Journal of Globalization and Development

Volume 2, *Issue* 2 2011 *Article* 3

Global Growth and Distribution: China, India, and the Emergence of a Global Middle Class

Maurizio Bussolo, *The World Bank*
Rafael E. de Hoyos, *The World Bank*
Denis Medvedev, *The World Bank*
Dominique van der Mensbrugghe, *Food and Agriculture Organization (FAO)*

Recommended Citation:
Bussolo, Maurizio; de Hoyos, Rafael E.; Medvedev, Denis; and van der Mensbrugghe, Dominique (2011) "Global Growth and Distribution: China, India, and the Emergence of a Global Middle Class," *Journal of Globalization and Development*: Vol. 2: Iss. 2, Article 3.

DOI: 10.1515/1948-1837.1041

Global Growth and Distribution: China, India, and the Emergence of a Global Middle Class

Maurizio Bussolo, Rafael E. de Hoyos, Denis Medvedev, and Dominique van der Mensbrugghe

Abstract

Over the past two decades, global inequality changed little despite significant structural shifts. Sustained growth in China and India lifted millions out of poverty, while many African countries fell behind. This paper assesses the distribution effects of a continuation of these trends. Growth in China and India will still drive the convergence of per capita incomes at the global level. Millions of Chinese and Indian consumers will join the global middle class. However, these positive developments will be somewhat offset by widening income disparities within countries, as fast growth is often characterized by high urbanization and growing demand for skills.

KEYWORDS: China, India, global income distribution, middle class

Author Notes: The findings, interpretations, and conclusions expressed in this paper are entirely those of the authors. They do not necessarily reflect the views of the World Bank, its Executive Directors, or the countries they represent. We are grateful to Hans Timmer and seminar participants at the UNU-WIDER project meeting on 'Southern Engines of Growth, China, India, Brazil, and South Africa', Beijing, China, 12-13 of January 2007 for helpful contributions, comments, and suggestions.

1. Introduction

Between 1980 and 2010, the share of the developing countries in global output nearly doubled from 18 to 32 percent. Most of this increase can be attributed to the economic expansion of China and India, who increased their contribution to world GDP from 2 to 12 percent over the same period. Going forward, sustained high growth and increased integration of China and India's with the global economy are likely to further cement their position as important engines of global development.

This paper explores the potential consequences of continued high growth in China and India on the global income distribution. Sustained growth in these countries will drive convergence of per capita incomes at the global level. One of the most interesting finding is that economic expansion of these two countries will support the emergence of a global middle class—a group of people who can afford, and demand access to, the standards of living previously reserved mainly for the residents of developed countries. By 2030 about a billion people in developing countries will belong to the global middle class, up from just 250 million in 2000. And not only the size of the middle class will change, but also its composition: in particular, China and India will increase their joint share from about 13 percent in 2000 to 44 percent in 2030. Other effects will include a growing demand for goods that is likely to boost trade in manufactured products but also raise demand for highly skilled workers. This implies that the rules of the global marketplace will be increasingly determined by the preferences of citizens of China and India.

Fast growth in relatively poor and highly populated countries like China and India has contributed to a reduction in global poverty and global income disparities. At the same time, as shown by Chaudhuri and Ravallion (2006), recent growth in China and India has been characterized by high urbanization rates and growing demand for skills, both of which have led to rising inequality within these countries. These opposing effects highlight the importance of analyzing the evolution of global income distribution by taking into account income differences both between and within countries.

The definition of global income distribution used in this study captures income differences between all the citizens in the world; we may think of the resulting global inequality as income differences that would prevail if the world were a single country. The concept of global income distribution becomes increasingly relevant as people's perception regarding their relative position in society is no longer based solely on a national yardstick, but it is influenced by the increased awareness of living standards of people around the world (Milanovic, 2006). On the other hand, within-country distributional changes should not be

disregarded since economic policy is still decided and implemented at the national level.

This paper relies on the Global Income Distribution Dynamics (GIDD) model to generate "reasonable" predictions of the contribution of China and India to the evolution of global inequality and poverty. The GIDD is first *global* microsimulation tool which combines a consistent set of price and volume changes from a global computable general equilibrium (CGE) model with microdata at the household level for the whole world.[1] Macro-micro simulation models represent the closest thing to a "laboratory" to study ex ante the poverty and distributive impacts of different macroeconomic growth and policy scenarios and the GIDD should be considered just that and not a forecasting tool. In fact, the levels of projected incomes depend on a series of assumptions about the accumulation of factors and changes in productivity and on a set of parameters (such as those embedded in the production functions) which are subject to high uncertainty. The objective here, however, is not to produce efficient estimates of the future global income distribution, but to build alternative scenarios which are consistent with economic theory and initial observed values. By providing hard data and model-based empirical evidence, we hope that this paper sheds some light on the debate on globalization and poverty (see for example Kanbur and Spence 2010, Harrison 2007, Bussolo and Round 2006).

The paper is organized as follows. The next section sketches the methodology, assumptions, and data behind the GIDD. Section 3 presents the macroeconomic results of the baseline scenario, showing the importance of China and India for global growth and trade. Section 4 assesses the importance of growth in China and India for the changes in the global income distribution and the emergence of a global middle class. The final section offers concluding remarks.

2. Methodology

The empirical analysis in this paper relies on two tools developed at the Development Economic Prospects Group of the World Bank: the LINKAGE global computable general equilibrium (CGE) model and the GIDD, which combines a set of price and volume changes from the CGE model with expected changes in demographic structure to create a simulated distribution of income in 2030. We begin with a brief description of the LINKAGE model and then proceed to introduce the GIDD framework and its ability to map macroeconomic outcomes to disaggregated household survey data. A few brief remarks on the limitations and yet usefulness of this approach conclude this section.

[1] See Bussolo, de Hoyos and Medeved (2010) for a technical presentation of the GIDD model.

2.1 LINKAGE: A Global Dynamic Multi-sectoral Model

The forward-looking scenarios in this paper have been produced with the World Bank's LINKAGE model. At its core, LINKAGE is a neo-classical model with aggregate growth predicated on assumptions regarding the growth of the labor force, savings/investment decisions (and therefore capital accumulation) and productivity. Unlike more simple growth models, however, LINKAGE has considerably more structure (see van der Mensbrugghe (2005) for a detailed description). First, it is multi-sectoral. This allows for more complex productivity dynamics including differentiating productivity growth between agriculture, manufacturing, and services and picking up the changing structure of demand (and therefore output) as growth in incomes leads to a relative shift into manufactures and services. Second, it is linked multi-regionally allowing for the influence of openness—via trade and finance—on domestic variables such as output and wages. Third, LINKAGE has a more diverse set of productive factors including land and natural resources (in the fossil fuel sectors), and labor is split between unskilled and skilled categories.

The version of the LINKAGE model used in this paper has a 2001 base year and relies on the Global Trade Analysis Project (GTAP) 6.1 database[2] to calibrate initial parameters. A scenario is developed by solving for a new equilibrium in each subsequent year through 2030. The growth in the labor force is driven by demographics—essentially given by the growth of the working age population. Differentiated growth of skilled versus unskilled workers is partly driven by demographics and partly driven by changes in education rates. As education levels rise (in the younger populations), they eventually increase relative growth of skilled workers once they enter the labor force (and older unskilled workers retire). Savings decisions are partly driven by demographics—rising as youth dependency ratios fall and falling as elderly dependency ratios rise. Investment rates are driven by changes in growth rates (the accelerator mechanism) and differential rates of return to capital. Net foreign savings is the difference between domestic savings and investment.

