# INCOME INEQUALITY IN LATIN AMERICA AND THE CARIBBEAN: EVIDENCE FROM HOUSEHOLD SURVEYS ${ }^{1,2}$ 

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## 1. Introduction

One of the most prominent characteristics of the Latin America and the Caribbean (LAC) region is its high degree of inequality. Few economic and social variables are so associated to LAC as inequality is. Living standards markedly vary among LAC citizens, not only across countries, but also especially within countries. Moreover, many of these gaps do not seem to be narrowing over time.

This paper shows evidence on inequality in the income distribution based on a sample of household surveys for 20 LAC countries at three points in time over the period 1989-2001. In this paper we introduce the sample of household surveys (section 2), present a large set of inequality measures for the distribution of household income adjusted for demographics (section 3), report the inequality patterns for the LAC countries based on our dataset and the existing literature (section 4), and report results for two other dimensions of the income distribution: aggregate welfare and polarization (section 5). Comparison with other

[^0]regions in the world, evidence on the distribution of income components, and on inequality in the distribution of other variables beyond income (education, health, political representation, safety form crime and social services) can be found in the extended version of this paper (Gasparini, 2003).

It is probably safe to state that most people have preferences for social fairness, and associate the concept of unfairness to some sort of inequality. Discrepancies arise at the stage of defining the variable(s) they consider important to equalize among individuals to reach a more fair society. A first alternative is between outcomes and opportunities. Should we try to reduce disparities in outcomes (e.g. in income or consumption), or to guarantee equality of opportunities in achieving those outcomes? Many authors have argued in favor of the second alternative. ${ }^{4}$ Unfortunately, the concept of opportunity is difficult to define and measure, and hence in practice it is usually abandoned in favor of the analysis of inequality in outcome variables.

Probably the most relevant outcome variable to compare among individuals is intertemporal living standard, i.e. the "average" well-being of a person over her entire lifetime. Conceptual and especially data limitations restrict the comparisons to time periods much shorter than a lifetime: surveys are usually able to capture dimensions of well-being for periods no longer than one year.

Consumption is, within the group of variables usually measured in a household survey, the best one to approximate living standards. ${ }^{5}$ Consumption can be estimated from household surveys in many countries of the world. Unfortunately, in Latin America consumption surveys are the exceptions. The great majority of countries in the region conduct surveys with no consumption or expenditure questions. From our sample of twenty LAC countries, only five have had at least two expenditure surveys in the last decade.

[^1]For the reasons mentioned above the measurement of social unfairness in Latin America has been mainly associated to the measurement of inequality in the distribution of household income. The implicit assumption is that household current income as measured in household surveys is highly correlated to individual opportunities and intertemporal living standards. Although these correlations are surely positive and probably high, we really do not know how distorted the picture we draw with income data from household surveys is from the reality we would like to know.

Summing up, our ideal objective would be measuring the degree of social unfairness in the LAC countries. Due to conceptual and data limitations we end up measuring inequality in the distribution of household income adjusted for demographics. Although we are aware of the limitations, we still believe that the statistics shown in this paper and similar studies are useful inputs to characterize and understand social unfairness in the region.

## 2. The data

We were able to assemble a dataset containing 52 household surveys covering the period 1989-2001. ${ }^{6}$ The sample comprises around 3.6 millions individuals surveyed in 20 LAC countries: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Trinidad and Tobago, Uruguay and Venezuela. The sample is fully representative of Latin America, and only partially of the Caribbean, where many countries do not regularly conduct or publish household surveys (e.g. Cuba).

For most countries our sample has three observations corresponding to the early 90s, mid 90s and either late 90s or years 2000/01. In each period the sample represents more than $92 \%$ of LAC total population. All household surveys included in the sample are nationally representative. The exceptions are Argentina and Uruguay, where surveys cover only

[^2]urban population, which nonetheless represents more than $85 \%$ of the total population in both countries. ${ }^{7}$ All surveys record a basic set of demographic, education, labor and income variables at the household and individual level. Although there are differences across countries, surveys are roughly comparable in terms of questionnaires and sampling techniques.

Table 2.1 presents the main characteristics of each household survey. The table shows the names of the surveys, their coverage (urban or national) and the sample size (in individuals). For reference, the population estimates of each country are presented in column (v). Household income is reported in all surveys. Those that also cover expenditures are indicated in column (vi). All surveys have specific questions for labor income, and nearly all also cover non-labor income (capital income, property income, profits and transfers), although surveys differ in the detail of the questions and the possibility of separating out different sources of non-labor income. Surveys that include questions for non-monetary income and for the implicit rent of own-housing are also marked in the table.

