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## Recent Trends in Income Inequality in Latin America

**A**ny assessment of the Latin American economies would be incomplete without reference to their high levels of socioeconomic inequalities. All countries in the region are characterized by large disparities of income and consumption levels, access to education, land, and basic services, and other socioeconomic variables. Inequality is a distinctive, pervasive characteristic of the region.

This document presents information updated through the mid-2000s and analyzes patterns and trends of income inequality in Latin America. The measurement and analysis of inequality have long been a major topic of study for economics and other social sciences in the region. However, the scarcity of reliable and consistent microeconomic data has always been an obstacle against comprehensive assessments. Most studies are based on limited sources or are constrained to cover a single country. The United Nations Economic Commission for Latin America and the Caribbean (ECLAC), the World Bank, and the Inter-American Development Bank (IDB) have all made efforts to assemble large databases of national household surveys to support wider

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assessments of inequality, poverty, and other socioeconomic variables. This study is mostly based on data from the Socioeconomic Database for Latin America and the Caribbean (SEDLAC), a project developed jointly by the Center for Distributive, Labor, and Social Studies (CEDLAS) and the World Bank. This database contains information on more than 200 official household surveys in twenty-five Latin American and Caribbean countries. This paper uses data for the period from 1992 to 2006.

We confirm that income inequality increased in the 1990s as documented in the literature, but we also find that inequality decreased in the 2000s, suggesting a turning point from the unequalizing changes of the previous two decades. While the recent fall in income inequality is significant and widespread, it does not seem to be based on strong fundamentals.

The rest of this paper is organized as follows. The discussion opens with a description of the data sources and their limitations. The subsequent section represents the core of the paper, as it documents the main patterns of income inequality in Latin America, at both the country and regional levels. The paper then takes a look inside household income, discussing inequality patterns for the distribution of individual labor and nonlabor income. We also place the Latin American evidence in international perspective, using various data sources. The final section presents our concluding remarks.

## **The Data**

The main source of data for this paper is the Socioeconomic Database for Latin America and the Caribbean (SEDLAC), developed jointly by CEDLAS at the Universidad Nacional de La Plata (Argentina) and the World Bank's Latin American and Caribbean Poverty and Gender Group. This database contains information on more than 200 official household surveys in twenty-five Latin American and Caribbean countries: the seventeen countries in continental Latin America (namely, Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay, and Venezuela) plus eight countries in the Caribbean (the Dominican Republic and seven non-Hispanic Caribbean countries). The sample represents 97 percent of the total Latin American and Caribbean population, including 100 percent in continental Latin America and 55 percent in the Caribbean. The main missing country is Cuba, which does not disclose household survey information. Our analysis starts in the early 1990s,

when most countries in Latin America consolidated their household survey programs, and ends in 2006.

Table 1 lists the surveys used in this study, covering the eighteen Latin American countries in the CEDLAS database. Household surveys in most countries are nationally representative, with the exception of Argentina and Uruguay (before 2006), where surveys cover only the urban population. This nonetheless represents 88 percent and 92 percent of the total population in these countries, respectively. In these two cases, we use the urban figures as proxies for the national statistics.<sup>1</sup>

Most countries experienced changes in their household surveys in the 1990s and 2000s. In many cases the geographical coverage was broadened, monthly surveys were replaced by annual ones, and the questionnaires were improved. Although these changes are certainly welcome, they pose significant problems for comparison. The specific assumptions made in each country to construct an income inequality series for the period 1992–2006 are discussed in the methodological appendix.

Household surveys are not uniform across Latin American countries. In addition, the national statistical offices take different methodological decisions to compute official measures of mean income (or consumption), poverty, and inequality.<sup>2</sup> For these reasons, rather than using the income variables defined by the national statistical offices, we construct a homogeneous variable (data permitting) for household per capita income across household surveys, incorporating all the typical sources of current income. We apply consistent criteria across countries and years, and we use identical programming routines to process the data. The SEDLAC website includes tables with all the items considered (or excluded) to compute a standardized income variable in each country/year.<sup>3</sup>

1. Uruguay expanded its official household survey (*Encuesta Continua de Hogares*, ECH) to the rural areas in 2006, with only negligible changes in inequality indicators: the national Gini is almost exactly the same as the Gini for the Greater Montevideo area. In Argentina, the World Bank's *Encuesta de Impacto Social de la Crisis* (ISCA) carried out in 2002 included small towns in rural areas. The Gini coefficient for the distribution of household per capita income turns out to be 47.4 in urban areas and 47.5 for the whole country. These facts suggest that in these two Southern Cone countries, urban inequality statistics can be taken as good approximations for the national figures.

2. National statistical offices differ in the treatment of adult equivalent scales, regional prices, implicit rent from own housing, zero incomes, adjustments for nonresponse and misreporting, and many other issues.

3. The SEDLAC website is [www.cedlas.org/sedlac](http://www.cedlas.org/sedlac). See also Gasparini, Gutiérrez, and Tornarolli (2007).

TABLE 1. Household Surveys in Latin America

Country	Period	Name of the survey	Coverage
Argentina	1986–1991	<i>Encuesta Permanente de Hogares</i> (EPH)	Greater Buenos Aires
	1992–1998	<i>Encuesta Permanente de Hogares</i> (EPH)	Urban (15 cities)
	1998–2003	<i>Encuesta Permanente de Hogares</i> (EPH)	Urban (28 cities)
	2003–2005	<i>Encuesta Permanente de Hogares—Continua</i> (EPHC)	Urban (28 cities)
	2006	<i>Encuesta Permanente de Hogares—Continua</i> (EPHC)	Urban (31 cities)
Bolivia	1993	<i>Encuesta Integrada de Hogares</i> (EIH)	Urban
	1997	<i>Encuesta Nacional de Empleo</i> (ENE)	National
	2000–2004	<i>Encuesta Continua de Hogares—MECOVI</i> (ECH)	National
Brazil	1990–2006	<i>Pesquisa Nacional por Amostra de Domicílios</i> (PNAD)	National
Chile	1990–2006	<i>Encuesta de Caracterización Socioeconómica Nacional</i> (CASEN)	National
Colombia	1992	<i>Encuesta Nacional de Hogares—Fuerza de Trabajo</i> (ENH)	Urban
	1996–2000	<i>Encuesta Nacional de Hogares—Fuerza de Trabajo</i> (ENH)	National
	2001–2004	<i>Encuesta Continua de Hogares</i> (ECH)	National
Costa Rica	1990–2006	<i>Encuesta de Hogares de Propósitos Múltiples</i> (EHPM)	National
Dominican Republic	2000–2006	<i>Encuesta Nacional de Fuerza de Trabajo</i> (ENFT)	National
Ecuador	1995–2006	<i>Encuesta de Condiciones de Vida</i> (ECV)	National
	1995–1998	<i>Encuesta Periódica de Empleo y Desempleo</i> (EPED)	Urban
	2000	<i>Encuesta Periódica de Empleo y Desempleo</i> (EPED)	National
	2003–2006	<i>Encuesta de Empleo, Desempleo y Subempleo Urbano</i> (ENEMDU)	Urban
El Salvador	1991–2005	<i>Encuesta de Hogares de Propósitos Múltiples</i> (EHPM)	National
Guatemala	2000–2006	<i>Encuesta Nacional sobre Condiciones de Vida</i> (ECV)	National
	2002–2004	<i>Encuesta Nacional de Empleo e Ingresos</i> (ENEI)	National
Honduras	1992–2006	<i>Encuesta Permanente de Hogares de Propósitos Múltiples</i> (EHPM)	National
Mexico	1989–2006	<i>Encuesta Nacional de Ingresos y Gastos de los Hogares</i> (ENIGH)	National
Nicaragua	1993–2005	<i>Encuesta Nacional de Hogares sobre Medición de Nivel de Vida</i> (EMNV)	National
Panama	1995–2006	<i>Encuesta de Hogares</i> (EH)	National
Paraguay	1990	<i>Encuesta de Hogares—Mano de Obra</i> (EHMO)	Urban
	1990–1995	<i>Encuesta de Hogares—Mano de Obra</i> (EHMO)	National
	1997–2001	<i>Encuesta Integrada de Hogares</i> (EIH)	National
	1999–2006	<i>Encuesta Permanente de Hogares</i> (EPH)	National
Peru	1997–2006	<i>Encuesta Nacional de Hogares</i> (ENAHO)	National
Uruguay	1989–2005	<i>Encuesta Continua de Hogares</i> (ECH)	Urban
Venezuela	1989–2006	<i>Encuesta de Hogares Por Muestreo</i> (EHM)	National

Source: Authors' calculations, based on CEDLAS and World Bank (2007).

Household consumption has several advantages over household income as a proxy for well-being. However, this paper studies income inequality, as few countries in the region routinely conduct national household surveys with consumption- or expenditures-based questionnaires. To make the results more transparent and easier to reproduce, monthly incomes are not adjusted for nonreporting or misreporting, and they are not adjusted to match national accounts.<sup>4</sup> The methodological decisions regarding missing data, implicit rent from own housing, regional prices, and other issues are detailed on the SEDLAC website.

In this paper we chose to show the results in terms of the Gini coefficients computed over the distribution of household per capita income. To evaluate the robustness of the results, we present several specifications that use alternative mechanisms for dealing with zero and missing income observations. The choice of specifications presented is mainly driven by consistency with the bulk of the empirical literature and current practices of several national statistical offices and researchers. We provide a wide range of alternative estimations on the SEDLAC website using other inequality indices, various income variables, and alternative methodological decisions on the treatment of the data. All the main results in this paper are robust to these changes.

## **Income Inequality in Latin America**

This section documents the pattern of income inequality in Latin American countries. Most of the evidence corresponds to the period from 1992 to 2006. We start by presenting the main trends for the region as a whole and then discuss the country-specific evidence.

### *An Overview*

Historians have documented inequality in Latin America from as early as the sixteenth century.<sup>5</sup> However, systematic data on the size income distribution only became available in the 1970s, when several countries in the region introduced household survey programs. The information for the 1970s and the 1980s is relatively weak, since surveys were infrequent, were usually

4. See Deaton (2003) on arguments about matching household survey data with national accounts.

5. See the discussion in Bourguignon and Morrisson (2002) and Robinson and Sokoloff (2004).

**TABLE 2. Distribution of Household per Capita Income: Mean and Median Gini Coefficients across Latin American Countries**

<i>Period</i>	<i>Mean</i>	<i>Median</i>	<i>Weighted mean</i>
Early 1990s (ca. 1992)	52.0	52.7	54.9
Late 1990s (ca. 1998)	53.2	53.6	55.5
Early 2000s (ca. 2002)	53.6	54.5	54.7
Mid-2000s (ca. 2006)	51.9	52.3	52.7

Source: Authors' calculations, based on CEDLAS and World Bank (2007).

restricted to main cities, and included limited questions about income, and the questionnaires and sampling frames changed over time. The literature suggests that inequality fell in the 1970s in several countries, such as Mexico, Panama, Colombia, Peru, and Venezuela, and increased in some Southern Cone economies, including Argentina, Chile, and Uruguay.<sup>6</sup> The 1980s, known as the lost decade based on the weak macroeconomic performance, were also frustrating in terms of income inequality.<sup>7</sup> Londoño and Székely report that the average income ratio of top to bottom quintiles in Latin American countries fell from 22.9 in 1970 to 18.0 in 1982 and then rose back to 22.9 by 1991.<sup>8</sup>

Our evidence starts in the early 1990s, when most countries consolidated their household survey programs. Table 2 depicts the evolution of inequality in Latin America by presenting the mean and median of the national Gini coefficients computed over the distributions of household per capita income.<sup>9</sup> When considering the mean and median Ginis, income inequality in the Latin American countries increased over the 1990s and fell in the first half of the 2000s, with levels in or around 2006 similar to those of the early 1990s. The latter assessment changes when we use the population-weighted mean of the Ginis: Brazil and Mexico, which together account for 56 percent of the region's population, experienced stronger equalizing changes than the rest of the countries over the 2000s, so that the Latin American weighted mean is significantly lower in the mid-2000s than in the early 1990s.

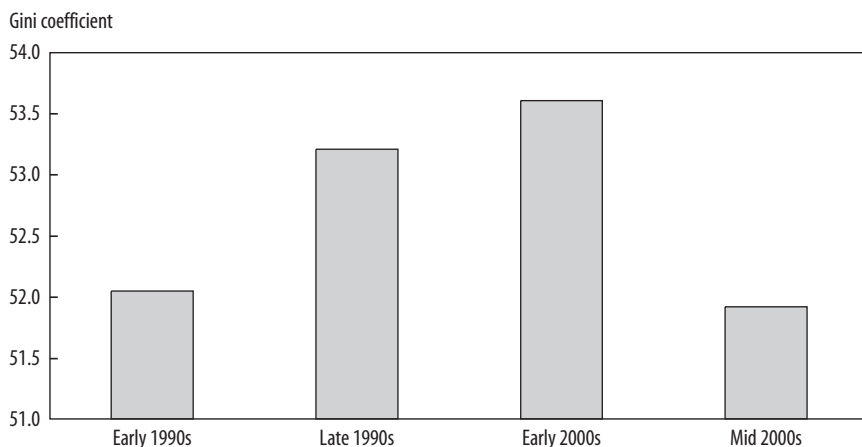
The direction of the overall change in inequality is unambiguous, but the magnitudes are relatively small. The unweighted mean of the Gini first

6. Gasparini (2004).

7. Although it should be stressed that during the decade several countries in the region emerged from military dictatorships and managed to consolidate democratic systems.