Productivity is derived by a combination of factors, but is also partially judgmental. The baseline assumes a long-term rate of TFP growth in the range of 1.0–1.4 for the high-income countries, towards the high end of the Bosworth and Collins (2003) estimates but consistent with the trends in the early and mid-2000s. The range for developing countries is somewhat wider—between 0.7 and 2.9 until 2015 and declining slowly thereafter. There is significant variation in TFP growth across developing countries, ranging from above 2 percent in China to less than 1

[2] See www.gtap.org for details.

percent in Sub-Saharan Africa.[3] Agricultural productivity is assumed to be factor-neutral and exogenous and is set to estimates from empirical studies (e.g., Martin and Mitra, 1999). Productivity in manufacturing and services is labor-augmenting (Harrod-neutral technical change); it is skill-neutral but sector-biased, with productivity growth higher in manufacturing than in services. Finally, the model assumes that energy efficiency improves autonomously by 1 percent per year in all regions and that international trade costs also decline by 1 percent per year.

2.2 GIDD: Linking Macroeconomic Outcomes to Micro Survey Data

The GIDD is based on micro-simulation methodologies developed in the recent literature, including Bourguignon and Pereira da Silva (2003); Ferreira and Leite (2003, 2004); Chen and Ravallion (2003); and Bussolo, Lay, and van der Mensbrugghe (2006). The starting point is the global income distribution in 2000, assembled with data from household surveys. 1.2 million households are sampled in 63 developing countries, while household information for developed countries comes from the Luxemburg Income Study dataset.[4] Detailed survey data for these 84 countries is combined with more aggregate information (usually vintiles) for the remainder of the world; the final sample covers 91 percent of the world population (see Annex 1 for a full detailed list).[5] The simulated 2030 distribution is then obtained by applying three sets of exogenous changes to the initial distribution: (a) demographic changes, including aging and shifts in the skill composition of the population; (b) shifts in the sectoral composition of employment; and (c) economic growth, including changes in relative wages across skills and sectors.

The empirical framework is depicted in Figure 1. Future changes in population shares by age (upper left part of Figure 1) are taken as exogenous from the population projections of the World Bank. Therefore, we assume that fertility decisions and mortality rates are determined outside the model. The change in shares of the population by education groups incorporates the expected demographic changes (linking arrow from top left box to top right box in Figure

[3] The assumed productivity growth in China and India is relatively modest compared with the estimates in Bosworth and Collins (2007), who calculate that annual TFP growth during 1993-2004 amounted to 4.0 and 2.3 percent in China and India, respectively.

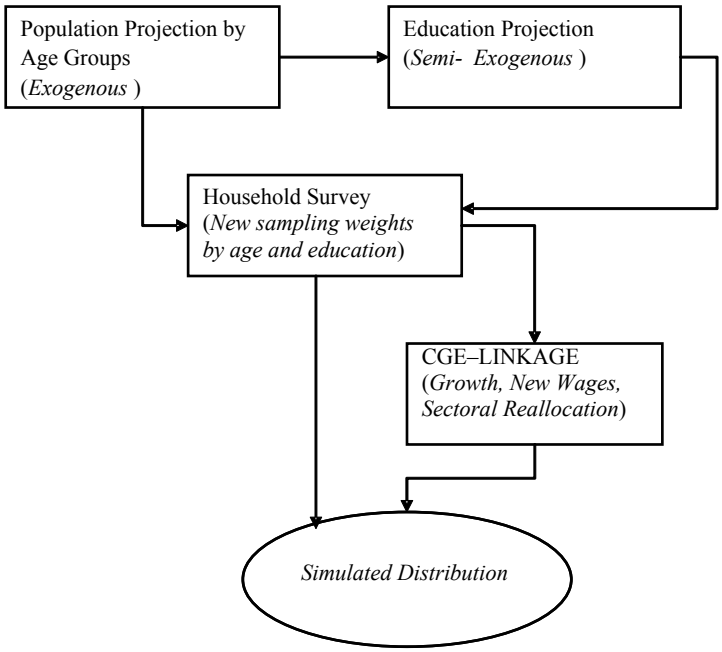
[4] Consumption or expenditure per capita is a more reliable measure than income, and its distribution is normally more equal than the distribution of income. Nevertheless, consumption data are not available for all countries' survey, so, to get a global picture, the study had to include countries from which only income data were available.

[5] Throughout the paper, when we talk about the global distribution, we are indeed referring to the GIDD's sample covering 91 percent of the world population.

1). Next, new sets of population shares by age and education subgroups are computed and household sampling weights are rescaled according to the demographic and educational changes above (larger box in the middle of Figure 1). In a second step, these demographic shocks drive changes the supply of labor by age and skill groups. These changes are incorporated into the CGE model to simulate overall economic growth, growth in relative incomes by education groups and sector reallocation of labor (link between the middle and bottom rectangles). Finally, the results of the CGE are passed-on to the re-weighted household survey (bottom link in Figure 1).

In reality these changes take place simultaneously, but in the GIDD's simplified framework they are accommodated in a sequential fashion. In the first step, total population in each country is expanded until it reaches the World Bank's projections for 2030. The structure of the population is also changed with older age cohorts becoming larger in many countries. To accommodate these changes in the survey data, larger weights are assigned to older people than those assigned to younger individuals.[6]

Figure 1: GIDD methodological framework



[6] Actually weights are not changed for each single individual but for whole households. Therefore, in the example in the text, households whose heads are older are assigned larger weights than households with younger heads. For a complete technical description of this re-weighting procedure, which in addition to the age structure also involves education attainments, see Bussolo, De Hoyos and Medvedev (2010).

In the next step, workers move from traditional agricultural sectors to more dynamic industrial and service sectors, and new incomes are estimated for these movers. Finally, consistent with an overall growth rate of real income per capita, changes in labor remuneration by skill level and sector are applied to each worker in the sample depending on their education and sector of employment. The number of workers changing sector of occupation and the growth differential in labor remuneration which are used to "shock" the micro-data are consistent with the results of the global computable general equilibrium (LINKAGE) model described in the previous section.

These sequential changes reshape national income distributions under a set of strong assumptions. In particular, income inequality within population subgroups formed by age, skills, and sector of employment is assumed to be time invariant. Moreover, data limitations affect estimates of the initial inequality and its evolution. Although consumption expenditure is a more reliable welfare measure than income, and its distribution is normally more equal than the distribution of income, consumption data are not available for all countries' surveys. To get a global picture, the GIDD dataset includes countries for which only income data were available. Finally, measurement errors implicit in purchasing power parity exchange rates, which have been used to convert local currency units, also affect comparability across countries.

2.3 Caveats and Limitations

Measuring global income distribution, accounting for the general equilibrium effects of growth patterns and policy changes, predicting the future are all very difficult things to do in economics and they can all be easily criticized. In fact, CGE models are not forecasting tools: growth rates for any specific country or region estimated with the LINKAGE model are subject to a large margin of error. These growth rates depend on *exogenous* assumptions and *endogenous* variables. The most important exogenous assumptions include: (i) the accumulation of factors (employment growth, depreciation) and (ii) productivity changes – which, as mentioned, are partially judgmental. Among the *endogenous* mechanisms, the most relevant for growth are the rates of investment (i.e. accumulation of capital) which depend on the availability of savings which, in turn, are a function of demographic factors (dependency rates) and endogenous relative prices of capital goods. There is no consensus on the exogenous values governing (i) and (ii) or on the correct parameterization of the savings function, and not even on the parameterization of demand and supply functions for capital goods. It is clear then that the level of uncertainty on the resulting growth rates is quite large. However, the main advantage of a model-based analysis is not in providing exact forecasts, but in having a framework which is consistent with economic theory and that can

be used to test and explain the *ceteris paribus* effects of these and many other different factors.

Besides, and this is an important point, given our objective of addressing the potential changes in the *distribution* of incomes, a structural model is required. Distribution is affected, amongst other things, by changes in relative factor prices, shifts in sectoral employment, and changes in relative prices of consumption goods. A model that provides only aggregate growth cannot be used for incidence analyses. Thus, even if the robustness of macro-econometric models (normally used for predicting growth rates) can be assessed more easily than that of a CGE model, a macro aggregate model cannot be used to answer the key questions addressed here.

