GLOBAL INEQUALITY: BEYOND THE BOTTOM BILLION

A Rapid Review of Income Distribution in 141 Countries

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This is a working document. It has been prepared to facilitate the exchange of knowledge and to stimulate discussion.

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A Rapid Review of Income Distribution in 141 Countries

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The findings, interpretations and conclusions expressed in this paper are those of the authors and do not necessarily reflect the policies or views of UNICEF or of the United Nations.

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Executive Summary

This working paper: (i) provides an overview of global, regional and national income inequalities based on the latest distribution data from the World Bank, UNU-WIDER and Eurostat; (ii) discusses the negative implications of rising income inequality for development; (iii) calls for placing equity at the center of development in the context of the United Nations development agenda; (iv) describes the likelihood of inequalities being exacerbated during the global economic crisis; (v) advocates for urgent policy changes at national and international levels to ensure a "Recovery for All"; and, (vi) to serve as a general reference source, Annex 2 provides a summary of the most up-to-date income distribution and inequality data for 141 countries.

Using different estimation models, we find a world in which the top 20 percent of the population enjoys more than 70 percent of total income, contrasted by two paltry percentage points for those in the bottom quintile in 2007 under PPP-adjusted exchange rates; using market exchange rates, the richest population quintile gets 83 percent of global income with just a single percentage point for those in the poorest quintile. While there is evidence of progress, it is too slow; we estimate that it would take more than 800 years for the bottom billion to achieve ten percent of global income under the current rate of change. Also disturbing is the prevalence of children and youth among the poorest income quintiles, as approximately 50 percent are below the $2/day international poverty line.

Middle-income countries appear the most unequal. Gini index trends show that Eastern Europe/former Soviet Union and Asia had the largest increases between 1990 and 2008. Latin America remains the region with the highest level of income inequality, although the region is marked by significant improvement since 2000. Low-income countries show mixed results; Sub-Saharan Africa is highly unequal but appears to have reduced its Gini index by almost five points, on average, since 1990.

Overall, the extreme inequality in the distribution of the world's income should make us question the current development model (development for whom?), which has accrued mostly to the wealthiest billion. Not only does inequality slow economic growth, but it results in health and social problems and generates political instability. Inequality is dysfunctional, and there is a grave need to place equity at the center of the development agenda. As an alternative, the paper summarizes the United Nations development agenda, which aims to strike the right balance between growth and equitable development progress.

In the context of the global economic crisis, the paper argues that the urgency for equitable policies has never been greater. In particular, current trends in employment, commodity prices and government spending suggest that income inequalities are likely to be exacerbated during 2011. The paper concludes by advocating for urgent policy actions at national and international levels to ensure a "Recovery for All" that is focused on pushing up the bottom billions.

Résumé Analytique

Ce document: (i) donne un aperçu de l'inégalité du revenu mondial, régional et national sur la base des dernières données de la Banque mondiale, l'UNU-WIDER et Eurostat, (ii) examine les conséquences négatives de l'inégalité croissante des revenus pour le développement, (iii) appelle à un programme de développement de l'ONU fondée sur l'équité, (iv) décrit la probabilité d'inégalités exacerbées au cours de la crise économique mondiale, (v) plaide pour des changements politiques urgents aux niveaux national et international pour assurer une «reprise pour tous», et (vi) sert de source de référence générale. L'annexe 2 présente un résumé actualisé des données sur la répartition des revenus et des inégalités dans 141 pays.

En utilisant des modèles d'estimation, nous trouvons un monde dans lequel 20 pour cent de la population contrôle plus de 70 pour cent du revenu mondial, en contraste avec seulement un maigre deux pour cent représentant le quintile inférieur (pour 2007 , taux de change PPA corrigés). En utilisant les taux de change du marché, le quintile des populations riches obtient 83 pourcent du revenu mondial contre seulement un seul point pour le quintile des personnes les plus pauvres. Bien qu'un certain progrès soit démontré, il est beaucoup trop lent ; Nous estimons qu'il faudrait 800 ans au rythme actuel pour que le milliard de pauvres puisse atteindre dix pourcent du revenu global. Tout aussi préoccupante est la prévalence des enfants et des jeunes parmi le quintile des plus pauvres - 50 pour cent d'entre eux sont en dessous du seuil de pauvreté de deux dollars par jour.

Les pays à revenu intermédiaire semblent être les plus inégaux. La tendance montre que l'indice de Gini a le plus augmenté en Asie, en Europe de l'Est et dans les pays de l'ex-Union soviétique entre 1990 et 2008. L'Amérique latine demeure la région ayant le plus haut niveau d'inégalités, en dépit des progrès dans certains pays depuis 2000. Les pays à faible revenu montrent des résultats mitigés ; l'Afrique subsaharienne est une région très inégale, mais semble avoir réduit son indice de Gini de près de cinq points en moyenne depuis 1990.

Dans l'ensemble, l'extrême inégalité dans la répartition du revenu global devrait remettre en question le modèle actuel de développement (le développement pour qui?), qui a principalement bénéficié aux plus riches. Il y a un besoin urgent de mettre l'égalité au cœur de l'agenda du développement. L'inégalité est dysfonctionnelle, inhibe la croissance économique et la stabilité démocratique. Comme alternative, le rapport présente le programme de développement des Nations Unies, qui vise à trouver le juste équilibre entre la croissance et les progrès du développement équitable.

Dans le contexte de la crise économique mondiale, ce rapport fait valoir que l'urgence de politiques équitables n'a jamais été aussi grande. En particulier, les tendances actuelles en matière d'emploi, les prix élevés des denrées alimentaires et du carburant ainsi que la contraction des dépenses publiques, indiquent que les inégalités sont susceptibles d'être exacerbées en 2011. Le rapport conclut en appelant à une action politique urgente aux niveaux national et international pour assurer une «reprise pour tous», et faire remonter les revenus du milliard d'en bas.

Resumen Ejecutivo

Este documento: (i) proporciona una visión de las desigualdades del ingreso mundial, regional y nacional basada en los últimos datos de distribución del Banco Mundial, UNU-WIDER y Eurostat, (ii) analiza las consecuencias negativas del aumento de la desigualdad para el desarrollo, (iii) presenta la agenda de desarrollo de la ONU, centrada en la equidad, (iv) señala la alta probabilidad de que las desigualdades se agraven debido a la crisis económica mundial, (v) llama a cambios urgentes en la política a nivel nacional e internacional para asegurar una "recuperación para todos," y (vi) como fuente de referencia general, el anexo 2 presenta una síntesis actualizada de datos sobre distribución del ingreso y desigualdad en 141 países.

Usando diferentes modelos de estimación, nos encontramos con un mundo en el que el 20 por cien superior de la población controla más del 70 por ciento de los ingresos mundiales, en contraste con solo un insignificante dos por cien que tiene el quintil inferior en 2007 con tasas de cambio ajustadas por PPP; bajo tasas de cambio de mercado, el quintil más rico de la población mundial recibe el 83 por ciento del ingreso total mundial, y solo un uno por ciento llega a aquellos en el quintil más pobre. Si bien es cierto que hay progreso, el ritmo de cambio es demasiado lento, se estima que se necesitarían aproximadamente 800 años para que los mil millones de personas más pobres del planeta alcanzaran el diez por ciento de los ingresos mundiales. También es muy preocupante la prevalencia de niños y jóvenes entre los quintiles pobres – un 50 por cien está por debajo de la línea de la pobreza de dos dólares al día.

Los países de renta media son los más desiguales en el 2007. La evolución de coeficientes Gini desde 1990 señala que Asia, Europa del Este y los países de la antigua Unión Soviética son los que más han incrementado en desigualdad. América Latina continúa siendo una región muy desigual, a pesar de los significativos avances logrados desde el año 2000. Los países de renta baja muestran resultados mixtos; el África Sub-Sahariana es una región muy desigual pero parece haber reducido su índice Gini en cinco puntos como media desde 1990.

La extrema desigualdad en la distribución del ingreso mundial debe hacernos cuestionar el modelo actual de desarrollo (desarrollo para quién?) sobre todo pues ha beneficiado a aquellos más ricos, con más ingresos. Existe una necesidad urgente de poner la equidad en el centro de la agenda de desarrollo. La desigualdad es disfuncional, inhibe el crecimiento económico y la estabilidad democrática. Como alternativa, el informe presenta una síntesis de la agenda de desarrollo de las Naciones Unidas, que se basa en un equilibrio adecuado entre el crecimiento económico y la redistribución.

En el contexto de la crisis económica mundial, este informe muestra la urgencia de políticas equitativas. En particular, las tendencias actuales del desempleo, los altos precios de los alimentos y combustibles, así como la contracción del gasto público, apuntan a un empeoramiento de la desigualdad social en 2011. El artículo concluye abogando por medidas políticas urgentes en los planos nacional e internacional para garantizar una "recuperación para todos."

1.   Introduction

Viewed as an "unwelcomed" and "politically sensitive" topic, world income inequality received little attention in international fora for decades. In 2004, however, the International Labour Organization (ILO) published its pioneering report on the social dimension of globalization, *A Fair Globalization*. Soon after, major development institutions began to focus flagship publications on inequality, including the United Nations 2005 Report on the World Social Situation, *The Inequality Predicament*, the United Nations Development Programme's (UNDP) 2005 Human Development Report, *Aid, Trade and Security in an Unequal World*, the World Bank's 2006 World Development Report, *Equity and Development*, and the International Monetary Fund's (IMF) 2007 World Economic Outlook, *Globalization and Inequality*. UNICEF also initiated its Global Study on Child Poverty and Disparities in 2007, and the United Nations University's World Institute for Development Economics Research (UNU-WIDER) released a comprehensive study, The World Distribution of Household Wealth, in 2008 based on its World Income Inequality Database. More recently, the World Bank opened a research line fully devoted to global inequality: Poverty and Inequality. The unanimous drive of international institutions to understand and focus attention on income disparities shows that inequality can no longer be avoided in development policy discussions.

This working paper focuses exclusively on income inequality. While income is just one measure of inequality, it is often closely associated with social inequalities in terms of coverage and outcomes. There are other inequalities; precisely, UNICEF supports a multidimensional approach to poverty, based not only on income poverty, but on other deprivations like access to food, water, health, education, shelter, information and others.[1]

This working paper: (i) provides an overview of global, regional and national income inequalities based on the latest distribution data from the World Bank, UNU-WIDER and Eurostat; (ii) discusses the negative implications of rising income inequality for development; (iii) calls for placing equity at the center of development in the context of the United Nations development agenda; (iv) describes the likelihood of inequalities being exacerbated during the global economic crisis; and (v) advocates for urgent policy changes at national and international levels to ensure a "Recovery for All". To serve as a general reference source, Annex 2 provides a summary of the most up-do-date income distribution and inequality data for 141 countries.

2.   Income Inequality at the Global Level

How unequal is our world in terms of income distribution? Our analysis of global inequality trends builds on earlier work by UNDP (1992, 1999 and 2005), Bourguignon and Morrisson (2002), Sutcliffe (2004) and Milanovic (2005). There are two common approaches for estimating

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[1] UNICEF has produced an array of publications on different inequalities/deprivations facing women, children and poor families. See http://www.unicef.org/socialpolicy/index_43137.html.

global income distribution—the global and inter-country accounting models—and we estimate the results using both typologies. We first present the results in terms of market exchange rates and then discuss them under purchasing power parity (PPP) exchange rates (see Box 1 for discussion on income estimates and different exchange rates).

The purpose of this section is to provide a general picture as to how global income inequality has likely evolved between 1990 and 2007 and not to enter into the theoretical debate that underpins the art and science of distribution estimates, which involves, *inter alia*, accounting models, income metrics and exchange rates. As a result, we provide a detailed summary of the methodology used, along with the main challenges and caveats regarding our estimations, in Annex 1.

A.   Market exchange rates

We first look at global income distribution using market exchange rates, where all national income estimates are compared in constant 2000 U.S. dollars. Figure 1 and Table 1 show the distribution of world income from 1990 to 2007 according to the *global* accounting model, which decomposes national income by population quintiles and compares those across countries. This includes all individuals for which data is available, from the poorest quintile in the Democratic Republic of Congo to the richest quintile in Luxembourg (see Table 2). Annex 2 provides quintile information for all countries. The distribution data reveal an incredibly unequal planet. As of 2007, the wealthiest 20 percent of mankind enjoyed nearly 83 percent of total global income compared to the poorest 20 percent, which had exactly a single percentage point under the global accounting model. Perhaps more shocking, the poorest 40 percent of the global population increased its share of total income by less than one percent between 1990 and 2007.

Figure 1. Global Income Distribution by Population Quintiles, 1990-2007 (or latest available) in constant 2000 U.S. dollars
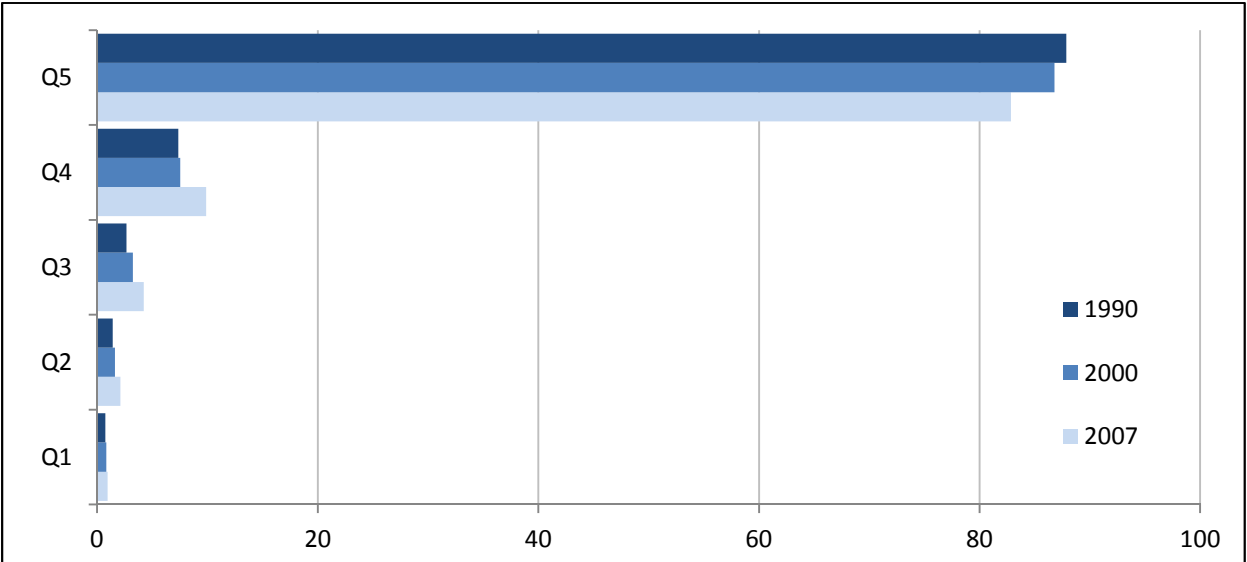
Source: Authors' calculations using World Bank (2011), UNU-WIDER (2008) and Eurostat (2011)

Table 1. Summary Results of Global Income Distribution by Population Quintiles, 1990-2007 (or latest available) in constant 2000 U.S. dollars

	Global Distribution (%)		
	1990	2000	2007
Q5	87.0	86.8	82.8
Q4	8.1	7.5	9.9
Q3	2.8	3.2	4.2
Q2	1.4	1.6	2.1
Q1	0.8	0.8	1.0
# of observations	100	126	135
% of global population	86.3	91.1	92.4
% of global GDP	79.0	81.4	82.6

Source: Authors' calculations using World Bank (2011), UNU-WIDER (2008) and Eurostat (2011)

Table 2. Poorest and Richest Population Quintiles in the World, 2007 (or latest available) in constant 2000 U.S. dollars

Poorest				Richest			
Country	Quintile	GDP per capita	Population	Country	Quintile	GDP per capita	Population
Dem. Rep. of Congo	1	26	12,504,557	Luxembourg	5	104,189	95,999
Dem. Rep. of Congo	2	43	12,504,557	United States	5	96,946	60,316,000
Liberia	1	47	725,457	Singapore	5	76,189	917,720
Haiti	1	49	1,944,017	Switzerland	5	73,404	1,510,223
Burundi	1	49	1,567,596	Norway	5	70,184	941,831
Niger	1	50	2,827,937	Luxembourg	4	63,986	95,999
Guinea-Bissau	1	51	308,208	Ireland	5	63,507	871,386
Malawi	1	52	2,887,899	United Kingdom	5	58,408	12,196,061
Central African Rep.	1	60	851,481	Denmark	5	56,421	1,092,288
Dem. Rep. of Congo	3	65	12,504,557	Sweden	5	55,543	1,829,618

Source: Authors' calculations using World Bank (2011), UNU-WIDER (2008) and Eurostat (2011)

The severity of inequality in global income distribution is perhaps best depicted by a distinctive three-dimensional figure based on country population quintiles. In Figure 2, each vertical column represents the income of one quintile of one country. Here, the tallest block in the back corner reflects the income of the richest quintile of the population of Luxembourg, while the column that is barely discernible in the nearest corner represents the income of the poorest quintile of the population of the Democratic Republic of Congo. Overall, this figure captures data for 135 countries as of 2007 using constant 2000 U.S. dollars.

**Figure 2. A Visualization of Global Income Distribution, 2007
(or latest available) in constant 2000 U.S. dollars**
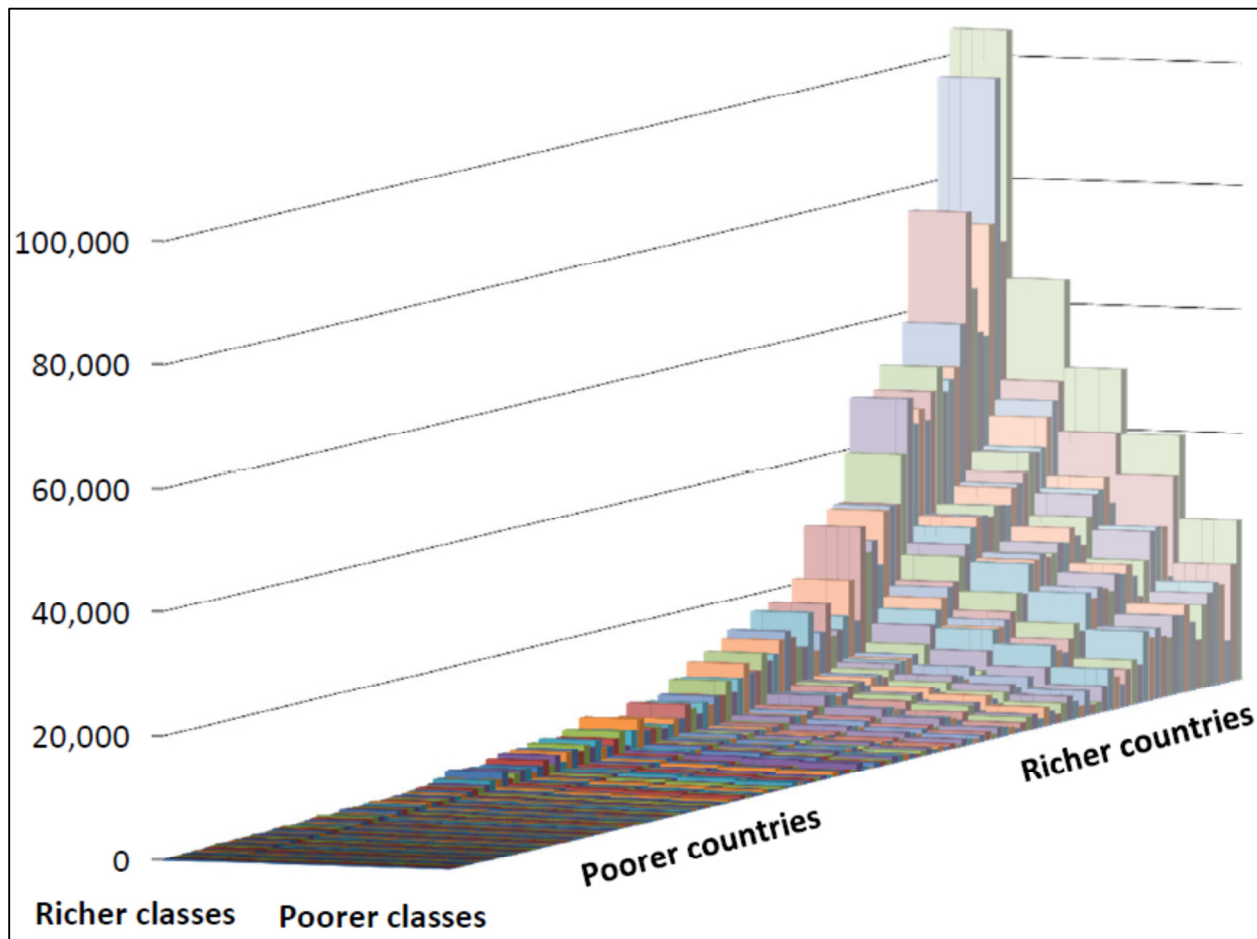
Source: Adapted from Sutcliffe (2005) using World Bank (2011), UNU-WIDER (2008) and Eurostat (2011)

However, not all countries have distribution data. As Table 1 shows, we have data for 100 countries in 1990, 126 countries in 2000 and 135 countries in 2007 (Annex 2). Still under market exchange rates, we now turn to a second approach to measuring global income distribution, which is known as the *inter-country* accounting model. This method looks at the average income differences between large groupings of countries by treating all members of a country as if they have the same income and then dividing the world into population quintiles. This method is less precise, but allows us to estimate global income distribution for most of the world, a total of 182 countries in 2007. Figure 3 and Table 3 present the income distribution results from 1990 to 2007. Here, the wealthiest 20 percent of the population enjoyed more than 81 percent of the world's income as of 2007, with the poorest 20 percent holding on to just over one percent. Similar to the global accounting model, the rate of change for the poorest 40 percent of the world population remains dismal at one percent between 1990 and 2007. The poorest and richest countries in the world as of 2007 are listed in Table 4 according to the inter-country accounting model under market exchange rates.