8. Londoño and Székely (2000).

9. Estimates are for the seventeen continental Latin American countries.

**FIGURE 1. Distribution of Household per Capita Income in Latin America, Unweighted Averages**

Source: Authors' calculations, based on CEDLAS and World Bank (2007).

increased and then fell less than two points after the early 1990s. These minor changes can be appreciated in figure 1. The changes in the median, reported in table 2, are only slightly larger.

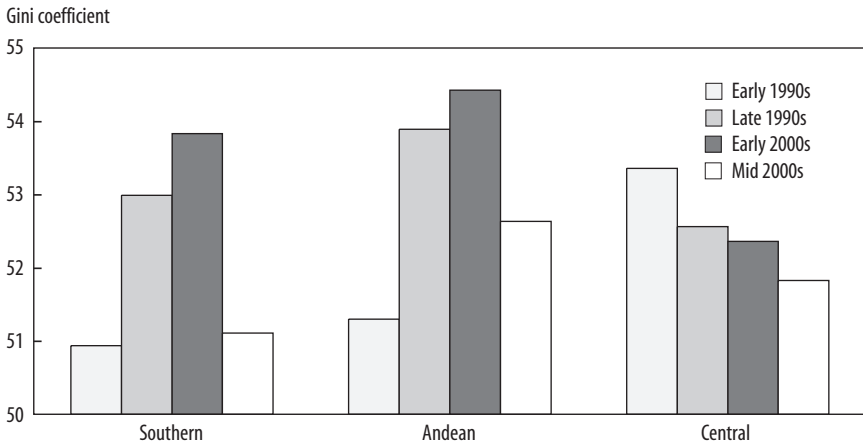
Regarding subregional trends, the changes in inequality were similar in southern South America and the Andean countries, the two subregions in South America: the Gini increased in the 1990s and fell in the 2000s (as documented in table 3 and figure 2). In contrast, on average the Gini has been slowly falling in Mexico and Central America since the early 1990s.

These changes in inequality levels show substantial heterogeneity (see table 4): several countries do not match the overall regional pattern described above. In seven out of seventeen Latin American countries, inequality did not

**TABLE 3. Regional Distribution of Household per Capita Income: Unweighted Means**  
Gini coefficient

Period	Southern South America	Andean countries	Central America
Early 1990s (ca. 1992)	50.9	51.3	53.4
Late 1990s (ca. 1998)	53.0	53.9	52.6
Early 2000s (ca. 2002)	53.8	54.4	52.4
Mid/2000s (ca. 2006)	51.1	52.6	51.8

Source: Authors calculations, based on CEDLAS and World Bank (2007).

**FIGURE 2. Distribution of Household per Capita Income by Region, Unweighted Averages<sup>a</sup>**

Source: Authors' calculations, based on CEDLAS and World Bank (2007).

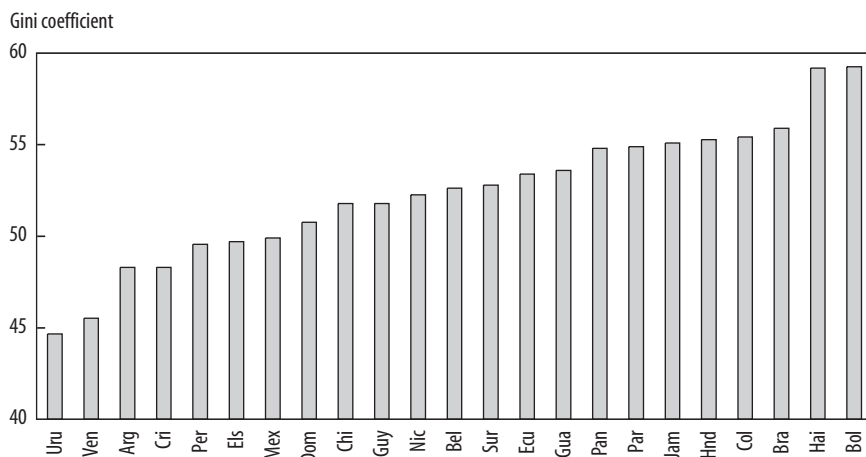
a. Southern South America includes Argentina, Brazil, Chile, Paraguay, and Uruguay. The Andean countries are Bolivia, Colombia, Ecuador, Peru, and Venezuela. Central America and the Caribbean include Costa Rica, the Dominican Republic, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, and Panama.

**TABLE 4. Statistically Significant Ups and Downs in Gini Coefficients**

<i>Region and movement</i>	<i>Early 1990s to late 1990s</i>	<i>Late 1990s to early 2000s</i>	<i>Early 2000s to mid-2000s</i>	<i>Early 1990s to mid-2000s</i>
Latin America (total)				
Ups	10	8	1	7
Downs	4	7	12	6
Stable	3	2	4	4
Southern South America				
Ups	4	3	0	3
Downs	1	2	5	2
Stable	0	0	0	0
Andean countries				
Ups	4	2	0	2
Downs	0	1	3	0
Stable	1	2	2	3
Central America				
Ups	2	3	1	2
Downs	3	4	4	4
Stable	2	0	2	1

Source: Authors' calculations, based on CEDLAS and World Bank (2007).



**FIGURE 3. Distribution of Household per Capita Income around 2006**

Source: Authors' calculations, based on CEDLAS and World Bank (2007).

increase over the 1990s. The fall in inequality in the 2000s seems more widespread, although there are some exceptions. When taking the whole period into consideration, about the same number of countries experienced increases and falls in the Gini coefficients. This heterogeneity indicates that further analysis of specific national experiences is needed to fully explain the regional pattern.

### *Heterogeneity at the Country Level*

The extent of income disparity is quite different across Latin American countries (figure 3). While the Gini coefficient for the distribution of household per capita income is 44.7 in Uruguay, it reaches almost 60.0 in Bolivia. Part of these discrepancies is due to country differences in the share of the rural population. The variation in inequality is still large, however, even when we restrict the comparison to urban areas and to more narrow definitions of household income. For instance, the Gini coefficient for the distribution of equalized household monetary labor income in urban areas ranges from 45.0 in El Salvador to 55.2 in Brazil. This range is narrower than for national household per capita income, but still substantially wide.

Figure 3 suggests a sort of continuum of inequality levels across countries. Uruguay, Venezuela, Argentina, and Costa Rica have relatively low inequality levels, while Bolivia, Brazil, and Colombia are among the most unequal

societies in the region. Even within subregions, the gaps in inequality levels are large: southern South America encompasses some of the countries with the lowest (Uruguay) and highest (Brazil) Ginis in Latin America; the same is true for the Andean region (Venezuela and Colombia) and Central America (El Salvador and Honduras). There do not seem to be large clusters of more egalitarian or unequal countries in the region. Latin American countries also differ in the changes of inequality experienced over the period under analysis, as depicted by figures 4 and 5.<sup>10</sup>

**SOUTHERN SOUTH AMERICA.** This subgroup of countries encompasses Argentina, Brazil, Chile, Paraguay, and Uruguay. Inequality increased substantially in Argentina after the early 1990s. Income disparities grew during the period of structural reforms of the 1990s, accelerated during the deep macroeconomic crisis of 2001–02, and fell to precrisis levels in the recovery between 2003 and 2006.<sup>11</sup>

Brazil has always been one of the most unequal countries in the region. While its income distribution did not change much in the first half of the 1990s, inequality fell substantially after 1999. The Gini coefficient was 60.4 in 1990, 58.6 in 1999, and 55.9 in 2006.<sup>12</sup>

High levels of inequality have also been a pervasive characteristic of the Chilean economy. However, there are encouraging signs of a significant fall in inequality in the 2000s. The Gini coefficient, which was roughly unchanged between 1990 and 2000 (55.1 and 55.2, respectively), fell slightly to 54.6 in 2003 and 51.8 in 2006.<sup>13</sup>

Household surveys in Paraguay have changed substantially since 1990, and these changes introduce a significant amount of noise in the inequality statistics. Some of the comparable evidence suggests that inequality increased substantially in the early 1990s.<sup>14</sup> The Gini then fell from 58.4 in 1995 to 55.5 in 1999, increased again to 58.1 in 2003 as a result of a large macroeconomic crisis, and finally fell substantially to 54.9 in 2006.

10. Most of the results discussed in this section are robust to inequality indices, income definitions, treatment of zero incomes, and sample variability concerns. The methodological appendix details the construction of these tables and figures. See the SEDLAC webpage ([www.cedlas.org](http://www.cedlas.org)) for a large set of statistics on these issues.

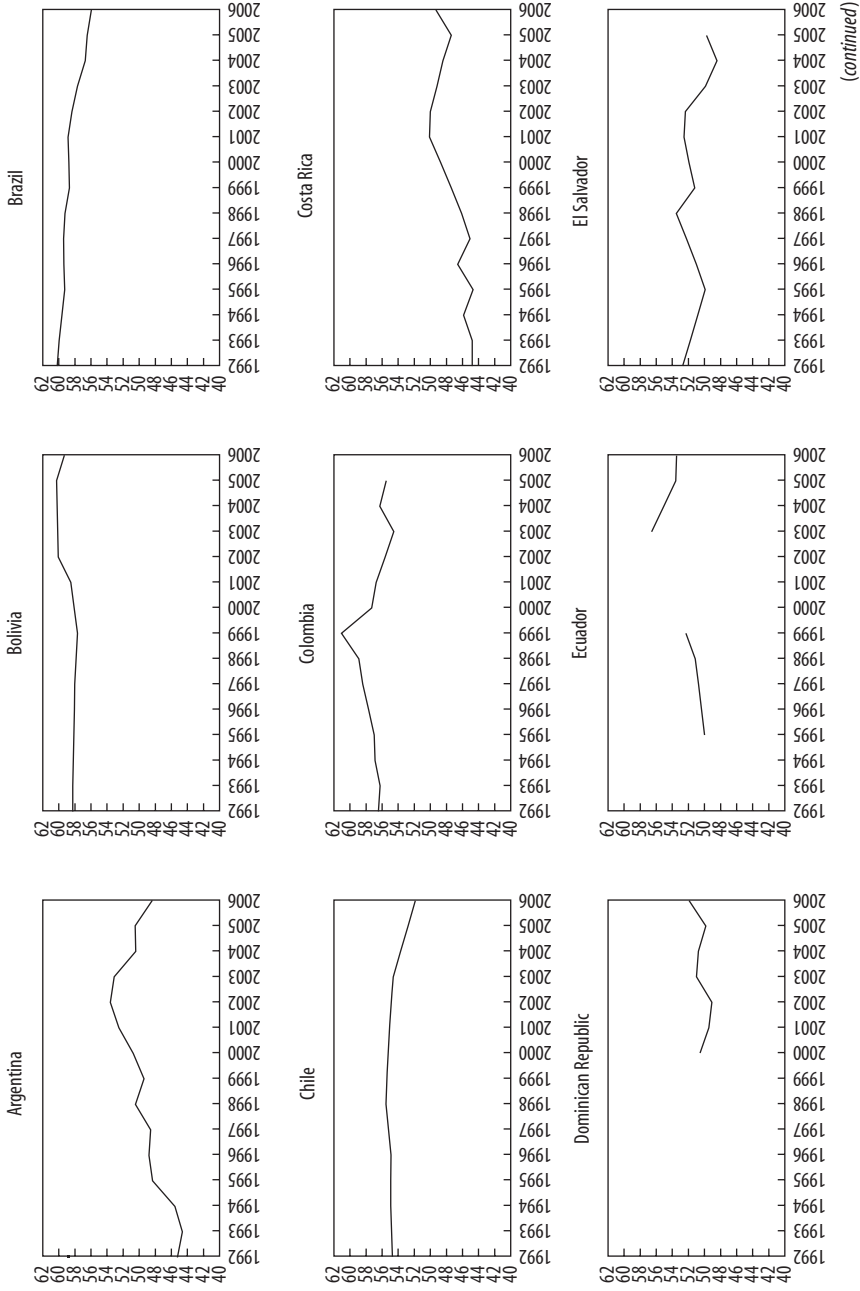
11. See also Gasparini and Cruces (2010), Altimir, Beccaria, and González Rozada (2002), and Lee (2000) for further references.

12. This pattern is also reported and documented in Paes de Barros, de Carvalho, and Franco (2004), Ferreira, Leite, and Litchfield (2005), and ECLAC (2008).

13. Official statistics in MIDEPLAN (2006) are in accordance with this pattern. See Ferreira and Litchfield (1999) and Contreras and others (2001) for evidence prior to 2000.