Most surveys were obtained through the MECOVI program, a joint effort of the World Bank, the Inter-American Development Bank (IADB) and the United Nations Economic Commission for Latin America and the Caribbean (ECLAC). This program promotes improvements in the collection, organization and analysis of household surveys in LAC. Some other surveys used in this paper are part of the Living Standards Measurement Surveys program (LSMS) of the World Bank. These surveys are usually richer, since they include questions on social services and expenditures.

This study is not the first one in analyzing inequality in LAC based on a set of household surveys. Altimir (1994) and Morley (2001) at ECLAC, Wodon et al. (2000) at the World Bank, and especially Székely and his coauthors at the IADB have gathered information from household surveys to

[^3]analyze income distribution in the region. ${ }^{8}$ Compared to these studies our sample has more countries, more information on some countries (mainly Argentina), and includes surveys for 2000 and 2001. We also present a larger set of statistics across countries and over time, not only on inequality in household income, but also on other dimensions of that distribution.

We have made all possible efforts to make statistics comparable across countries and over time by using similar definitions of variables in each country/year, and by applying consistent methods of processing the data. ${ }^{9}$ However, perfect comparability is not assured, as the coverage and questionnaires of household surveys differ among countries, and frequently also within countries over time. ${ }^{10}$

## 3. Income inequality in the 90s

In this section we use our dataset to study income inequality across countries and over time. We first take a look at the most analyzed distribution in LAC: the distribution among all individuals in the population of household per capita disposable income. Population weights are used in the calculations, and missing and zero income observations are deleted. ${ }^{11}$ Both monetary and non-monetary incomes are considered when that information is available. Although most income sources are included (labor, capital, profits, property rents and transfers), we ignore some potentially relevant items, as the implicit rent from own housing, in-kind gifts, and government in-kind transfers. Estimates (of dubious quality) of some of these variables are available in only few surveys.

[^4]Table 3.1 shows what are probably the most tangible and robust measures of inequality: the income shares of different income strata. ${ }^{12}$ People are sorted according to their household per capita income and divided in ten groups of equal size (called deciles). In all the LAC countries the share of the poorest $10 \%$ of the population in total income has been always less than $2 \%$, while the share of the richer $10 \%$ has been always higher than $30 \%$. Column (xi) in Table 3.1 reports the income ratio between the average individual of the top decile and a typical person of the bottom decile. This ratio ranges from 16 in Uruguay 1989 to values above 60 in several countries. In column (xii) we compare individuals at the limits of these deciles: the poorest of the top decile with the richest of the bottom decile. The income ratios are much smaller than in the previous column, a fact driven by the presence of few individuals with extremely large household incomes compared even with the incomes of most people in the top decile. ${ }^{13}$ It has been argued that Latin American distributions are characterized by large differences between the rich and middle-class people. To look at these differences column (xiii) shows the income ratio between a person located at the 95th percentile and one located at the 80th percentile.

[^5]In the academic literature more sophisticated measures of inequality are preferred to simple statistics on income shares and ratios. Table 3.2 presents a set of indices commonly used in that literature: the Gini coefficient, the Theil index, the coefficient of variation, the Atkinson index and the generalized entropy index with different parameters. ${ }^{14}$ All indices are designed to increase as the distribution becomes more unequal. By far, the most used one is the Gini coefficient, which in the sample ranges from 42.2 in Uruguay 1989 to 61.2 in Brazil 1990. ${ }^{15}$

Although widely used, household per capita income is probably not the best available measure of individual well-being based on household income, as it ignores household economies of scale and differential needs by age. We define an individual's equivalized household income as total household income divided by $\left(A+\alpha_{1} \cdot K_{1}+\alpha_{2} \cdot K_{2}\right)^{\theta}$, where A is the number of adults, $\mathrm{K}_{1}$ the number of children under 5 years old, and $\mathrm{K}_{2}$ the number of children between 6 and 14 . Parameters $\alpha$ allow for different weights for adults and kids, while $\theta$ regulates the degree of household economies of scale. Following Deaton and Zaidi (2002) we take intermediate values of the $\alpha$ s ( $\alpha_{1}=0.5$ and $\alpha_{2}=0.75$ ), and a rather high value of $\theta(0.9)$ as the benchmark case. Statistics for the distribution of equivalized household income constructed in this way are presented in Tables 3.3 and 3.4. Table 3.5, which reproduces the Gini coefficient of that distribution for all the countries in the sample, is the basic input for Figures 3.1 and 3.2.

Inequality has risen in most South American economies during the last decade (see Figure 3.1). Argentina experimented by far the biggest jump (7.7 Gini points between 1992 and 2001). ${ }^{16}$ Venezuela follows with an increase of nearly 4 Gini points. ${ }^{17}$ The income distribution has also become

[^6]more unequal in Bolivia, Chile, Ecuador, Peru, Uruguay and possibly Paraguay. ${ }^{18}$ Colombia has not experimented significant inequality changes. Brazil is the only South American economy where there has been a clear reduction in inequality in the 90 s, although small enough not to change its position as the most unequal country in the region. Most of these results are in accordance with those found in other studies for the period 1990-1999 (Morley, 2001; Székely, 2001; Wodon et al., 2000). These studies, however, overlooked the two most relevant distributional changes in the region: the large increase in inequality in Argentina, and the distributional improvement in Brazil.