**Figure 3. Global Income Distribution by Countries, 1990-2007
(or latest available) in constant 2000 U.S. dollars**
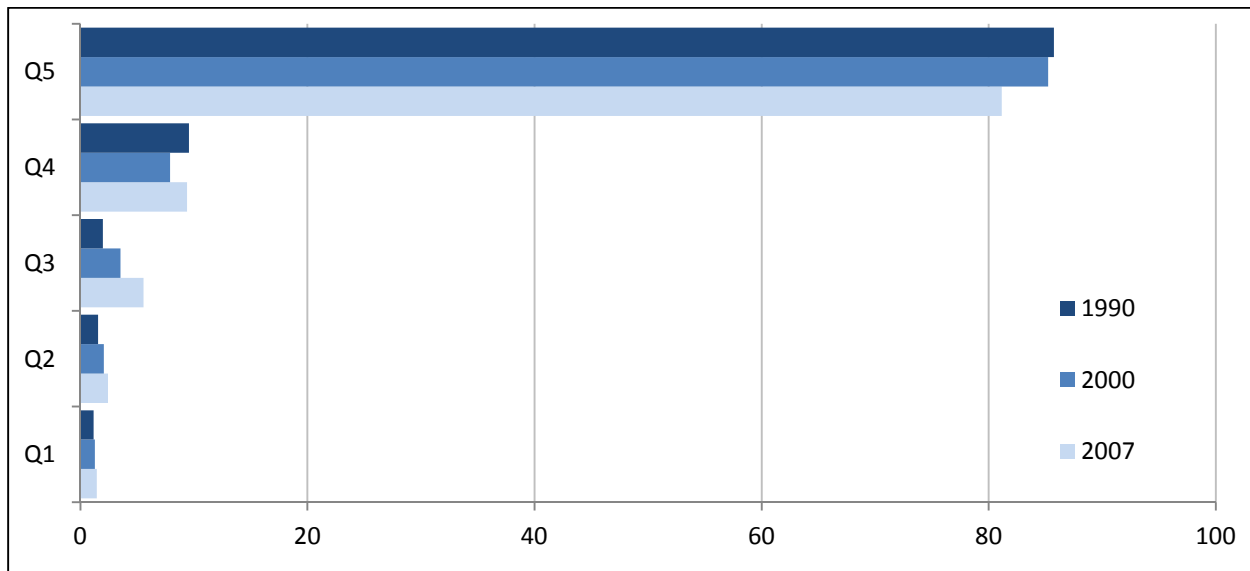
Source: Authors' calculations using World Bank (2011)

Table 3. Summary Results of Global Income Distribution by Countries, 1990-2007

	Inter-country Distribution (%)		
	1990	2000	2007
Q5	85.7	85.2	81.2
Q4	9.6	7.9	9.4
Q3	2.0	3.5	5.6
Q2	1.6	2.1	2.4
Q1	1.2	1.3	1.4
# of observations	173	180	182
% of global population	97.0	97.6	97.6
% of global GDP	98.3	98.3	98.1

Source: Authors' calculations using World Bank (2011)

**Table 4. Poorest and Richest Countries in the World, 2007
(or latest available) in constant 2000 U.S. dollars**

Poorest 10			Richest 10		
Country	GDP per capita	Population	Country	GDP per capita	Population
Dem. Rep. of Congo	94	62,522,787	Monaco	106,466	32,620
Burundi	110	7,837,981	Bermuda	72,296	64,000
Guinea-Bissau	140	1,541,040	Luxembourg	56,625	479,993
Liberia	144	3,627,285	Norway	41,901	4,709,153
Malawi	148	14,439,496	Japan	40,707	127,770,750
Eritrea	151	4,781,169	United States	38,701	301,580,000
Niger	171	14,139,684	Iceland	38,166	311,566
Ethiopia	176	78,646,128	Switzerland	37,935	7,551,117
Tajikistan	231	6,727,377	Qatar	34,960	1,137,553
Central African Rep.	231	4,257,403	Hong Kong	34,041	6,925,900

Source: Authors' calculations using World Bank (2011)

B.   PPP exchange rates

The earlier set of findings for the global accounting model was based on market exchange rates. But what happens if we compare national income estimates using PPP-adjusted exchange rates?

Box 1. Two Different Benchmarks for Measuring GDP or Income

There are two main methods of comparing national income estimates across countries. The first uses the market exchange rate, which is the actual rate in the foreign exchange market. And the second uses the PPP exchange rate—the rate at which the currency of one country would have to be converted into that of another country to buy the same amount of goods and services in each country. The pros and cons of using PPP-adjusted exchange rates to estimate national income are briefly summarized below.

Drawbacks of PPP: The biggest downside to using PPP rates is that they are much harder to measure than market-based rates. The International Comparisons Program (ICP) was established by the United Nations and the University of Pennsylvania in 1968 to generate PPPs, which involves gathering national average prices for 1,000 closely specified products in participating countries (the previous round was held from 2003-06 and covered 146 countries). Apart from the vast amount of work, there are methodological questions regarding price surveys, meaning that PPP rates are unlikely to be consistent over time or between different estimates (Callen 2007).

The so-called "substitution bias" is another weakness of PPP exchange rates. This refers to the practice of assigning U.S. prices to services consumed by people in developing countries. In reality, however, U.S. prices for services tend to be much higher than those in developing countries, and PPP-derived income estimates are likely to be inconsistent with actual consumption structures and result in artificial substitution (Dowrick and Akmal 2005). Similar to this is the fact that it is unrealistic to compare countries with very different consumption patterns.

A further drawback to using PPPs is contrasting results. While there are three available series of PPP-adjusted GDP data—Maddison, Penn World Table and World Bank—all of which are based on the PPP rates produced by the ICP, comparing these different sources produces significant variations across countries. This means that PPP income estimates will vary according to the data source selected (Sutcliffe 2003).

Advantages of PPP: Many argue that PPP rates are better than market rates when comparing GDP across countries because PPP attempts to measure this value at a common set of prices. In particular, the exchange rate measure implies that all national output is sold on world markets and that all national consumption is imported—a very unrealistic assumption often referred to as the "traded sector bias." Since non-traded goods and services tend to be cheaper in low-income countries when compared to higher-income countries, any analysis that fails to take these price differences into account will underestimate the purchasing power of consumers in developing countries and, consequently, their overall welfare or income share. PPP exchange rates further have the advantage of being relatively stable over time whereas market rates are more volatile.

Does it make a difference? The per capita income gap between the richest and poorest global population quintiles—as well as individual countries—is reduced under PPP exchange rates according to our estimates, a finding that reflects the well-known fact that PPP exchange rates are higher than market ones. Some countries also move up or down the income scale depending on the metric used. Irrespective of method, however, income disparities remain exceptionally high.

Figure 4 and Table 5 show the distribution of world income from 1990 to 2007 using a PPP dataset in constant 2005 international dollars. While the overall picture of global inequality improves under the PPP measure, the data still confirm grave income disparities. As of 2007, the top 20 percent of the world controlled about 70 percent of total income compared to just two percent for the bottom 20 percent. Regarding change, the poorest 40 percent of the global population increased its share of total income by a meager 1.7 percent between 1990 and 2007. Table 6 lists the ten highest and lowest income quintiles for the world in 2007 using PPP exchange rates, and Figure 5 presents the three-dimensional illustration of income distribution also under PPP-adjusted exchange rates.

Figure 4. Global Income Distribution by Population Quintiles, 1990-2007 (or latest available) in PPP constant 2005 international dollars
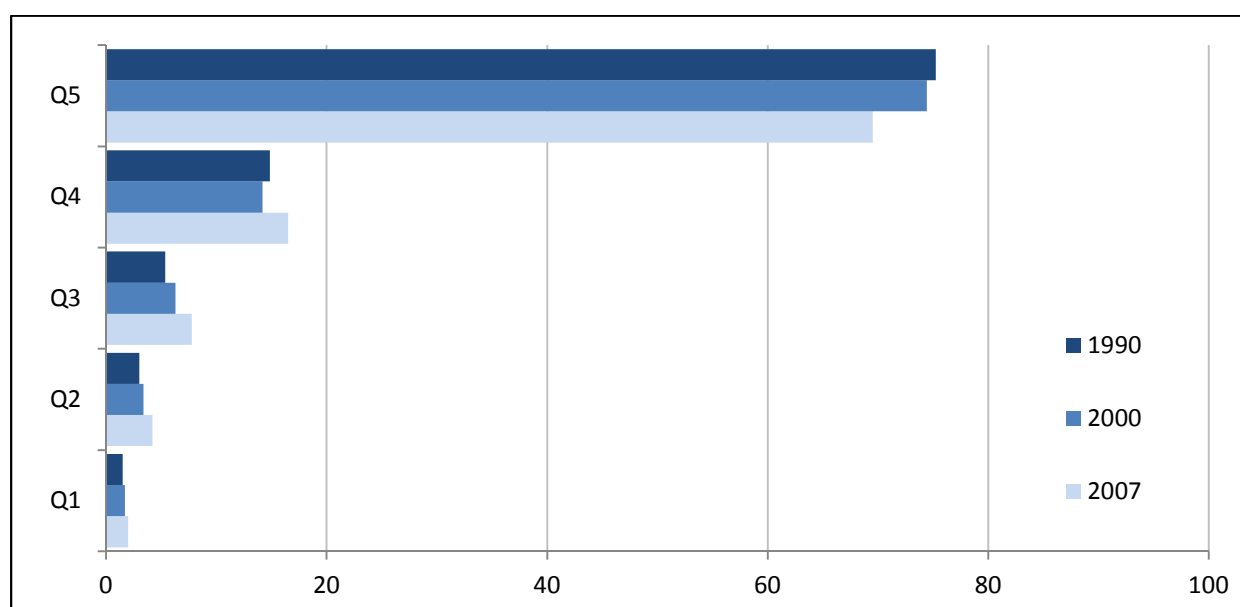
Source: Authors' calculations using World Bank (2011), UNU-WIDER (2008) and Eurostat (2011)

Table 5. Summary Results of Global Income Distribution by Population Quintiles, 1990-2007 (or latest available) in PPP constant 2005 international dollars

	Global Distribution (%)		
	1990	2000	2007
Q5	75.3	74.4	69.5
Q4	14.9	14.2	16.5
Q3	5.4	6.3	7.8
Q2	3.0	3.4	4.2
Q1	1.5	1.7	2.0
# of observations	99	127	136
% of global population	86.1	91.1	92.4
% of global GDP	85.3	87.4	88.6

Source: Authors' calculations using World Bank (2011), UNU-WIDER (2008) and Eurostat (2011)

**Table 6. Poorest and Richest Population Quintiles in the World, 2007
(or latest available) in PPP constant 2005 international dollars**

Poorest				Richest			
Country	Quintile	GDP per capita	Population	Country	Quintile	GDP per capita	Population
Dem. Rep. of Congo	1	77	12,504,557	Luxembourg	5	136,936	95,999
Liberia	1	113	725,457	Singapore	5	121,781	917,720
Dem. Rep. of Congo	2	129	12,504,557	United States	5	109,373	60,316,000
Haiti	1	132	1,944,017	Luxembourg	4	84,096	95,999
Burundi	1	156	1,567,596	Norway	5	81,739	941,831
Niger	1	175	2,827,937	Ireland	5	80,832	871,386
Central African Rep.	1	178	851,481	Switzerland	5	73,248	1,510,223
Lesotho	1	191	406,335	Canada	5	72,032	6,595,200
Dem. Rep. of Congo	3	193	12,504,557	Seychelles	5	70,113	17,006
Liberia	2	199	725,457	Netherlands	5	69,311	3,276,339

Source: Authors' calculations using World Bank (2011), UNU-WIDER (2008) and Eurostat (2011)

**Figure 5. A Visualization of Global Income Distribution in 2007
(or latest available) in PPP constant 2005 international dollars**
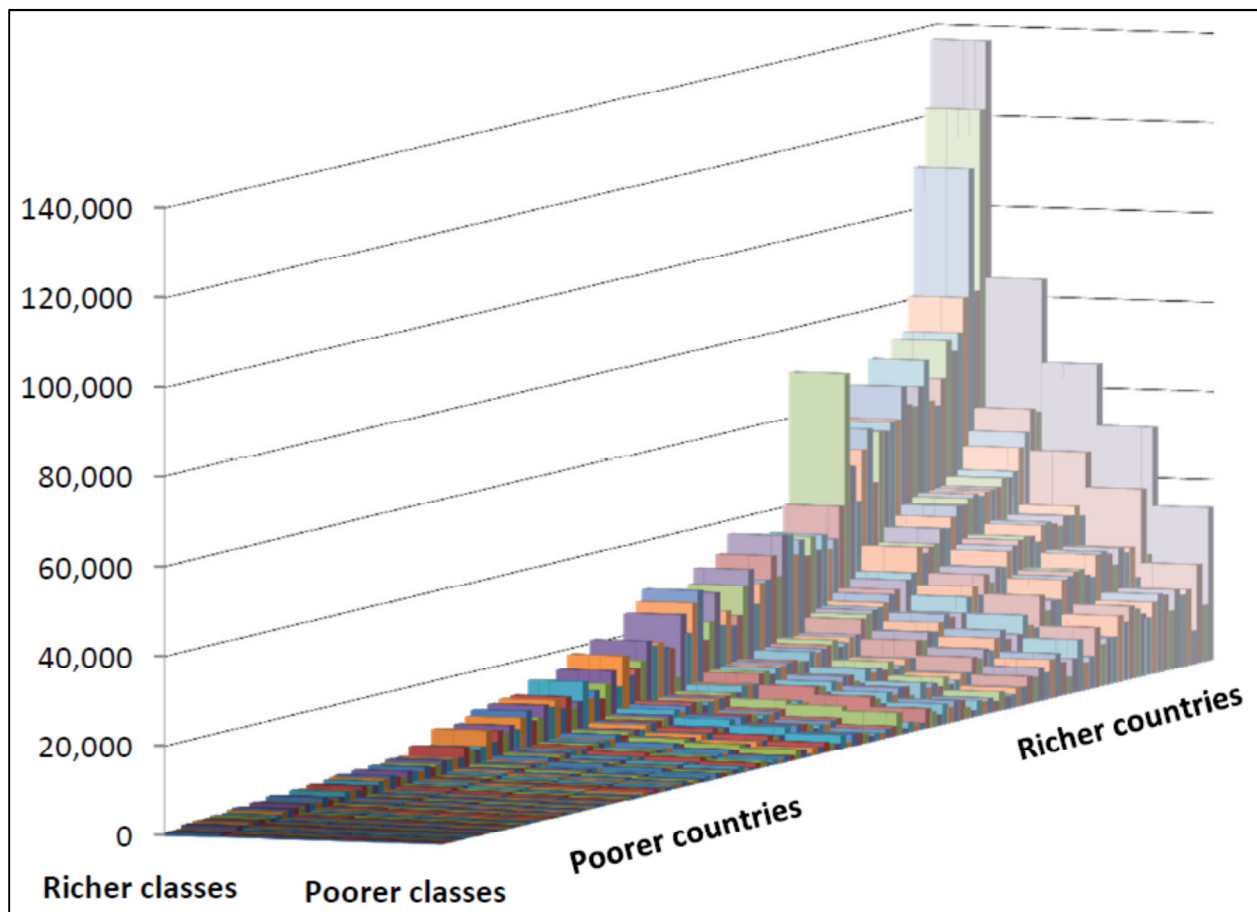
Source: Adapted from Sutcliffe (2005) using World Bank (2011), UNU-WIDER (2008) and Eurostat (2011)

We also present the inter-country accounting model using PPP estimates in order to allow us to see the picture for almost the entire world countries instead of a smaller set of countries (Figure 6 and Table 7). As in the PPP-adjusted global accounting model, inequality marginally improves under this method, but world income disparities are still severe. Whereas the top 20 percent of the global population controlled about 64 percent of total income as of 2007, the bottom 20 percent had just over three percent. Similarly, in terms of change, the poorest 40 percent of the global population increased its share of total income by only three percentage points over nearly two decades. Table 8 lists the ten highest and lowest income quintiles for the world in 2007 under PPP exchange rates.

Figure 6. Global Income Distribution by Countries, 1990-2007 (or latest available) in PPP constant 2005 international dollars
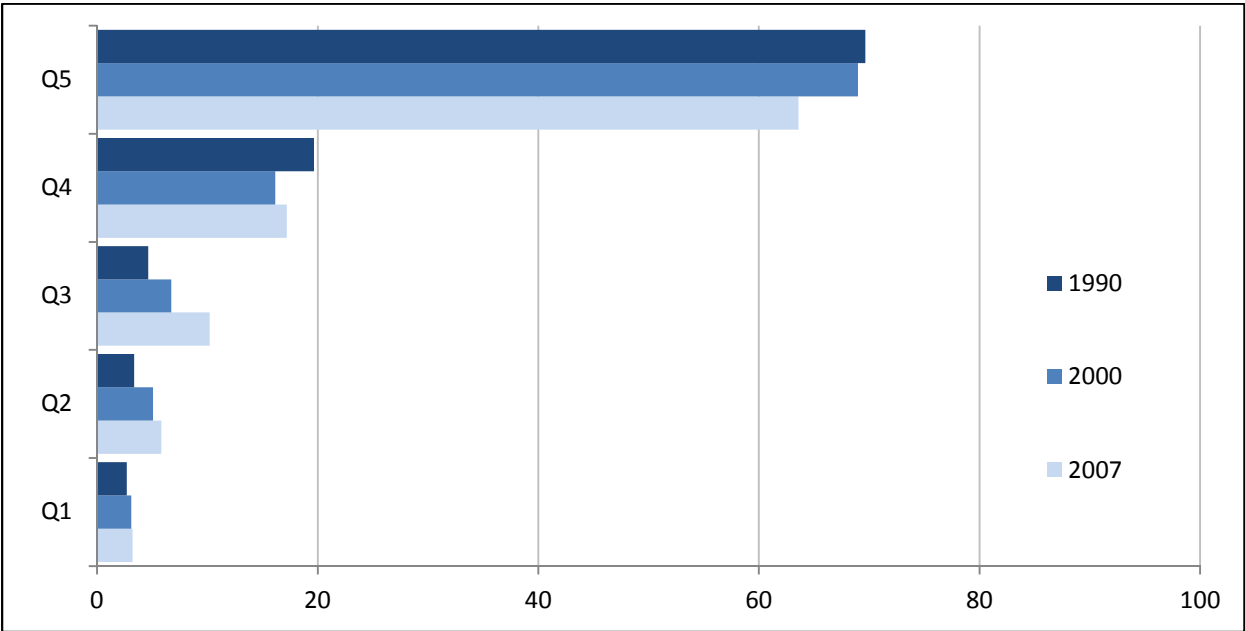
Source: Authors' calculations using World Bank (2011)

Table 7. Summary Results of Global Income Distribution by Countries, 1990-2007 (or latest available) in PPP constant 2005 international dollars

| | Inter-country Distribution (%) | | |
	1990	2000	2007
Q5	69.7	69.0	63.6
Q4	19.7	16.1	17.2
Q3	4.6	6.7	10.2
Q2	3.4	5.1	5.8
Q1	2.7	3.1	3.2
# of observations	168	174	174
% of global population	96.9	97.4	97.4
% of global GDP	98.2	98.3	98.2

Source: Authors' calculations using World Bank (2011)

**Table 8. Poorest and Richest Countries in the World, 2007
(or latest available) in PPP constant 2005 international dollars**

Poorest 10			Richest 10		
Country	GDP per capita	Population	Country	GDP per capita	Population
Dem. Rep. of Congo	281	62,522,787	Qatar	75,415	1,137,553
Burundi	349	7,837,981	Luxembourg	74,422	479,993
Liberia	350	3,627,285	United Arab Emirates	52,944	4,363,913
Eritrea	599	4,781,169	Singapore	49,739	4,588,600
Niger	599	14,139,684	Norway	48,800	4,709,153
Timor-Leste	675	1,064,141	United States	43,662	301,580,000
Central African Rep.	683	4,257,403	Ireland	41,136	4,356,931
Malawi	697	14,439,496	Hong Kong	39,958	6,925,900
Sierra Leone	702	5,420,400	Switzerland	37,854	7,551,117
Mozambique	741	21,869,362	Netherlands	37,466	16,381,696

Source: Authors' calculations using World Bank (2011)

C.   The takeaway

Both income distribution accounting models offer strikingly similar results. Under market exchange rates, we inhabit a planet in which the top quintile controls more than 80 percent of global income contrasted by a paltry percentage point for those at the bottom. While the disparity improves under PPP exchange rates (67 to 2.6 percent), both models reveal a world that is deeply corroded by income disparities. Each of the accounting methods and exchange rate scenarios also suggest that some progress is taking place for the poorest; however, the sluggish pace of change is clearly unacceptable. Using the rate of change under the global accounting model with market exchange rates, it took 17 years for the bottom billion to improve their share of world income by 0.18 percentage points, from 0.77 percent in 1990 to 0.95 percent in 2007 (see Q1 in Table 1). At this speed, it would take more than eight centuries (855 years to be exact) for the bottom billion to have ten percent of global income.[2]

3.   Global Income Inequality Trends and the Poor, Children and Women

While the previous section showed the vast income inequalities that characterize our world, this section sets out to answer some of the more pressing questions regarding the overlying trends and impacts of this reality. In particular, what do we know about global inequality trends over a longer-term horizon? What do the extreme distortions in income distribution at the global level mean for different groups, such as the poor, children, women or the middle classes? And are there alternative measures of wealth that could shed further light on the overall state of global inequality at present?

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[2] Under PPP-adjusted exchange rates, it would take about three centuries (272 years) (see Q1 in Table 5).

A.   Income inequality in historical perspective

What do we know about world income inequalities over the past centuries? Studies using longer time series conclude that income inequality has been constantly increasing since the early 19th century. Milanovic (2009), for example, calculates Gini indices[3] over time and finds that global income inequality rose steadily from 1820 to 2002, with a significant increase from 1980 onwards (Table 9).[4] To further inform the more recent trajectory, Cornia (2003) concludes that inequality increased globally between the early 1980s and 1990s following a review of different studies. While our analysis shows some reversal of this trend, there is a significant likelihood that income inequality is being exacerbated in the ongoing global economic crisis (Section 8).

Table 9. Estimated Global Gini Indices, 1820-2002

Year	Gini
1820	43.0
1850	53.2
1870	56.0
1913	61.0
1929	61.6
1950	64.0
1960	63.5
1980	65.7
2002	70.7

Source: Milanovic (2009)

B.   The poor

What does global inequality mean for the poor? An illustration of global income disparities adapted from UNDP (1992 and 2005) helps to contextualize the extremity of inequality that faces an incredibly large number of poor persons. In Figure 7, global income distribution resembles a "champagne glass" in which a large concentration of income at the top trickles down to a thin stem at the bottom. Overall, this provides a powerful graphic in terms of the scant amount of income that is available to the poor on a global scale. In particular, approximately 1.2 billion were living on less than $1.25 per day in 2007 (22 percent of the world population) and about 2.2 billion on less than $2 per day (or about 40 percent of the world population).[5] An alternative way of viewing the "champagne glass" is to compare the top percent of world income earners versus the bottom. In doing so, we find that the wealthiest 61 million individuals (or one percent of the global population) had the same amount of income as the poorest 3.5 billion (or 56 percent) as of 2007.