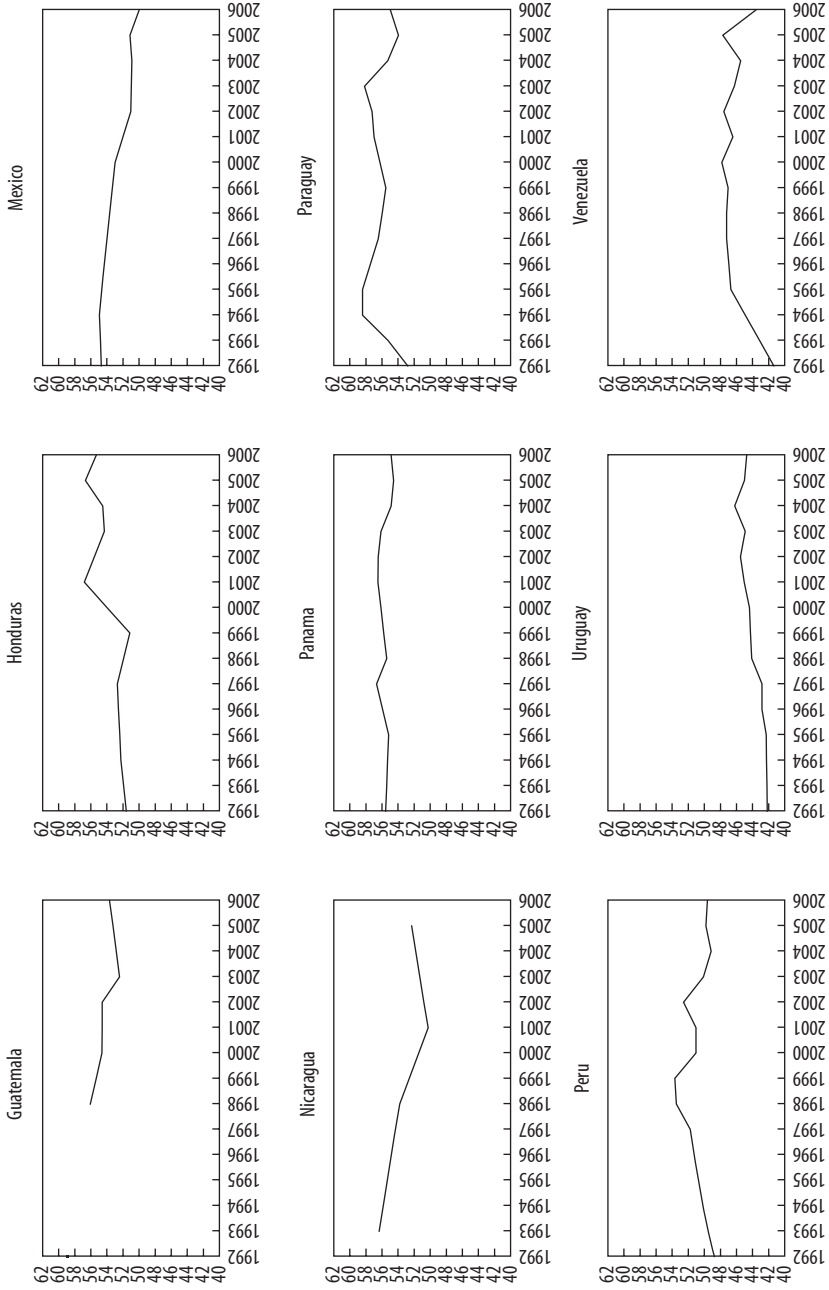
14. ECLAC (2007); Gasparini (2004); Morley and Vos (1997); Robles (1999).

**FIGURE 4. Distribution of Household per Capita Income by Country**



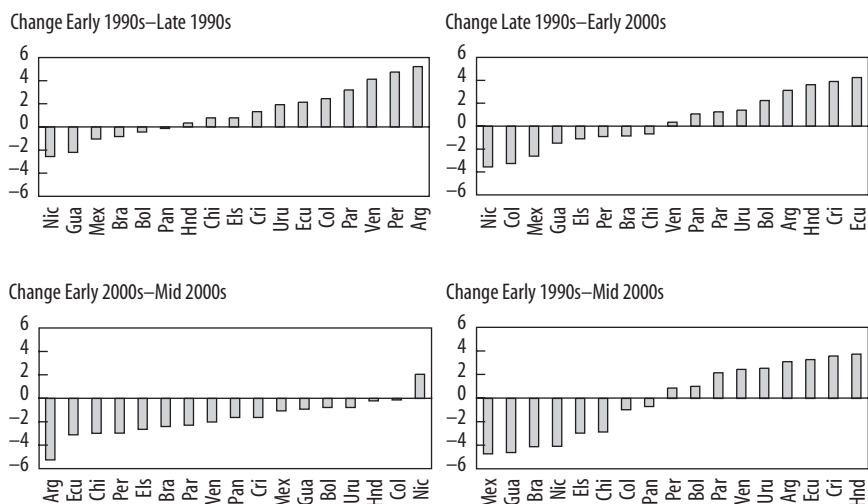
(continued)

**FIGURE 4 . Distribution of Household per Capita Income by Country (Continued)**



Source: Authors' calculations, based on CEDIAS and World Bank (2007).

FIGURE 5. Change in Gini Coefficient over Time



Source: Authors' calculations, based on CEDLAS and World Bank (2007).

Finally, Uruguay experienced an increase in income inequality, although with a smoother pattern than in Argentina. The Gini coefficient increased by two points in the 1990s, grew by around two additional points in the stagnation and crisis of the early 2000s, and fell two points in the subsequent recovery.<sup>15</sup>

**ANDEAN COUNTRIES.** The performance of the five Andean countries in terms of inequality has been disappointing. In Bolivia, which probably has the most unequal income distribution in Latin America, the urban income distribution did not change much in the 1990s.<sup>16</sup> National indicators are available since the late 1990s; they suggest an increase of around two Gini points between 1997 and 2002. Bolivia's Social and Economic Policy Unit reports a stable income distribution since then, with a Gini of around 60.<sup>17</sup>

The evolution of inequality in Colombia is not easy to trace, as a result of changes in the national household surveys. We find a sizeable increase in income inequality from the early 1990s to 2000, followed by a return to the early 1990s levels. The World Bank and the Colombian Mission for the Reduction of Poverty and Inequality (MERPD) provide similar figures and

15. See Winkler (2005) and Amarante and Vigorito (2007) for further details.

16. Some authors report a small increase (Gasparini, 2004; Morley, 2001; Székely, 2003).

17. UDAPE (2006).

patterns for 1996 onward.<sup>18</sup> In contrast, ECLAC reports a fall in inequality between 1994 and 1999, and Ocampo and others and Székely find a rather stable income distribution.<sup>19</sup>

The available information for Ecuador is patchy, with some Living Standard Measurement Surveys in the 1990s and one in 2006. Using consumption data from those surveys, the National Statistics and Census Institute (INEC) reports an increase of three Gini points between 1995 and 2006, from 43 to 46.<sup>20</sup> Using nationally representative income data, which were only recently available, we find a significant fall in inequality between 2003 and 2006.

In Peru, the data for the 1990s suggest a significant increase in inequality in the distribution of both income and expenditure. In contrast, the income distribution seems to have become progressively less unequal since 1999. ECLAC reports a similar pattern.<sup>21</sup>

Venezuela has the most egalitarian income distribution in the Andean region. Inequality rose substantially in the 1990s, with a Gini of 42.5 in 1989 increasing to 47.2 in 1998. The Gini fluctuated around that level until 2005, while the official statistics for 2006 report a strong fall in inequality.<sup>22</sup>

**CENTRAL AMERICA AND MEXICO.** Costa Rica has one of the most equal income distributions in Latin America.<sup>23</sup> However, inequality increased substantially in the second half of the 1990s, and although it fell in the 2000s, it has not returned to its previous level. The Gini coefficient for the distribution of household per capita income rose from 44.6 in 1995 to 50.0 in 2001, and it then fell only to 47.3 in 2005.

The Dominican Republic has implemented a consistent household survey (*Encuesta Nacional de Fuerza de Trabajo*, ENFT) since 2000. The levels of inequality have not shown any significant changes over the period.<sup>24</sup>

El Salvador has also had a relatively egalitarian income distribution compared to its neighbors. In contrast to inequality in other countries in the region, inequality in El Salvador did not change much in the 1990s, with a Gini coefficient of around 52. The coefficient started to fall around 2002, reaching 48.4 in 2004 and 49.7 in 2005.

18. World Bank (2008); MERPD (2006).

19. ECLAC (2008); Ocampo and others (1998); Székely (2003).

20. INEC (2007).

21. ECLAC (2007).

22. Székely (2003) finds a similar pattern for the 1990s, and ECLAC (2007) broadly coincides with our figures for the whole period under analysis.

23. See Paes de Barros and others (2005) for a thorough analysis of income distribution in Central American countries.

24. See also the World Bank (2006).

Guatemala only implemented an annual household survey very recently, which makes it difficult to provide a medium- or long-term perspective about its income distribution. According to ECLAC, the Gini coefficient fell two points between 1989 and 1998 and about two additional points by 2002.<sup>25</sup> Indicators from the annual employment and income survey (*Encuesta Nacional de Empleo e Ingresos*, or ENEI) also record a fall in inequality since 2002.

The income distribution in Honduras did not change much in the 1990s. Inequality increased in the early 2000s (around four Gini points between 1999 and 2006) and has not significantly decreased since then.

The data for Mexico indicate a slow, continuous reduction in income inequality since the early 1990s. We find that the largest fall occurred between 2000 and 2002, as in the official figures provided by the Secretariat of Social Development (SEDESOL).<sup>26</sup> The Gini in 2006, at around 50, was almost five points lower than in 1992.

The economy of Nicaragua was hit hard by the crisis of the 1980s, and it has been recovering since the early 1990s. The income distribution has also become less unequal: the Gini fell from 56.3 in 1993 to 52.3 in 2005.<sup>27</sup>

Panama has the most stable income distribution in Latin America. The Gini coefficient fluctuated around 55.5 in the 1990s, increased by almost a point in the early 2000s, and fell to around 55.0 since 2004.

**ROBUSTNESS TESTS.** The country trends described in this section seem to be robust to variations in methodological decisions. For example, there is a long-standing debate on the inclusion of zero-income observations. A zero answer in the income question could be due to either an accurate report of the lack of income in the period or the failure to report some income items (such as nonmonetary resources). Figure 6 shows that levels of inequality are higher when zero-income observations are included, but the results on trends remain unchanged.<sup>28</sup>

Nonresponse is another potentially serious problem in the analysis of social issues with survey data. We carried out several exercises to predict household income for missing observations. We ran several income models (at the individual level when observables at that level were available and at

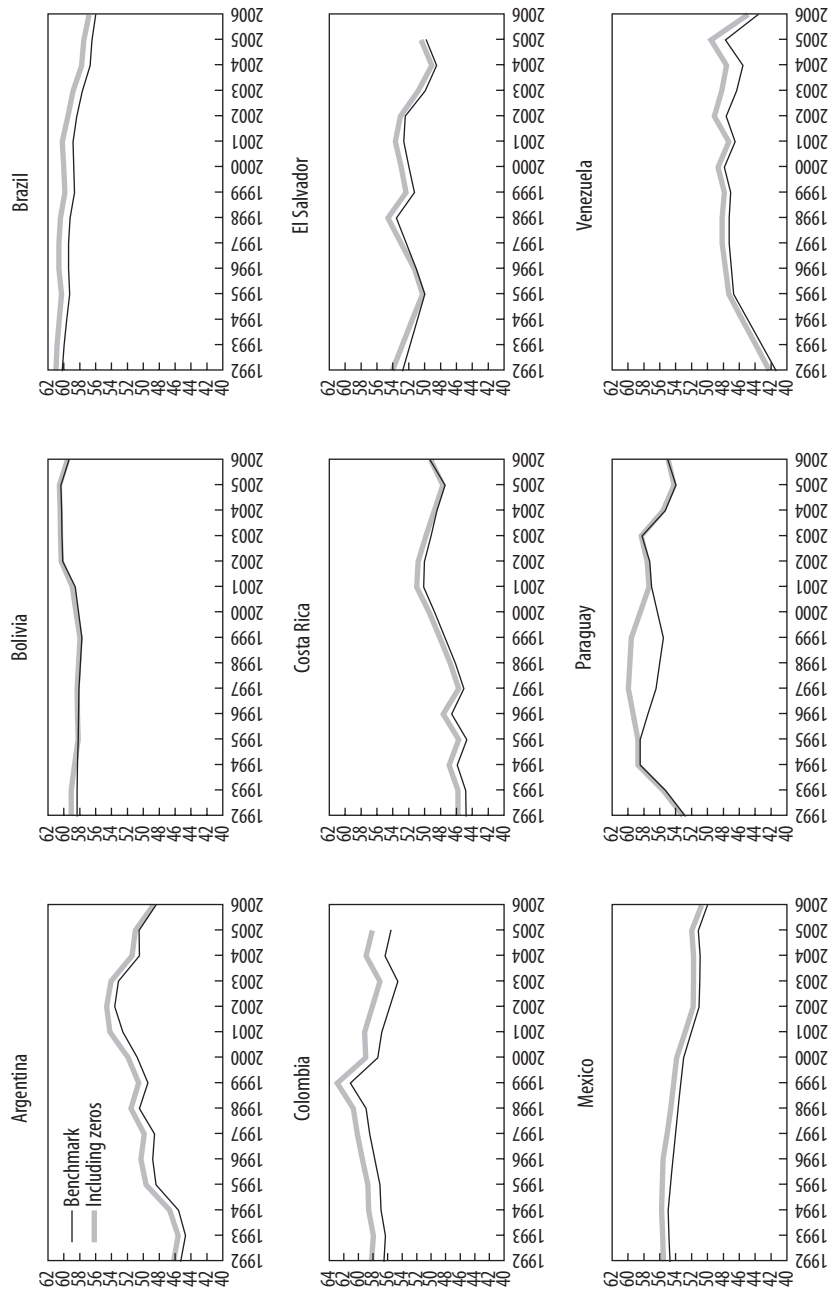
25. ECLAC (2006).

26. Székely (2005).

27. ECLAC (2008) reports a more modest fall in income inequality in the 1990s, whereas official sources indicate that the Gini over the distribution of per capita consumption dropped nine points in that period.

28. The figure shows countries with a significant share of zero-income observations. Paraguay in the second half of the 1990s is the only case in which inequality patterns differ.