In summary, the macro (LINKAGE) – micro (GIDD) modeling framework used here is easy to criticize. However, if one accepts the premise that the ability to "predict" – obviously subject to great uncertainty – plausible worldwide distributional implications of large shocks is a worthwhile endeavor, then it is not easy to propose a clearly superior alternative.

3. The World Economy in 2030

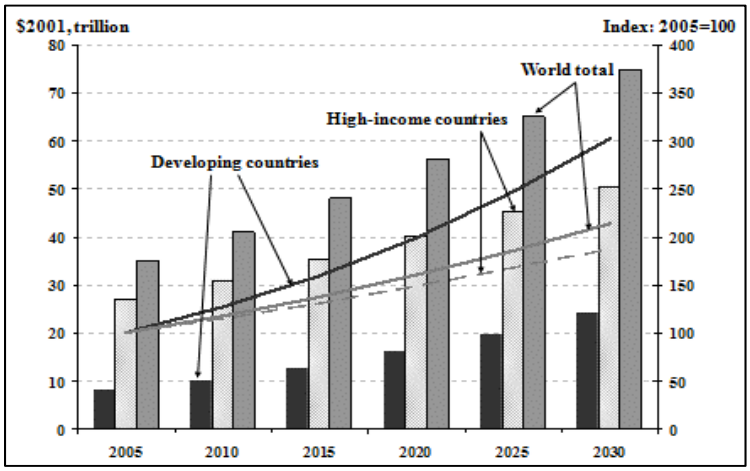
3.1 Convergence by the Developing Countries

In the baseline scenario of this paper, global GDP grows at an average annual rate of 2.9 percent between 2005 and 2030.[7] Measured at constant 2001 prices the global economy would reach $75 trillion in 2030 up from $35 trillion in 2005, an overall increase of some 2.1 times (Figure 2). The developing-country GDP would jump from $8 trillion to $24.3 trillion increasing its global share of output from 23 percent to 33 percent.[8]

[7] This represents a modest acceleration of what was observed between 1980 and 2005. For high-income countries, projected growth rates decrease slightly (from 2.0 to 1.9) but a more significant acceleration is attributed to developing countries (from 2.4 to 3.1).

[8] Evaluated at 2001 market exchange rates and constant prices. The rapidly emerging economies would normally be associated with rising real exchange rates so that their weight in the global economy will actually be measurably higher in value terms than in constant price volume terms.

Figure 2: Developing countries will account for a larger portion of world output in the coming decade



Source: Authors' simulations with Linkage model. Note: Bars represent Real GDP in $2001 trillion (left-axis), lines are growth indexes (right-axis).

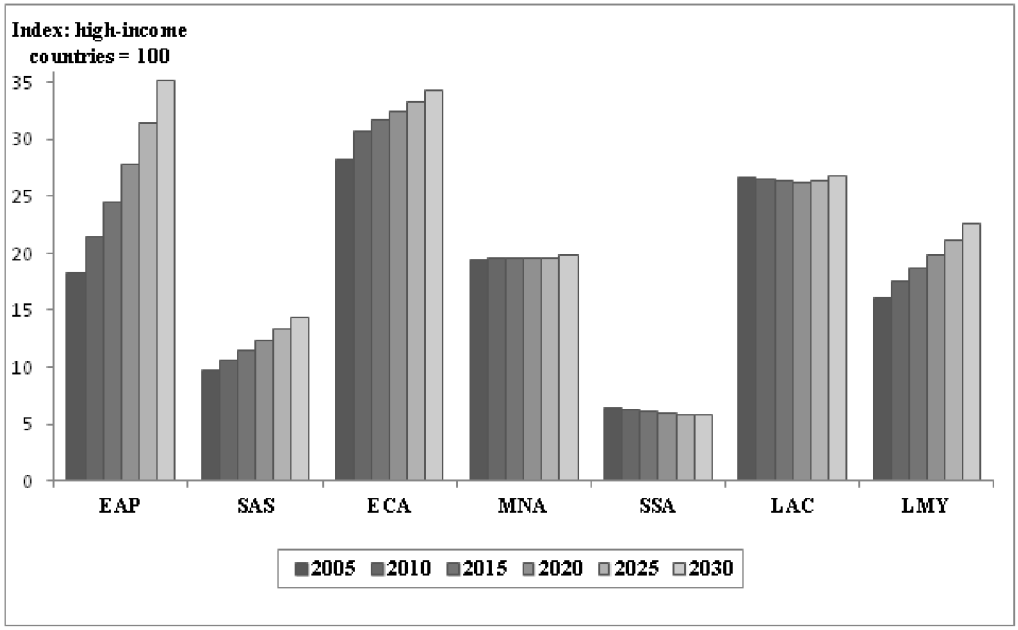
The accelerated growth path of many developing countries is a consequence, in the authors' judgment, of the combination of improved initial conditions, better policies, demographic trends, and the still wide gap in productivity—relative to high-income countries. The influence of these factors on growth is already visible in the recent performance. If one decomposes the last 25 years in two periods—1980–2000 and 2000–2005— average growth in developing countries jumped from 3.2 percent per year in the first period to 5 percent per year in the second. Over time, China and India played a major role in the quickening pace of growth in the developing world: the contribution of the two giants to growth of low and middle income countries has increased from 45 percent in the first period to 50 percent in the second. The baseline scenario envisions a slight slowing of this recent performance: over the next 24 years, China and India are likely to account for 18 percent of growth in global output and 46 percent of growth in real output of today's low and middle income countries.

Under this growth scenario and using PPP exchange rates[9], the speed of convergence between developing- and developed-country incomes would be noticeable but perhaps not major. At today's income in PPP terms, the average

[9] Using the market dollar exchange rate of an economy provides a biased estimate of individual wellbeing because prices differ substantially across economies—particularly for non-traded goods such as personal and housing services. For this reason, it is more appropriate to use the PPP exchange rates, which take into account these differences in prices.

developing-country resident receives about 16 percent of the average income of high income countries—$4,800 versus $29,700 (Figure 3). This ratio would rise to 23 percent in 25 years' time, representing an average developing-country income of $12,200 versus $54,000 for high-income countries.

Figure 3: In some developing regions, per capita incomes will begin to converge with those in high-income countries



Source: Authors' simulations with Linkage model. Notes: (i) Ratio of PPP-adjusted per capita incomes relative to high-income average. PPP is fixed at base year (2001) level; (ii) EAP stands for East Asia and the Pacific, SAS for South Asia, ECA for Europe and Central Asia, MNA for Middle East and North Africa, SSA for Sub-Saharan Africa, LAC for Latin America and the Caribbean, and LMY for Low and middle-income countries.

There is great variance across countries. Chinese incomes would rise from 19 percent of the average high income level to 48 percent (in PPP terms), a significant narrowing of the gap, and would approach the lower range of today's poorest high-income countries. However, it would take China approximately another 40 years to catch up with the OECD average (using PPP exchange rates). Per capita incomes in India are likely to rise much more slowly—from 11 percent in 2005 to 17 percent in 2030—due to faster population growth and more measured expansion in real GDP. As a consequence, convergence with the OECD could take almost four times as long as in the case of China.