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[3] The Gini index is the most commonly used measure of income inequality, where 0 is perfect equality (e.g. each person has exactly the same income) and 1 is perfect inequality (e.g. one person has all income). See Box 2 for a more detailed discussion on Gini indices.

[4] See Annex 2 for Gini index values for most countries in recent years.

[5] Based on PPP estimates in constant 2005 international dollars from Chen and Ravallion (2008).

Figure 7. Global Income Distributed by Percentiles of the Population in 2007 (or latest available) in PPP constant 2005 international dollars*
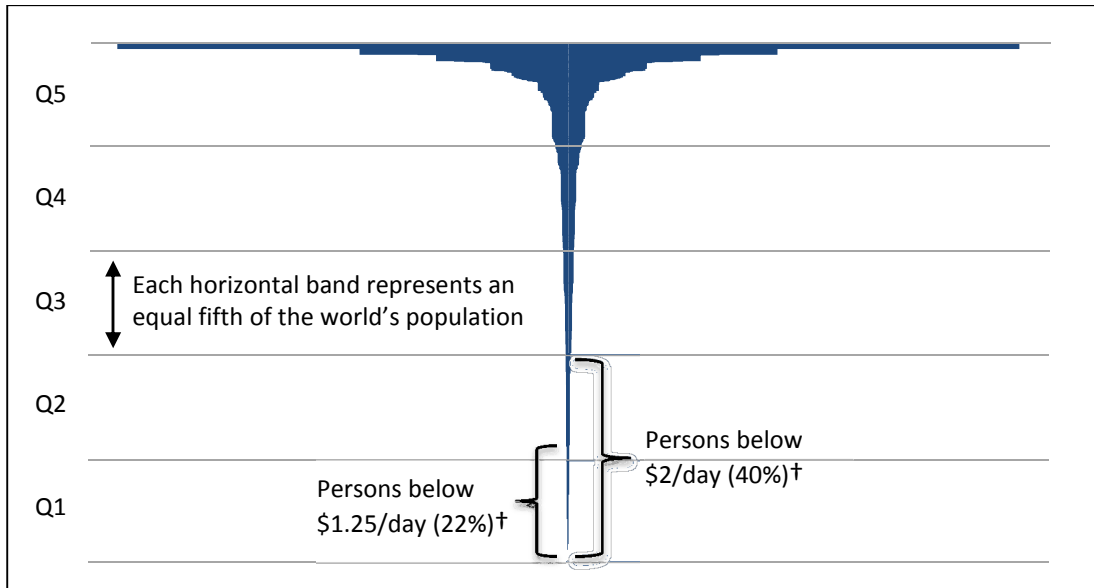
Source: Adapted from UNDP (2005) using World Bank (2011), UNU-WIDER (2008) and Eurostat (2011)
* According to the global accounting model
† Based on Chen and Ravallion (2008)

C.   Children and youth

How does the global distribution of income affect children and youth? At the global level, most children live in the poorest income quintiles (Figure 8). When comparing the concentration of youth populations across global income distribution quintiles, we find that about half (48.5 percent) of the world's young persons are confined to the bottom two income quintiles. This means that out of the three billion persons under the age of 24 in the world as of 2007, approximately 1.5 billion were living in situations in which they and their families had access to just nine percent of global income. Such findings are not shocking given that poorer families tend to have higher fertility rates. Moving up the distribution pyramid, children and youth do not fare much better: more than two-thirds of the world's youth have access to less than 20 percent of global wealth, with 86 percent of all young people living on about one-third of world income. For the just over 400 million youth who are fortunate enough to rank among families or situations atop the distribution pyramid, however, opportunities abound with more than 60 percent of global income within their reach.

**Figure 8. Global Income Distribution and Children/Youth in 2007
in PPP constant 2005 international dollars***
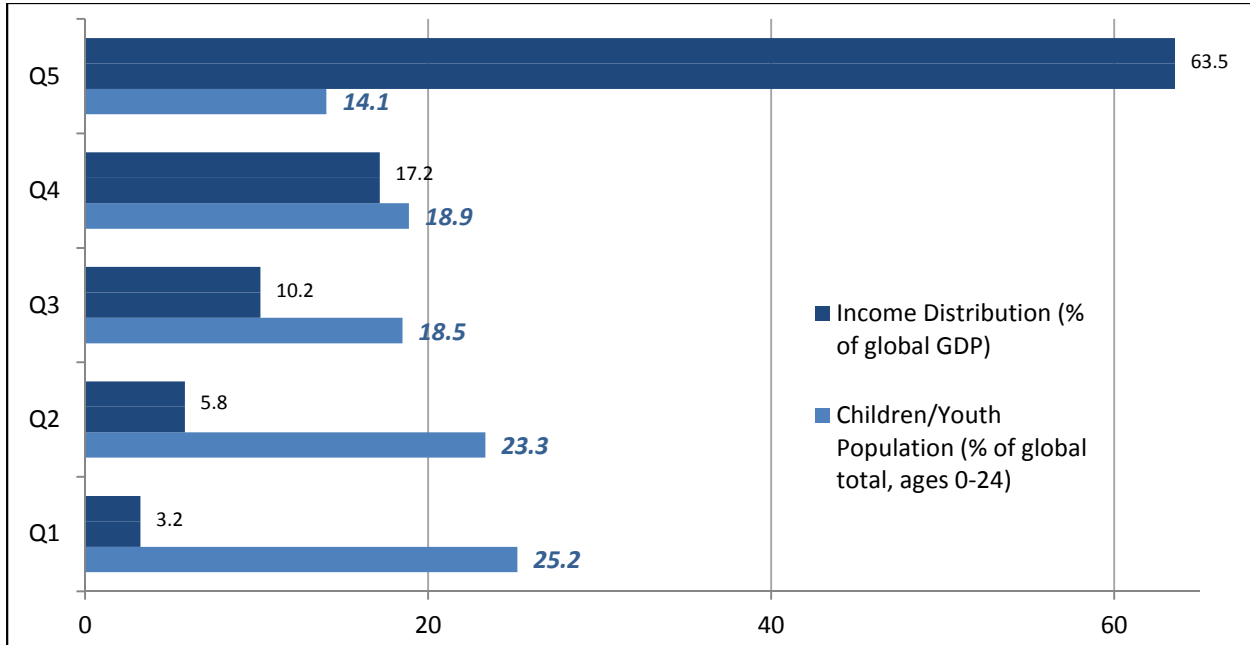
Source: Authors' calculations using World Bank (2011), UNU-WIDER (2008) and United Nations (2009)
* According to the inter-country accounting model

D.   Women

Unlike children and youth, using the same data and methodology, the distribution of income at the global level does not appear to have a disproportionate, negative impact on women (Figure 9). When examining the percentage of females across global income distribution quintiles, we find that the dispersion is, in fact, nearly equal, with each income quintile containing about 20 percent of the global female population. Given that the female-to-male ratio was about 1:1 as of 2007,[6] this comes as little surprise. This finding remains unchanged even when further restricting the global female population to girls and young women: about half of women 24 years old or younger are situated in the bottom two income quintiles, which mirrors the proportion of children and youth as presented in Figure 8.[7]

In sum, the global distribution of income has a much stronger impact on age than gender, largely reflecting higher fertility rates among poorer women. This is not to say that intra-household income disparities don't exist; however, based on the available aggregate income data at the global level, it is not possible to identify the dispersion of income among household members. It should be noted that this does not imply that other gender and age-related

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[6] According to United Nations (2009), females slighted outnumbered males globally in 2007—51.1 to 48.9 percent.
[7] These findings apply to both the inter-country and global accounting models.

disparities do not exist. In fact, UNICEF has long advocated for a multidimensional approach to addressing inequalities beyond income, such as education, nutrition, health, information, etc.[8]

Still, the numbers of adult women and girls living in poverty are alarming. As of 2007, roughly 20 percent of women were below the $1.25/day international poverty line, and 40 percent below the $2/day mark. Girls and younger women also suffer disproportionately from poverty, as more than one-quarter of females under the age of 25 were below the $1.25/day international poverty line, and about half on less than $2/day.

Figure 9. Global Income Distribution and Gender in 2007 in PPP constant 2005 international dollars*
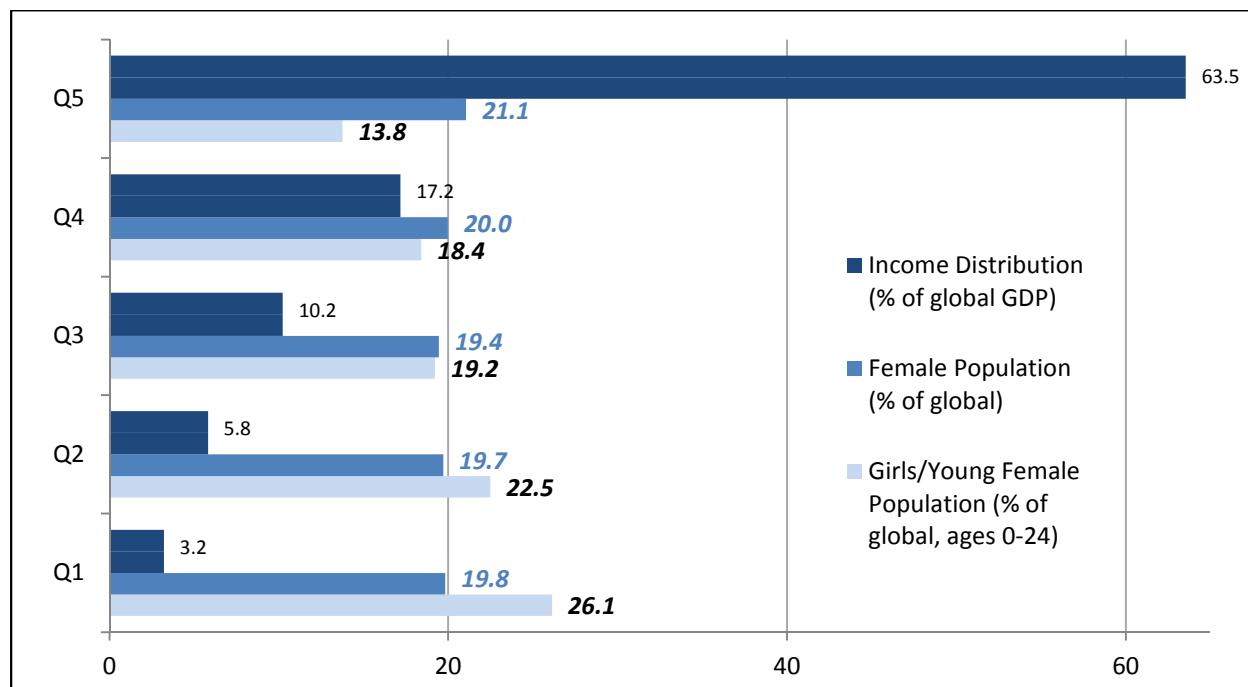
Source: Authors' calculations using World Bank (2011), UNU-WIDER (2008) and United Nations (2009)
* According to the inter-country accounting model

E.   Middle classes

Looking at distribution information across country income groupings (e.g. low-, middle- and high-income) adds further insight into the evolution of income inequality in the world (Figure 10 and Table 10). Viewed from this perspective, there are two striking observations. One is the extremely high level of inequality that characterizes middle-income countries. The second is the relative loss of income—or absence of change—of the middle and lower classes in favor of the wealthier, upper-income groups in both low- and high-income countries over time.

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[8] Please visit the following website for more information: http://www.unicef.org/gender/index.html.

**Figure 10. Income Distribution by Country Income Levels, 1990-2007
(or latest available) in PPP constant 2005 international dollars***
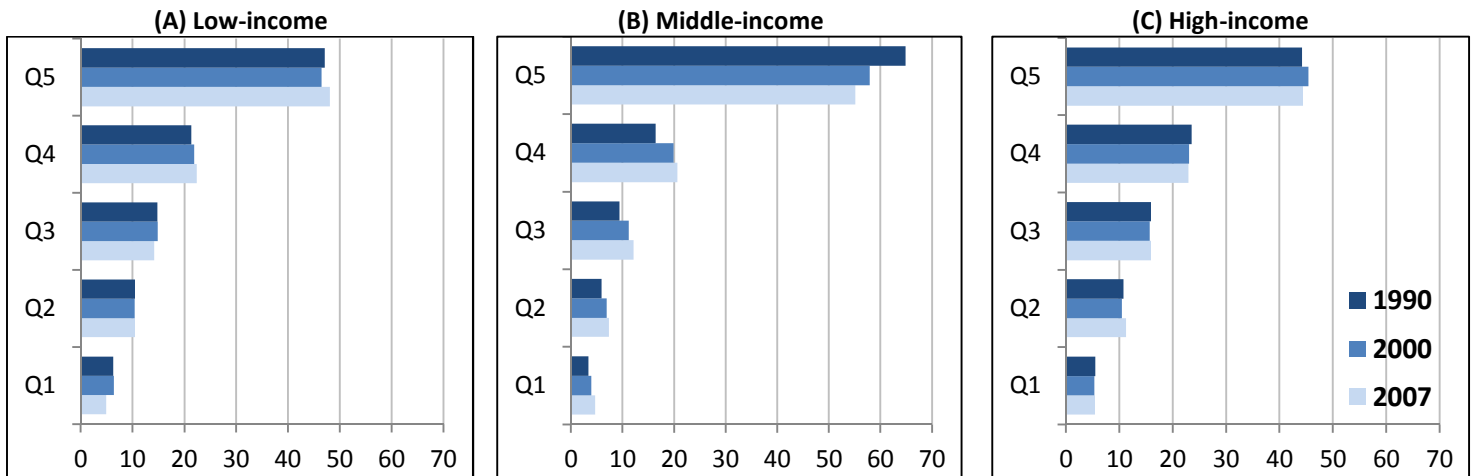
Source: Authors' calculations using World Bank (2011), UNU-WIDER (2008) and Eurostat (2011)
* According to the global accounting model

**Table 10. Summary Results of Income Distribution by Income Levels, 1990-2007
(or latest available) in PPP constant 2005 international dollars***

	Low-income			Middle-income			High-income		
	1990	**2000**	**2007**	**1990**	**2000**	**2007**	**1990**	**2000**	**2007**
Q5	47.1	46.5	48.1	64.9	58.0	55.2	44.2	45.4	44.4
Q4	21.3	21.9	22.4	16.4	19.9	20.6	23.5	23.0	22.9
Q3	14.7	14.8	14.1	9.4	11.2	12.2	16.0	15.7	16.0
Q2	10.5	10.4	10.5	5.9	7.0	7.4	10.8	10.5	11.2
Q1	6.3	6.4	4.9	3.4	4.0	4.7	5.5	5.3	5.4
# of observations	31	26	17	49	70	74	33	31	31
% of global population	4.8	7.9	9.9	66.1	69.3	69.0	15.2	14.0	13.5
% of global GDP	0.6	0.8	1.0	29.7	32.0	38.5	55.0	54.5	49.1
% of sample population	5.6	8.6	10.7	76.8	76.0	74.7	17.7	15.4	14.6
% of sample GDP	0.7	1.0	1.2	34.8	36.7	43.4	64.5	62.4	55.4

Source: Authors' calculations using World Bank (2011), UNU-WIDER (2008) and Eurostat (2011)
* According to the global accounting model

While most of middle-income countries increased inequality in recent years, it is important to note that middle classes and—to a lesser extent—poorer-income groups seem to be getting an increasing share of income in recent years. This advance is still vulnerable and needs to be quickly accelerated in the 21st century (Ravallion 2009).

Middle classes and poorer-income groups appear to be doing worse in both low- and high-income countries—for the benefit of the richest quintile. This has generated debate on how states need to meet the welfare needs of all of their citizens, including the middle classes who are critical for nation building (Birdsall 2010). From an equity point of view, what is clear is that growth and development should not only be "pro-rich," as it tends to be now, but ensure

equitable outcomes for all. For lower-income countries, this implies evolving from "poverty reduction" to "inclusive development" (Deacon 2010).

F.   Alternative metrics: Wealth distribution

It is important to note that income inequality measures, which are often based on household consumption, do not capture other household wealth, such as financial assets, real estate and savings instruments that high income groups commonly possess. Some recent studies do include metrics for wealth, and they offer an even more unequal depiction of our world (Table 11). For instance, ILO (2008:44) estimates that the global Gini index based on wealth was 89.2 in 2000, a number which is significantly higher than most measures of global income inequality. And according to UNU-WIDER, the top ten percent of adults own 85 percent of global household wealth; the average member of the top decile has nearly 3,000 times the mean wealth of the bottom decile (Davies et al. 2008:7).

Table 11. Wealth Inequality in Selected Countries

Country	Wealth Gini (2000)	Income Gini	Year
Argentina	74.0	50.1	2005
Australia	62.2	31.2	2003
Bangladesh	65.8	33.5	1996
Brazil	78.3	56.6	2004
Canada	66.3	31.5	2000
China	55.0	44.9	2003
France	73.0	27.8	2000
Germany	67.1	31.1	2004
India	66.9	36.5	1997
Indonesia	76.3	39.6	1996
Italy	60.9	33.3	2000
Japan	54.7	31.9	1998
South Korea	57.9	37.2	1998
Mexico	74.8	49.9	2004
Nigeria	73.5	52.2	1996
Pakistan	69.7	39.8	1996
Spain	56.5	33.6	2000
Taiwan	65.4	33.9	2003
Thailand	70.9	42.7	2001
United States	80.1	46.4	2004
Viet Nam	68.0	37.3	1998

Source: Davies et al. (2008:9)

Having teased out some of the broader trends and implications of income and other inequalities at the global level, the following sections turn to income inequality at the regional and country levels.

4.   Income Inequality across Regions

The recent publication of the Standardized World Income Inequality Database (SWIID) (Solt 2009) allows us to compare the evolution of income inequality in a sample of 141 countries from 1990-2008 using Gini indices (see Box 2 for a discussion on Gini indices).

Box 2. Gini Indices and Caveats

The Gini index is the most commonly used measure of income inequality. It is derived from the Gini coefficient, which is based on the Lorenz curve whereby 0 is perfect equality (e.g. each person has exactly the same income) and 1 is perfect inequality (e.g. one person has all income).

Selecting Gini indices to gauge national income inequality can be just as controversial as selecting distribution estimates, especially when comparing across countries (See Annex 1). In fact, most of the contention revolves around the same issues: differing household survey methodologies within and across countries—which are the basis for estimating Gini coefficients—and large data gaps over time. It is also important to note that Gini indices cannot be compared globally due to the different assumptions behind their calculations.

The SWIID (Solt 2009) is the most comprehensive attempt at developing a cross-nationally comparable database of Gini indices across time. The SWIID standardizes Gini estimates from all major existing resources of inequality data, including UNU-WIDER (2008), the World Bank's PovcalNet, the Socio-Economic Database for Latin America, Branko Milanovic's World Income Distribution data, and the ILO's Household Income and Expenditure Statistics, as well as a host of national statistical offices and other sources. Overall, the SWIID includes Gini estimates for gross and net income inequality for 171 countries from 1960 to 2009 and allows us to examine changes in *net income inequality* for 132 countries between 1990 and 2008. While this is, of course, far from the ideal set of Gini indices—all methodology caveats remain fully valid—it is the best database currently available.

The development of Gini indices across regions over the past two decades reveals mixed trends regarding income inequality (Table 12). According to 2008 Gini index estimates based on Solt (2009), Latin America and the Caribbean is the region with the highest levels of income inequality, and Sub-Saharan Africa is not far behind. On the other side of the spectrum, high-income countries emerge as the most equal group of countries—by a wide margin—with Eastern Europe and Central Asia ranking as the second most equal region.

Table 12. Gini Index Values by Region, 1990-2008 (or latest available)*
(unweighted average values)

Region	1990	2000	2008	2008-1990 Change	2008-2000 Change
Asia	36.4	40.0	40.4	4.0	0.6
Eastern Europe and Central Asia	26.7	33.2	35.4	8.7	2.2
Latin America and the Caribbean	46.9	49.2	48.3	1.5	-1.3
Middle East and North Africa	39.2	39.2	39.2	0.0	0.0
Sub-Saharan Africa	49.1	46.1	44.2	-4.8	-1.8
High-income Countries	27.4	30.8	30.9	3.5	0.0
Number of Observations	137	140	141	132	132

Source: Authors' calculations using Solt (2009)
* Gini index values based on net income

Table 13. Top Performers in Reducing Inequality, 2000-08 (or latest available) [based on change in Gini index according to Solt (2009)]	
Asia	
Thailand	-4.0
Malaysia	-3.0
Philippines	-2.6
Mongolia	-2.0
Eastern Europe and Central Asia	
Azerbaijan	-14.7
Moldova	-4.9
Latin America	
Brazil	-4.6
Peru	-3.4
Argentina	-3.4
Chile	-3.2
Paraguay	-2.9
El Salvador	-2.4
Bolivia	-2.2
Mexico	-2.2
Panama	-2.1
Nicaragua	-2.0
Venezuela	-2.0
Middle East and North Africa	
Egypt	-2.9
Iran	-2.4
Sub-Saharan Africa	
Lesotho	-7.9
Malawi	-6.4
Ethiopia	-4.8
Burundi	-4.6
Mali	-4.6
Sierra Leone	-4.2
Burkina Faso	-4.0
Uganda	-3.5
Nigeria	-3.4
Gabon	-3.2
Swaziland	-2.9
Guinea	-2.6
Cameroon	-2.5
Senegal	-2.5
Niger	-2.3
High-income Countries	
Estonia	-4.1
New Zealand	-3.3
South Korea	-2.8
Spain	-2.3
Belgium	-2.2
Sweden	-2.2
Croatia	-2.1

In terms of change, Eastern Europe and Central Asia along with Asia appear as the worst performers on average, having increased their Gini indices by nearly nine and four points, respectively, between 1990 and 2008. These regions also emerge as the worst performers over the nearer term, with 2.2 and 0.6 point increases, respectively, in their Gini indices since 2000. Sub-Saharan Africa, on the other hand, achieved the biggest gains towards increasingly equality by reducing its Gini index by about five points, on average, between 1990 and 2008. Sub-Saharan Africa also ranks as the best performer over the nearer term, as its regional Gini index decreased by about two points from 2000 to 2008, although Latin America and the Caribbean is close behind having reduced by about 1.3 points, on average, according to Solt (2009). Table 13 lists countries by region that achieved the biggest improvements in terms of income inequality since 2000.