**FIGURE 6 . Alternative Estimates Excluding and Including Zero-Income Observations**



Source: Authors' calculations, based on CEDIAS and World Bank (2007).



the household level when they were not) and predicted incomes from that process. In most cases, we were able to run hourly wages or earnings equations applying Heckman maximum likelihood methods and including as regressors age (and its square), education, gender, a rural dummy, regional dummies, household composition, the sector of activity, seniority, and ethnicity. Figure 7 shows the results of these estimates.<sup>29</sup> The main conclusion is that all qualitative results presented in the paper are robust to this methodological issue. The evidence confirms that the trends presented in this document are not the result of some arbitrary decisions.

**APPARENT CONVERGENCE.** The dispersion in inequality levels across countries diminished in the period under analysis, as suggested by the comparison of the Gini coefficients in the two panels of figure 8. In fact, the coefficient of variation of the national Ginis fell from 0.10 in 1992 to 0.07 in 2006. This narrowing of the range in inequality levels in the region reflects some degree of convergence, since it is the result of increased inequality in some low-inequality countries, such as Argentina, Costa Rica, Uruguay, and Venezuela, and a drop in inequality in some high-inequality countries, such as Brazil. This incipient convergence arises not only when we consider the mid-2000s and the early 1990s, but also when we compare the mid-2000s with the early 2000s and the latter period with the early 1990s. While the number of observations is too small to ascertain the presence of regional convergence in inequality, this is certainly an issue worth exploring in further research.

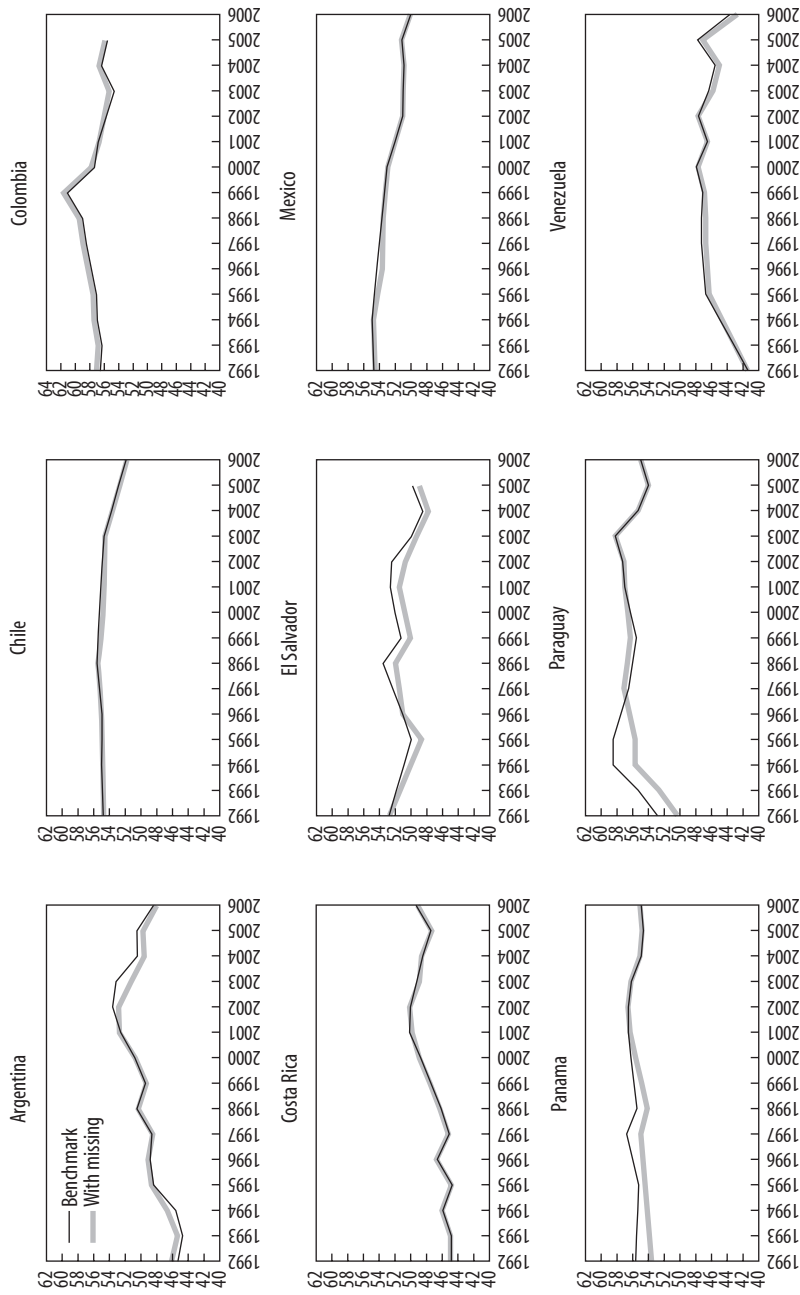
### *Global inequality in Latin America*

There has been a recent surge in the analysis of global income inequality, that is, inequality among individuals in a large region (or in the world) with each individual assigned his or her own income.<sup>30</sup> The key steps in these studies are choosing an appropriate income aggregate comparable across countries and setting an exchange rate to convert local currency units into a common numeraire. Table 5 presents a set of inequality indexes for the distribution of per capita income—converted to purchasing power parity (PPP) U.S. dollars—for Latin America as a whole, that is, considered as one single country. When using this methodology, income inequality seems to have fallen

29. We present results for countries with around 1 percent or more missing observations in the sample and for which an earnings model can be estimated. Missing data do not seem to be an increasing problem in the region, with the exception of Venezuela. Methodological details and results on these imputations are available on request.

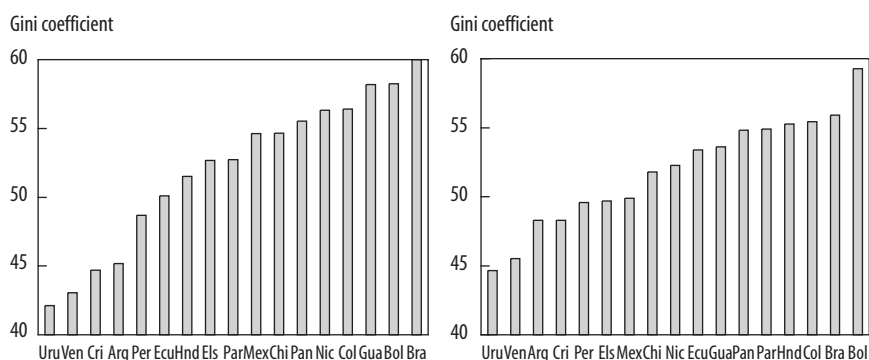
30. Milanovic (2005); Anand and Segal (2008).

**FIGURE 7 . Alternative Estimates Excluding and Including Missing-Income Observations<sup>a</sup>**



Source: Authors' calculations based on CEDIAS and World Bank (2007).

a. Missing-income observations were included by predicting earnings from observables and reconstructing household per capita income.

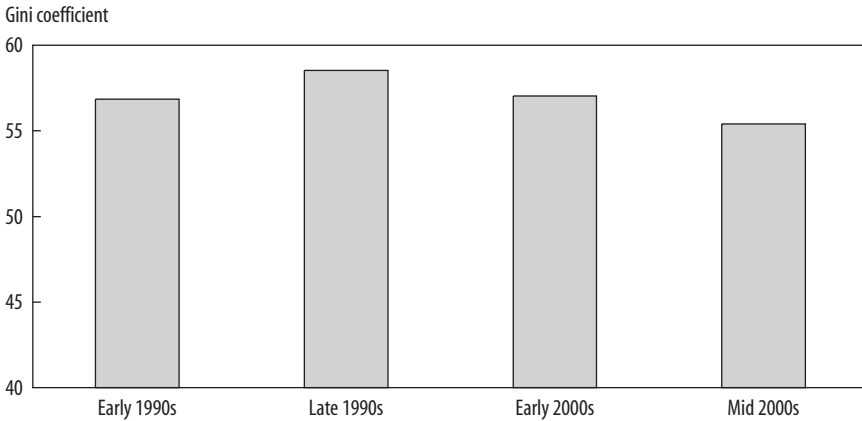
**FIGURE 8 . Distribution of Household per Capita Income: The Early 1990s versus the Mid-2000s**

Source: Authors' calculations, based on CEDLAS and World Bank (2007).

**TABLE 5 . Global Inequality in Latin America**

<i>Region and coverage</i>	<i>Gini</i>	<i>Theil</i>	<i>CV</i>	<i>Atk(0.5)</i>	<i>Atk(2.0)</i>	<i>E(0)</i>
<i>A. Latin America (total)</i>						
National						
1998	58.4	0.710	1.980	0.286	0.898	0.652
2002	57.1	0.675	2.058	0.273	0.815	0.614
2006	55.4	0.628	1.774	0.258	0.751	0.579
Urban						
1998	56.3	0.652	1.835	0.264	0.690	0.580
2002	55.3	0.628	1.940	0.255	0.677	0.559
2006	53.7	0.583	1.655	0.240	0.713	0.523
<i>B. Thirteen Latin American countries</i>						
National						
1992	56.8	0.677	1.971	0.272	0.800	0.610
1998	58.5	0.713	1.982	0.287	0.909	0.656
2002	57.0	0.674	2.063	0.272	0.827	0.613
2006	55.4	0.626	1.759	0.257	0.761	0.579
Urban						
1992	55.6	0.644	1.885	0.259	0.712	0.568
1998	56.6	0.659	1.845	0.266	0.693	0.586
2002	55.6	0.634	1.959	0.257	0.683	0.567
2006	53.9	0.587	1.654	0.242	0.724	0.531

Source: Authors' calculations, based on CEDLAS and World Bank (2007).

**FIGURE 9. Global Inequality in Latin America**

Source: Authors' calculations, based on CEDLAS and World Bank (2007).

slightly in Latin America during the period 1992–2006 (see figure 9). The pattern is similar to that of the cross-country inequality aggregates: an increase in the 1990s and a drop in the 2000s.

These changes in global inequality can be analyzed further by means of a between-within decomposition. The results in panel A of table 6, taken from Gasparini and others, show that between-country inequality accounts for a

**TABLE 6. Decomposition of Inequality by Country: Theil Index**

<i>A. Decomposition of the level</i>				
<i>Coverage</i>	<i>Overall</i>	<i>Between</i>	<i>Within</i>	<i>Percent between</i>
National				
1992	67.8	2.3	65.5	3.4
2006	63.7	3.9	59.8	6.1
Urban				
1992	64.2	1.3	63.0	2.0
2006	60.7	2.5	58.3	4.1
<i>B. Decomposition of the change</i>				
<i>Coverage</i>	<i>Overall</i>	<i>Within</i>	<i>Participation</i>	<i>Between</i>
National	-4.2	-7.2	-0.2	3.3
Urban	-3.5	-5.8	0.0	2.4

Source: Gasparini and others (2009).

small but growing share of overall Latin American global inequality.<sup>31</sup> Panel B presents the results of a decomposition of the change in the Theil index.<sup>32</sup> Global Latin American inequality, as measured by that index, fell 4.2 points between 1992 and 2006. That reduction is fully accounted for by a drop in within-country inequality, since the between component is positive.<sup>33</sup>

These results deserve further inspection. The within-country component of the decomposition is a weighted average of the changes in the Theil index in each country. Given that the weights are the shares of each country in total Latin American income, Brazil and Mexico have a decisive role in the result—the two countries together account for around 72 percent of total income in the sample. The fall in the within-country component is strongly affected by the fact that inequality significantly fell in the two largest Latin American countries.

The results in table 6 indicate that between-country inequality rose, suggesting that the differences in income across countries increased. Gasparini and others report that this result is not driven by growing disparities within each supranational subregion—namely, southern South America, the Andean region, and Central America—but by increasing disparities across these regions: while the mean income of the richest region, southern South America, grew by 25 percent, the mean income of the Andean region fell by 11 percent.<sup>34</sup>

### *A Possible Turning Point*

The evidence presented so far in this document points to a widespread drop in inequality levels from the early to the mid-2000s, but as discussed above, this result is neither conclusive nor generalized to all countries in the region. However, most Latin American countries show signs of falling income inequality. As reported above, inequality fell significantly in twelve of the seventeen continental Latin American countries, where the average Gini contracted by around one and a half points between the early and mid-2000s.

31. Gasparini and others (2009).

32. Tsakloglou (1993).

33. Londoño and Székely (2000) also find that both the level and the change of overall inequality are mainly due to differences within countries. They report an increase in global Latin American inequality between the 1980s and the mid-1990s, despite a slow convergence in per capita income across countries.

34. Gasparini and others (2009).

This result, while not extraordinary, contrasts sharply with the significant increase of the 1980s and 1990s.<sup>35</sup>

There are many plausible factors behind this reduction in inequality in the region, including employment growth, changes in relative prices, realignments after reforms, realignments after macroeconomic shocks, cash transfer programs, and increased concerns for inequality. A thorough examination of these factors for the whole region is well beyond the scope of this paper, which concentrates on aggregate trends. In what follows, we only present a sketch of the main arguments. The specific evidence on their relevance originates necessarily in in-depth country studies, such as those collected in López Calva and Lustig.<sup>36</sup>

Fueled by the exceptional international conditions, Latin America has experienced a period of strong growth since the early 2000s. While per capita GDP fell almost 1 percent yearly between 1999 and 2002, it increased almost 3 percent per year from 2003 to 2008. In almost all countries, growth has been accompanied by a surge in employment.<sup>37</sup> A stronger labor market is associated with fewer jobless workers and higher wages, which are both factors that tend to lower income inequality.