In Central America and the Caribbean changes have been milder (see second panel of Figure 3.3). The income distribution has remained remarkably stable in Panama, Nicaragua, and Jamaica, has become more equal in Honduras, and somewhat more unequal in Costa Rica and El Salvador. ${ }^{19}$ Inequality indices went down in Mexico, although not enough to be sure that the fall is really significant in statistical terms.

The assessment of inequality patterns is quite robust to most changes in inequality measures. It is interesting to notice, however, that the share of the poorest deciles has considerably increased only in Brazil and Panama, while it has shrunk in most LAC economies. Consequently, for instance the Atkinson index with inequality-aversion parameter 2 (see column (vi) in Tables 3.2 and 3.4 ), which compared to the Gini coefficient gives more weight to changes affecting the poorest individuals, generates a somewhat more pessimistic picture for the distributional changes in the region.

Notice that less unequal countries have performed worse on average than more unequal countries: while the distribution has become more unequal in Argentina, Uruguay and Venezuela -three low-inequality economies-, it either has not changed or has become more equal in Brazil, Colombia, Mexico, and Panama -four mid to high-inequality economies. The standard deviation for the distribution of Gini coefficients in the region

[^7]fell substantially in the last decade: from 6.1 to 4.6 . Latin America, a region already very homogeneous compared to other regions in the world, became more homogeneous in distributional terms in the last 10 years. Figure 3.2 is illustrative of this fact: in the early 90 s there was (i) a group of countries with low inequality (for LAC standards) comprised by Uruguay, Venezuela, Argentina, Costa Rica and maybe Peru, (ii) another set of countries with high inequality, and (iii) Brazil, which stood up as substantially more unequal than the rest. Ten years later the differences among groups are not so clear. A sort of convergence of inequality levels seems to have been taken place in LAC.

One decade of differential changes has had some impact over the inequality ranking of countries in the region. While Argentina scaled up some positions in the inequality ladder and became closer to the mid/highinequality group, Costa Rica, Honduras, and Colombia have moved backward in the ranking. In spite of having the best performance in distributional terms in the last decade, Brazil remains at the top of the list.

As a result of the reported changes the non-weighted average Gini across countries increased almost 1 point in the period (from 50.5 to 51.4 ). The population-weighted average however shows a small decrease (from 51.9 to 51.5), because of the positive performance of Brazil and Mexico, and the stability of Colombia, the three most populated countries in the region.

Table 3.6 reports the Gini coefficient for the distribution of household income divided by alternative equivalent scales. In columns (vii) and (viii) we separate the distributions in urban and rural, wherever possible. In some countries inequality is higher in cities, while in others inequality is higher in rural areas. However, in most countries inequality differences between urban and rural areas seem minor. Household surveys are usually unable to properly capture non-labor income and non-monetary income. In columns (ix) to (xii) we report the Gini coefficient for the distribution of household per capita income, including alternatively as income sources only labor income, monetary income, labor monetary income and labor monetary income in urban regions. These are the most homogeneous household income variables to compare across countries.

According to some views inequality should be measured only on the distribution of variables that are beyond individual control. This idea may imply, for instance, a concern on the distribution of household total income, and not household income adjusted for demographics, since fertility decisions are mostly under individual control. Without judging the validity of this argument we show in column (xiii) the Gini for the distribution of total household income. Table 3.6 finally reports the Gini over the distribution of equivalized household income for people in certain age ranges to control for life-cycle factors.

Most of the qualitative results over the inequality trends and crosscountry comparisons do not substantially vary when considering any of the distributions in Table 3.6 instead of the household per capita or equivalized income distributions of Tables 3.2 and 3.4. Certainly, there are some ranking reversions and changes in trends as we consider different definitions, but the main results remain quite robust to these methodological changes.

## 4. Income inequality since the $\mathbf{5 0 s}$

This section combines information from our dataset with evidence from other sources for previous decades to draw a general picture of trends in income inequality in the region. Unfortunately, our vision becomes increasingly blurred as we go back in time. As recently as in the 1970s many countries did not have national surveys or even any household survey at all. Actually, it was only after World War II that countries around the world started to conduct household surveys and to compute inequality statistics in a systematic way. Mexico and some Caribbean countries (Barbados, Guyana, Jamaica and Trinidad and Tobago) were the first in the LAC region to join that trend in the 50s. Only Mexico has continued with a systematic program of surveying household incomes and expenditures. The available statistics for that country show a mild increase in income inequality in the 1950s and the first half of the 1960s (Felix, 1982; Fields, 1989; Altimir, 1996). There is some evidence that inequality also increased
in the 60s in some of the few LAC countries where distributional statistics started to become available (Brazil, Costa Rica, Chile and Uruguay). ${ }^{20}$