Further examination reveals diverse inequality patterns within each of the regional groupings (see Figures 11-16). Asia offers an interesting mix (Figure 11). On the one hand, China and India—the most populous countries in the world—stand as examples of high growth (average annual GDP per capita growth rates of 10.1 and 6.3 percent, respectively, between 1990 and 2008[9]) and increasing income inequality (their respective Gini indices jumped by 12.2 and 3.8 points over the same time period). While income inequality permeates most Asian countries, there are exceptions such as Malaysia and Thailand, who are visibly reducing inequality through universal social policies, including basic education and health (Jomo and Baudot 2007).

As an aggregate, transition economies of Eastern Europe and the former Soviet Union, including the Russian Federation, have experienced the highest spikes in income inequality (Figure 12). The transition from centrally planned to more liberal regimes appears to have led to detrimental outcomes in terms of equity, due to the social impacts of privatization, changes in tax/transfer systems, financial and labour market liberalization, reliance on commodity exports, and migrant remittances, among others (Cornia 2010, Simai 2006).

Data for Latin America and the Caribbean suggest a varied, yet gravely unequal, region (Figure 13). Much of this appears to be rooted in historically unequal patterns in land tenure, ethnic discrimination and limited taxation coupled with the more recent effects of privatization and liberalization beginning in the early 1990s. Since 2000, however, the region has demonstrated significant signs of progress on the equality front, as 16 of the 21 countries with data experienced a

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[9] Based on World Bank (2011).

decline in their Gini index between 2000 and 2008. Much of this reflects the combination of macroeconomic and social protection policies, which have been adopted widely throughout the region (Cornia and Martorano 2010, Lopez-Calva and Lustig 2010). According to Solt (2009), some of the Latin American countries that have recorded the largest improvements in inequality since 2000 include Argentina, Bolivia, Brazil, Chile, El Salvador, Mexico, Panama, Paraguay and Peru, all of which reduced their Gini indices by more than two points.

Compared to other regions, the Middle East and North Africa presents a more challenging assessment (Figure 14). This largely reflects the limited availability of data. For the observations that are afforded, however, two major trends appear. The first is that there appears to be general parity across the region in terms of income equality. Second, it seems that there has been very little change over time in either direction, whether improving or worsening equality. The exception here appears to be Yemen, which increased its Gini index by five points from 2000-08 according to Solt (2009). Yet such findings should be taken with caution. In particular, the wave of social unrest that swept across the Middle East and North Africa in early 2011 suggests that, perhaps, levels of inequality are more severe than official estimates indicate.[10]

Although Sub-Saharan Africa, on the aggregate, has some of the highest income inequalities in the world, there is a trend toward improvement (Figure 15). Since the 1990s, the biggest reductions have been reported in Cameroon, Gabon, Guinea-Bissau, Lesotho, Malawi, Senegal and Sierra Leone, all of which reduced their Gini indices by ten or more points. Much of the major improvements in inequality, however, appear to have taken place during the 1990s. While the average reduction in a country's Gini index value was 7.3 points, on average, between 1990 and 2000, this fell to 3.3 points between 2000 and 2008. In any case, the best performers over the near period include Burundi, Ethiopia, Lesotho, Malawi, Mali and Sierra Leone, all of which reduced their Gini index values by two or more points since 2000. Despite the positive signs of progress, the region still hosts some of the world's most unequal countries, including Namibia and South Africa.

For high-income countries in our sample, which cover a broad mix of countries from North America, Eastern and Western Europe, and the Pacific Rim, among others, a wide range of trends are evident (Figure 16). On the one hand, Estonia, Hong Kong, Israel, Japan, Latvia, Slovakia and Slovenia are cases of significant increases in income inequality when looking at the 1990-2008 time period, all of which increased their Gini indices by six or more points. On the flip side, Denmark, Ireland, South Korea, and Trinidad and Tobago are successful examples of reducing income disparities over the last decades. In the more recent period, Belgium, Croatia, Estonia, New Zealand, Spain, South Korea and Sweden stand out as having reduced income inequality, each of which lowered its Gini index value by two or more points since 2000. Also interesting is the fact that many of the larger high-income countries achieved negligible change in inequality since 2000, as the Gini indices in Austria, Canada, France, Italy, Poland and the United States increased or decreased by less than one point.

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[10] This paper does not question the reliability of income distribution information reported in the main sources used for this analysis (e.g. Egypt and Pakistan appear as equal as France). See Annex 1 for description of caveats.

Figures 11-16. Gini Indices and Changes by Region, 1990-2008 (or latest available)

Figure 11. Asia

Increasing Inequality — Decreasing Inequality
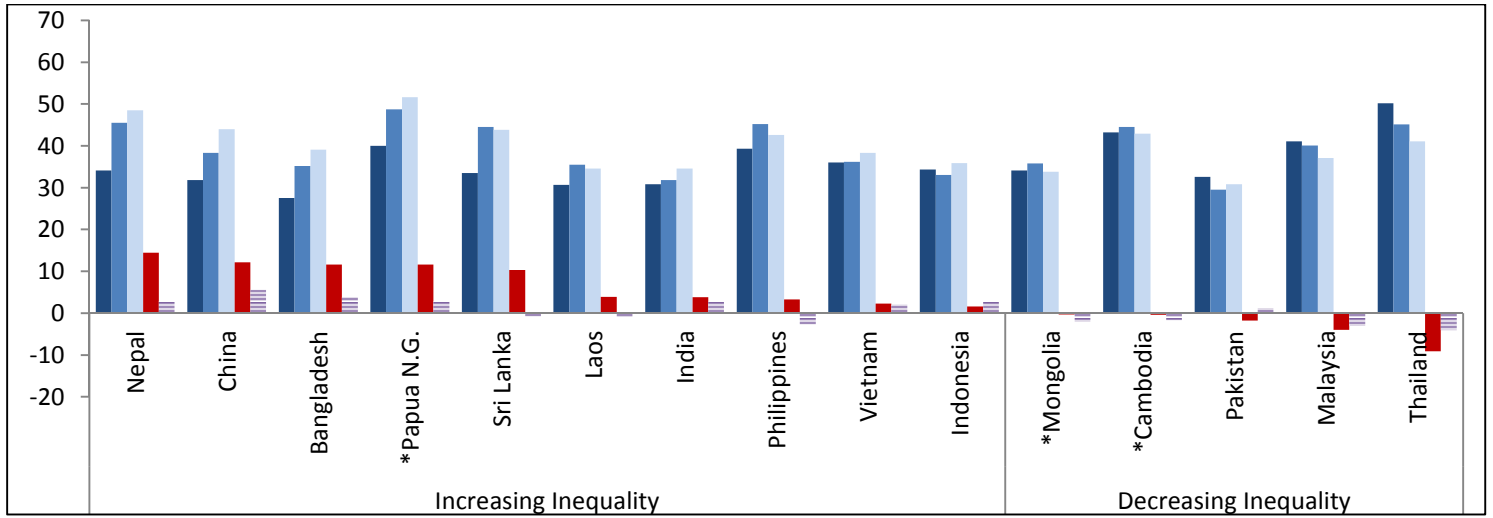
Figure 12. Eastern Europe and Central Asia

Increasing Inequality — Decreasing
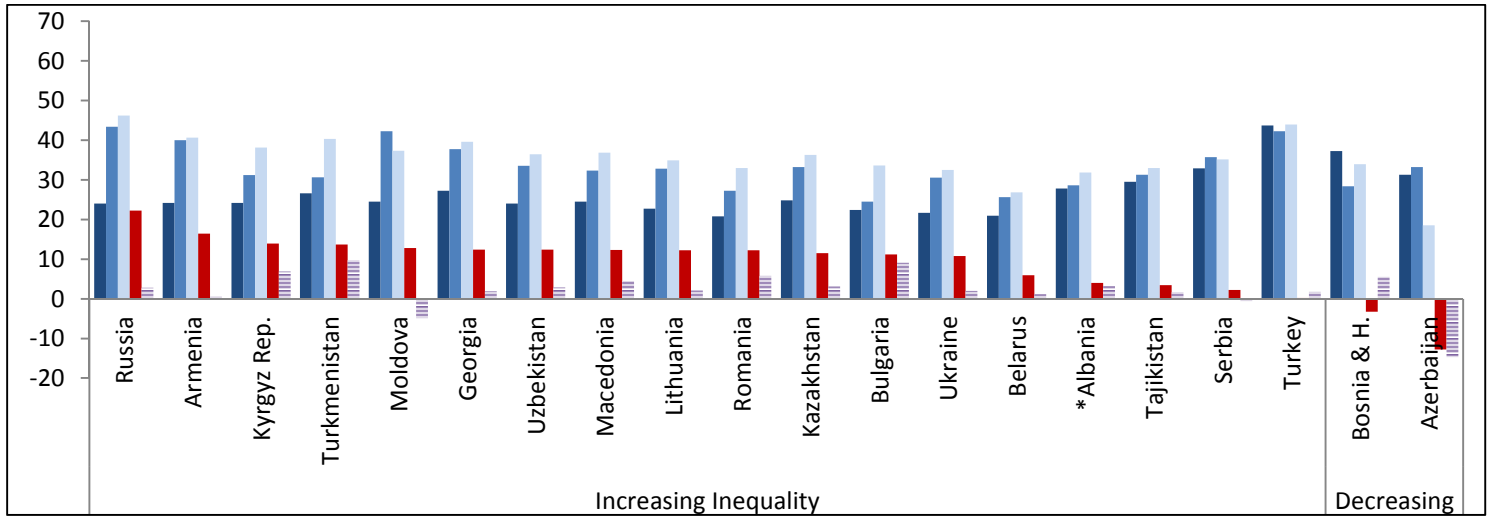
Figure 13. Latin America and the Caribbean

Increasing Inequality — Decreasing Inequality

Source: Solt (2009)
*1990 value reflects circa 1995

Legend:
- 1990
- 2000
- 2008 (or latest available)
- Change (2008-1990)
- Change (2008-2000)
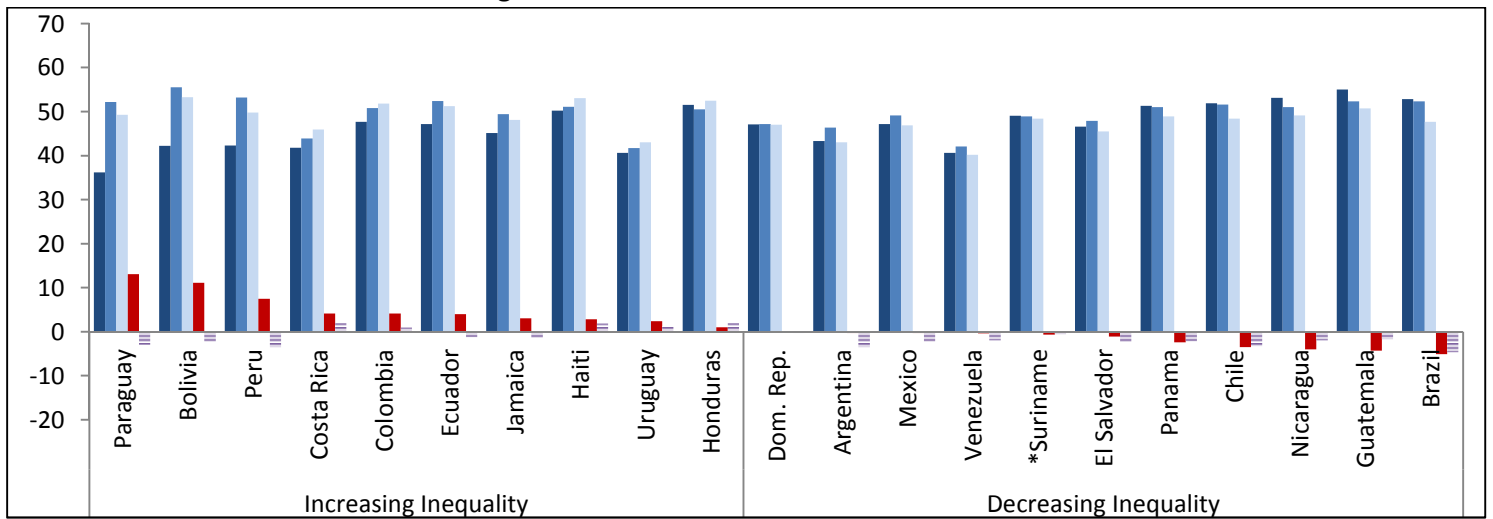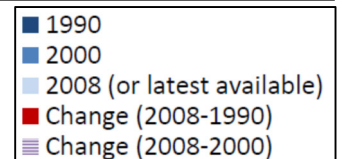
Figure 11-16 (cont). Gini Indices and Changes by Region, 1990-2008 (or latest available)

Figure 14. Middle East and North Africa
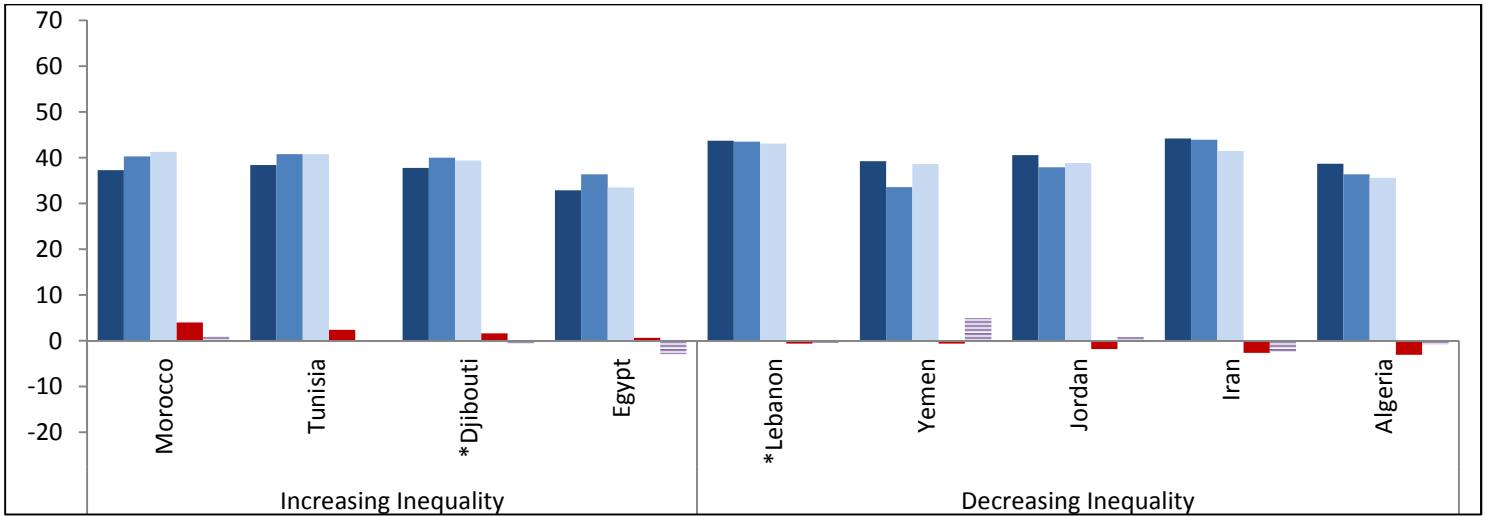
Figure 15. Sub-Saharan Africa
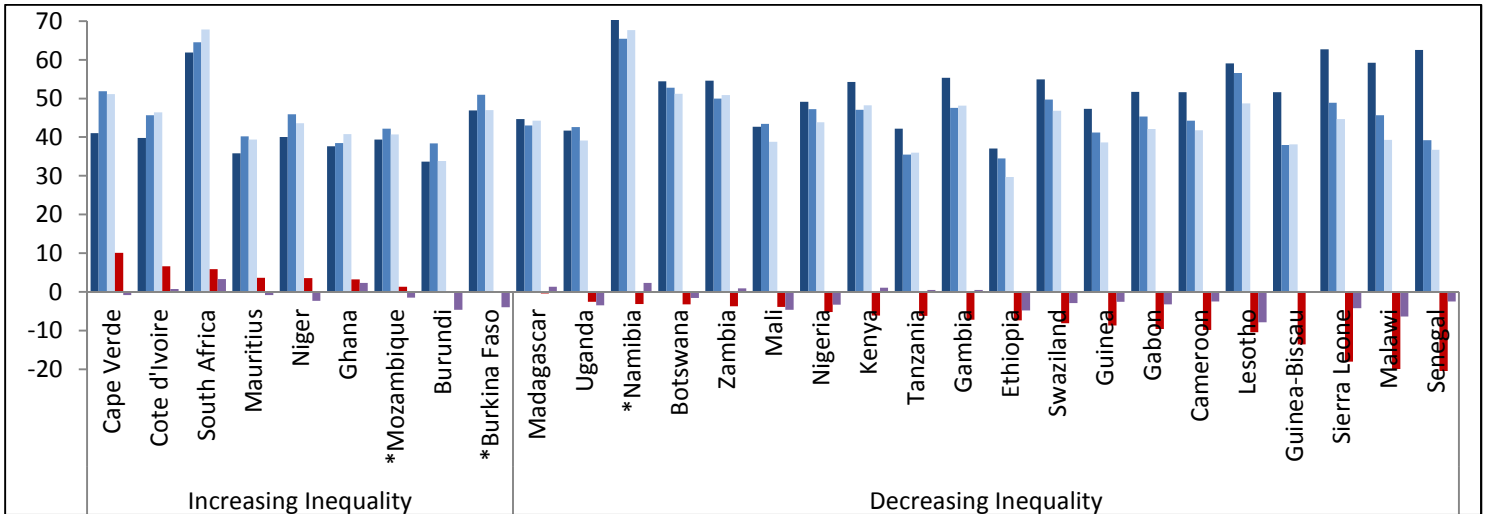
Figure 16. High-income Countries

Source: Solt (2009)

*1990 value reflects circa 1995

1990
2000
2008 (or latest available)
Change (2008-1990)
Change (2008-2000)
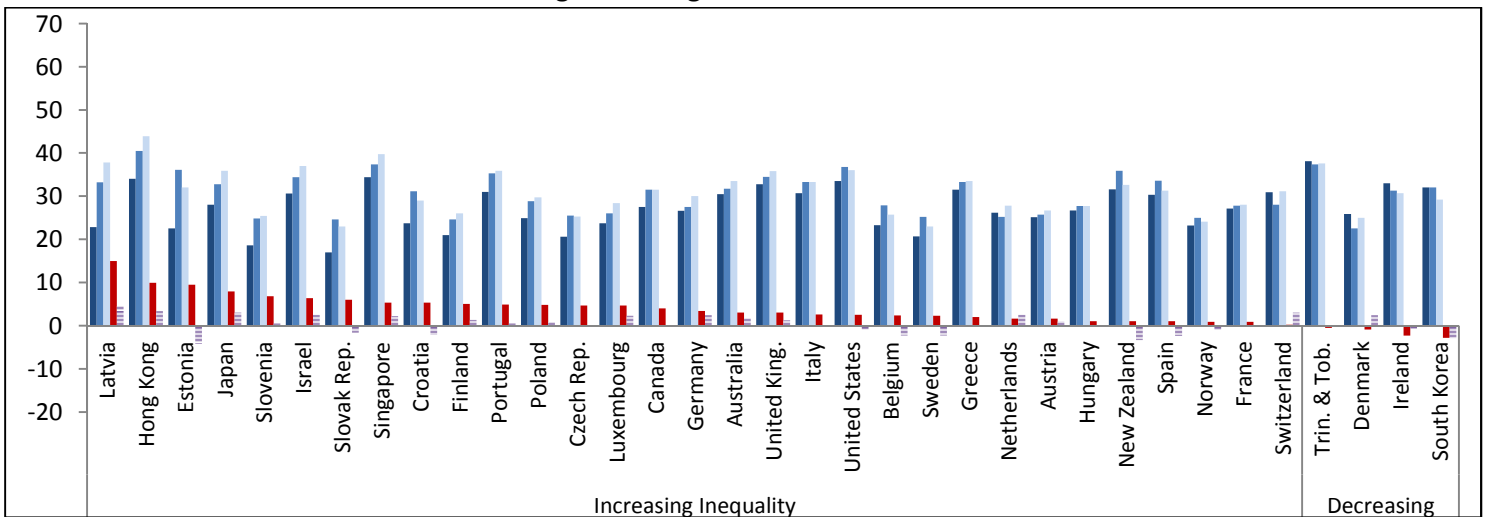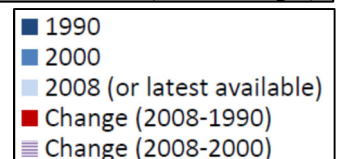
5.   Income Inequality at the National Level

Looking at income distribution quintile estimates using recent data, some of the highest national disparities are found in countries like Colombia, Nepal, Russia and Zambia, despite recent governments' efforts to address it, while some of the most equal societies are found in countries like Australia, Azerbaijan, France and Sweden (Figure 17).

Figure 17. Snapshot of High and Low Inequality in Selected Countries, 2007 (or latest available)
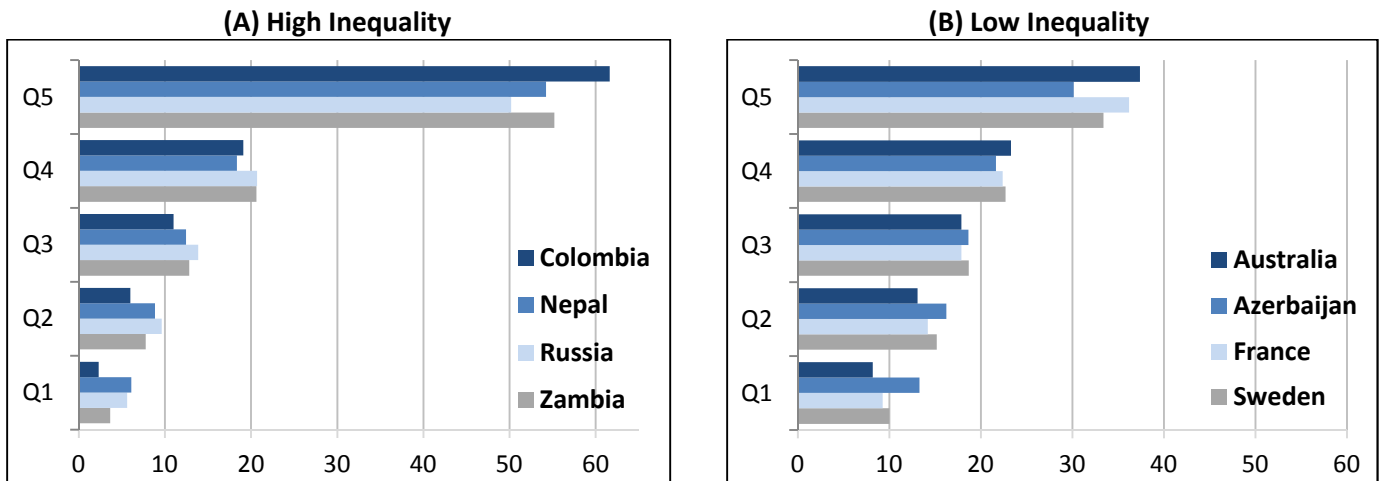
Source: World Bank (2011), UNU-WIDER (2008) and Eurostat (2011)

Such differences could lead us to think that equality is a result of fast or sustained GDP growth over long periods of time. However, this is not necessarily the case. Income distribution data in China, India and the United States, which have ranked among the largest and strongest growing economies in the world over the past decades, suggest otherwise (Figure 18). In all three cases, significant and sustained economic growth (annual GDP per capita growth of 9.8, 6.0 and 3.1 percent, respectively, between 1990 and 2005) has not led to more equal societies, but rather made the rich relatively richer and the poor relatively poorer (see top and bottom quintiles).