The region has also been favored by a surge in international commodity prices. The terms of trade in 2006 were 31 percent higher than in the 1990s. These price changes are likely to benefit rural areas, which are typically poorer than the rest. The urban-rural income ratio shrank in almost all Latin American countries from the early to the mid-2000s. When considering the income distribution of Latin America as a whole (and adjusting all incomes for PPP), the urban-rural income ratio dropped from 2.5 in 2002 to 2.2 in 2006. In addition, the devaluations in some economies (such as Argentina and Uruguay) implied changes in relative prices that favored unskilled-labor-intensive sectors.

Many Latin American countries implemented market-oriented reforms in the late 1980s and 1990s. These reforms included trade and financial liberal-

35. These broad inequality patterns are also found for other relevant variables. For instance, Gasparini and others (2009) report that while the Gini for the years of education attained has been falling steadily in the region, this is due to the fact that education years have a ceiling, and the average has been increasing over time. The gap in years of education between the richest and poorest quintiles has indeed increased over the period.

36. López Calva and Lustig (2010); see Gasparini and Cruces (2010) for the Argentine case.

37. ECLAC (2007) reports that the unemployment rate for Latin America rose from 5.8 percent in 1990 to 9.3 percent in 1995 and 11.0 percent in 2002, and it then dropped to 8.7 percent in 2006.

ization, privatizations, and deregulations, which stimulated a surge in physical capital accumulation and a substantial technical upgrade. These structural reforms were also accompanied by increasing unemployment levels, and the technical change was usually skill biased. Several authors attribute some of the increase in income inequality in the region to the effects of these reforms.<sup>38</sup> The pace of the market-oriented reforms was much slower in the 2000s, and some of the previous reforms were undone. In a more stable scenario, the strongly unequalizing initial impact of the reforms should have lost strength over time. An inequality overshooting has been documented for some of these episodes of structural reforms, as it takes time for the displaced (mostly unskilled) workers to be reallocated in the economy.<sup>39</sup>

Several countries in the region suffered severe macroeconomic crises in the late 1990s and early 2000s. Per capita GDP fell 12 percent in Argentina in 2002, 6 percent in Colombia 1999, 8 percent in Ecuador 1999, 12 percent in Uruguay 2002, and 11 percent in Venezuela 2002. These substantial shocks, which seriously disrupted the functioning of the economy, are associated with large jumps in inequality levels. However, their impact on inequality indicators is often short-lived: inequality falls rapidly as economic relationships return to normality.<sup>40</sup> The significant drop in income inequality in Argentina, Colombia, Ecuador, Paraguay, Uruguay, and Venezuela from the early to the mid-2000s can be at least partially attributed to quick recoveries from severe macroeconomic crises.

After the successful experience of the Education, Health, and Nutrition Program (PROGRESA) in Mexico, several Latin American countries adopted or expanded conditional cash transfer programs.<sup>41</sup> These programs combine

38. See Sánchez Páramo and Schady (2003); Behrman, Birdsall, and Székely (2003); Goldberg and Pavcnik (2007); and Cruces and Gasparini (2008) for examples of this extensive literature.

39. See, for instance, Behrman, Birdsall, and Székely (2003).

40. There are compelling arguments that these large crisis might still have a long-term impact on inequality through hysteresis effects and through human capital accumulation. Cruces and Glüzmann (2009), for instance, find a significant effect of the 2001–02 crisis in Argentina on maternal and child mortality. The evidence on this issue is still relatively scarce, and it constitutes an important issue for further research.

41. Some of the most important conditional cash transfers in the region include *Oportunidades* (the continuation of Mexico's PROGRESA), *Bolsa Familia* in Brazil, *Bono Solidario* in Ecuador, the Programme of Advancement through Health and Education (PATH) in Jamaica, and *Familias en Acción* in Colombia. Cash transfer programs with some conditionalities but related to specific economic crises were implemented in Argentina (*Programa Jefes y Jefas de Hogar Desempleados*) and Uruguay (*Plan de Asistencia Nacional a la Emergencia Social*, or PANES). See Veras Soares, Perez Ribas, and Guerreiro Osório (2007) for a comparative review of recent experiences in the region.

monetary subsidies with the requirement that the family group of the beneficiary comply with a set of conditions related to human capital accumulation, such as enrolling children in schools and attending medical checkups for pregnant women. Unlike other redistributive policies that deliver in-kind subsidies (such as education or health), conditional cash transfers are computed as income by the household surveys and hence have full impact on income inequality statistics. The evidence suggests that conditional cash transfers in Latin America are well-targeted on the poor and are thus highly progressive. However, most of these programs have a modest impact on inequality, given their relatively low coverage and the low level of monetary transfers.<sup>42</sup>

In the 2000s, Latin America seemed to enter a new stage of the political cycle. In several countries, new administrations came into power based on a promise to promote a more active role of the state in the economy and more ambitious redistributive policies. Some of these governments followed through by engaging in a more active role in the labor market, widening the scope and coverage of social policy, intervening in some markets, and subsidizing goods and services. While it is likely that some of these initiatives had equalizing results, much more work is needed for a complete assessment of their effective impact on income distribution, including the actual progressiveness of the subsidies established and the long-term consequences of the policies.

The fall in inequality in the 2000s suggested by the evidence, however, does not necessarily imply a substantial reversal of the trend that started in the 1980s and 1990s. A significant share of the current distributional improvements are either based on natural realignments after the shocks of the 1990s or dependent on the favorable international scenario in the 2000s. In fact, if we exclude the countries where a significant share of the drop in inequality can be attributed to the recovery from severe macroeconomic crisis (such as Argentina, Uruguay, and Venezuela), the average reduction in inequality in Latin America from the early to the mid-2000s is just one Gini point.

## **Inside Household Income**

The inequality measures presented in the previous section are based on the distribution of household per capita income. This section's objective is to

42. The impact is larger when using indexes that place relatively higher weights in the lower tail of the distribution. See Soares and others (2007) for a discussion.



**TABLE 7. Share of Different Income Sources in Total Household Income**

<i>Country</i>	<i>Year</i>	<i>Labor</i>	<i>Nonlabor</i>
Argentina	2006	77.0	23.0
Bolivia	2005	81.7	18.3
Brazil	2006	75.9	24.1
Chile	2006	84.7	15.3
Colombia	2004	81.4	18.6
Costa Rica	2006	86.9	13.1
Dominican Republic	2006	75.9	24.1
Ecuador	2006	87.4	12.6
El Salvador	2005	81.9	18.1
Guatemala	2006	86.0	14.0
Honduras	2006	79.5	20.5
Mexico	2006	88.6	11.4
Nicaragua	2005	88.6	11.4
Panama	2006	77.5	22.5
Paraguay	2005	85.9	14.1
Peru	2006	72.3	27.7
Uruguay	2005	64.4	35.6
Venezuela	2006	86.6	13.4

Source: Authors' calculations, based on CEDLAS and World Bank (2007).

analyze the components of household income in order to establish whether the trends in these inequality measures can be traced out to any of these elements.<sup>43</sup>

Labor earnings account for the bulk of household income, as documented for Latin America and for other regions of the world. Table 7 presents the shares of total household income corresponding to labor and nonlabor sources. This information confirms the previous findings: the unweighted average share of labor income represents about 81 percent of total household income, with relatively lower levels in Argentina, Brazil, the Dominican Republic, Peru, and Uruguay.

Table 8 presents the level of inequality (as measured by the Gini coefficient) of hourly wages in the main job for all workers and for prime-age male workers by education level. Given the large share of labor in household income and the high levels of inequality reported in the previous section, it is not surprising to find a high average unweighted Gini of 0.501 for hourly

43. The time span of these comparisons is more limited than in the previous section, which compared the Gini coefficient of household per capita income for the period between the early 1990s and the mid-2000s for most of the countries in the sample. This is because the national statistical offices published data on household per capita income for the earlier period (as detailed in the appendix), but not on other household income variables.

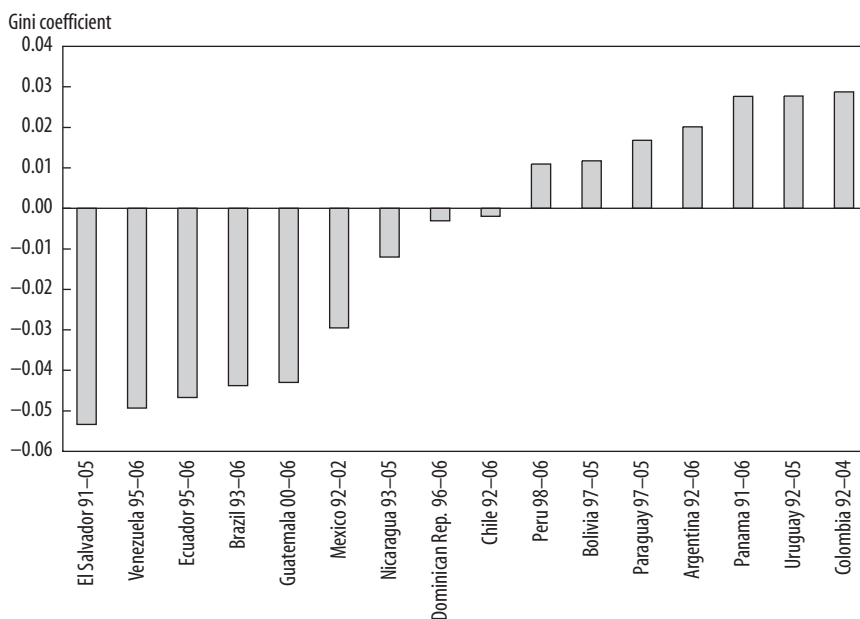
**TABLE 8. Inequality in Hourly Wages of Main Job**  
Gini coefficient

Country	Year	All workers	Male workers aged 25–55			
			All	Education level		
				Low	Middle	High
Argentina	2006	42.0	39.7	32.8	34.9	37.9
Bolivia	2005	59.2	56.4	53.0	51.8	45.5
Brazil	2006	55.1	55.0	44.3	46.2	46.7
Chile	2006	53.7	52.7	42.0	44.1	50.3
Colombia	2004	51.3	50.6	34.4	38.1	44.0
Costa Rica	2006	44.6	44.0	32.8	37.1	41.9
Dominican Republic	2006	47.3	44.5	41.3	40.7	41.5
Ecuador	2006	50.2	47.1	41.5	42.5	50.5
El Salvador	2005	46.7	45.6	41.4	39.1	40.0
Guatemala	2006	53.5	53.3	46.2	41.0	42.1
Honduras	2006	50.7	49.4	42.6	41.1	38.9
Mexico	2006	50.9	49.3	40.3	38.8	45.2
Nicaragua	2005	51.1	53.6	49.7	40.4	49.3
Panama	2006	50.5	49.3	44.2	37.6	47.3
Paraguay	2005	54.6	54.7	45.2	49.6	52.7
Peru	2006	53.1	51.7	51.0	44.8	47.4
Uruguay	2005	48.2	47.2	37.6	40.1	45.6
Venezuela	2006	38.0	35.5	32.2	32.1	34.0

Source: Authors' calculations, based on CEDLAS and World Bank (2007).

wages in Latin American countries. This number is lower than but still close to the 51.9 for per capita household income reported in table 2. There does not seem to be a significant difference between the inequality of hourly wages for all workers and for prime-age male workers, as reported in the second column of table 2. However, inequality levels vary substantially within educational groups. Gini coefficients are similar, on average, in the low and middle education groups (with a few notable exceptions, mainly in Central America, with much higher inequality for the low category), with averages around 0.418 and 0.411, respectively, for Latin American countries. The level of inequality is markedly higher within the high education group for most countries, with an average Gini of 0.445.

Figure 10 presents the change in the Gini of hourly wages for all workers for the widest available date range for each country. As in the results presented in the previous section for household per capita income, the inequality of hourly wages has recorded substantial changes. There have been significant drops of more than four Gini points in Brazil, Ecuador, El Salvador, Guatemala, and

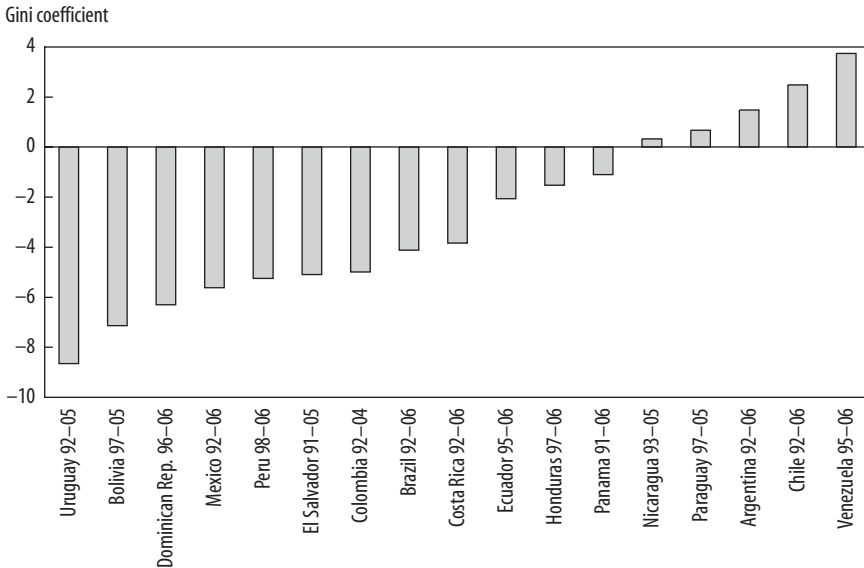
**FIGURE 10. Change in the Gini Coefficient of Hourly Wages, All Workers**

Source: Authors' calculations, based on CEDLAS and World Bank (2007).