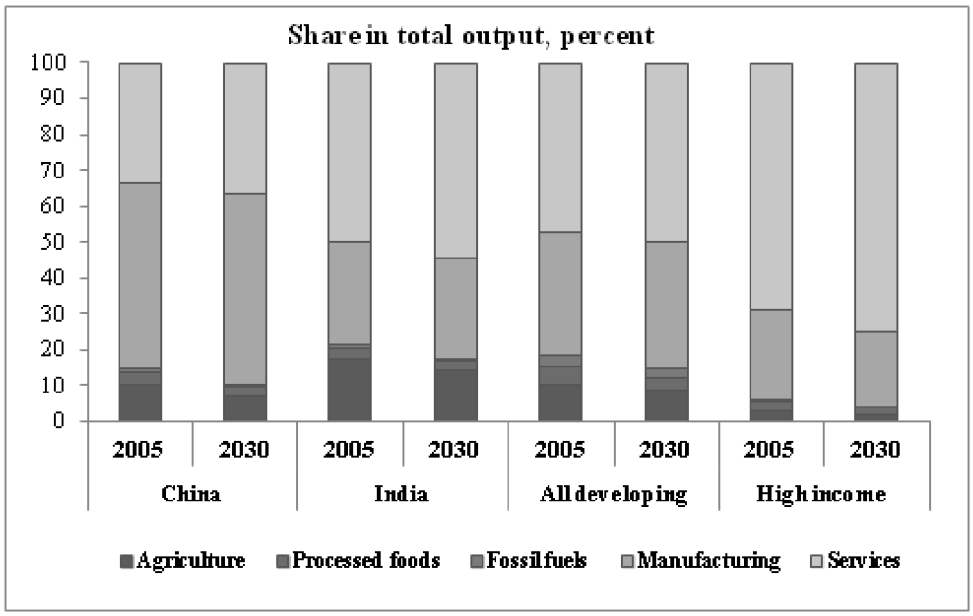
On the other end of the range, there would be a further falling behind in Sub-Saharan Africa. This is a consequence of the largely bimodal distribution of productivity growth within the developing countries, with a small group of high-productivity nations led by China and India and a large group of countries with low productivity growth, many of them in Sub-Saharan Africa. In our baseline scenario, per capita income growth for the continent as a whole would actually lag behind the high-income average, meaning that there would be no convergence despite improvements in absolute living standards. More broadly, the very gradual convergence of today's low-income countries to the average income of the OECD is due entirely to the high growth in India. Removing India from the group would bring its average growth down sufficiently to eliminate the possibility of convergence. However, as history has shown us many times before, there is plenty of scope for surprises and countries doing significantly better, even compared to countries with similar initial conditions.[10]

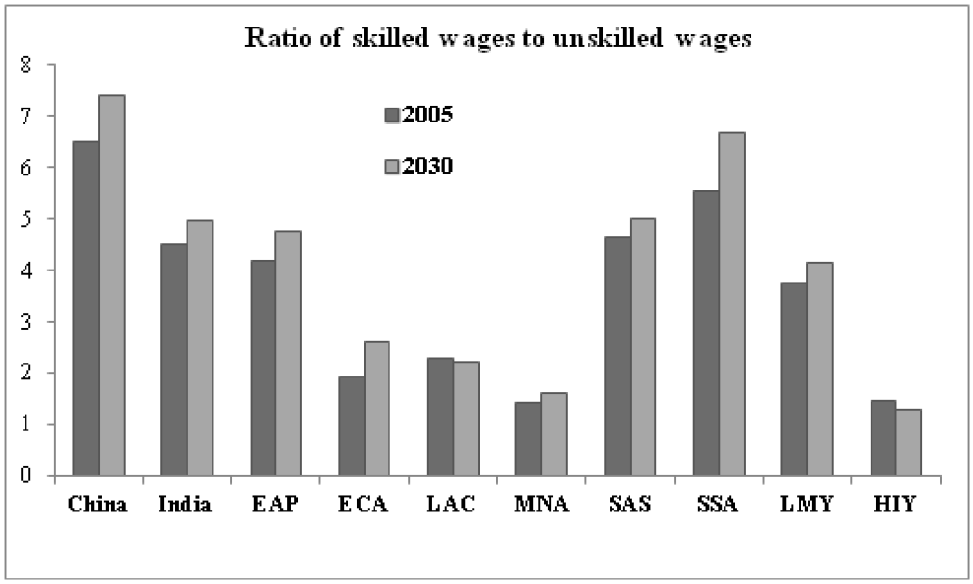
3.2 Changes in Production Structure and Factor Prices

As average incomes of developing countries get closer to the OECD levels, demand for services in the developing world is likely to increase faster than in high income countries because services tend to have higher income elasticities than agricultural and manufactured products. Some of this catch-up will be moderated by growing demand for health and public services by the aging OECD populations, but overall, faster growth in low and middle income countries—and particularly China and India—is likely to translate into more pronounced shift of production towards service activities (Figure 4).[11]

[10] Rodrik (2011) provides an interesting point of view on convergence and, more specifically, on which important elements beyond conventional macroeconomic and openness policies may help countries to accelerate their convergence towards the high income countries.
[11] Also see the Annex for additional details.

Figure 4: Shift into services and rising skill premiums in China and India





Source: World Bank simulation using the LINKAGE model. Note: EAP stands for East Asia and the Pacific, SAS for South Asia, ECA for Europe and Central Asia, MNA for Middle East and North Africa, SSA for Sub-Saharan Africa, LAC for Latin America and the Caribbean, LMY for Low and middle-income countries, and HIM for High Income countries.

In order to accommodate this growing share of services in total output, the contribution of other sectors to aggregate production will decrease. For developing countries, the expansion is likely to come at the cost of agricultural output: China's agricultural output share is likely to decrease by more than one-half, while India's agricultural production share could decline by one-third. This is driven by sustained large increases in manufacturing productivity in both countries, which underpin their leading growth performance. The fast pace of productivity growth in manufacturing sectors allows their share of total output to remain roughly constant between 2005 and 2030, despite the demand-driven pulling of resources into the service sectors. For the high income countries, the converse is likely to be true. Because productivity in manufacturing among OECD countries grows slower, the share of manufacturing in total output declines from 26 percent in 2005 to 19 percent in 2030.

The changing sectoral structure of Chinese and Indian economies is likely to have profound effects on factor returns. Because services tend to be more skill intensive than other sectors, increasing demand for services is likely to exert upward pressure on skilled wages. In 2005, 79 and 91 percent of total skilled wage bill in China and India is paid to service sector workers, and these shares could rise further by 2030. Demand for skilled workers over the coming decades is likely to be particularly acute in China, where slower population growth will add to the relative scarcity of the white-collar employees. Improvements in education service provision, combined with the fact that younger cohorts tend to be better educated than their older colleagues, are likely to lessen some of the pressures in the labor market. Nonetheless, our baseline scenario envisions an increasing relative scarcity of skilled workers in China and India (as well as most of the developing world) and as a result the skill premium is expected to rise (Figure 4). This widening of wage gaps could lead to increasing inequality within fast-growing economies, although such pressures could be counteracted by a host of effects including falling rural-urban wage differentials, decrease in the gender wage gap, or changing returns to other worker characteristics.

4. Global Income Distribution: China, India and the Middle Class

4.1 China, India, and Global Income Inequality

If the world were a single country, it would be highly unequal with a Gini coefficient of 0.68 (Table 1), well above the world's simple average of 0.39 and

the population-weighted average of 0.35.[12] The fact that global inequality is higher than the inequality level within most countries is explained by disparities in average incomes *between* countries. This is also clear from the results of two different population decomposition[13] exercises: (1) defining the subgroups as countries, and (2) defining two subgroups, China and India versus the rest of the world. The results show that a measure of international inequality based on country's average incomes, completely ignoring within-country differences in incomes, would capture three quarter of total global inequality in 2000. In other words, eliminating all within-country income differences would bring global income inequality down by 25 percent.

In a second exercise the world's population is partitioned in two subgroups, one containing the populations of China and India and the other one with citizens from the rest of the world. This decomposition shows that in 2000 comparing average incomes of the China and India group with average income in the rest of the world (RoW) would be enough to capture 18 percent of total income inequality (Table 1).