Figure 18. GDP Growth and High Inequality in Selected Countries, 1990-2005
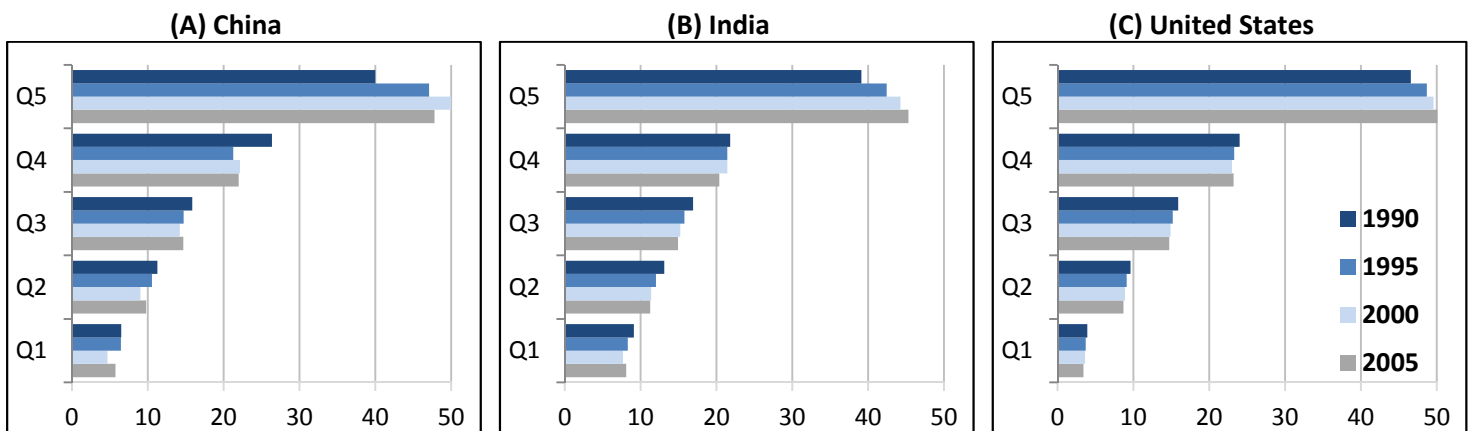
Source: World Bank (2011) and UNU-WIDER (2008)

Perhaps most interestingly, income inequality is significantly decreasing in countries like Brazil, Malawi and Malaysia, which have also experienced strong and consistent economic growth in recent years (they all experienced an average annual GDP per capita growth of roughly three percent between 1990 and 2005, which increases to 2.1, 4.4 and 7.9 percent, respectively, if controlling for the impacts of the late-1990s Asian financial crisis) (Figure 19).

Figure 19. GDP Growth and Decreasing Inequality in Selected Countries, 1990-2005
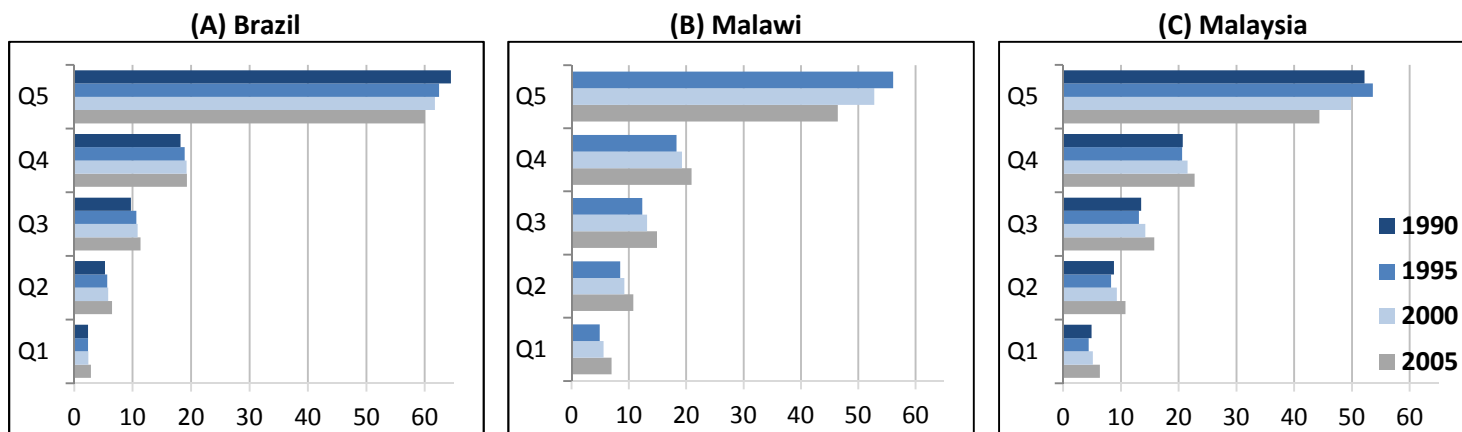
Source: World Bank (2011), UNU-WIDER (2008) and Eurostat (2011)

This suggests that, ultimately, addressing inequality depends on a society's willingness to reduce social disparities by financing equitable policies through taxes and investments. Addressing equity is at the center of the social contract between governments and citizens: how much a society is willing to redistribute and how to do so. But what happens if a society is unwilling or unable to address inequality?

6.   Why Income Inequality is Dysfunctional

There is a vast literature documenting the effects of income inequality across a broad spectrum of economic and social indicators. It is not our purpose to offer a detailed review or to debate the merits of some of the more controversial topics, especially in terms of causality. Rather, the aim of this section is simply to highlight some of the key perils that are associated with high levels of income inequality both across countries—in terms of economic growth, health and social well-being, and political stability—as well as within countries—in terms of social inequalities, especially among children. Building on existing research, we also present updated empirical analyses where possible.

A.   Slows economic growth

Some argue that income inequality is necessary for economic growth, following initial analysis by Simon Kuznets in the 1950s. Supporters of this position advise governments to invest in growth as a first priority, believing that the benefits will eventually "trickle down" to the poor.

The argument is based on the following: (i) since the rich save more, higher inequality means higher rates of savings, investment and future growth; (ii) poverty and a flexible labour market keep wage levels cheap and encourage investment; and (iii) taxation on higher income groups should be limited to maximize the retained income available for investment. Such views are still influential in development debates, mostly via vague "trickle down plus" approaches that focus on growth first with some basic education, health and other limited social interventions.

Evidence, however, suggests otherwise. Alesina and Rodrick (1994), Bourguignon (2004) and Birdsall (2005), among others, have shown that developing countries with high inequality tend to grow more slowly. We build on Birdsall's analysis using more recent data and an expanded sample of countries, and we also look at changes in inequality over time alongside economic growth rates. For the 131 countries that allow us to estimate the change in Gini index values between 1990 and 2008, we find that, on the aggregate, those countries that increased levels of inequality experienced slower annual per capita GDP growth over the same time period (ρ= -0.20). Moreover, the strong negative correlation between high inequality and high growth remains virtually unchanged when restricting the sample to developing countries only (94 countries) (ρ= -0.19) (Figure 20).

Figure 20. Growth and Inequality: Per Capita Growth and Change in Income Inequality in 94 Developing Countries, 1990-2008 (or latest available)
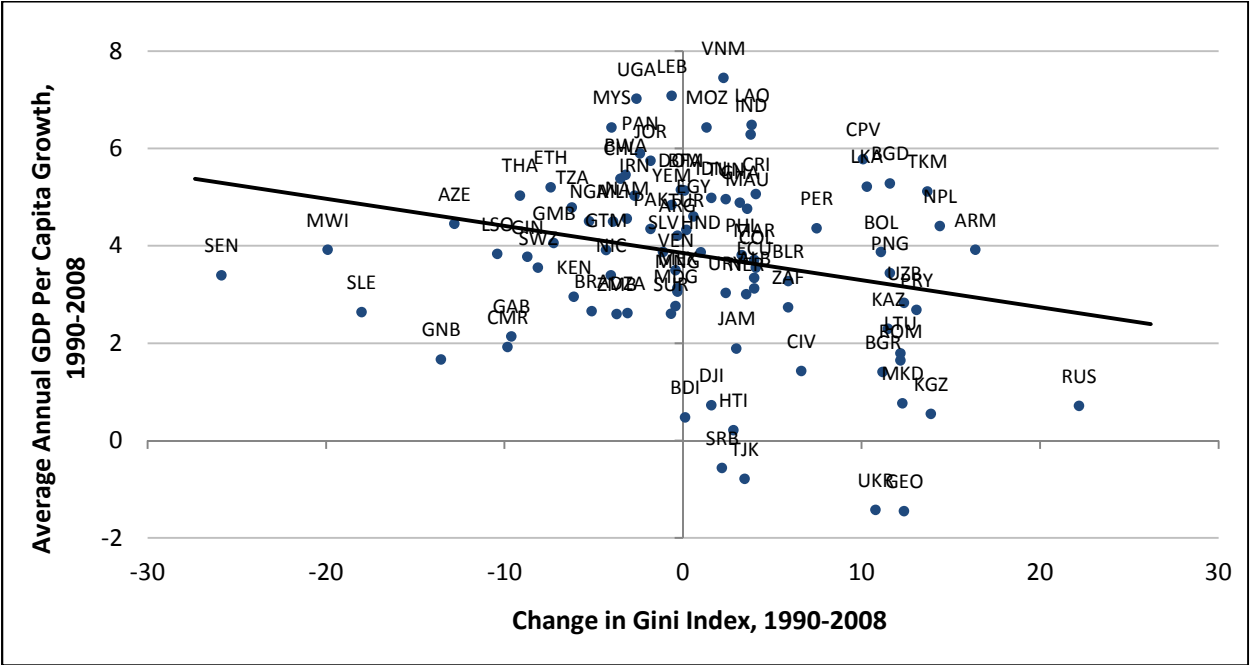
Source: Authors' calculations using World Bank (2011) and Solt (2009)

B.   Results in health and social problems

Wilkinson and Pickett (2010) examine the relationship between income inequality and eleven unique health and social problems. They carry out empirical tests across a group of OECD

countries as well as the 50 states in the United States. Among both settings, the results clearly show that health and social outcomes are substantially worse in more unequal societies. In particular, individuals in more equal societies, *inter alia*, enjoy better health, live longer, are less likely to experience mental illness, perform better in school, use less illegal drugs, engage in less criminal behaviour, have better social mobility, are more trusting, experience less violence and are less likely to be teenage mothers when compared to those living in more unequal societies.

One of Wilkinson and Pickett's most significant contributions was the development of the International Index of Health and Social Problems (IHSP). The composite index covers 23 OECD countries and includes the following indicators: homicides, imprisonment, infant mortality, life expectancy, maths and literacy score, mental illness, obesity, social mobility, teenage births and trust. To date, the IHSP offers perhaps the most comprehensive cross-national snapshot of social outcomes without including an income parameter, which makes it an ideal source for income inequality analysis. We present Wilkinson and Pickett's compelling graphic, which captures the overall findings of their research, by placing the IHSP alongside the most up-to-date inequality data (Figure 21).[11] This unique dataset demonstrates a very strong relationship between increasing levels of inequality and greater health and social problems ($\rho = 0.54$).

Figure 21. Income Inequality and Health and Social Problems, 2008
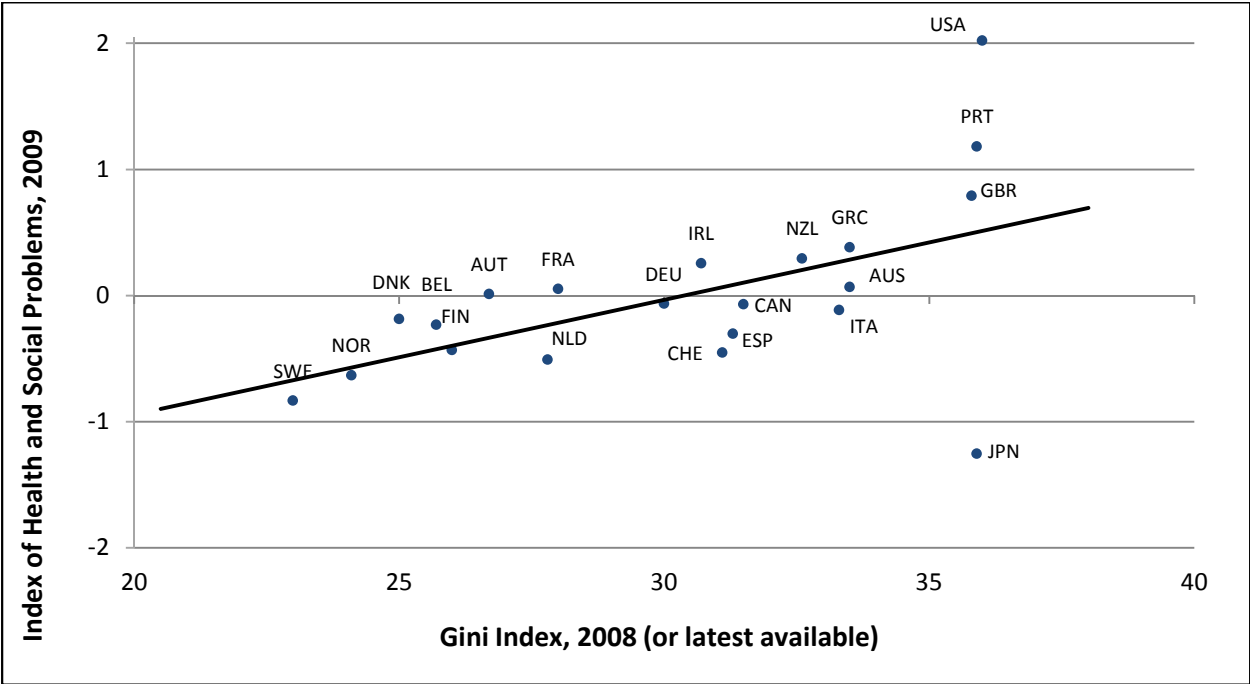
Source: Authors' calculations using Wilkinson and Pickett (2010) and Solt (2009)
Note: Lower index values represent better health and social outcomes

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[11] Most of their data sources span the early 2000s, and the authors' also use inequality measures from UNDP that are dated (circa 2005). Figure 22, therefore, provides a more recent picture of the relationship between the IHSP and income inequality, especially in terms of Gini indices.

While data limitations preclude us from testing the IHSP over a wider range of countries, we are able to examine income inequality and one particularly pressing social problem, violence (Figure 22). Looking at homicide rates and Gini indices across a sample of 138 countries, we find that countries characterized by high levels of inequality tend to be much more violent (ρ = 0.57).

Figure 22. Income Inequality and Homicides in 138 Countries, 2008
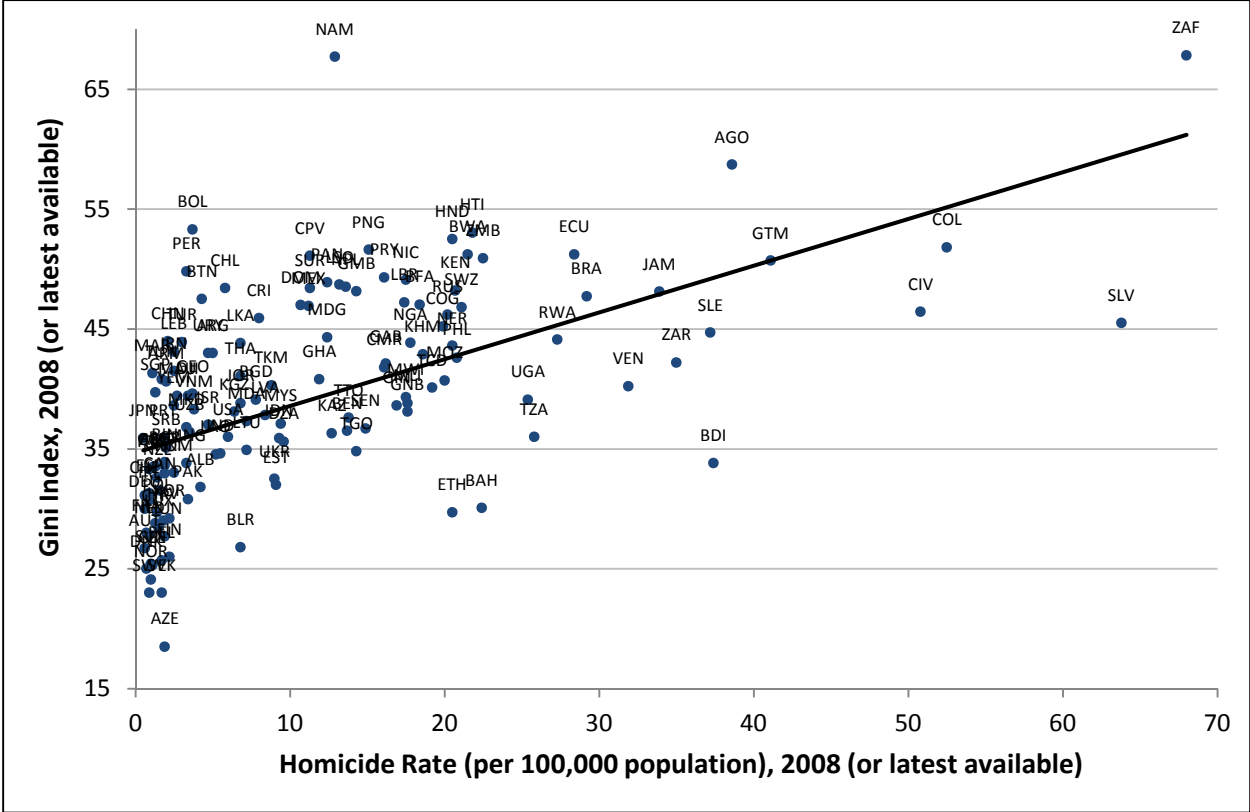
Sources: Authors' calculations using Solt (2009) and United Nations Office on Drugs and Crime (2008)

C. Generates political instability

Given the predominance of health and social ills across more unequal societies, there is little surprise that inequality is also strongly associated with political instability. While the sources of political conflict vary from country to country, conflict generally originates from severe social grievances, including class conflict and the perception of inequality among ethnic, religious or other groups. Using one of the six dimensions included in the Worldwide Governance Indicators (WGI) project (Kaufmann et al. 2010), we find that unequal societies, in general, are much more prone to political instability, or, in other words, to be destabilized or overthrown by unconstitutional or forceful means, which includes politically-motivated violence and terrorism (ρ = -0.33) (Figure 23).

Figure 23. Income Inequality and Political Stability in 141 Countries, 2008

Sources: Authors' calculations using Solt (2009) and Kaufmann et al. (2009)
Note: -2.5 is high political instability and politically-motivated violence/terrorism; 2.5 is the absence of

D.   Leads to severer social inequalities, especially among children

In addition to poorer growth, more health and social problems, and greater political instability, income inequality is also associated with graver social inequalities, among children in particular. UNICEF's 2010 Report Card 9 (UNICEF 2010a)[12] offers a compelling analysis of social inequalities in terms of child well-being by assessing three dimensions of inequality—including material, education and health—among a sample of rich countries. Given our interest in understanding the relationship between income and different social disparities, we adjust the overall child equality score by removing the material indicator and re-calculating country scores based on education and health scores alone.[13] This gives us a good estimate for levels of basic education and health inequality among 24 OECD countries, which we then compare to income inequality as measured by Gini index values (Figure 24). The data reveal a strong negative relationship between greater income inequality and lower levels of education and health inequalities as experienced by children (ρ = -0.28).

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[12] The Report Card series is founded on the premise that a country's real economic and social progress is gauged by how well it cares for its children—their health and safety, material security, education and socialization, and inclusion in society, among others.
[13] National education scores are based on literacy in reading, math and science, and national health scores reflect self-reported health complaints, healthy eating and physical activity.

Figure 24. Income and Education/Health Inequalities, 2010 (or latest available)

Source: Authors' calculations using UNICEF (2010) and Solt (2009)
Note: Higher scores equal greater education and health equality among children

As in earlier analyses, data limitations prevent us from examining a larger cohort of countries, but the strong relationship between income inequality and other social inequalities most certainly applies to developing countries. UNICEF (2010b) offers very conclusive evidence in its analysis of household survey data from across the developing world. In particular, children from developing country households in the poorest income quintile are:

- Less than half as likely to have benefited from antenatal care while in the womb
- Three times less likely to have been delivered by a skilled health professional at birth
- Less than half as likely to be registered after birth
- Nearly three times as likely to be underweight
- Twice as likely to be stunted
- Less than half as likely to sleep under insecticide-treated bed nets
- Nearly twice as likely to not receive measles immunizations
- Twice as likely to die before their fifth birthday
- Significantly less likely to have access to improved drinking water sources
- Less likely to attend primary school
- Much less likely to benefit from malaria interventions
- Three times as likely to get married before the age of 18 (for girls)

than those children from households in the richest income quintile of the same country. In sum, there is overwhelming evidence that those at the bottom of the income chain are those most likely to be excluded from essential health care services, improved water and sanitation facilities, and primary and secondary education, among others. Moreover, in many instances trends in social inequalities can be exacerbated over time. In India, for example, 166 million people gained access to improved sanitation between 1995 and 2008, but little progress was made in the poorest households, which furthered social inequalities (UNICEF 2010b:43). In

West and Central Africa, measles immunization coverage increased by ten percent in the wealthiest quintile of the population but only three percent in the poorest quintile, thus widening the gap in social inequalities (UNICEF 2010b:25).