Venezuela and lesser falls in Mexico and Nicaragua, while the Gini coefficients increased by two points or more in Argentina, Colombia, Panama, and Uruguay.

Figure 11 depicts the evolution of labor income as a share of total household income for the widest possible date range for each country. The first noticeable fact from this figure is that the share of labor income has fallen for most of the countries, with an average drop of 2.8 percentage points over the observation period (a 4.6 percentage point reduction for countries where the share fell and 1.7 percent increase in countries where this share grew). The distributive impact of an increase in the share of nonlabor income, however, is ambiguous: it depends on which components of nonlabor income have increased and their concentration.<sup>44</sup>

44. The share of labor income has fallen not only in countries where inequality in household per capita income increased, like Bolivia and Uruguay, but also in countries where inequality has fallen substantially, such as Brazil and Mexico. These last two countries have implemented major conditional cash transfer programs, and Brazil has also vastly increased the coverage of pensions for the rural population over the period. Part of the reduction in inequality might be attributed to this increase in the share of equalizing nonlabor income sources.

**FIGURE 11. Change in Labor Income as a Share of Total Household Income**

Source: Authors' calculations, based on CEDLAS and World Bank (2007).

Nonlabor income is composed of income from capital, rents and profit, pensions, interhousehold transfers and remittances, government transfers, and the implicit rent from owned property. Household surveys, however, do not usually provide reliable estimates of capital and related income, and this is especially true for the data collection efforts in the region. Most income from this source is concentrated in the higher levels of the income distribution: households in the fifth quintile of per capita income account for around 80 percent of this source, on average. Moreover, capital and related incomes only account for 2.7 percent of total individual income, on average, which is far from the estimates obtained by national accounts or other methodologies. This distribution and the high probability of underreporting of capital income probably imply a downward bias in inequality measures in the region.

The information on nonlabor income from other sources tends to be more reliable, especially in terms of pensions and transfers from the government and from other households. Table 9 presents the share of different sources in total individual income, and table 10 shows the Gini coefficient for these

**TABLE 9. Share of Different Income Sources in Total Individual Income**

Country	Year	Labor income	Nonlabor income	Capital and profits	Pensions	Transfers	Other	Government transfers
Argentina	2006	80.9	19.1	1.7	12.2	4.0	1.2	1.3
Bolivia	2005	81.7	18.3	5.2	4.3	8.7	.	0.8
Brazil	2006	76.0	24.0	3.9	19.4	0.7	.	0.0
Chile	2006	84.8	15.2	n.a.	7.2	n.a.	6.7	1.2
Colombia	2004	82.1	17.9	3.9	10.0	4.0	n.a.	n.a.
Costa Rica	2006	86.5	13.5	3.1	6.8	0.3	3.3	.
Dominican Republic	2006	75.9	24.1	3.2	1.9	17.1	1.9	0.2
Ecuador	2006	87.4	12.6	3.0	3.3	6.4	n.a.	0.6
El Salvador	2005	81.9	18.1	0.9	3.9	13.3	n.a.	n.a.
Guatemala	2006	86.0	14.0	2.4	2.0	9.6	n.a.	1.3
Honduras	2006	79.2	20.8	1.9	1.9	24.9	n.a.	0.2
Mexico	2006	88.6	11.4	1.9	4.9	4.6	n.a.	1.5
Nicaragua	2005	88.5	11.5	1.1	1.8	8.6	n.a.	n.a.
Panama	2006	77.6	22.4	1.8	12.6	5.5	2.5	5.5
Paraguay	2005	86.1	13.9	2.3	4.6	7.0	0.0	0.0
Peru	2006	74.1	25.9	2.5	0.0	11.5	11.9	0.0
Uruguay	2005	64.4	35.6	3.8	24.5	7.3	0.0	0.8
Venezuela	2006	86.9	13.1	n.a.	n.a.	13.1	n.a.	0.4

Source: Authors' calculations, based on CEDLAS and World Bank (2007).

**TABLE 10. Gini Coefficient of the Distribution of Individual Income**

Country	Year	Individual income	Labor income	Nonlabor income	Capital and profits	Pensions	Transfers	Government transfers	Implicit rent
Argentina	2006	45.3	44.4	46.0	60.6	33.6	45.3	24.7	44.7
Bolivia	2005	56.9	56.2	64.4	55.6	25.9	65.8	24.8	56.8
Brazil	2006	54.5	53.8	57.3	66.5	46.4	60.3	52.2	54.2
Chile	2006	58.9	53.2	67.1	n.a.	38.4	n.a.	56.5	38.3
Colombia	2004	53.4	51.3	62.8	55.1	40.5	58.9	n.a.	n.a.
Costa Rica	2006	50.1	45.4	62.6	67.7	55.9	43.2	n.a.	n.a.
Dominican Republic	2006	56.4	48.4	73.2	68.9	48.6	74.4	19.3	56.4
Ecuador	2006	60.2	55.8	70.9	55.9	40.8	66.9	8.9	48.7
El Salvador	2005	48.2	46.8	53.2	62.4	39.2	54.0	n.a.	51.8
Guatemala	2006	66.5	56.9	72.8	60.7	49.2	70.0	44.2	56.1
Honduras	2006	56.5	51.6	69.2	65.0	54.9	73.0	41.0	55.9
Mexico	2006	53.0	50.9	62.3	63.1	48.9	62.6	42.6	48.0
Nicaragua	2005	51.4	50.6	68.9	67.7	55.5	68.4	n.a.	60.4
Panama	2006	63.4	51.6	73.5	65.8	54.5	66.4	66.4	n.a.
Paraguay	2005	52.9	52.5	57.5	64.1	36.4	53.9	n.a.	52.4
Peru	2006	51.7	51.9	63.2	70.8	n.a.	63.7	n.a.	67.7
Uruguay	2005	47.9	50.1	50.2	61.2	44.9	52.2	53.5	33.8
Venezuela	2006	40.2	38.4	49.9	n.a.	n.a.	49.9	50.7	42.3

Source: Authors' calculations, based on CEDLAS and World Bank (2007).

sources. As with household income, labor income represents 80 percent of individual income, on average, and pensions and transfers account for about three-quarters of nonlabor income. Table 10 indicates that individual nonlabor income tends to be significantly more concentrated than labor income, which is driven by the high concentration of capital income and transfers, as reflected by the Gini coefficients for these sources. The distribution of government transfers, pensions, and implicit rents, on the other hand, presents lower levels of inequality than the distribution of individual income or labor income.

The evidence presented so far indicates that the countries in Latin America exhibit high levels of inequality, as does the region as a whole. The following section compares the distribution of income in the region with other regions of the world.

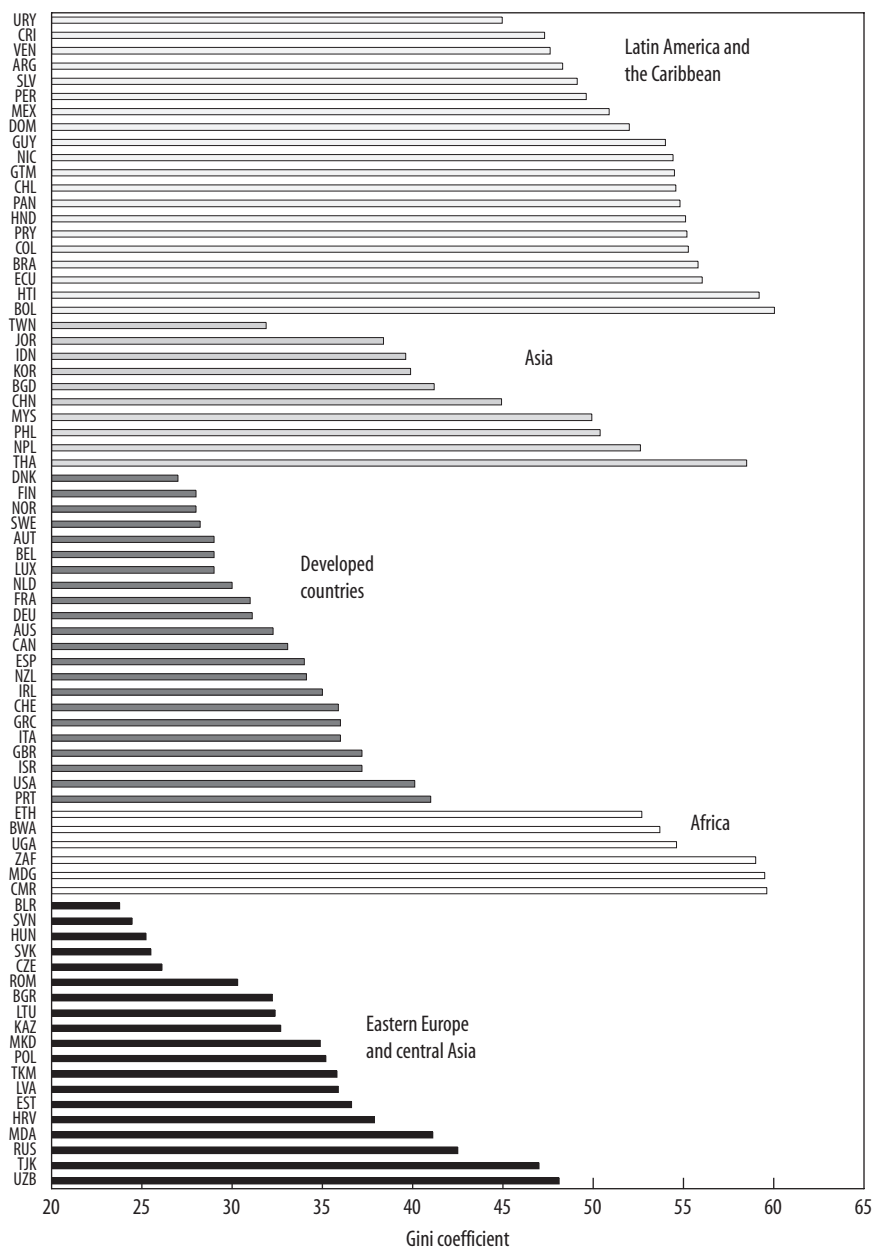
### **Latin America from a World Perspective**

Latin America has traditionally been regarded as the most unequal region of the world. This assessment, although plausible, was not based on strong grounds, as differences in the data sources undermine the regional comparability of the results. Although the field is still far from producing fully comparable international inequality statistics, the view of inequality in the world becomes less blurred as new and better data become available.

One key initiative in compiling inequality statistics is the World Income Inequality Database maintained by the World Institute for Development Economics Research of the United Nations University (UNU-WIDER).<sup>45</sup> Figure 12 shows Gini coefficients drawn from that source for several countries in the world. The observations included in the figure's data set meet several criteria: they are rated by WIDER as high quality (one or two in their ranking); the income sharing unit is the household or the family; the unit of analysis is the person; and the coverage of the survey is national (or when urban, the share of the urban population is higher than 80 percent).

45. WIDER (2007). The UNU/WIDER World Income Inequality Database uses the results from SEDLAC as its source for most of its indicators for Latin America and the Caribbean.

**FIGURE 12. Household per Capita Income Distribution: Regional Comparison**



Source: Authors' calculations, based on data from WIDER (2007) and CEDLAS and World Bank (2007).

a. The figure shows the Gini coefficients for individual countries in the indicated regions, taking the last available observation in the period 1995–2005.

The observations in the figure belong to the latest available survey for the period 1995–2006.<sup>46</sup>

Latin American countries rank among the most unequal in the world in terms of income. Of the fifteen most unequal countries in the WIDER database (based on income data), ten are in Latin America. The average Gini in Latin America is 52.5, a value exceeded only by the mean Gini of those few African countries in the WIDER income database (56.5). Income inequality is substantially lower in the high-income countries and in countries from the former Soviet block (namely, Russia, eastern European countries, and the former members of the Soviet Union). Some Asian countries are as unequal as Latin America (for example, Thailand and Nepal), but in most Asian economies, income is more equally distributed. Compared to Latin America, the average income Gini is eight points lower in Asia, eighteen points lower in eastern Europe and Central Asia, and twenty points lower in the developed countries. When using consumption or expenditure as the base for the Gini inequality indicator, Latin American countries also rank among the most unequal in the world (figure 13). The estimates published in the *World Development Report 2006* provide a similar picture (figure 14).<sup>47</sup> Latin American countries are located among the most unequal economies in terms of both consumption and income.

