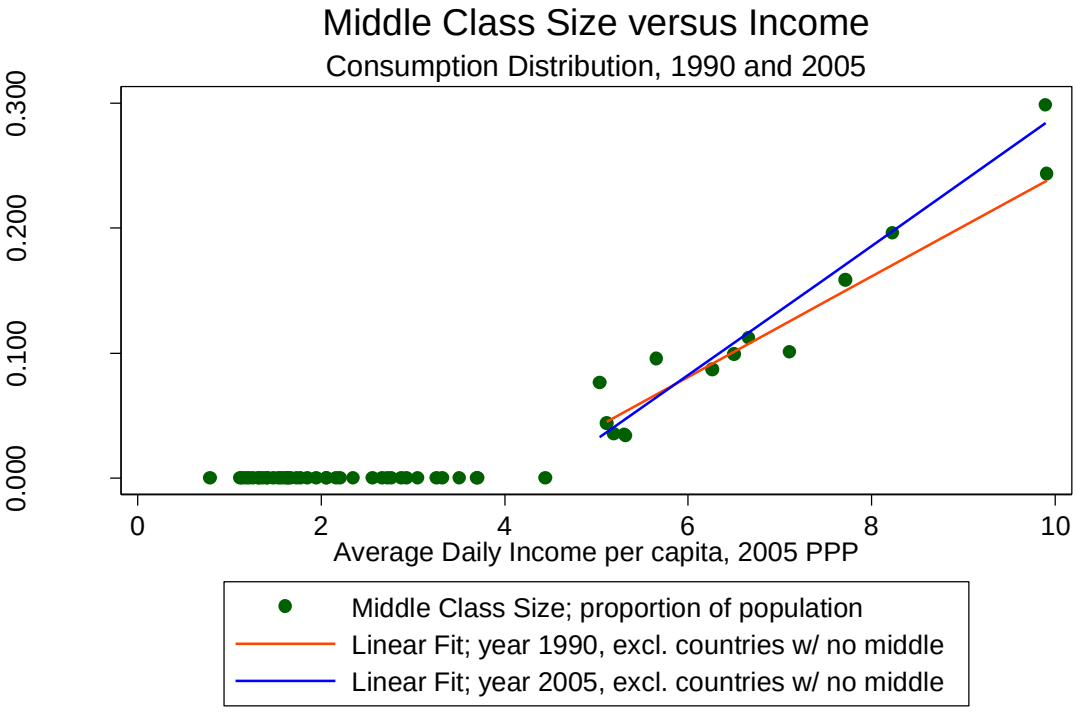
Notes: Average daily per capita household incomes are normalized to match the Povcal 2005 PPP figures. The income figures are generated based on the question in the agricultural production sectionof the household questionnair that askes about household consumption of agricultural production. Note, also, that if the upper bound of the middle class is below $10/day, there will be no middle class, indicated by only one vertical line.
Source: LSMS data via FAO compilation.

Figure 4: Scatter Plots, Middle Class Size versus Income (alternate)


Middle Class Size versus Income
Income Distribution, 1990 and 2005
0.000
0.100
0.200
0.300
0.400
0
5
10
15
Average Daily Income per capita, 2005 PPP
Middle Class Size; proportion of population
Linear Fit; year 1990
Linear Fit; year 2005


Middle Class Size versus Income
Consumption Distribution, 1990 and 2005
-0.100
0.000
0.100
0.200
0.300
0
2
4
6
8
10
Average Daily Income per capita, 2005 PPP
Middle Class Size; proportion of population
Linear Fit; year 1990
Linear Fit; year 2005


Middle Class Size versus Income
Consumption Distribution, 1990 and 2005
0.000
0.100
0.200
0.300
0.400
0
5
10
15
Average Daily Income per capita, 2005 PPP
Middle Class Size; proportion of population
Linear Fit; year 1990, excl. countries w/ no middle
Linear Fit; year 2005, excl. countries w/ no middle


Middle Class Size versus Income
Consumption Distribution, 1990 and 2005
0.000
0.100
0.200
0.300
0
2
4
6
8
10
Average Daily Income per capita, 2005 PPP
Middle Class Size; proportion of population
Linear Fit; year 1990, excl. countries w/ no middle
Linear Fit; year 2005, excl. countries w/ no middle

APPENDIX Table 1: Summary Statistics and Income Ratios for Selected Countries (2005)

Country	I/C	Mean Income	Income at 95th Percentile	MC Size	MC Share	Ventile Ratios			Decile Ratios		
						(20/19)	(19/18)	(18/17)	(10/9)	(9/8)	(8/7)
Ghana	C	77.7	203.14	0	0	3.15	1.31	1.19	4.16	1.34	1.24
India, urban	C	62.43	152.11	0	0	3.03	1.29	1.18	3.94	1.32	1.21
Indonesia, urban	C	89.1	216.18	0	0	4.18	1.3	1.18	5.56	1.33	1.22
Morocco	C	161.42	385.32	0.035	0.073	4.03	1.29	1.18	5.34	1.32	1.22
China, urban	C	161.83	372.53	0.034	0.07	2.48	1.25	1.16	3.1	1.27	1.19
Thailand	C	190.47	502.14	0.087	0.174	3.51	1.33	1.2	4.75	1.37	1.25
Turkey	C	234.6	599.77	0.159	0.274	3.89	1.3	1.19	5.17	1.34	1.23
South Africa	C	153.14	569.25	0.076	0.203	2.5	1.49	1.33	3.73	1.64	1.45
Mexico	C	330.37	891.25	0.28	0.405	4.64	1.35	1.22	6.46	1.4	1.27
Russian Federation	C	300.95	752.77	0.298	0.439	1.99	1.27	1.17	2.5	1.31	1.22
Honduras	I	163.9	495.72	0.068	0.157	5.02	1.39	1.25	7.29	1.47	1.34
Bolivia	I	203.51	645.33	0.122	0.254	4.94	1.41	1.26	7.25	1.5	1.36
Paraguay	I	256.62	745.82	0.18	0.315	4.86	1.38	1.24	6.95	1.45	1.32
Colombia	I	231.62	682.45	0.135	0.255	4.25	1.41	1.26	6.2	1.5	1.35
Ecuador	I	229.33	649.66	0.139	0.257	4.51	1.37	1.24	6.41	1.44	1.31
Brazil	I	278.68	836.06	0.194	0.331	5.09	1.41	1.26	7.48	1.49	1.35
Venezuela	I	136.02	386.07	0.032	0.081	3.04	1.33	1.21	4.08	1.38	1.27
Argentina, urban	I	332.99	992.89	0.305	0.464	3.1	1.36	1.23	4.27	1.43	1.3
Chile	I	412.3	1097.2	0.327	0.419	3.2	1.38	1.24	4.48	1.45	1.31
Sweden	I	2020.05	3871.52	0.95	0.879	2.18	1.19	1.11	2.56	1.19	1.13
United States	I	3347.66	9504.35	0.909	0.812	1.62	1.28	1.19	2.02	1.36	1.27