7. Beyond the Bottom Billion: Bringing Equity to the Development Agenda

Given that the bottom billion requires urgent attention to alleviate their enduring hardships, social progress in the 21st century requires much greater efforts. To start with, attention needs to focus on the fact that the world's policy-making is accruing mostly to the top billion.

The extreme inequality in the distribution of income globally, regionally and nationally, coupled with the resounding negative effects associated with higher levels of income disparities, should make us question the current development approach (development for whom?) and the need to place equity at the center of the development agenda.

A. Striking the right balance between equity and growth

From an historical perspective, Maddison (2006) shows that the rise of global GDP per capita over the past two centuries was largely driven by the industrial revolution in Western Europe and the United States along with a few countries that managed to position themselves as strategic exporters (Table 14). The extraordinary increase in GDP among these countries enabled them to become hegemonic and influence global policy in their own interest (Gilpin 1987, Chang 2003, Reinert 2007). Many developing countries did not grow as they could have in recent decades (Reddy and Minoui 2006). For developing countries to emerge, a similar employment-intensive productive development push is needed, as well as an international setting favorable to it.

Table 14. Per Capita GDP in Selected Countries and Regions, 1-2000*

Country / Region		1	1000	1500	1600	1700	1820	1900	1950	2000
Main Drivers	Western Europe	599	425	798	907	1,032	1,243	3,076	5,018	20,090
	United States	400	400	400	400	527	1,257	4,091	9,561	28,403
	Australia	400	400	400	400	400	518	4,013	7,412	21,549
	New Zealand	...	400	400	400	400	400	4,298	8,456	16,178
	Argentina	...	...	...	...	...	...	2,756	4,987	8,544
	Chile	...	...	...	...	...	694	2,194	3,670	10,311
Other Regions	East Europe	412	400	496	548	606	683	1,438	2,111	5,901
	Former USSR	400	400	499	552	610	688	1,237	2,841	4,454
	Latin America	400	400	416	438	527	691	1,113	2,503	5,893
	Asia	456	470	568	574	572	581	638	717	3,807
	Africa	472	425	414	422	421	420	601	890	1,474
World Average		467	453	566	596	615	667	1,262	2,113	6,055

Source: Maddison (2006)
* In 1990 international Geary-Khamis dollars

An inclusive development agenda promoting employment and universal social policies was a key ingredient to legitimizing governments and nation building in the past. The late industrializers (Box 3) followed this pattern: they implemented universal social policies that ensured the buy-in of the middle classes and simultaneously focused on reducing poverty (Mkandawire 2006, Deacon 2010). This differs radically from today's standard development formula based on growth that benefits the highest income quintiles accompanied by a few targeted safety nets for the poorest.

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Box 3. Lessons from the Late Industrializers

The development trajectory of most of the "late industrializers" was predicated on a strong integration of economic and social policies. Social policies tended towards universalism, benefiting all citizens and financed by tax contributions (providing public services only to the poor undermines the middle class commitment to pay taxes). Some of the late industrializers opted for universal services and social security from the outset, such as Holland and the Nordic countries. Others introduced universalism gradually, like Germany and Japan, where welfare was first directed to groups whose cooperation in economic modernization and nation-building was deemed indispensable by the government—the "productive" working and middle classes—and, over time, new beneficiaries were added by specifying new eligibility criteria.

Sources: Mkandawire (2006) and UNRISD (2010)

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Former World Bank Chief Economist F. Bourguignon stresses that income distribution matters as much as growth for poverty reduction and that redistribution is a legitimate goal of public policy for balancing the tendency of the market to concentrate resources (Bourguignon 2004). Viewed in this light, sustained poverty reduction is a twin function of the rate of growth and of changes in income distribution, whereby more equal distribution tends to have faster impacts on reducing poverty than growth, but economic growth is also necessary to sustain the process over time. It is important to note that more equal distribution is not antagonistic to growth; in fact, it tends to stimulate consumption, raise productivity and help sustain growth itself (World Bank 2006).

Finding the right combination of instruments and policies to deliver both growth and equity remains the key to 21st century development (Kanbur and Lustig 1999, van der Hoeven et al. 2001). While exclusively focusing on distribution can lead to stagnation and leave populations worse-off, which has been the fate of countries under some "populist" governments, exclusively focusing on growth can lead to large inequalities, as many countries have experienced in recent decades (Cornia and Court 2001, Cornia 2005, United Nations 2005, Jomo and Baudot 2007).

B. Mainstreaming equity in the development agenda

Achieving the equity/growth balance requires a major overhaul of current decision making. Economic choices at both international and national levels have often been taken without adequate consideration of their distributional impacts; if there are negative social impacts, these may be mitigated, but equity and social progress cannot be achieved by this approach alone. As an alternative, the United Nations development agenda has been proposing the

combination of social and economic policies in a complementary and mutually reinforcing manner.

The United Nations development agenda consists of a comprehensive set of goals agreed by global consensus in different United Nations conferences and summits over the last two decades. The agenda encompasses issues ranging from social inclusion and decent employment to sustainable development and finance. The UN agenda focuses on country ownership of national development strategies, integrating social, economic and environmental policy, and enabling frameworks for peace/conflict prevention, good governance and human rights, as well as addresses systemic issues, such as the differential impact of globalization and inequalities among and within countries. The United Nations development agenda has been shaped by a fundamental concern for equity and for equality of all persons, as human beings and as citizens (United Nations 2007 and 2008). United Nations agencies and other organizations have operationalized this agenda in recent years. An indicative summary of selected sector interventions is presented below in Table 15.

Table 15. Mainstreaming Equity in the Development Agenda

Area	Typical Interventions with Equitable Outcomes for Children and Households	Typical Interventions with Inequitable/Regressive Outcomes	Good Guidance Sources
Education	Universal free education; scholarships and programmes to retain students	User fees; commercialization of education; cost-saving in teacher's salaries	UNICEF, UNESCO, UNRISD, World Bank's PRSP Sourcebook
Energy and Mining	Rural electrification; life-line tariffs (subsidized basic consumption for low- income households); windfall social funds; contract laws ensuring local benefits from natural resources	Untaxed oil/mineral extraction	UN Policy Notes, World Bank's PRSP Sourcebook, DFID
Finance	Regional rural banks; branching out to local areas; managing finance (regulating financial and commodity markets, capital controls)	Financial liberalization; rescue of banking system (transfers to large banks); subsidies to large private enterprises	UN Policy Notes, UNCTAD, CGAP
Health	Universal primary and secondary health services; nutrition programmes; free reproductive health services	User fees; commercialization of health; tertiary highly specialized clinics that benefit a few (e.g. cardiology centers)	UNICEF, WHO, UNRISD, UNFPA, UN Policy Notes
Housing	Subsidized housing for lower income groups; upgrading of sub-standard housing	Public housing finance for upper income groups	UN Habitat, IDS
Industry	Technology policy to support competitive, employment-generating domestic industries, SMEs	Deregulation; general trade liberalization	UNCTAD, UN Policy Notes, ILO
Labour	Active and passive labour programmes; employment-generating policies	Labour flexibilization	ILO, UN Policy Notes

Area	Typical Interventions with Equitable Outcomes for Children and Households	Typical Interventions with Inequitable/Regressive Outcomes	Good Guidance Sources
Macro-economic Policies	Employment-sensitive monetary and fiscal policies; countercyclical policies; direct taxation	An excessive focus on inflation control; cyclical policies; indirect taxation (VAT)	UN Policy Notes, ILO, UNDP, UNCTAD
Public Expenditures	Pro-poor expenditures; fiscal decentralization	Military spending; subsidies to activities benefiting upper income groups	World Bank's PRSP Sourcebook, UNICEF, IDS
Rural Development	Land redistribution; access to water, markets; livestock, credit for smallholders, rural extension services	Large investments that may benefit major landowners (e.g. irrigation systems)	FAO, WFP, World Bank's PRSP Sourcebook
Social Protection	A Social Protection Floor, comprising cash transfers and social services	Private funded pension systems	ILO, WHO, UNICEF, UN, UNRISD, Development banks
Tourism	Small-scale local companies; financing basic infrastructure; international marketing campaigns	Poorly taxed luxury hotel chains	DFID, Overseas Development Institute
Trade	Linking employment-generating local companies with export markets; taxing exporting sectors for domestic development	Most bilateral free trade agreements; current intellectual property agreements	UNCTAD, UN Policy Notes
Transport and Infrastructure	Rural roads; social infrastructure; affordable public transport; non-motorized transport for households (bicycles, buffalos, horses)	Large (and costly) infrastructure investments that the poor/excluded do not use or do not benefit by taxation	World Bank's PRSP Sourcebook, DFID
Urban Development	Slum upgrading; accessible universal design	Large urban infrastructure projects in wealthy areas	World Bank's PRSP Source Book, UN HABITAT, UNICEF
Water and Sanitation	Rural water supply and sanitation	Poorly negotiated privatizations	UNICEF, UNDP, World Bank's PRSP Source Book

Source: Ortiz (2008)

C.   Financing equitable policies: Transfers across three levels

Given the large extent of global income asymmetries, financing an equitable development agenda requires a degree of transfer from the wealthy to the poor across three levels:

- *North-South transfers:* The justification for more equitable international distribution cannot be stronger. For globalization to be accepted, it will have to be a globalization that benefits the majority, a globalization for all and not just for a privileged few. While the predominant channel for international redistributive flows is official development aid (ODA), international commitments continue to fall short. Of the 0.7 percent of gross national income (GNI) promised by high-income countries, actual ODA flows remain at only 0.3

percent (OECD DAC 2010). Given the failure of donors to meet aid commitments, new international sources of development finance have been proposed, mainly taxing luxury goods and services or those with negative social or environmental externalities. Recent proposals have included: taxing the arms trade, global environmental taxes (carbon-use tax), taxing speculative short-term currency flows (the so-called "Tobin tax") and taxes on international airplane tickets (Atkinson 2004). Proposals for an International Tax Organization have been suggested by both IMF staff and by the United Nations. Some point out that the overall amount of north-south transfers needed to vastly improve the well-being of millions of persons is trivial; Jeffrey Sachs, Director of the United Nations Millennium Project, estimates that extreme poverty could be eradicated with only one percent of the combined GDP of OECD countries (Sachs 2005).

- *South-South transfers:* South-South cooperation is becoming increasingly important. Though still minor in amount, South-South transfers are occurring in three main forms (Ortiz 2009): (i) bilateral aid (China, Saudi Arabia and Venezuela are noticeable examples), (ii) regional development banks (e.g. Islamic Development Bank, Arab Fund for Economic and Social Development, Andean Development Corporation or the Bank of ALBA) and (iii) regional integration (e.g. the South American Common Market, MERCOSUR; the Bolivarian Alternative for the Americas, ALBA; the League of Arab States; the Southern African Development Community, SADC; and the Association of Southeast Asian Nations, ASEAN).

- *National transfers:* There is untapped capacity to fund more equitable policies even in the poorest countries. This may require moving away from orthodox approaches. Main options to increase fiscal space to ramp up equitable spending include: improved taxation, reprioritization of expenditures, external financing and debt relief, domestic borrowing, adopting a more accommodating macroeconomic framework (e.g. tolerating some inflation and/or fiscal deficit), fighting illicit financial flows or use of reserves for national development.

8.   Impacts of the Global Economic Crisis and the Need for a Recovery for All

A global financial and economic crisis quickly swept across the world beginning in 2007. While comprehensive data are not yet available to evaluate the aggregate impacts on income inequality, many factors suggest that inequality may be increasing dramatically. Above all, historical analyses show that financial crises often deepen poverty and worsen income inequalities (Baldacci et al. 2002). In general terms, as a financial crisis causes a country's average income to decline, a more-than-proportional fall in the income share of the lowest income quintiles of the population leads to higher income inequality, which is worsened if coupled with an increase in the income share of the richest quintile. While this largely reflects the lopsided impact of changes in labour demand, inflation and public spending on the bottom quintiles over the short term (Lustig and Walton 1999), there are also longer-term effects on the capabilities of the poorest as a result of household coping mechanisms related to children

and expenditures on essential food, health and education (Mendoza 2008). In aggregate poverty terms, Cline (2002) estimated a seven percent increase in the average poverty headcount of a developing country due to a financial crisis. The distributional impacts of financial crises are accordingly uneven, with inequality often worsening and adding further pressure to poverty levels (Ravallion 2008). Given the current trends in employment, food and fuel prices, as well as in government spending, it is predictable that income inequality will increase during 2011.

A.   Employment

First, an employment crisis continues to affect much of the globe. The world experienced jobless growth prior to the crisis, and this intensified as labour demand weakened (ILO 2010a:7). ILO's (2011) latest analysis notes that, while there is evidence of employment recovery in some East Asian countries, the outlook worsened for many others during 2010. The ongoing economic recovery is not yet leading to a sufficient expansion in employment opportunities for most. At the global level, trends in the employment-to-population ratio, which indicates whether the employment-generating capacity of a country or region is rising or falling, show that economies are simply not generating sufficient employment opportunities to absorb growth in the working-age population. For example, in 64 countries for which quarterly data are available, the number of countries with falling employment-to-population ratios was still twice the number that had rising ratios as of the second quarter in 2010. More recently, in rich countries, estimates for the return to pre-crisis employment levels were revised an additional two years—to 2015. Near the end of 2010, ILO (2010a) also estimated that nearly 40 percent of jobseekers had been unemployed for more than one year in a sample of 35 countries, and more than four million had stopped searching altogether by the end of 2009 due to, for example, demoralization. The public response in many countries has included major protests against the government in its role as employer and failure to address dogged unemployment (ILO 2010a:40).

In terms of inequality, evidence shows that rising unemployment causes the bottom of the earnings distribution to fall off relative to the median (Heathcote et al. 2010). Further, total wage inequality—defined as the difference in the earnings of those at the 90th and 10th percentile of the overall wage distribution—had increased dramatically in many countries since the 1970s (Machin and van Reenen 2007, OECD 2008). More recently, evidence points that the trend has continued during the crisis. In advanced economies, for example, banks and corporations provided near-record bonuses to executives and financial sector workers in 2010 and 2011.[14] Given the severity and persistence of unemployment across much of the world, inequality in earnings is likely to be perpetuated through 2011 and beyond.

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[14] See Wall Street Journal, "On Street, Pay Vaults to Record Altitude," on 23 February 2011, and Wall Street Journal, "Executive Bonuses Bounce Back," on 18 March 2011.

Young men and women have been disproportionately affected by unemployment since the onset of the crisis. Earlier experiences have shown that it takes, on average, over 11 years for youth unemployment to return to pre-recession levels (ILO 2010a:13). According to ILO estimates, youth unemployment has risen by nearly eight million globally since the onset of the crisis in 2007. Moreover, the percent increase in youth unemployment globally was over twice that for the overall working population. However, this dramatic increase masks an even more striking trend towards decreasing youth participation in labour markets and growing informality and precarity of youth employment (ILO 2010b). ILO further reports that young women have more difficulty than young men in finding work.

B.   High commodity prices

Second, households have been dealing with unabatedly high food prices since 2008. According to the FAO's Food Price Index, global food prices surpassed the peak levels of the 2007-08 food crisis in January 2011 and continued to set new record highs in February and March 2011. At the local level, UNICEF recent analysis finds that food prices closely trailed those in global food markets during the latter half of 2010; it also found that domestic food prices remained alarmingly high compared to pre-crisis levels as of November 2010 (Ortiz et al. 2011). As high food prices continue to erode disposable income, most poor families have already exhausted available coping strategies, such as eating fewer meals, cutting health expenditures, increasing debt and working longer hours in the informal sector. Given that poor families spend a much higher share of their income on food than wealthier groups, the link between higher local food prices and inequality is clear. For example, studies of Asia and Latin America show that inequality rates rose as a result of the 2007-08 food price shocks (Save the Children 2009 and World Bank 2008), and the ADB (2008) estimates that a 20 percent nominal food price increase leads to a one percent increase in the Gini coefficient.

The food price outlook is bleak and further complicated by rising oil prices. The sharp rise of petroleum prices beginning in early 2011 is likely to persist as political uncertainty inundates much of the Middle East and North Africa, thus adding more pressure on employment-generating economic activities and scarce household resources. As the resilience of poor populations for further increases in food—or energy—costs is extremely limited, continued high prices can be expected to increase income inequality during 2011.

C.   Fiscal consolidation

Third, while most governments launched fiscal stimulus plans during the first phase of the global economic crisis, fiscal stimuli were abandoned during the second phase, and governments are now scaling back public spending at a time when economic and social recovery remains fragile. UNICEF analysis of public expenditures in 126 developing countries (Ortiz et al. 2010) shows that many governments are planning to remove or phase out crisis response policies in 2010-11 as part of fiscal consolidation efforts. In particular, cuts/caps in public outlays on social programmes, transfers to households, and wages and salaries are being considered. The ILO (2010a:40) finds that such austerity measures have been met by severe

social unrest and public protest in many countries, including 16 of 28 countries studied. In terms of inequality, reductions in government spending on basic education, health care and social security programmes—the main ways tighter fiscal policy affects the poor—are associated with falling incomes and investment for the poorest groups. A recent Economist analysis finds evidence of this effect in a set of developed countries.[15] Following examination of changes in income levels among regions within individual countries, The Economist concluded that income inequality had increased between richer and poorer regions since the start of the global recession and is likely to be exacerbated since lower government expenditures disproportionately impact poorer regions.[16] Current debates on reducing development assistance in donor countries should be considered in this context.

In sum, the ongoing patterns in employment, food and fuel prices, and public spending do not appear to bode well for equity outcomes. What is needed is a Recovery for All that ensures that the economic recovery benefits the most excluded households, and invests in the future of their members, rather than perpetuating or accentuating existing disparities (UNICEF 2010c).

9.   Concluding Remarks

Gross asymmetries in income distribution matter to people. To start with, they are a sign of social injustice. Irrespective of methodology, we inhabit a planet where, as an aggregate, the wealthiest quintile of the population enjoys more than 70 percent of total income compared to a meager two percent for the poorest quintile (83 versus one percent under market exchange rates). We also live in a world where more than eight million young children die each year (some 22,000 per day), and most of their deaths are preventable (UNICEF 2011:84). Hunger, malnutrition and lack of safe drinking water contribute to at least half of child mortality, and their incidence is highly concentrated among the poorer quintiles. The urgency to address these inequalities cannot be more stressed.

But inequality also matters to economic growth. Developing countries with higher income inequality tend to grow slower. Inequality is economically inefficient and dysfunctional: consumption is concentrated in the top income quintile in most developing countries, making their markets smaller. In contrast, most high-income economies developed by expanding domestic markets as a strategy to raise demand and promote economic growth. This happened through public policies that focused on generating employment and household income, ensuring access to land and assets, as well as infrastructure and services, and enhancing human capital and labour productivity. Likewise, developing country governments can focus on

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[15] The Economist, "Internal Affairs: The Gap between Many Rich and Poor Regions Widened because of the Recession," 10 March 2011.
[16] For example, USAID Administrator Rajiv Shah testified before the United States House Appropriations State and Foreign Ops Subcommittee on 30 March 2011 that the passed budget bill (to be approved by the Senate) would result in the deaths of at least 70,000 children who depend on American food and health assistance globally.

expansionary macroeconomic policies that support employment and broad-based economic activities, introduce new schemes to extend health services and social protection for all, and invest in education, water supply, sanitation, food security and nutrition.

Last but not least, inequality matters to political stability. Gross inequities tend to generate intense social tensions and even violent conflict. Equitable policies, on the other hand, are able to enlist the political support of citizens in democratic systems, and can build social stability.

A more equitable world can be achieved. This requires action at national and international levels.

Some questions for policy makers include:

- How can national development strategies and socio-economic recovery plans address inequality and better prioritize the needs and rights of lower income groups?
- How can inclusive development outcomes be accelerated?
- How can governments best guarantee the right to food, housing, education and medical care, along with the right to employment and social security, with special attention to families and children?
- How can employment-generating activities at the local level be fostered, including decent employment for young people?
- Are all possible fiscal space options being considered to ensure a Recovery for All and accelerate inclusive development?
- How can government spending be refocused on the bottom quintiles to push them up? Is the government doing all that it can?
- Are the long-term economic, social and political costs of leaving out low- and middle-income households and vulnerable children in the current economic crisis being considered?
- Are policies being selected and designed through inclusive processes—in other words, through open and public discourse?

At the global level, some of the initiatives that could support and complement the efforts of national governments include:

- Consider the social impacts of different global policies, such as international trade and finance, and promote those options that have larger positive impacts on inclusive national development and directly benefit the majority of households in a country.
- Promote a universal global social protection floor to support adequate income and services for all, which also supports investment in the human capital of poor people.
- Given gross income asymmetries at the global level, ensure donor commitments are upheld and pursue new international sources of development finance.
- Encourage South-South cooperation as a vehicle to promote regional solidarity.

Annex 1. Estimating Income Inequality: Methodology and Assumptions

A. Methodology

There are two common approaches for estimating global income distribution (see UNDP 1992 and 1995, Sutcliffe 2004 and Milanovic 2005). The first approach is known as the *inter-country* distribution accounting model, which looks at the average income differences between large groupings of countries. To do so, it treats all members of a country as if they have the same income (e.g. all Bolivians are assumed to earn the same amount of money in a given year). After ordering all countries in the world according to their levels of per capita income (smallest to largest), global income distribution estimates are derived by dividing the world population into five equal parts (or quintiles) and calculating the corresponding shares of total global income.

The data requirements for inter-country model are very basic and consist of GDP per capita and population for each country. As a result, this method allows for a very large sample size (about 98 percent of the global population for any given year) and covers very recent time periods. All calculations are based on data from World Bank (2011).

A second approach accounts for both inter- and intra-country distribution. Frequently referred to as the *global* distribution accounting model, this method decomposes national income by quintiles and compares those incomes across countries. Here, the average per capita income of those in India's bottom quintile is estimated on the basis of their share of total national income. While this method still assumes that large numbers of individuals have the same income (e.g. a quintile of India's population equals the entire population of Indonesia), it allows for the construction of a hypothetical world in which all persons can be lined up in a single distribution—within country population quintiles—regardless of where they live.

The global distribution model has much more stringent data requirements than the inter-country model. In particular, this method requires national income distribution estimates, which are commonly presented as the share of total income held by different population quintiles, from the poorest 20 percent (quintile 1 or Q1) to the richest 20 percent (quintile 5 or Q5). Annual quintile data were extracted from World Bank (2011) for all available countries and years and then supplemented by information from UNU-WIDER (2008) and Eurostat (2011). Since we are most interested in understanding trends over unique time periods (e.g. 1990, 2000 and most recent available), interpolation and nearest neighbor imputation were used as gap-filling procedures to maximize the number of observations using all three distribution data sources. We did not, however, estimate quintile values for all countries in the world, which means that all of our data points are derived from actual estimates.