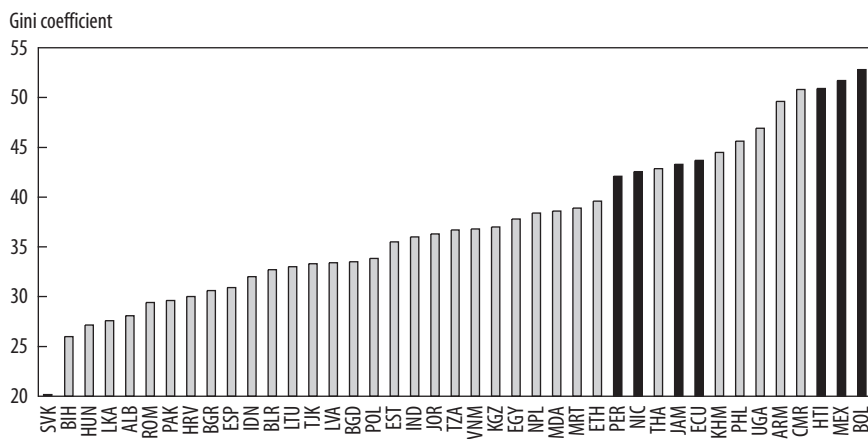
A vast literature links inequality to economic development.<sup>48</sup> This literature usually finds that the level of inequality in Latin American countries

46. In most countries, the Gini coefficient is computed over the distribution of household per capita gross income. In European countries where equivalence scales are used, we estimate the Gini for per capita income based on results for countries for which both computations are available. We were unable to correct for the fact that in developed countries, WIDER reports Ginis for household disposable income, while for developing countries these statistics are based, in principle, on gross income. Three elements alleviate the consequences of this comparability problem. First, since incomes recorded in developing countries usually include monetary government transfers and since most salaried workers report their wages after taxes (which are deducted from the wage bill), the income concept captured by surveys is not exactly gross, but instead is halfway between gross and disposable. Second, direct taxes are unimportant in most developing countries, so the gap between these two concepts is small. Finally, developed countries are substantially less unequal than those in the rest of the world, in particular those in Latin America, even after adjusting for the difference in the income aggregate. For instance, in Finland, where the tax burden is high and the gap between gross and disposable income is large, the difference in the Gini computed over the two income concepts (gross and disposable) is less than five points. This difference is small compared to the twenty points difference between the average Gini in Latin America versus the developed countries.

47. World Bank (2005).

48. Kuznets (1955) was one of the first to explore this line of study.



**FIGURE 13. Distribution of per Capita Consumption and Expenditures in Countries around the World, circa 2000<sup>a</sup>**

Source: Authors' calculations, based on WIDER (2007).

a. Latin American countries are marked in black.

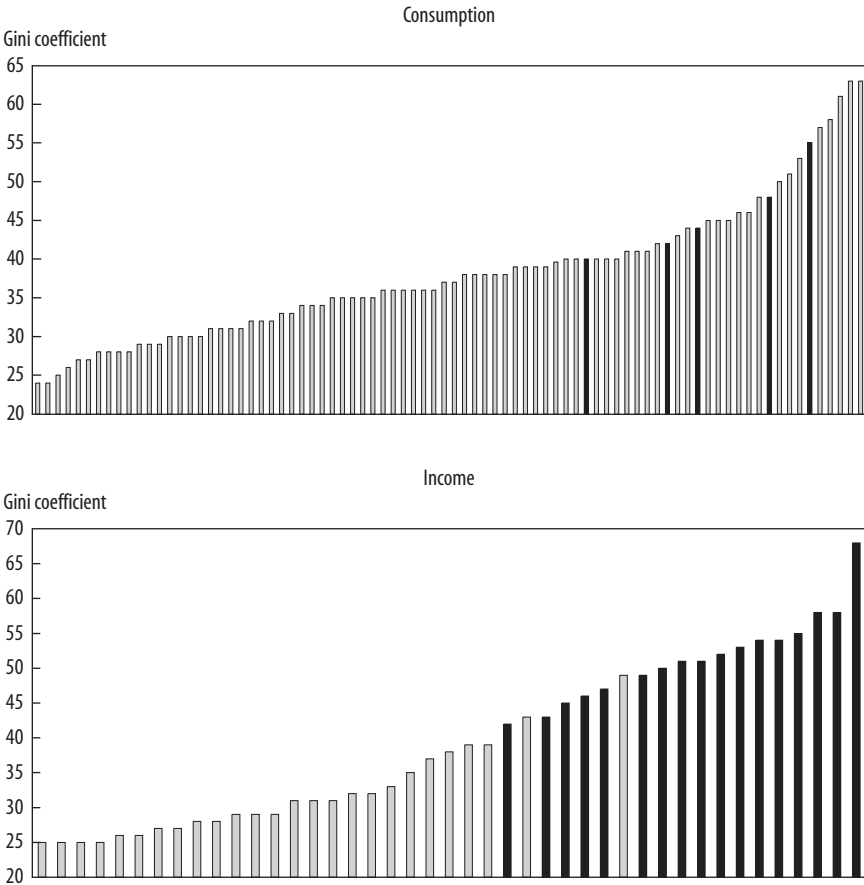
is higher than predicted according to their level of development, usually captured by GDP per capita. This “excess inequality” constitutes a pervasive characteristic of Latin American societies.<sup>49</sup> Figure 15 illustrates this point using WIDER data on income inequality. The Latin American countries are all above the smoothed regression line in the GDP per capita/Gini plane: Ginis for Latin American countries are larger than expected according to their level of output per inhabitant. The coefficient of the Latin American dummy in a linear regression is positive and highly significant: the Gini coefficient is around ten points higher in Latin America than in the rest of the world (based on income data from the WIDER database), after controlling for per capita GDP.

Tracing international inequality patterns over time is a difficult task with arguably too much noise in the results. In table 11, we update previous regional inequality figures, in which Gini coefficients are taken from a common sample of countries and a small set of studies and hence are methodologically more consistent.<sup>50</sup> According to these estimates, the mean Gini across

49. Londoño and Székely (2000).

50. The original figures are from Gasparini (2004).

**FIGURE 14. Distribution of per Capita Consumption and Income in Countries around the World, circa 2000<sup>a</sup>**

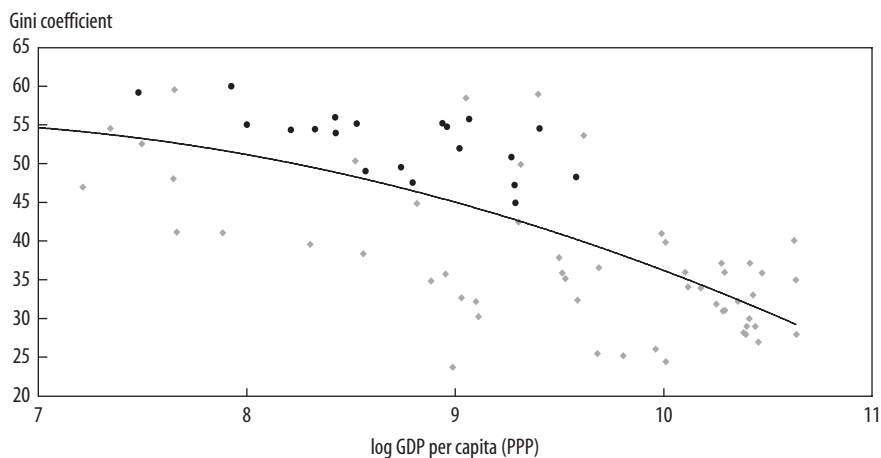


Source: Authors' calculations, based on World Bank (2005).

a. The *WDR* includes one observation per country (either income or consumption). Latin American countries are marked in black.

Latin American and Caribbean countries has been significantly higher than in Asia, the developed countries, and eastern Europe over the last four decades.<sup>51</sup> There are signs of a small reduction in the inequality gap with Asia and eastern Europe, two regions that experienced strong and potentially unequalizing economic transformations in the last two decades.

51. See also Bourguignon and Morrisson (2002) and Deininger and Squire (1996) for similar conclusions.

**FIGURE 15 . Excess Inequality: Scatter Plot of Log of per Capita GDP (PPP) and Gini Coefficient, circa 2003<sup>a</sup>**

Source: Authors' calculations, based on data from WIDER (2007), CEDLAS and World Bank (2007), and World Bank (2008).

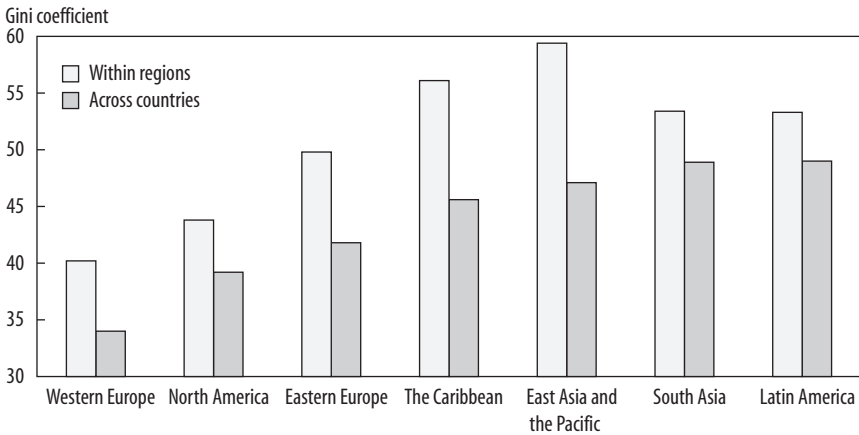
a. Latin American countries are marked in black circles.

**TABLE 11 . Average Gini Coefficients by Region and Decade**

<i>Measure and region</i>	<i>1970s</i>	<i>1980s</i>	<i>1990s</i>	<i>2000s</i>
<b>Level</b>				
Latin America and the Caribbean	48.8	51.2	52.5	52.1
Asia	39.0	39.3	40.1	44.2
Developed countries	28.2	28.4	29.8	30.3
Eastern Europe	25.6	26.5	29.7	34.1
<b>Change from previous decade</b>				
Latin America and the Caribbean	...	2.4	1.3	-0.5
Asia	...	0.2	0.8	4.1
Developed countries	...	0.2	1.4	0.4
Eastern Europe	...	0.9	3.2	4.4
<b>Difference from Latin American Gini coefficient</b>				
Asia	9.8	11.9	12.5	7.9
Developed countries	20.6	22.8	22.7	21.8
Eastern Europe	23.2	24.7	22.9	18.0

Source: Authors' calculations, based on data from WIDER (2007), Gasparini (2004), and CEDLAS and World Bank (2007).

FIGURE 16. World Gini Coefficients



Source: Gasparini and Glüzmann (2009), based on Gallup World Poll 2006.

The recent Gallup World Poll provides some new evidence on the international comparison of income inequality. The survey uses an identical questionnaire from national samples of adults from 132 countries, 19 of them in Latin America. In particular, similar income questions are asked in all countries. Figure 16 and table 12 reproduce Gasparini and Glüzmann's main results based on the 2006 round of that survey.<sup>52</sup> Cross-country inequality is computed as the unweighted mean of the national Gini coefficients of the countries in each region. According to this definition, Latin America is the most unequal region in the world (excluding Africa, which is not in the sample). The cross-country Gini in Latin America is 49.9, which is slightly larger than in south Asia (48.9) and east Asia and Pacific (47.1). The mean Gini in the Caribbean countries is 45.6. Countries in eastern Europe and central Asia (41.8), North America (39.2), and especially western Europe (34.0) are the least unequal in the world.

As discussed above, it is also possible to evaluate the level of regional inequality by considering each region as a single unit and computing inequality among all individuals in the region after translating their incomes to a common currency. The Gini coefficient for Latin America considered as a single large country is 52.5. That value is again higher than in western Europe (40.2),

52. Gasparini and Glüzmann (2009).

**TABLE 12. Inequality Estimates from the Gallup World Poll**

<i>Region</i>	<i>Within regions</i>	<i>Across countries</i>
Latin America	52.5	49.9
The Caribbean	56.1	45.6
East Asia and the Pacific	59.4	47.1
Eastern Europe and central Asia	49.8	41.8
South Asia	53.4	48.9
Western Europe	40.2	34.0
North America	43.8	39.2

Source: Gasparini and Glüzmann (2009).

North America (43.8), and eastern Europe and central Asia (49.8), but it is lower than in south Asia (53.4) and east Asia and Pacific (59.4). Inequality in the Caribbean (56.1) is significantly larger than the average of national Ginis.

This result of not very high within-country inequality in Latin America is driven by the fact that dispersion in mean incomes among countries is smaller in Latin America than in other regions, such as east Asia and the Pacific and the Caribbean. Milanovic finds a similar result when estimating the world income distribution from household surveys.<sup>53</sup> Milanovic and Yitzhaki find that while only 7 percent of overall inequality in Latin America is due to between-country group inequality, the share is 72 percent in Asia.<sup>54</sup> Gasparini and Glüzmann report that in the Gallup Poll, the income ratio between the poorest and the richest countries (Bolivia and Chile) is less than 5.0 in Latin America, more than 8.0 in east Asia and Pacific (Cambodia and Hong Kong), and more than 10.0 in the Caribbean (Haiti and Puerto Rico).<sup>55</sup>

To sum up, the evidence discussed in this section is not conclusive regarding the status of Latin America as the most unequal region in the world. Africa may be somewhat more unequal, and some Asian countries may also be more unequal than the Latin American economies. In addition, the Latin American excess inequality has probably diminished in the last twenty years, given the transformations in eastern Europe, central Asia, and southeast Asia. Finally, when global inequality is computed, Latin America does not rank as the most unequal region in the world. Regardless of its position in the global ranking, Latin America is a region with very unequal national income distributions. This characterization has been unchanged for decades and probably

53. Milanovic (2002).

54. Milanovic and Yitzhaki (2002).

55. Gasparini and Glüzmann (2009).

for centuries, despite substantial changes in the demographic, economic, social, and political environment. There seem to be some underlying factors that are stronger determinants of the level of inequality in the region.

## Concluding Remarks

The evidence presented in this paper confirms that income inequality was and still is a pervasive and distinctive characteristic of Latin American economies. The discussion, however, has shed some light on the recent patterns and evolution of inequality in the region. While we found evidence of a drop in inequality in the 2000s, this does not necessarily imply a substantial reversal of the trend that started in the 1980s and 1990s, and thus the situation only allows for a cautious and qualified optimism.