Table 1: Subgroup Decomposition of the global income inequality

Year	Global Inequality		Subgroups			
	Gini	Theil	Countries		China-India versus RoW	
2000	0.68	0.93	Between	0.69	Between	0.17
				(0.75)		*(0.18)*
			Within	0.23	Within	0.76
				(0.25)		*(0.82)*
2030	0.63	0.77	Between	0.54	Between	0.03
				(0.70)		*(0.04)*
			Within	0.23	Within	0.74
				(0.30)		*(0.96)*

Source: Authors' calculations using the GIDD model. Notes: (i) Decomposition results are based on the Theil index (Generalized Entropy index with aversion parameter equal to 1) decomposition; (ii) Proportion of total income inequality between brackets.

[12] Only Haiti with a Gini coefficient of 0.71 showed more inequality than the world as a whole in 2000.

[13] A simple way of evaluating the importance of differences in average incomes between countries versus differences in incomes within countries is to undertake inequality decomposition by population subgroups. A subgroup decomposition exercise separates or partitions the population (in this case the world population) into mutually excusive groups and assesses how much inequality is accounted for by difference in incomes between groups versus within these groups (Mookherjee and Shorrocks, 1982). The importance of a particular characteristic determining the partition rule will be captured by the proportion of inequality that can be accounted for by differences in average incomes between groups (Cowell and Jenkins, 1995).

However, the importance of China and India is much larger when considering changes between the 2000 and 2030 global distributions. By 2030, the Gini for the global income distribution is 5 points lower than its level in 2000. According to the decomposition results, the reduction in inequality between 2000 and 2030 is entirely accounted for by a reduction in disparities in average incomes across countries. Since reductions in average incomes differentials are weighted by population, *a rapid growth of poor countries like China and India can have a great impact on global inequality*.

The decomposition results for China and India versus the rest of the world shows that 14 out of a total of 16 points reduction in the Theil index between 2000 and 2030 are explained by a reduction in inequality in average incomes between the China and India group versus the rest of the world (compare the result of 0.17 Theil points explained by China and India in 2000 with the 0.03 points for 2030). In other words, average income in China and India are closer to the world's average in 2030 than what they were in 2000.

4.2 The Emergence of the Global Middle Class

According to our baseline, in 2030, 16.6 percent of the world population will belong to what can be called a "global middle class," up from 7.9 percent in 2000. That is, in 2030 more than a billion people in developing countries will buy cars, engage in international tourism, demand world-class products, and require international standards for higher education. Compare that with only 250 million people in developing countries who had access to these kinds of living standards in 2000. This large middle class will create rapidly growing markets for international products and services—and become a new force in domestic politics.

The *global middle class* is defined here as in Milanovic and Yitzhaki (2002). The authors proposed disaggregating the world population into three categories—the poor, the middle class, and the rich—where the middle class is defined by two absolute thresholds equal to the per capita incomes of Brazil and Italy.[14] By assigning an individual to the global middle class according to his or her income, Table 2 shows the evolution of this income group and contrasts it with the groups of the poor and the rich.[15] This table also shows that the great majority of the global middle class entrants are citizens of developing countries; hence tomorrow's global middle class will be formed, primarily, by today's citizens from poor countries. The total increase in the global middle class is

[14] Italy's per capita income was used as the upper threshold because it was the country with the lowest income among the G7; Brazil's per capita income corresponded to the official poverty line used in rich countries like the US and Germany (about $PPP 10 per capita per day).

[15] Notice that the definition of poor used here is far from being comparable to the standard 1 dollar-a-day definition.

explained by (1) population growth rates of cohorts within this class that are above the world average, and (2) by higher economic growth rates in developing countries which pull their citizens out of *poverty* and into the global middle class. The population growth rates of households within the global middle class (as classified in 2000) was relatively low with an average rate of 18 percent over the entire period, as opposed to the world average of 32 percent. Therefore, the great majority of the increase in the global middle class is explained by high economic growth rates taking place in developing countries.

Table 2: Growth of the global middle class and its compositional changes

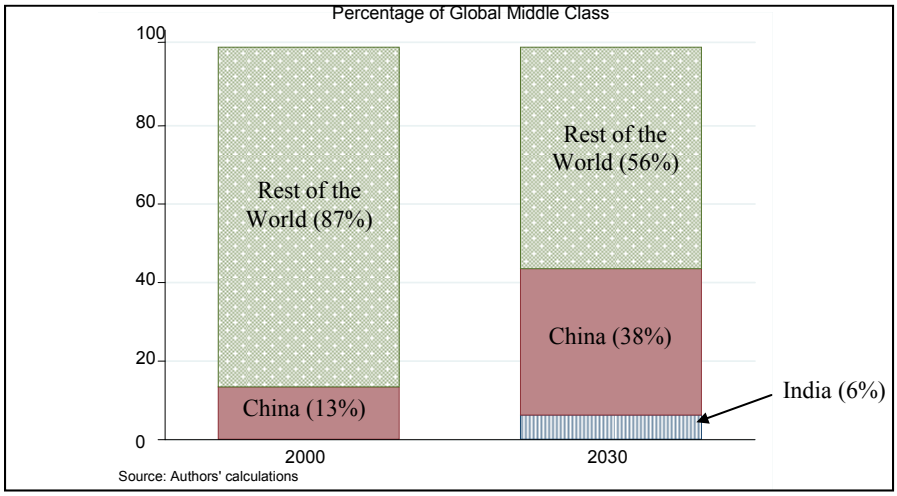
	Shares				Growth Rates	
	2000		2030		(% 2000-30)	
	Pop.	Income	Pop.	Income	Pop.	Income
Poor	81.7	29.1	61.9	15.5	2	29
Middle class, of which:	7.9	14.6	16.6	14.4	178	0
Developed country nationals	*3.7*	*7.4*	*0.8*	*0.8*	*-52*	*-2*
Developing country nationals	*4.1*	*7.2*	*15.8*	*13.6*	*363*	*3*
Rich	10.4	56.3	21.5	70.1	163	28
Total	100	100	100	100	32	109

Source: Authors' calculations using the GIDD model. Notes: (i) Totals may not sum to 100 because of rounding; (ii) Poor are defined as individuals with an income below the average of Brazil; the middle class is defined as individuals with an income between the per capita incomes of Brazil and Italy; rich are those individuals with incomes at or above the average income in Italy; (iii) Thresholds of Brazil and Italy are annual per capita incomes (2000 PPP) of US$3,914 and US$16,746.

Figure 5 divides the global middle class into citizens from China and India and the rest of the world. In 2000 only 13.5 percent of the global middle class were Chinese nationals and no Indians belonged to this group.[16] By 2030 citizens from China and India had a combined shared of 44 percent of the global middle class, with the great majority (38 percent) being Chinese, in fact half of the total 740 million new entrants into the global middle class will be Chinese nationals.

[16] It is quite likely that in reality some Indians are within the middle and high income ranges, nevertheless by the way the Indian Household Survey data is being collected, *outliers* (high income or consumption citizens) are not captured at all.