B. Assumptions behind income distribution estimates

Estimating income inequality based on national distribution estimates is no easy task. In an ideal world, there would be cross-nationally comparable household surveys for all countries over time with mean income estimates for different population deciles or quintiles derived

from those surveys. In reality, however, household surveys are based on various methodologies, ranging from consumption (with and without transfers) and expenditure to earnings (gross and net) and income (monetary and taxable or disposable and gross). Moreover, household studies are not carried out on a regular basis in most countries, with methods often changing between studies. Since existing national income estimates must be converted from national currencies in order to be compared, there is also the issue of the most appropriate exchange rate (see Box 1 for discussion on using market versus PPP-adjusted exchange rates).

To date, the World Bank's PovcalNet offers the best attempt to create the ideal income distribution database (Note: distribution estimates published in the World Bank's World Development Indicators—referred as World Bank 2011 in this paper—are derived from PovcalNet). Using nearly 700 household surveys across 116 developing countries, it contains income/consumption distribution information along with mean per capita income/consumption estimates based on the latest PPP exchange rates (2005). Regrettably, however, PovcalNet does not include information for any developed countries and is further characterized by large data gaps over time.

Given our objective to understand global inequality trends since 1990, we sacrifice the quality assurance of income/consumption estimates offered by PovalNet in favor of an expanded sample of countries and across more time. We do so by complementing PovcalNet's estimates with income/consumption distribution data compiled by UNU-WIDER as well as by Eurostat. The UNU-WIDER and Eurostat data suffer from differing calculation methods and do not offer mean per capita income/consumption estimates based on household surveys. We further acknowledge the statistical inaccuracies in comparing distribution estimates from three unique data sources. Comparability shortcomings aside, combining these sources enables us to carry out rough approximations of income/consumption distribution estimates in a sample of 136 countries between 1990 and 2007.

The expanded sample requires us to use a less preferable income gauge: GDP. Using GDP as an income metric is inherently flawed given that investment and government spending are assumed to be distributed in the same way as household consumption (or disposable income). As a result, while GDP includes items which may have something to do with future welfare, it is not an accurate measure of current income (e.g. consumption expenditure in China is less than 40 percent of GDP as of 2009). Despite the measurement inadequacies, our intent is to show the general evolution of income distribution over time, and our calculations assume that the distribution of total household income/consumption and total GDP are equally proportionate. Adopting the GDP metric further allows us to carry out comparable distribution estimates using both the inter-country and global accounting models, which would otherwise not be possible.

Concerning populous countries, many global distribution estimates treat the world's most populous countries uniquely since the vast size of their populaces can have a significant impact on global projections. This usually involves dividing the populations of China and India into rural and urban groups and treating each group separately. We have not adopted this approach, and our estimates for all countries represent GDP per quintile of total population.

Annex 2. Income Distribution and Gini Index Data by Country, 1990-2008 (or latest available)[17] [18]

Country Name	Year	Q1	Q2	Q3	Q4	Q5	Gini Index
Albania	1995	8.7	13.0	17.4	23.2	37.8	27.8
	2000	8.9	13.2	17.5	23.1	37.4	28.6
	2005	7.8	12.2	16.6	22.6	40.9	31.8
Algeria	1990	6.5	10.8	14.8	20.7	47.2	38.7
	1995	6.9	11.5	16.3	22.8	42.4	35.5
	2000						36.4
	2005						35.6
	2000	2.0	5.7	10.8	19.7	61.9	59.4
	2005						58.7
Argentina	1990	4.7	9.1	14.3	21.9	50.1	43.3
	1995	4.1	8.4	13.7	21.6	52.2	43.7
	2000	3.3	7.5	12.8	21.2	55.2	46.4
	2005	3.4	7.8	13.3	21.6	53.9	46.1
	2007/8	3.6	8.2	13.4	21.7	53.0	43.0
Armenia	1990						24.2
	1995	5.4	9.5	14.0	20.7	50.4	40.9
	2000	7.6	11.6	15.5	21.2	44.1	40.0
	2005	8.6	12.7	16.4	21.4	41.0	40.2
	2007/8	8.6	13.0	17.1	22.1	39.2	40.6
Australia	1990	7.1	12.3	16.8	23.1	40.6	30.5
	1995	3.6	9.3	15.2	24.0	47.9	30.8
	2000	3.8	9.0	15.0	23.8	48.5	31.7
	2005	8.2	13.1	17.9	23.3	37.4	31.6
	2007/8						33.5
Austria	1990	9.2	14.0	17.9	23.3	35.6	25.1
	1995	9.0	15.0	17.0	23.0	36.0	27.7
	2000	8.6	13.3	17.4	22.9	37.8	25.7
	2005						26.8
	2007/8	9.5	14.4	17.9	22.3	35.9	26.7
Azerbaijan	1990						31.3
	1995	6.9	11.9	16.5	22.6	42.0	40.5
	2000	7.4	11.4	15.6	21.5	44.2	33.2
	2005	13.3	16.2	18.7	21.7	30.2	18.5
Bahamas	1990						30.1
	1995						34.3
	2000						46.4
	2005						30.1
Bangladesh	1990	10.0	13.9	17.5	22.1	36.6	27.5
	1995	9.3	12.9	16.4	21.3	40.2	32.5
	2000	9.3	12.7	16.3	21.4	40.4	35.2
	2005	9.4	12.6	16.1	21.1	40.8	39.1

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[17] Methodology Note: Annual quintile data were extracted from the WDI (2011) and then supplemented by quintile information from UNU-WIDER (2008) and the European Commission (2011). If a data point was not available for a specific year of interest (e.g. 1990, 1995, 2000 or 2007), the stated value reflects (i) interpolation or, if interpolation was not possible, (ii) nearest neighbour imputation (e.g. the most recent data point within two years of the missing year); if neither of these options were possible, no quintile data were reported. All Gini index values were derived from Solt (2009), and some values also reflect interpolation. See Annex 1 for further details on the methodology and underlying assumptions.

[18] The color-coding key is provided at the end of the table on page 52.

Country Name	Year	Q1	Q2	Q3	Q4	Q5	Gini Index
Belarus	1990	10.6	14.8	18.5	23.0	33.1	20.9
	1995	8.5	13.5	17.7	23.1	37.2	25.1
	2000	8.5	12.9	17.1	22.6	38.9	25.6
	2005	8.8	13.6	17.8	23.1	36.7	24.9
	2007/8	8.8	13.4	17.5	22.6	37.7	26.8
Belgium	1990	9.6	14.4	18.4	22.7	34.9	23.3
	1995	8.0	13.0	17.0	23.0	37.0	26.6
	2000	8.5	13.0	16.3	20.8	41.4	27.9
	2005	9.1	13.7	17.8	22.5	36.9	25.7
	2007/8	9.1	14.2	18.3	23.1	35.3	25.7
Belize	1990						53.8
	1995	2.1	5.4	10.4	19.2	62.9	47.6
	2000						47.4
	2005	6.9	10.9	15.1	21.2	45.9	36.9
	2007/8						36.5
Bhutan	2000						47.8
	2005	5.4	8.8	12.9	20.0	53.0	47.5
Bolivia	1990	5.5	9.7	14.8	22.2	47.9	42.2
	1995	3.2	7.2	12.4	20.3	56.8	52.0
	2000	1.4	5.7	11.4	20.4	61.0	55.5
	2005	1.8	5.9	11.4	20.2	60.7	52.8
	2007/8	2.7	6.5	11.0	18.6	61.2	53.3
Bosnia and Herzegovina	1990						37.2
	1995						33.3
	2000	9.1	13.6	17.5	22.6	37.2	28.4
	2005	6.8	11.4	16.1	22.7	42.9	33.9
	2007/8	6.7	11.4	16.0	22.9	43.1	
Botswana	1990	3.4	6.3	10.5	17.8	61.9	54.4
	1995	3.1	5.8	9.6	16.4	65.0	52.9
	2000						52.8
	2005						51.2
Brazil	1990	2.4	5.3	9.7	18.2	64.5	52.8
	1995	2.4	5.7	10.6	18.9	62.5	51.6
	2000	2.4	5.8	10.9	19.2	61.7	52.3
	2005	2.9	6.5	11.4	19.3	60.0	49.1
	2007/8	3.0	6.9	11.8	19.6	58.7	47.7
Bulgaria	1990	9.7	14.1	17.9	22.6	35.6	22.4
	1995	6.9	13.5	18.1	23.5	38.1	28.9
	2000	7.4	12.7	17.2	22.7	40.0	24.5
	2005	7.6	12.9	17.6	23.2	38.7	27.2
	2007/8	5.9	12.3	17.2	23.3	41.3	33.6
Burkina Faso	1990						46.9
	1995	5.3	8.2	12.1	18.5	55.9	42.9
	2000	6.3	9.8	13.6	19.3	50.9	51.0
	2005	7.0	10.6	14.7	20.6	47.1	47.0
Burundi	1990	7.9	12.1	16.3	22.1	41.6	33.7
	1995	6.5	11.2	15.7	21.8	44.8	36.8
	2000	6.1	10.7	15.2	21.3	46.7	38.4
	2005	8.5	11.7	15.4	21.1	43.4	34.5
	2007/8	9.0	11.9	15.4	21.0	42.8	33.8
Cambodia	1990						43.2
	1995	7.9	11.1	14.6	19.9	46.6	43.5
	2000	6.1	9.9	13.0	18.8	52.2	44.5
	2005	6.7	9.9	13.6	19.5	50.3	42.9
	2007/8	6.5	9.7	12.9	18.9	52.0	

Country Name	Year	Q1	Q2	Q3	Q4	Q5	Gini Index
Cameroon	1990						51.6
	1995	5.7	8.9	12.9	19.3	53.3	53.8
	2000	5.6	9.3	13.7	20.5	50.9	44.3
	2005						41.8
Canada	1990	7.7	13.7	19.0	24.8	34.8	27.5
	1995	7.5	12.9	17.3	23.0	39.2	28.7
	2000	7.2	12.7	17.2	23.0	39.9	31.5
	2005						31.7
	2007/8						31.5
Cape Verde	1990						41.0
	1995						46.4
	2000	4.5	8.1	12.2	19.1	56.1	51.9
	2005						51.1
Central African Republic	1990	1.9	4.7	8.9	17.7	66.7	
	1995	2.0	4.9	9.6	18.5	65.0	
	2000	4.0	7.7	12.5	20.5	55.2	
	2005	5.2	9.4	14.3	21.7	49.4	
Chad	2000						40.4
	2005	6.3	10.4	15.0	21.8	46.6	40.1
Chile	1990	3.4	6.9	11.4	18.6	59.7	51.9
	1995	3.5	6.9	11.5	18.8	59.4	51.5
	2000	3.5	7.0	11.4	18.5	59.6	51.6
	2005	4.0	7.6	12.0	19.0	57.4	49.1
	2007/8	4.1	7.7	12.2	19.3	56.8	48.4
China	1990	6.5	11.2	15.9	26.4	40.0	31.8
	1995	6.5	10.5	14.7	21.3	47.1	36.1
	2000	4.7	9.0	14.2	22.1	50.0	38.3
	2005	5.7	9.8	14.7	22.0	47.8	44.0
Colombia	1990	3.4	7.7	12.9	20.9	55.2	47.7
	1995	3.1	6.8	11.0	17.9	61.2	52.8
	2000	2.6	6.5	11.2	18.9	60.8	50.8
	2005						51.3
	2007/8	2.3	6.0	11.0	19.1	61.6	51.8
Congo, Democratic Rep.	2005						43.0
	2007/8	5.5	9.2	13.8	20.9	50.6	42.2
Congo, Republic of	2005	5.0	8.4	13.0	20.5	53.1	42.1
	2007/8						45.2
Costa Rica	1990	4.0	9.0	14.6	22.6	49.9	41.8
	1995	3.9	8.7	14.2	22.2	51.0	42.2
	2000	4.1	8.8	14.1	21.8	51.2	43.9
	2005	4.2	8.6	13.9	21.7	51.8	44.6
	2007/8	4.4	8.5	12.7	19.7	54.6	45.9
Cote d'Ivoire	1990	6.8	11.1	15.8	22.3	43.9	39.8
	1995	7.1	11.2	15.6	21.9	44.3	38.3
	2000	5.4	9.2	13.4	19.9	52.1	45.7
	2005						46.4
Croatia	1990	10.5	14.8	18.5	22.9	33.4	23.7
	1995						31.7
	2000	8.3	12.7	16.9	22.5	39.8	31.1
	2005	8.8	13.3	17.3	22.7	37.9	28.4
	2007/8						29.0
Cyprus	1990						22.6
	1995						24.1
	2000						27.0
	2005						28.8
	2007/8						28.8

Country Name	Year	Q1	Q2	Q3	Q4	Q5	Gini Index
Czech Republic	1990	11.3	14.8	18.1	22.2	33.6	20.6
	1995	10.3	14.2	17.4	21.6	36.6	24.5
	2000	10.5	14.4	18.0	22.8	34.3	25.5
	2005	9.8	14.4	17.5	22.3	36.0	25.4
	2007/8	10.1	14.5	17.7	22.1	35.6	25.3
Denmark	1990	9.4	14.7	18.1	22.6	35.1	25.9
	1995	8.3	14.7	18.2	22.9	35.8	21.8
	2000	9.6	15.0	18.6	22.4	34.4	22.5
	2005	9.5	15.2	19.0	23.0	33.3	23.5
	2007/8	9.2	15.1	18.6	22.7	34.4	25.0
Djibouti	1995	6.4	11.5	16.2	22.7	43.3	37.8
	2000	6.1	10.9	15.5	22.1	45.4	40.0
	2005						39.4
Dominican Republic	1990	4.2	7.9	12.5	19.6	55.7	47.1
	1995	4.2	8.3	13.1	20.4	54.1	46.4
	2000	3.5	7.5	12.5	20.2	56.3	47.2
	2005	4.0	8.0	12.9	20.6	54.5	47.7
	2007/8	4.4	8.5	13.1	20.2	53.8	47.0
Ecuador	1990	3.1	8.0	13.3	21.0	54.6	47.2
	1995	3.1	7.5	12.8	20.7	56.0	50.6
	2000	2.9	6.8	11.3	18.4	60.6	52.4
	2005	3.3	7.3	12.1	19.8	57.6	51.3
	2007/8	3.4	7.2	11.8	19.2	58.5	51.2
Egypt	1990	8.6	12.4	16.3	21.8	40.8	32.9
	1995	9.3	12.9	16.4	21.3	40.1	36.7
	2000	9.0	12.5	15.8	20.7	42.1	36.4
	2005	9.0	12.6	16.1	20.9	41.5	33.5
El Salvador	1990	2.4	8.5	14.5	22.8	51.8	46.6
	1995	3.7	8.2	13.3	20.8	54.1	46.8
	2000	2.8	7.5	13.1	21.4	55.2	47.9
	2005	3.3	8.1	13.6	21.6	53.4	45.5
	2007/8	4.3	9.2	13.7	20.8	52.0	
Estonia	1990	8.6	13.2	17.4	22.7	38.1	22.5
	1995	8.0	12.9	17.6	23.6	38.0	36.7
	2000	6.6	11.3	16.0	22.4	43.8	36.1
	2005	6.8	11.6	16.2	22.5	43.0	33.6
	2007/8	7.4	12.3	16.8	22.6	40.9	32.0
Ethiopia	1990						37.1
	1995	7.2	10.9	14.5	19.8	47.7	39.8
	2000	9.2	13.2	16.7	21.5	39.4	34.5
	2005	9.3	13.2	16.8	21.4	39.4	29.7
Fiji	1990						43.1
	1995						43.3
	2000						43.4
Finland	1990	11.1	15.2	18.5	22.6	32.6	21.0
	1995	10.8	14.8	18.0	22.1	34.3	21.7
	2000	9.6	14.1	17.5	22.1	36.7	24.6
	2005	9.8	14.2	17.9	22.2	35.9	25.7
	2007/8	9.7	14.1	18.0	22.4	35.8	26.0
France	1990	7.3	12.7	17.1	22.7	40.2	27.1
	1995	8.0	13.0	17.0	23.0	38.0	28.2
	2000	9.0	13.0	17.0	23.0	37.0	27.8
	2005	9.2	13.8	17.6	22.3	37.1	27.8
	2007/8	9.3	14.2	17.9	22.4	36.2	28.0

Country Name	Year	Q1	Q2	Q3	Q4	Q5	Gini Index
Gabon	1990						51.7
	1995						50.4
	2000						45.3
	2005	6.1	10.1	14.6	21.2	47.9	42.1
Gambia	1990	1.1	3.4	6.8	14.9	73.7	55.4
	1995	1.2	3.0	6.4	13.4	76.0	55.5
	2000	4.3	8.0	12.8	20.7	54.3	47.6
	2005	4.8	8.6	13.2	20.6	52.8	48.1
Georgia	1990						27.2
	1995	6.1	11.4	16.3	22.8	43.5	40.5
	2000	5.9	10.8	15.8	22.6	45.0	37.7
	2005	5.4	10.5	15.3	22.2	46.7	39.6
Germany	1990	8.5	13.2	17.2	22.7	38.3	26.6
	1995	8.2	14.0	17.8	22.9	37.1	27.1
	2000	8.5	13.7	17.8	23.1	36.9	27.5
	2005	9.5	14.5	18.1	22.0	35.9	28.1
	2007/8	7.8	13.7	17.5	22.5	38.5	30.0
Ghana	1990	6.9	11.3	15.8	22.0	44.0	37.6
	1995	6.1	10.5	15.2	22.1	46.0	35.7
	2000	5.6	10.0	15.1	22.6	46.8	38.5
	2005						41.5
	2007/8	5.2	9.8	14.8	21.9	48.3	40.8
Greece	1990	6.6	12.2	16.6	25.8	38.8	31.5
	1995	6.0	12.0	17.0	24.0	41.0	34.9
	2000	6.7	11.9	16.8	23.0	41.5	33.3
	2005	7.0	12.6	16.9	23.2	40.3	33.4
	2007/8	6.9	12.2	16.7	22.8	41.4	33.5
Guatemala	1990	2.2	5.7	10.5	18.8	62.9	55.0
	1995	2.8	6.5	11.1	18.7	60.9	53.5
	2000	3.4	7.2	11.6	18.6	59.2	52.3
	2005	3.3	7.1	11.9	19.5	58.1	51.6
	2007/8	3.4	7.2	12.0	19.5	57.8	50.7
Guinea	1990	3.1	8.2	14.7	23.9	50.1	47.3
	1995	6.4	10.4	14.8	21.3	47.1	41.9
	2000	6.0	9.9	14.4	21.0	48.7	41.2
	2005	5.8	9.6	14.1	20.8	49.7	39.3
	2007/8						38.6
Guinea-Bissau	1990	2.1	6.5	12.0	20.6	58.9	51.6
	1995	5.2	8.9	13.1	19.4	53.5	44.6
	2000	7.2	11.6	16.0	22.1	43.0	38.0
	2005						38.1
Guyana	1990						42.1
	1995	4.3	9.0	13.2	19.5	53.9	44.1
	2000	4.3	9.8	14.5	21.3	50.1	42.7
Haiti	1990						50.2
	1995						50.6
	2000	2.5	5.9	10.5	18.1	63.0	51.1
	2005						53.0
Honduras	1990	2.8	6.3	10.9	18.8	61.2	51.5
	1995	3.2	7.0	11.8	19.5	58.5	50.9
	2000	3.3	7.5	12.6	20.5	56.0	50.5
	2005	2.3	6.4	11.7	20.0	59.7	52.1
	2007/8	2.5	6.7	12.1	20.4	58.4	52.5

Country Name	Year	Q1	Q2	Q3	Q4	Q5	Gini Index
Hong Kong	1990	4.9	10.2	14.4	21.2	49.4	34.0
	1995	5.3	9.4	13.9	20.7	50.7	38.1
	2000						40.5
	2005						43.5
	2007/8						43.9
Hungary	1990	10.2	14.1	17.6	22.1	36.0	26.7
	1995	9.8	14.0	17.5	22.0	36.7	28.9
	2000	9.6	13.8	17.5	22.2	37.0	27.7
	2005	8.6	13.1	17.1	22.5	38.7	28.9
	2007/8	9.6	14.6	18.0	22.5	35.3	27.7
India	1990	9.1	13.1	16.9	21.8	39.1	30.8
	1995	8.3	12.0	15.8	21.4	42.5	33.2
	2000	7.7	11.4	15.2	21.5	44.3	31.8
	2005	8.1	11.3	14.9	20.4	45.3	34.6
Indonesia	1990	7.9	11.7	15.5	21.1	43.8	34.3
	1995	7.3	11.0	14.9	20.9	45.9	35.6
	2000	8.0	11.6	15.2	21.0	44.2	33.0
	2005	7.1	10.7	14.4	20.5	47.3	35.5
	2007/8	7.4	11.0	14.9	21.3	45.5	35.9
Iran	1990	5.2	9.6	14.5	21.6	49.2	44.2
	1995	5.4	9.6	14.4	21.5	49.1	43.7
	2000	5.1	9.3	14.3	21.6	49.7	43.9
	2005	6.4	10.9	15.6	22.2	45.0	41.5
Ireland	1990	5.7	11.2	16.4	23.6	43.1	33.0
	1995	7.4	11.3	15.7	21.9	42.8	33.6
	2000	7.4	12.3	16.3	21.9	42.0	31.3
	2005	7.9	12.5	17.2	22.7	39.7	31.5
	2007/8	8.2	12.6	16.8	23.1	39.3	30.7
Israel	1990	4.8	9.9	15.9	23.7	45.7	30.6
	1995	2.6	7.3	13.0	21.5	55.4	32.9
	2000	5.7	10.5	15.9	23.0	44.9	34.4
	2005						37.0
Italy	1990	7.7	12.6	17.2	23.4	39.1	30.7
	1995	6.4	11.9	16.7	23.3	41.8	33.8
	2000	6.6	11.9	16.8	23.2	41.6	33.3
	2005	7.2	12.8	17.2	22.7	40.1	34.0
	2007/8	7.2	12.7	17.5	23.1	39.5	33.3
Jamaica	1990	5.8	9.7	14.5	21.7	48.3	45.1
	1995	6.5	10.9	15.3	21.6	45.7	38.6
	2000	5.1	9.2	13.8	20.8	51.1	49.4
	2005	5.2	9.0	13.8	20.9	51.2	48.1
Japan	1990						28.0
	1995	10.6	14.2	17.6	22.0	35.7	29.1
	2000						32.8
	2005						35.9
Jordan	1990	6.4	10.3	14.7	21.2	47.3	40.6
	1995	6.7	10.6	14.8	20.9	47.0	37.9
	2000	7.0	11.1	15.4	21.6	45.0	37.9
	2005	7.0	11.0	15.2	21.3	45.5	39.2
	2007/8	7.2	11.1	15.2	21.1	45.4	38.8
Kazakhstan	1990	8.7	13.3	17.6	23.2	37.2	24.8
	1995	7.0	11.7	16.7	23.2	41.5	32.8
	2000	8.1	12.5	17.0	23.1	39.3	33.2
	2005	8.0	12.3	16.6	22.5	40.6	34.3
	2007/8	8.7	12.8	16.6	22.0	39.9	36.3