The discussion highlighted that a significant share of the distributional improvements from the early to mid-2000s was either based on realignments after the strong shocks of the 1990s or dependent on the favorable international scenario in terms of liquidity and commodity prices. While there are signs of decreasing inequality in the region, the reduction is still relatively small, and so far is not clearly related to substantial policy changes or permanent modifications in the fundamentals.

## Methodological Appendix

This appendix provides information on the construction of the inequality series in each country. All series are based on information taken from the SEDLAC database. In several countries, we also use estimates from studies or official sources to fill holes in our database.

### *Southern South America*

Data for **Argentina** come from the *Encuesta Permanente de Hogares* (EPH), which has undergone several transformations since it was first carried out in 1974. These include an increase in the number of urban areas covered in several years and changes in the questionnaire, weights, and frequency of visits in 2003. We take into account these changes to estimate a comparable series.<sup>1</sup>

1. See Gasparini and Cruces (2010).

Data from **Brazil** come entirely from our estimates from the *Pesquisa Nacional por Amostra de Domicílios* (PNAD). The same is true for **Chile**, using the *Caracterización Socioeconómico Nacional* (CASEN).

In the case of **Paraguay**, we use data from the national surveys implemented since 1995—namely, the *Encuesta de Hogares* (EH), *Encuesta Integrada de Hogares* (EIH), and *Encuesta Permanente de Hogares* (EPH). We estimate inequality in the early 1990s by extrapolating the patterns for Asunción (EH). For **Uruguay**, we use data from the *Encuesta Continua de Hogares* (ECH), except for 2006, which is estimated based on Amarante and Vigorito.<sup>2</sup>

### *Andean Countries*

For **Bolivia**, we use SEDLAC data from the country's two national household surveys from 1997 to 2003; these are the *Encuesta Nacional de Empleo* (ENE) and the *Encuesta Continua de Hogares* (ECH). Ginis from 1992 to 1997 are estimated from patterns in urban areas drawn from the ENE and the *Encuesta Integrada de Hogares* (EIH). The Ginis for 2005 and 2006 are computed based on data from UDAPE taken from the ECH.

In **Colombia**, we take SEDLAC estimates from 2001 and 2006 based on the *Encuesta Continua de Hogares* (ECH), but because of various methodological jumps, we use the official statistics from the *Misión para la Reducción de la Pobreza y la Desigualdad* (MERPD) to estimate changes between 1992 and 2001.<sup>3</sup>

Tracing the evolution of inequality in **Ecuador** is difficult, because of differences in the surveys carried out in the period under analysis (*Encuesta de Condiciones de Vida*, ECV; *Encuesta Periódica sobre Empleo y Desempleo*, EPED; and *Encuesta Nacional de Empleo, Desempleo y Subempleo Urbano*, ENEMDU). We estimate inequality changes by combining the data of the three surveys.

**Peru** has two surveys: *Encuesta Nacional de Medición de Niveles de Vida* (ENNIV) and *Encuesta Nacional de Hogares* (ENAHO). The last ENNIV was conducted in 2000, while the ENAHO has been carried out since 1997. We use SEDLAC data for the last ten years (based on the ENAHO) and complement these estimates with other sources of information.<sup>4</sup> Establishing comparables indexes of inequality is very difficult, however, because the two

2. Amarante and Vigorito (2007).

3. MERPD (2006).

4. Gasparini (2004); Jaramillo and Saavedra (2010).

surveys differ in terms of the sample frame, questionnaires, and number of observations.

In the case of **Venezuela**, we use the *Encuesta de Hogares por Muestreo* (EHM).

### *Central America and the Caribbean*

In the case of **Costa Rica**, we obtain our estimates based on data from the *Encuesta de Hogares de Propósitos Múltiples* (EHPM). This survey incorporated an important change in the weights in 2000, so data before and after that year are not strictly comparable. We do not have enough information to make any adjustment.

For the **Dominican Republic**, our estimates are based on information from the *Encuesta Nacional de Fuerza de Trabajo* (ENFT). Significant changes have been introduced to this survey since 2000, generating serious comparison problems with previous surveys.

We estimate inequality in **El Salvador** using data from the *Encuesta de Hogares de Propósitos Múltiples* (EHPM).

**Guatemala** has relatively few household surveys. In this case, we estimate inequality measures using data from the *Encuesta Nacional de Condiciones de Vida* (ENCOVI) for 2000 and 2006 and the *Encuesta Nacional de Egresos e Ingresos* (ENEI) from 2002 to 2004. We also use ECLAC's estimates for the inequality level at the beginning of the 1990s.

In **Honduras**, we take SEDLAC estimates (based on the *Encuesta Permanente de Hogares de Propósitos Múltiples*, EPHPM) from the second part of the 1990s up to the present. We estimate inequality in the first part of the 1990s by combining our information with data from WDI.

The statistics for our estimations of **Mexico** are from the *Encuesta Nacional de Ingresos y Gastos de los Hogares* (ENIGH).

For **Nicaragua**, our estimates are based on the *Encuesta Nacional de Hogares sobre Medición de Niveles de Vida* (EMNV). Because this survey was only carried out four times (1993, 1998, 2001, and 2005), we assume a linear evolution between years in which the survey was collected. Finally, data from **Panama** come from our estimates from the *Encuesta de Hogares* (EH).

## **Recent Trends in Income Inequality in Latin America: An Update**

The article in this issue of *Economía* documents patterns of income inequality in Latin America from the early 1990s to the mid-2000s. This short note



**TABLE 13. Distribution of Household per Capita Income: Mean and Median Gini Coefficients across Latin American Countries, 1990 to 2009**

Gini Coefficients			
<i>Period</i>	<i>Mean</i>	<i>Median</i>	<i>Weighted mean</i>
Early 1990s (c. 1992)	52.0	52.7	54.9
Late 1990s (c. 1998)	53.2	53.6	55.5
Early 2000s (c. 2002)	53.6	54.5	54.7
Mid 2000s (c. 2006)	51.9	52.3	52.7
Late 2000s (c. 2009)	50.6	50.7	51.5

Source: Authors' calculations, based on CEDLAS and World Bank (2010).

complements those results with new comparable evidence for the period 2006–09, which became available at the time of publication. The objective is not necessarily timeliness and completeness, since “recent” trends inexorably do not stay recent for very long. The most relevant issue is that the additional information provided by a few more years of data adds to the discussion and to the interpretation of the results in the main article.

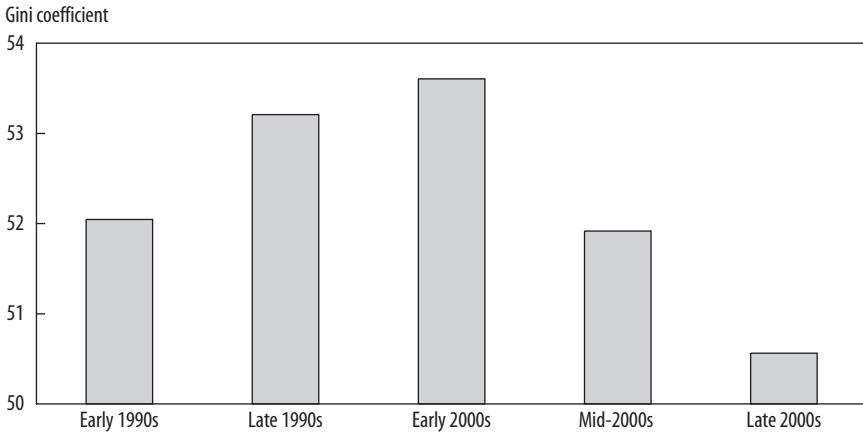
By any account, inequality is still a distinctive and pervasive characteristic of the region, as evidenced by the average level of the Gini coefficient for the latest figure available around 2009, which ranges from 50.6 (unweighted) to 51.5 (weighted by each country's population); see tables 13 and 14. As the international comparison in the main article indicates, these are still high levels from a world perspective. However, the most recent figures indicate that the significant downward trend documented for the first half of the 2000s continued at the regional level (see figures 17 and 18). The last line in each table presents updated figures for the countries in the main article's sample. The mean, the median, and the weighted average of the Gini coefficient for

**TABLE 14. Regional Distribution of Household per Capita Income: Unweighted Means, 1990 to 2009**

Gini Coefficients			
<i>Period</i>	<i>Southern South America</i>	<i>Andean countries</i>	<i>Central America</i>
Early 1990s (c. 1992)	50.9	51.3	53.4
Late 1990s (c. 1998)	53.0	53.9	52.6
Early 2000s (c. 2002)	53.8	54.4	52.4
Mid 2000s (c. 2006)	51.1	52.6	51.8
Late 2000s (c. 2009)	49.2	50.9	51.3

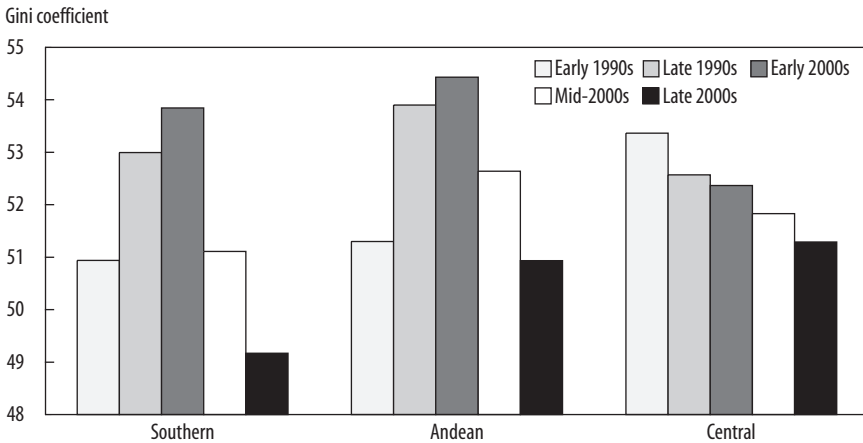
Source: Authors' calculations, based on CEDLAS and World Bank (2010).

**FIGURE 17. Distribution of Household per Capita Income, 1990 to 2009: Unweighted Country Average**



Source: Authors' calculations, based on CEDLAS and World Bank (2010).

**FIGURE 18. Distribution of Household per Capita Income, 1990 to 2009: Unweighted Country Average by Region**



Source: Authors' calculations, based on CEDLAS and World Bank (2010).

the region and for every subregion continued the downward trend observed between the early and mid-2000s. These aggregate trends are robust to the underlying indicator definition (not reported) and to the weighting scheme. Moreover, they originate in substantial changes at the country level: inequality (as measured by the Gini coefficient and other indicators) experienced a statistically significant decline for nine out of seventeen countries in the region for the 2006–09 period (the change was not significant or there was no updated information for the remaining eight countries).<sup>1</sup> Finally, these trends coincide with those reported by ECLAC, among others.<sup>2</sup>

The evidence thus indicates a continuing downward trend in inequality for the region over most of the decade of 2000. The conclusions of the original article, based on the trend up to the mid-2000s, were not overly confident about the sustainability of this trend. We commented that this decline “does not necessarily imply a substantial reversal of the trend that started in the 1980s and 1990s,” allowing only for “a cautious and qualified optimism.” One of the objectives of the article was to assess whether the observed changes were permanent—that is, whether they represented a turning point—and our preliminary evaluation suggested that they were not “based on strong fundamentals.”<sup>3</sup> The main motivation for such reluctant conclusions was the concern, at the time of finishing the original article, for the potential impact of the international financial crisis on the region’s economies. As documented in the main text, past crisis episodes in the region resulted in substantial economic declines, accompanied by increasing inequality levels.

A substantial share of the distributional improvements from the early to mid-2000s were interpreted as consequences of either realignments after the shocks of the 1990s or the favorable international scenario in terms of liquidity and

1. For the sake of brevity, this note presents only regional and subregional aggregates and only for the Gini coefficient. As in the original article, the data originate in the Socioeconomic Database for Latin America and the Caribbean (SEDLAC), a project jointly developed by CEDLAS and the World Bank. The project’s website presents more detailed comparable figures by country for a series of alternative inequality indicators and the level of significance in their changes. For this information and for statistics on other dimensions of welfare based on household surveys, visit the website [sedlac.econo.unlp.edu.ar](http://sedlac.econo.unlp.edu.ar).

2. ECLAC (2010).

3. The article was initially written as a background paper for a UNDP study for the region, which resulted in the publication of an edited volume with country case studies and regional evidence from the same time period, 1990–2006 (López Calva and Lustig, 2010). The book and the working paper versions of our article (Gasparini, Cruces, and Tornarolli, 2008; Gasparini and others, 2009) had a question mark in common in their titles, reflecting the uncertainty about future trends from the available evidence up to 2006.

commodity prices during the period. The original decline in inequality, while small, increased in 2006–09. Most important, while not all countries in the region escaped unscathed from the international financial crisis, its impact was relatively mild in terms of output and implied only temporary and small increases in poverty.<sup>4</sup>

The evidence presented in this comment complements that of the main article and points to a series of issues for further research. For instance, regional and country case studies could evaluate whether social policies were responsible for the lack of major adverse distributional effects of the international crisis. From a wider perspective, the analysis could concentrate on establishing whether the “shielding” of the income distribution was the result of home-grown local policy developments that reduced the macroeconomic impact of the external shock or whether the underlying causes can be attributed to permanent changes in patterns of trade and international specialization.

4. World Bank (2010).