Figure 5: The contribution of China and India to the global middle class



The importance of China and India in the global middle class will depend on their economic and population growth rates and the changes in their within-country income inequality. For instance, in China, 56 million people belonged to the global middle class in 2000—each of them earning more than 90 percent of all Chinese citizens, i.e. they belonged to the richest decile. By 2030, assuming income inequality in China remains constant, there will be 361 million Chinese in the global middle class, and their earnings will range from the sixth to the ninth decile of the Chinese national income distribution. Chinese members of the global middle class will no longer be among the richest Chinese citizens but will probably be considered upper middle class in their country. On the other hand, if China manages to reduce income disparities, making middle income cohorts fatter, they would contribute even further to the global middle class. Conversely, if Chinese income inequality increases, the mass around the mean income in China in 2030 would reduce. As a result of higher inequality in China in 2030, the number of Chinese belonging to the global middle class would fall; less Chinese in the global middle class means a smaller overall middle class.[17]

To inspect these effects in more detail, in Figure 6 we fit a non-parametric kernel income density for China, India and the world population in 2000 and 2030. Figure 6 consistently shows the proportion of world population to Chinese and Indian populations; hence the Chinese and Indian densities can be interpret as the probabilities of being within the different income ranges and being Chinese and Indian citizens, respectively. Several interesting features are highlighted by

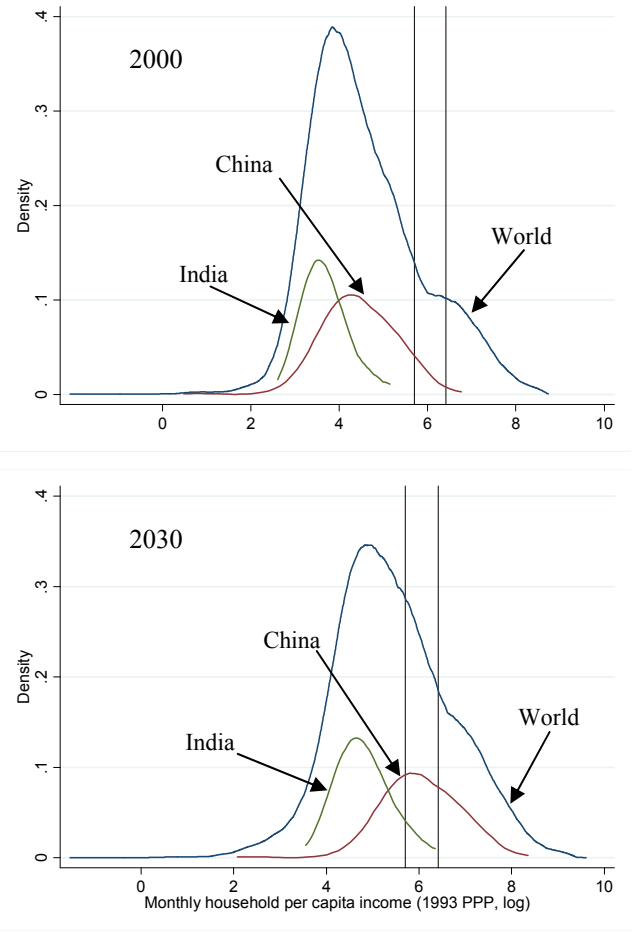
[17] While it is true that changes in Chinese income distribution between 2000 and 2030 have an impact on the total population in the global middle class, it effect is quite limited. Most of the changes in the global middle class is the outcome of growth in per capita incomes and less so of changes in within-countries inequality.

Figure 6. In 2000, the mode of the global income distribution (1993 PPP $114), i.e. the income value that more individuals in the world were receiving, was largely determined by the level earned by a high proportion of Indian upper middle class citizens and members of the Chinese lower middle class (overlapping of the Chinese and Indian income densities in Figure 6). Focusing on the country-specific distributions, we can see that in 2000 incomes were less skewed in India compared with China (India's distribution had a larger density around the mean); in 2000, the Gini coefficient for India was equal to 0.29 compared with a value of 0.42 in China.[18] In fact, due to the relatively unequal distribution in China, its richest citizens could be part of the global middle class in 2000. By year 2030, after several years of growth rates higher than the world average, China becomes the country that accounted for more global middle class members, hence reshaping the global distribution.

Growth in China causes a decrease in the global density around the mode and an increase in the probability of being in income ranges above it. Although India will experience growth rates in per capita incomes above world average, the differential is not large enough to result in a significant shift along the global distribution.

[18] The limitations of expenditure data reported in the Indian NSS to captures consumption levels at the top of the distribution have been pointed by Deaton and Kozel (2005).

Figure 6: China, India and the world income distribution 2000 and 2030



Source: Authors' calculation using the GIDD model

Nevertheless, given that the thresholds defining the global middle class are absolute values, India's growth also results in an increase in the global middle class. India's entrance into the global middle class is also partly explained by an increase in India's income inequality, expanding the upper tail of its distribution further to the right along the global density.[19] This increase in income dispersion helps the richest 5 percent Indian citizens enter the global middle class. Growth in China and India and, to a lesser extent, changes in their within-country inequality will have as an effect a tremendous increase in the global middle class resulting in a substantial improvement in global income inequality.

[19] India's inequality passes from a Gini of 0.29 in 2000 to 0.32 in 2030.

5. Conclusions

This paper analyzed, in an ex-ante fashion, the effects that economic expansion in China and India may have on global growth and the global income distribution. The results under the baseline scenario show that global GDP more than doubles between 2005 and 2030, with China and India accounting for almost one-fifth of this expansion. In terms of income per capita, in 2005 the average Chinese had an income one fifth of what the average citizen of a high-income country would earn and, by 2030, this gap narrows to almost one half. Due to faster population growth and more measured expansion in real GDP, per capita incomes in India are likely to rise much more slowly than in China, catching up from one tenth of average incomes in rich countries in 2005 to less than one sixth in 2030. This rapid growth in China and India gives rise to a reduction in global inequality and a substantial expansion in the global middle class.

According to our simulations, 4.3 of the 5 points reduction in the global Gini are due to the decline in income differences between Chinese and Indian citizens and the rest of the world. Besides, China, by itself, will account for almost half of the total increase in the global middle class (310 million out of the total 740 million new entrants). The ascent of hundreds of millions of Chinese, Indians, and nationals from other developing countries into the global middle class will produce a large group of people in the developing world who can afford, and will demand access to, the standards of living that were previously reserved mainly for the residents of high-income countries. This may have two major implications: the demand for international goods and services is likely rise, and pressures for policies that favor global integration are likely increase.

Much of the effect of the middle-class expansion on the world economy will be realized through a changing demand for goods. If middle class grows faster rate than the overall population (Table 2), multinational enterprises will be able to market their products to a much larger audience in 2030 than they do today. Furthermore, the rules of this new global marketplace will be increasingly determined by the tastes and preferences of the developing world, particularly the desires of consumers in China and, to a lesser extent, India. The rise of the global middle class will also affect demand for services. For example, given the strong correlation between income and determinants of human capital accumulation like health and education levels, the growing middle class is likely to demand more and better health and education. Therefore the increased emphasis on health and education among the middle class will deepen the human capital stocks hence establishing the foundations for continued growth in the developing countries. However, the increasing demand for education and health is likely to put pressure on the budgets of developing-country governments and will require heightened policy attention in the future.

Today, the median voter in most developing countries is unlikely to be a member of the global middle class; by 2030 the middle class members in developing countries will constitute a significant share of their home population increasing the likelihood of finding the median voter among them. In China, for example, both the median and mode earner will be members of the global middle class in 2030 (Figure 6). These changes are likely to have an impact on the domestic policy arena. Some evidence points to a correlation between rising incomes and a shift in demand towards more globalization-supportive policies. Other policy goals—among them improved transparency, intensified anticorruption efforts, and demand for a more open society and cleaner environment—are also likely to move to the forefront of the policy agenda with the expansion in the size of the middle class.