Country Name	Year	Q1	Q2	Q3	Q4	Q5	Gini Index
Kenya	1990	3.4	6.7	10.7	17.3	61.8	54.3
	1995	5.7	10.0	14.6	21.3	48.4	48.2
	2000	5.5	9.4	13.9	20.7	50.5	47.1
	2005	4.7	8.8	13.3	20.3	53.0	48.2
Korea, Republic of	1990	7.3	12.4	16.8	22.9	40.6	32.0
	1995	5.8	13.3	18.0	23.5	39.4	29.1
	2000	4.8	11.2	17.8	24.5	41.6	32.0
	2005						31.8
	2007/8						29.2
Kyrgyz Republic	1990	7.4	10.7	15.4	22.1	44.4	24.2
	1995	4.4	8.8	13.8	21.4	51.6	44.1
	2000	7.8	12.0	16.4	22.3	41.6	31.2
	2005	8.3	12.0	15.9	22.1	41.8	35.8
	2007/8	8.8	11.9	15.1	21.6	42.6	38.1
Lao PDR	1990	9.3	12.8	16.4	21.4	40.1	30.7
	1995	8.5	12.3	16.0	21.2	42.0	34.5
	2000	8.3	12.1	16.0	21.4	42.1	35.5
	2005						34.5
Latvia	1990	10.1	14.3	18.3	23.1	34.2	22.8
	1995	8.0	13.3	17.3	22.3	39.2	28.9
	2000	7.1	12.0	16.4	22.4	42.1	33.2
	2005	6.8	11.6	16.1	22.6	42.9	36.7
	2007/8	6.7	11.5	15.9	22.6	43.3	37.8
Lebanon	1995						43.7
	2000						43.5
	2005						43.1
Lesotho	1990	2.7	6.0	10.7	19.5	61.1	59.1
	1995	1.5	4.3	9.0	18.6	66.6	61.4
	2000	2.4	6.1	11.2	20.1	60.2	56.6
	2005	3.0	7.2	12.5	21.0	56.4	48.7
Liberia	2005						41.1
	2007/8	6.4	11.4	15.7	21.6	45.0	47.2
Lithuania	1990	9.5	14.0	17.7	22.3	36.5	22.7
	1995	7.9	12.6	16.6	22.0	40.9	33.4
	2000	7.9	12.5	17.0	22.8	39.9	32.8
	2005	6.2	11.8	16.2	22.7	43.1	34.6
	2007/8	7.0	12.3	16.8	22.7	41.2	34.9
Luxembourg	1990	9.7	14.2	17.1	22.4	36.6	23.7
	1995	9.0	13.0	17.0	22.0	38.0	25.4
	2000	8.9	13.3	17.1	22.9	37.8	26.0
	2005	9.3	14.2	17.9	22.6	36.0	27.4
	2007/8	9.1	13.9	17.6	22.6	36.8	28.4
Macedonia	1990						24.5
	1995	5.0	11.1	18.4	25.8	39.8	33.4
	2000	6.7	12.0	16.9	23.2	41.2	32.3
	2005	5.5	10.2	14.8	21.8	47.6	35.9
	2007/8	5.2	10.0	14.5	21.5	48.8	36.8
Madagascar	1990						44.7
	1995	5.7	9.9	14.5	21.1	48.8	42.2
	2000	5.4	9.1	13.7	21.1	50.8	43.0
	2005	6.2	9.6	13.1	17.7	53.5	44.3
Malawi	1990						59.2
	1995	4.9	8.5	12.3	18.3	56.1	56.6
	2000	5.6	9.2	13.2	19.3	52.8	45.7
	2005	7.0	10.8	14.9	20.9	46.4	39.3

Country Name	Year	Q1	Q2	Q3	Q4	Q5	Gini Index
Malaysia	1990	4.9	8.8	13.5	20.7	52.2	41.1
	1995	4.4	8.3	13.1	20.6	53.6	43.5
	2000	5.2	9.3	14.2	21.5	49.9	40.1
	2005	6.4	10.8	15.8	22.8	44.4	37.1
Maldives	2005	6.5	10.9	15.6	22.6	44.3	
Mali	1990	6.6	10.6	15.0	21.4	46.4	42.7
	1995	4.6	7.8	12.1	19.3	56.1	63.6
	2000	6.1	10.2	15.0	22.1	46.7	43.4
	2005						38.9
	2007/8	6.5	10.7	15.2	21.6	46.0	38.8
Mauritania	1990	4.7	9.0	13.6	20.3	52.4	44.8
	1995	5.9	10.3	14.8	21.2	47.9	38.7
	2000	6.2	10.5	15.4	22.3	45.7	36.6
Mauritius	1990						35.8
	1995						40.3
	2000						40.2
	2005						39.9
	2007/8						39.4
Mexico	1990	3.7	7.6	12.2	19.6	56.9	47.2
	1995	4.1	8.0	12.8	20.2	54.9	48.4
	2000	3.9	7.8	12.4	19.6	56.4	49.1
	2005	4.6	8.9	13.6	20.8	52.2	46.0
	2007/8	4.2	8.3	12.8	19.8	54.9	46.9
Micronesia	2000	1.6	5.1	10.2	19.0	64.0	
Moldova	1990	8.4	13.2	17.6	23.0	37.8	24.5
	1995	6.6	11.6	16.4	22.8	42.7	37.0
	2000	6.9	11.4	15.9	22.0	43.8	42.2
	2005	7.1	11.5	15.8	22.0	43.6	38.3
	2007/8	6.7	11.1	15.6	22.0	44.6	37.3
Mongolia	1995	7.3	12.0	16.9	23.4	40.4	34.1
	2000	7.6	12.6	17.3	23.3	39.2	35.8
	2005	7.2	12.2	17.1	23.4	40.2	33.8
	2007/8	7.1	11.5	16.1	22.6	42.7	
Montenegro	1995	9.0	13.8	17.9	22.9	36.5	
	2000	8.4	12.6	16.4	21.5	41.2	
	2007/8	6.5	11.4	16.1	22.2	43.7	
Morocco	1990	6.6	10.5	15.0	21.5	46.4	37.3
	1995	6.5	10.5	15.1	21.6	46.3	39.9
	2000	6.4	10.4	14.9	21.6	46.8	40.3
	2005						41.0
	2007/8	6.5	10.5	14.5	20.6	47.9	41.3
Mozambique	1995	5.7	9.6	13.8	20.1	50.8	39.4
	2000	5.6	9.4	13.5	19.6	52.0	42.2
	2005	5.4	9.2	13.1	19.0	53.3	40.7
Namibia	1990						70.8
	1995	1.5	2.8	5.5	12.0	78.3	67.0
	2000						65.4
	2005						67.7
Nepal	1990						34.1
	1995	7.6	11.1	15.0	20.6	45.7	39.2
	2000	6.8	10.0	13.7	19.5	50.0	45.5
	2005	6.1	8.9	12.5	18.4	54.2	48.5
Netherlands	1990	7.9	13.6	18.1	23.6	36.8	26.2
	1995	8.5	13.6	17.8	23.1	36.8	25.6
	2000	9.4	14.6	17.3	23.1	36.2	25.2
	2005	9.0	14.5	18.0	22.5	36.0	27.4
	2007/8	9.3	14.1	17.6	22.0	37.0	27.8

Country Name	Year	Q1	Q2	Q3	Q4	Q5	Gini Index
New Zealand	1990	4.6	10.5	16.3	23.9	44.7	31.6
	1995	6.4	11.4	15.8	22.6	43.8	33.4
	2000						35.9
	2005						33.1
	2007/8						32.6
Nicaragua	1990						53.1
	1995	2.9	6.8	11.7	19.5	59.1	52.7
	2000	3.7	7.9	12.6	20.0	55.9	51.0
	2005	3.8	7.7	12.3	19.4	56.9	49.1
Niger	1990	7.5	11.7	15.7	21.3	43.9	40.1
	1995	6.0	10.1	14.6	21.2	48.1	49.8
	2000	5.9	9.9	14.3	20.7	49.2	45.9
	2005	5.9	9.8	13.9	20.1	50.3	43.6
Nigeria	1990	4.9	9.5	15.0	23.2	47.5	49.1
	1995	4.7	9.0	13.9	21.2	51.2	49.4
	2000	5.0	9.4	14.1	21.1	50.4	47.2
	2005	5.1	9.7	14.7	21.9	48.6	43.8
Norway	1990	6.2	12.2	18.0	24.7	38.7	23.2
	1995	9.8	14.4	17.8	22.3	35.7	23.8
	2000	8.1	13.0	17.3	22.7	39.0	25.0
	2005	9.3	14.4	17.6	21.0	37.7	25.3
	2007/8	9.0	15.7	19.0	22.8	33.5	24.1
Pakistan	1990	8.1	12.3	16.2	21.6	41.7	32.6
	1995	9.7	13.2	16.5	21.2	39.5	32.2
	2000	9.0	12.6	16.1	21.0	41.4	29.5
	2005	9.1	12.8	16.3	21.3	40.5	30.8
Panama	1990	1.9	6.0	11.8	21.0	59.3	51.3
	1995	2.1	6.2	11.6	20.2	59.9	51.7
	2000	2.4	6.3	11.6	19.9	59.8	51.0
	2005						49.8
	2007/8	2.5	6.6	12.1	20.8	58.0	48.9
Papua New Guinea	1995	4.5	7.7	12.1	19.3	56.4	40.0
	2000						48.7
	2005						51.6
Paraguay	1990	5.8	10.3	15.4	22.7	45.8	36.2
	1995	2.3	5.9	10.7	18.7	62.4	54.0
	2000	2.2	6.3	11.5	19.7	60.2	52.2
	2005	3.0	7.2	12.2	20.0	57.6	51.1
	2007/8	3.4	7.6	12.2	19.4	57.4	49.3
Peru	1990	5.6	9.8	14.1	20.5	50.0	42.3
	1995	4.6	9.1	14.1	21.4	50.7	50.5
	2000	3.5	7.6	12.7	20.4	55.8	53.2
	2005	3.7	7.5	12.4	20.0	56.4	50.7
	2007/8	3.6	7.8	13.0	20.8	54.8	49.8
Philippines	1990	6.1	9.6	13.9	20.9	49.6	39.3
	1995	5.8	9.3	13.7	20.8	50.5	46.1
	2000	5.4	8.8	13.2	20.4	52.3	45.2
	2005	5.5	9.1	13.7	21.2	50.5	42.7
	2007/8	5.6	9.1	13.7	21.2	50.4	42.6
Poland	1990	9.2	13.8	18.0	23.2	35.9	24.9
	1995	7.7	12.6	16.9	22.5	40.4	31.8
	2000	7.9	12.3	16.6	22.4	41.0	28.8
	2005	7.3	11.7	16.2	22.4	42.4	31.3
	2007/8	7.6	12.8	17.0	22.5	40.1	29.7

Country Name	Year	Q1	Q2	Q3	Q4	Q5	Gini Index
Portugal	1990	7.1	11.8	16.4	22.6	42.0	31.0
	1995	6.0	11.0	17.0	22.0	44.0	35.6
	2000	7.0	12.0	17.0	22.0	42.0	35.3
	2005	6.6	11.3	15.4	21.0	45.7	37.0
	2007/8	6.9	11.5	15.4	21.8	44.4	35.9
Romania	1990	9.7	14.7	18.6	23.2	33.7	20.8
	1995	8.8	13.5	17.6	22.7	37.4	27.7
	2000	8.2	13.0	17.4	23.0	38.4	27.2
	2005	8.2	12.8	16.8	22.3	39.9	29.8
	2007/8	7.9	12.7	16.8	22.3	40.3	33.0
Russian Federation	1990	7.8	12.3	16.5	22.0	41.5	24.0
	1995	4.4	9.1	13.9	20.9	51.8	44.7
	2000	6.1	10.7	15.7	22.7	44.8	43.4
	2005	6.4	11.0	15.9	22.7	44.1	45.0
	2007/8	5.6	9.6	13.9	20.7	50.2	46.2
Rwanda	2000	5.4	9.0	13.2	19.6	52.8	47.7
	2005						42.3
	2007/8						44.1
São Tomé and Príncipe	2000	5.2	8.7	12.1	17.6	56.5	
Senegal	1990	3.5	7.0	11.6	19.3	58.6	62.5
	1995	6.5	10.4	14.4	20.4	48.4	41.0
	2000	6.5	10.3	14.4	20.5	48.3	39.2
	2005	6.2	10.6	15.3	22.0	45.9	36.7
Serbia	1990						32.9
	1995	9.0	13.8	17.9	22.9	36.5	29.4
	2000	8.4	12.6	16.4	21.5	41.2	35.7
	2005						36.1
	2007/8	9.1	13.6	17.4	22.5	37.5	35.1
Seychelles	2007/8	3.7	5.7	8.4	12.4	69.8	
Sierra Leone	1990	1.1	2.2	9.8	23.1	63.8	62.7
	1995	3.6	5.9	11.9	22.0	56.5	55.8
	2000	5.2	8.3	13.2	21.3	52.0	48.9
	2005	6.1	9.7	14.0	20.9	49.3	44.7
Singapore	1990						34.4
	1995						33.8
	2000	5.0	9.4	14.6	22.0	49.0	37.4
	2005						37.9
	2007/8						39.7
Slovak Republic	1990	11.7	15.8	18.8	22.3	31.4	17.0
	1995	9.5	15.2	18.7	22.7	33.9	22.4
	2000	10.4	14.6	17.8	22.3	35.0	24.6
	2005	9.1	14.6	18.3	22.5	35.5	24.9
	2007/8	10.0	14.9	18.2	22.3	34.6	23.0
Slovenia	1990	9.9	13.9	17.6	22.3	36.3	18.6
	1995	9.2	13.3	17.2	22.3	38.1	24.4
	2000	8.8	13.3	17.5	22.9	37.5	24.8
	2005	9.9	15.0	18.5	22.8	33.8	24.5
	2007/8	10.1	15.2	18.5	22.8	33.4	25.4
South Africa	1990						61.9
	1995	3.6	6.1	10.2	18.4	61.8	57.8
	2000	3.1	5.6	9.9	18.8	62.7	64.5
	2005						67.8
Spain	1990	7.6	12.7	17.1	22.9	39.7	30.3
	1995	6.5	12.3	16.7	23.3	42.2	35.3
	2000	7.6	12.5	16.7	22.2	40.9	33.6
	2005	7.2	12.8	17.4	23.6	39.0	31.6
	2007/8	7.3	12.8	17.8	23.5	38.6	31.3

Country Name	Year	Q1	Q2	Q3	Q4	Q5	Gini Index
Sri Lanka	1990	8.7	12.5	16.1	21.2	41.5	33.5
	1995	8.0	11.8	15.7	21.4	43.1	37.1
	2000	7.1	10.8	14.8	20.8	46.5	44.5
	2005						43.8
Suriname	1995						49.1
	2000	3.1	7.5	12.2	19.9	57.4	48.9
	2005						48.4
Swaziland	1990						54.9
	1995	2.7	5.8	10.0	17.2	64.3	54.0
	2000	4.2	7.6	11.9	19.0	57.3	49.7
	2005						46.8
Sweden	1990	7.4	12.7	16.7	25.0	38.2	20.7
	1995	9.3	14.5	18.4	23.4	34.5	22.1
	2000	9.4	13.8	17.2	21.9	37.8	25.2
	2005	10.1	15.2	18.5	22.7	33.5	23.7
	2007/8	10.0	15.2	18.7	22.7	33.4	23.0
Switzerland	1990	6.2	12.1	16.6	22.9	42.2	30.9
	1995	6.7	12.1	16.5	22.8	41.9	29.2
	2000	7.6	12.2	16.3	22.6	41.3	28.0
	2005	8.2	12.9	17.0	22.5	39.5	31.1
	2007/8	8.4	13.2	17.3	22.4	38.7	
Taiwan	1990						27.1
	1995						27.7
	2000						28.9
	2005						30.5
Tajikistan	1990						29.5
	1995						30.3
	2000	8.0	12.7	16.9	22.4	40.0	31.3
	2005	7.8	12.0	16.4	21.9	41.9	33.0
Tanzania	1990	7.4	12.2	16.6	22.2	41.6	42.2
	1995	7.4	12.0	16.4	22.2	41.9	39.4
	2000	7.3	11.8	16.3	22.3	42.3	35.5
	2005						36.0
Thailand	1990	5.8	9.1	13.4	20.3	51.5	50.2
	1995	5.8	9.3	13.7	20.6	50.5	51.5
	2000	5.9	9.4	14.1	21.3	49.4	45.1
	2005	6.1	9.8	14.2	21.0	49.0	41.1
Timor-Leste	2000	6.7	10.4	14.8	21.3	46.8	
	2005	8.2	11.8	15.6	21.3	43.1	
	2007/8	8.9	12.5	16.0	21.2	41.3	
Togo	2005						34.7
	2007/8	5.4	10.3	15.2	22.0	47.1	34.8
Trinidad and Tobago	1990	5.2	10.0	15.2	22.7	46.9	38.1
	1995						37.3
	2000						37.4
	2005						37.6
Tunisia	1990	5.9	10.4	15.3	22.1	46.3	38.4
	1995	5.6	10.0	14.9	22.0	47.6	41.5
	2000	5.9	10.2	14.9	21.8	47.2	40.8
	2005						40.8
Turkey	1990	5.9	10.0	14.3	20.8	49.0	43.7
	1995	5.8	10.1	14.8	21.5	47.8	43.7
	2000	5.7	9.9	14.6	21.3	48.5	42.2
	2005	5.2	9.8	14.6	21.6	48.8	43.9
	2007/8	5.4	10.3	15.2	22.0	47.1	

Country Name	Year	Q1	Q2	Q3	Q4	Q5	Gini Index
Turkmenistan	1990	9.1	12.4	16.8	22.9	38.8	26.6
	1995	6.6	10.9	15.7	22.4	44.4	29.9
	2000	6.0	10.2	14.9	21.7	47.2	30.6
	2005						40.3
Uganda	1990	5.3	9.6	14.3	21.2	49.6	41.7
	1995	7.0	10.9	15.1	21.0	46.0	36.8
	2000	5.8	9.7	13.9	20.2	50.4	42.6
	2005	6.1	9.8	14.1	20.7	49.3	40.3
	2007/8						39.1
Ukraine	1990	9.8	14.3	18.4	23.3	34.2	21.7
	1995	7.7	12.4	16.8	22.6	40.6	38.4
	2000	8.8	13.4	17.5	22.8	37.6	30.5
	2005	9.0	13.4	17.6	22.9	37.2	33.4
	2007/8	9.3	13.5	17.5	22.7	37.1	32.5
United Kingdom	1990	7.6	12.2	16.8	22.8	40.7	32.8
	1995	7.4	12.3	16.6	22.7	41.3	34.4
	2000	7.7	12.5	16.6	22.4	41.2	34.5
	2005	7.1	12.2	16.5	22.3	41.9	34.6
	2007/8	7.5	12.6	16.9	22.6	40.4	35.8
United States	1990	3.9	9.6	15.9	24.0	46.6	33.5
	1995	3.7	9.1	15.2	23.3	48.7	36.3
	2000	3.6	8.9	14.9	23.0	49.6	36.8
	2005	3.4	8.7	14.7	23.2	50.1	37.0
	2007/8						36.0
Uruguay	1990	5.3	10.0	14.9	21.8	48.0	40.6
	1995	4.9	9.6	14.8	22.2	48.5	40.5
	2000	4.8	9.2	14.4	21.9	49.8	41.7
	2005	4.6	9.0	14.3	22.2	49.9	42.8
	2007/8	4.3	8.6	13.6	21.4	52.1	43.0
Uzbekistan	1990	10.9	12.7	17.2	23.6	35.6	24.0
	1995	6.5	10.6	15.7	22.8	44.3	34.0
	2000	5.9	10.7	15.4	21.9	46.1	33.5
	2005	7.1	11.5	15.7	21.5	44.2	36.4
Venezuela	1990	4.9	9.6	14.7	22.0	48.8	40.6
	1995	4.2	8.8	13.9	21.6	51.5	43.5
	2000	3.0	8.3	14.1	22.3	52.3	42.1
	2005	3.7	8.8	14.1	21.7	51.8	42.1
	2007/8	4.9	9.6	14.8	22.1	48.6	40.2
Vietnam	1990						36.0
	1995	7.9	11.4	15.4	21.3	44.0	34.1
	2000	7.7	11.2	15.2	21.1	44.8	36.2
	2005	7.1	10.7	14.9	21.3	46.1	38.1
	2007/8	7.1	10.8	15.2	21.6	45.4	38.3
Yemen	1990	6.1	10.8	15.4	21.8	45.9	39.2
	1995	6.8	11.5	16.0	22.3	43.4	35.4
	2000	7.4	11.9	16.3	22.3	42.2	33.6
	2005	7.2	11.3	15.3	21.0	45.3	38.6
	2007/8	7.2	11.3	15.3	21.0	45.3	
Zambia	1990	0.7	4.8	10.8	21.4	62.4	54.6
	1995	3.8	7.8	12.7	20.4	55.4	52.4
	2000	4.4	8.4	13.1	20.2	53.9	50.0
	2005	3.6	7.8	12.8	20.6	55.2	50.9
Zimbabwe	1990	4.0	6.3	10.0	17.4	62.3	54.7
	1995	1.1	3.2	6.5	12.5	76.7	57.5

Key

Data Type	Color	Source
Distribution*	Black	World Bank (2011)
	Green	UNU-WIDER (2008)
	Blue	Eurostat (2011)
Gini*	-	Solt (2009)

*Note: For 2007/8, distribution estimates reflect 2007, and Gini estimates reflect 2008

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