6. Annex: List of household surveys

Region	Covered population	Actual population	
World	**5,513,123**	**6,076,509**	**90.73**
East Asia and Pacific	1,749,255	1,817,232	96.26
Eastern Europe and Central Asia	474,468	471,549	100.62
High Income Countries	767,291	974,612	78.73
Latin America	503,418	515,069	97.74
Middle East and North Africa	192,128	276,447	69.50
South Asia	1,336,922	1,358,294	98.43
Sub-Saharan Africa	489,642	663,305	73.82

Economy	Covered population	Actual population	Coverage (%)	Data used
East Asia and Pacific	**1,749,255**	**1,817,232**	**96.26**	
China Rural	866,670	866,670	47.69	grouped
China Urban	407,755	407,755	22.44	grouped
Indonesia	209,173	206,000	11.34	individual
Vietnam	78,670	78,500	4.32	individual
Philippines	76,627	75,800	4.17	grouped
Thailand	61,439	61,400	3.38	individual
Malaysia	23,270	23,000	1.27	grouped
Cambodia	12,744	12,700	0.70	individual
Lao PDR	5,278	5,279	0.29	grouped
Papua New Guinea	5,133	5,299	0.29	grouped
Mongolia Urban	1,576	1,576	0.09	grouped
Mongolia rural	921	921	0.05	grouped
Myanmar		47,700	2.62	missing
Korea, Dem. Rep.		21,900	1.21	missing
Fiji		811	0.04	missing
Timor-Leste		784	0.04	missing
Solomon Islands		419	0.02	missing
Vanuatu		191	0.01	missing

Samoa		177	0.01	missing
Micronesia, Fed. Sts.		107	0.01	missing
Tonga		100	0.01	missing
Kiribati		91	0.00	missing
Marshall Islands		53	0.00	missing
Eastern Europe and Central Asia	**470,491**	**471,549**	**99.78**	
Russian Federation	146,560	146,000	30.96	individual
Turkey	68,234	67,400	14.29	individual
Ukraine	49,498	49,200	10.43	grouped
Poland	38,649	38,500	8.16	individual
Uzbekistan	24,652	24,700	5.24	grouped
Romania	22,117	22,400	4.75	individual
Kazakhstan	15,034	14,900	3.16	individual
Serbia and Montenegro	10,639	8,137	1.73	grouped
Czech Republic	10,275	10,300	2.18	grouped
Hungary	10,226	10,200	2.16	individual
Belarus	10,005	10,000	2.12	grouped
Azerbaijan	8,048	8,049	1.71	grouped
Bulgaria	7,999	8,060	1.71	individual
Tajikistan	6,189	6,159	1.31	individual
Slovak Republic	5,393	5,389	1.14	grouped
Georgia	5,261	4,720	1.00	grouped
Kyrgyz Republic	4,952	4,915	1.04	individual
Turkmenistan	4,644	4,502	0.95	grouped
Croatia	4,446	4,503	0.95	grouped
Moldova	4,275	4,275	0.91	individual
Lithuania	3,499	3,500	0.74	individual
Armenia	3,082	3,082	0.65	individual
Albania	3,062	3,062	0.65	individual
Latvia	2,383	2,372	0.50	grouped
Estonia	1,373	1,370	0.29	individual
Bosnia and Herzegovina		3,847	0.82	missing
Macedonia, FYR		2,010	0.43	missing
High Income Countries	**764,271**	**974,612**	**78.42**	
United States	282,223	282,000	28.93	grouped
Germany	82,211	82,200	8.43	grouped
France	58,895	58,900	6.04	grouped
United Kingdom	58,798	59,700	6.13	grouped
Italy	57,689	56,900	5.84	grouped
Korea, Rep.	47,008	47,000	4.82	grouped
Spain	40,498	40,300	4.13	grouped
Canada	30,771	30,800	3.16	grouped
Netherlands	15,920	15,900	1.63	grouped
Greece	10,905	10,900	1.12	grouped
Belgium	10,254	10,300	1.06	grouped
Portugal	10,129	10,200	1.05	grouped
Sweden	8,875	8,869	0.91	grouped
Austria	8,011	8,012	0.82	grouped
Hong Kong, China	6,669	6,665	0.68	grouped

Israel	6,282	6,289	0.65	grouped
Denmark	5,338	5,337	0.55	grouped
Finland	5,177	5,176	0.53	grouped
Norway	4,492	4,491	0.46	grouped
Singapore	4,020	4,018	0.41	grouped
New Zealand	3,864	3,858	0.40	grouped
Ireland	3,815	3,805	0.39	grouped
Slovenia	1,986	1,989	0.20	grouped
Luxembourg	441	438	0.04	grouped
Japan		127,000	13.03	missing
Taiwan, China		22,200	2.28	missing
Saudi Arabia		20,700	2.12	missing
Australia		19,200	1.97	missing
Switzerland		7,184	0.74	missing
Puerto Rico		3,816	0.39	missing
United Arab Emirates		3,247	0.33	missing
Kuwait		2,190	0.22	missing
Cyprus		694	0.07	missing
Bahrain		672	0.07	missing
Qatar		606	0.06	missing
Macao, China		444	0.05	missing
Malta		390	0.04	missing
Brunei Darussalam		333	0.03	missing
Bahamas, The		301	0.03	missing
Iceland		281	0.03	missing
French Polynesia		236	0.02	missing
New Caledonia		213	0.02	missing
Netherlands Antilles		176	0.02	missing
Guam		155	0.02	missing
Channel Islands		147	0.02	missing
Virgin Islands (U.S.)		109	0.01	missing
Antigua and Barbuda		76	0.01	missing
Isle of Man		76	0.01	missing
Bermuda		62	0.01	missing
Greenland		56	0.01	missing
Latin America	**503,418**	**515,069**	**97.74**	
Brazil	173,860	174,000	33.78	individual
Mexico	100,088	98,000	19.03	individual
Colombia	42,120	42,100	8.17	individual
Argentina	36,897	36,900	7.16	individual
Peru	25,953	26,000	5.05	individual
Venezuela, RB	24,418	24,300	4.72	individual
Chile	15,412	15,400	2.99	individual
Ecuador	12,306	12,300	2.39	individual
Guatemala	11,166	11,200	2.17	individual
Bolivia	8,318	8,317	1.61	individual
Dominican Republic	8,265	8,265	1.60	individual
Haiti	7,941	7,939	1.54	individual
Honduras	6,423	6,424	1.25	individual
El Salvador	6,281	6,280	1.22	individual

Paraguay	5,468	5,346	1.04	individual
Nicaragua	4,958	4,920	0.96	individual
Costa Rica	3,928	3,929	0.76	individual
Uruguay	3,343	3,342	0.65	individual
Panama	2,949	2,950	0.57	individual
Jamaica	2,585	2,589	0.50	grouped
Guyana	744	744	0.14	individual
Cuba		11,100	2.16	missing
Trinidad and Tobago		1,285	0.25	missing
Suriname		434	0.08	missing
Barbados		266	0.05	missing
Belize		250	0.05	missing
St. Lucia		156	0.03	missing
St. Vincent and the Grenadines		116	0.02	missing
Grenada		101	0.02	missing
Dominica		71	0.01	missing
St. Kitts and Nevis		44	0.01	missing
Middle East and North Africa	**192,128**	**276,447**	**69.50**	
Egypt, Arab Rep.	67,288	67,300	24.34	individual
Iran, Islamic Rep.	63,661	63,700	23.04	grouped
Morocco	28,706	27,800	10.06	grouped
Yemen, Rep.	17,936	17,900	6.48	individual
Tunisia	9,565	9,564	3.46	grouped
Jordan	4,973	4,857	1.76	individual
Algeria		30,500	11.03	missing
Iraq		23,200	8.39	missing
Syrian Arab Republic		16,800	6.08	missing
Libya		5,306	1.92	missing
Lebanon		3,398	1.23	missing
West Bank and Gaza		2,966	1.07	missing
Oman		2,442	0.88	missing
Djibouti		715	0.26	missing
South Asia	**1,336,922**	**1,358,294**	**98.43**	
India	1,021,082	1,020,000	75.09	individual
Pakistan	142,650	138,000	10.16	individual
Bangladesh	128,914	129,000	9.50	individual
Nepal	24,430	24,400	1.80	individual
Sri Lanka	19,847	19,400	1.43	individual
Afghanistan		26,600	1.96	missing
Bhutan		604	0.04	missing
Maldives		290	0.02	missing
Sub-Saharan Africa	**489,088**	**663,305**	**73.73**	
Nigeria	117,608	118,000	17.79	individual
Ethiopia	68,527	64,300	9.69	individual
South Africa	45,610	44,000	6.63	individual
Tanzania	34,761	34,800	5.25	individual
Kenya	30,094	30,700	4.63	grouped
Uganda	24,309	24,300	3.66	individual
Ghana	19,593	19,900	3.00	grouped

Côte d'Ivoire	16,734	16,700	2.52	individual
Madagascar	16,196	16,200	2.44	individual
Cameroon	14,855	14,900	2.25	individual
Zimbabwe	12,649	12,600	1.90	grouped
Zambia	12,594	10,700	1.61	individual
Niger	11,781	11,800	1.78	individual
Burkina Faso	11,291	11,300	1.70	individual
Senegal	10,342	10,300	1.55	individual
Malawi	10,308	11,500	1.73	grouped
Guinea	8,433	8,434	1.27	individual
Rwanda	8,024	8,025	1.21	individual
Burundi	6,488	6,486	0.98	individual
Sierra Leone	4,509	4,509	0.68	individual
Mauritania	2,643	2,645	0.40	individual
Lesotho	1,743	1,788	0.27	grouped
Congo, Dem. Rep.		50,100	7.55	missing
Sudan		32,900	4.96	missing
Mozambique		17,900	2.70	missing
Angola		13,800	2.08	missing
Mali		11,600	1.75	missing
Chad		8,216	1.24	missing
Benin		7,197	1.09	missing
Somalia		7,012	1.06	missing
Togo		5,364	0.81	missing
Central African Republic		3,777	0.57	missing
Eritrea		3,557	0.54	missing
Congo, Rep.		3,438	0.52	missing
Liberia		3,065	0.46	missing
Namibia		1,894	0.29	missing
Botswana		1,754	0.26	missing
Guinea-Bissau		1,366	0.21	missing
Gambia, The		1,316	0.20	missing
Gabon		1,272	0.19	missing
Mauritius		1,187	0.18	missing
Swaziland		1,045	0.16	missing
Comoros		540	0.08	missing
Cape Verde		451	0.07	missing
Equatorial Guinea		449	0.07	missing
São Tomé and Principe		140	0.02	missing
Seychelles		81	0.01	missing

7. References

Atkinson, Anthony B., and Andrea Brandolini (2004). Global world inequality: Absolute, relative or intermediate. Paper prepared for the 28th Conference of the International Association for Research in Income and Wealth, Cork, Ireland, 22-28 August.

Bosworth, Barry P. and Susan M. Collins. 2003. "The Empirics of Growth: An Update." Brookings Paper on Economic Activity, No. 2:113-206.

Bosworth, Barry P. and Susan M. Collins. 2007. "Accounting for Growth: Comparing China and India." NBER Working Paper 12943.

Bourguignon, François and Luiz Pereira da Silva (ed.) (2003), "The Impact of Economic Policies on Poverty and Income Distribution: Evaluation Techniques and Tools", World Bank and Oxford University Press

Bourguignon, François, and Christian Morrison. (2002) "Inequality among World Citizens: 1890–1992." American *Economic Review* 92 (4): 727–44.

Bussolo, Maurizio, Rafael De Hoyos and Denis Medvedev (2010) "Economic growth and income distribution: linking macroeconomic models with household survey data at the global level", *The International Journal of Microsimulation*, May.

Bussolo, Maurizio, Jann Lay and Dominique van der Mensbrugghe. (2006) "Structural change and poverty reduction in Brazil : the impact of the Doha Round". *World Bank Policy Research Working Paper* 3833.

Bussolo, Maurizio and Round Jeffery eds. (2006) Globalisation and poverty: channels and policy responses, Routledge, London and New York.

Bryant, Ralph C. 2004. "Cross-Border Macroeconomic Implications of Demographic Change."

Chaudhuri, Shubham and Ravallion, Martin (2006) "Partially Awakened Giants: Uneven Growth in China and India", *mimeograph,* The World Bank

Chen, Shaohua, and Martin Ravallion. (2003) "Household Welfare Impacts of China's Accession to the World Trade Organization." *Policy Research* Working *Paper* 3040, World Bank, Washington, DC.

Cowel, F.A. and Jenkins, S.P. (1995) "How much inequality can we explain? A methodology and an application to the United States" *The Economic Journal*, vol. 105. pp. 421-430.

David, Paul A. 1990. "The Dynamo and the Computer: An Historical Perspective on the Modern Productivity Paradox." The American Economic Review. 80(2): 355-362. May.

Deaton, Angus and Valerie Kozel (2005) "Data and dogma: the great Indian poverty debate", *The World Bank Research Observer*, 20 (2): 177-199

Ferreira, Francisco H. G., and Phillippe G. Leite. (2003) "Meeting the Millennium Development Goals in Brazil: Can Microsimulations Help?" *Economía* 3 (2): 235–79.

———. (2004) "Educational Expansion and Income Distribution: A Microsimulation for Ceará." In *Growth, Inequality and Poverty*, ed. Anthony Shorrocks and Rolph van der Hoeven. London: Oxford University Press

Gordon, Robert J. 2000. "Does the 'New Economy' Measure Up to the Great Inventions of the Past?" Journal of Economic Perspectives. 14(4): 49-74. Fall.

Harrison, Glenn W. Richard Jones, Larry J. Kimbell, Randal Wigle, 1993 "How robust is applied general equilibrium analysis?", *Journal of Policy Modeling*, Volume 15, Issue 1, February, Pages 99-115,

Harrison Ann ed. 2007, Globalization and Poverty, Ann Harrison, Editor, The University of Chicago Press, 2007, Chicago IL.

Helliwell, John F. 2004. "Demographic Changes and International Factor Mobility." National Bureau of Economic Research Working Paper 10945. Cambridge, Mass.

Kanbur, Ravi and Spence Michael (2010), "Globalization, Growth and Distribution: Framing the Questions," in Kanbur and M. Spence (Eds.), Equity in a Globalizing World, The World Bank for the Commission on Growth and Development, pp. 41-70.

Martin, Will and Mitra, Devashish. 1999. "Productivity Growth and Convergence in Agriculture and Manufacturing" World Bank Policy Research Working Paper No. 2171.

McKibbin, Warwick J. 2005. "The Global Macroeconomic Conseqences of a demographic Transition. Centre for Applied Macroeconomic Analysis, Australian National University. Processed. August.

Milanovic, Branko (2002) "True World Income Distribution, 1988 and 1993: First Calculation Based on Household Surveys Alone." *Economic Journal* (Royal Economic Society) 112 (476) (January): 51–92.

Milanovic, Branko (2006) "Global Income Inequality: What it is and Why it Matters" *World Bank* WPS 3865, Washington DC

Milanovic, Branko, and Shlomo Yitzhaki. (2002) "Decomposing World Income Distribution: Does the World Have a Middle Class?" *Review of Income and Wealth* 48 (2): 155–78. June.

Mookherjee, Dilip, Anthony, Shorrocks (1982) "A decomposition analysis of the trend in UK income inequality." *Economic Journal* 92, 886–902.

Rodrik Dani (2011), "The Future of Economic Convergence", paper prepared for the 2011 Jackson Hole Symposium of the Federal Reserve Bank of Kansas City, August 25-27, 2011.

Quah, Danny T, (1996) "Twin Peaks: Growth and Convergence in Models of Distribution Dynamics," Economic Journal, Royal Economic Society, vol. 106(437), pages 1045-55, July.

Tyers, Rod and Qun Shi. 2005. “Global Demographic Change, Labour Force Growth and Economic Performance.” Faculty of Economics and Commerce, Australian National University. Processed. June.

van der Mensbrugghe, Dominique (2005) “The LINKAGE Model Technical Documentation.” Washington, DC: World Bank.

Winters, L. A. and Yusuf, S. (2006) “Dancing with Giants: China, India and the Global Economy”, *The World Bank and the Institute of Policy Studies*

World Bank (2006) “*Global Economic Prospects 2007: Confronting Challenges of the Coming Globalization*”, Oxford University Press for the World Bank, Oxford and New York