Most countries either consolidated or introduced household surveys in the 70s. The picture of income inequality from that decade on is hence clearer. Some international organizations (ECLAC, IADB and The World Bank) shed additional light on the issue by starting to generate periodical reports depicting the level, structure and trends of income inequality in the region. Table 4.1 shows the signs of the inequality changes in most LAC countries in the last three decades. During the 70s inequality only significantly increased in the Southern Cone (Argentina, Chile and Uruguay). In contrast several countries (Mexico, Bahamas, Panama, Colombia, Peru and Venezuela) experienced equalizing changes while the rest shows stable distributions. The 80s were a "lost decade" also in distributional terms. Most countries suffered a substantial increase in the level of income inequality. In around half of the countries inequality continued to increase in the 90s, although in most of them at lower rates. As a result of the patterns described above most LAC countries have now more unequal income distributions than around 1970, and very likely also more unequal than at the end of the World War II. There are some exceptions, but for the majority of LAC countries the economic changes of the last half-century have been mainly unequalizing.

The previous evidence refers to LAC countries considered separately. Londoño and Székely (2000) compute inequality indicators for the region as a whole by calculating a Lorenz curve from the percentiles of each country. They conclude that inequality fell in the 70s, increased in the 80s and increased a bit in the first half of the 90 s . The average income ratio of top to bottom quintiles went from 22.9 in 1970 to 18.0 in 1982, back to 22.9 in 1991, and to 24.4 in 1995. They also conclude that both the level and the change of overall inequality are mainly due to differences within countries rather than across countries. In fact, in the last 20 years there was a slow convergence in per capita income across LAC countries: the

[^8]increase in regional inequality is exclusively due to unequalizing changes in the income distributions within countries.

Having described the main changes in the region as a whole, the rest of this section is then devoted to present a broad picture of the income inequality patterns by country.

Inequality has dramatically increased in Argentina during the last three decades. ${ }^{21}$ The Gini coefficient for the household per capita income distribution in the Greater Buenos Aires area has increased from 34.5 in 1974 to 53.8 in 2002 (CEDLAS, 2003). Even if the observations for the recent crisis years are ignored, the increasing trend is noticeable. None of the other LAC countries has experienced such deep distributional changes as Argentina has. ${ }^{22}$ Inequality also increased in the neighbor Uruguay during the 90 s, although the increase was smaller. Moreover, there were no sizeable distributional changes in Uruguay in the 70s and 80s. As a consequence of these divergent patterns, the distributions of Argentina and Uruguay, once almost identical, now are significantly different. The other country in the Southern Cone, Chile, has always had higher inequality indicators. The Chilean income distribution became more unequal during the 70s and 80s. That "storm" finished in the 90s (Ferreira and Litchfield, 1999), although there are no signs of distributional recovery: inequality measures slightly increased during the last decade (see Contreras et al., 2001).

Brazil has traditionally been the most unequal economy in the LAC region. The Brazilian economy experienced a sizeable increase in income inequality during the 80s (Ferreira and Litchfield, 1996), but since then inequality stabilized and even started to decline (Neri and Camargo, 1999). As above mentioned, we have found a drop in income inequality in Brazil during the last decade.

Due to few and changing household surveys, the distributional information for Bolivia and Paraguay before mid-90s is scarce. According

[^9]to this study inequality has slightly increased in Bolivia during the 90s. This result is shared by other studies (Morley, 2001 and Székely, 2001). Paraguay did not have national reliable household surveys until mid-90s. In order to gain some insight on the evolution of inequality we computed the Gini for two years, 1990 and 1995, using only data from the metropolitan area of Asunción, finding a sizeable inequality increase. ${ }^{23}$ Inequality seems to have decreased during the second half of the nineties in Paraguay, although possibly not enough to compensate the increase of the first half. ${ }^{24}$

Income distribution in Colombia and Venezuela became more equal in the 70 s and more unequal in the 80 s. In the 90 s there was no recovery from the distributional losses of the 80s: inequality continued to increase in Venezuela and the pattern for Colombia seems stable (see also Ocampo et al., 1998 and Székely, 2001). In Peru while there is no clear evidence that the income distribution became more unequal in the 70s and 80s, income data for the 90 s suggests a movement towards more concentration. Studies that use expenditure data find similar results. The distribution seems to have become somewhat more unequal also in neighbor Ecuador, at least in the second half of the 90s.

The Mexican income distribution has changed in different directions in the last three decades. After an improvement in the 70s, the distribution became substantially more unequal in the 80s. Despite the important economic changes and shocks in the last decade, the income distribution has remained remarkably stable. The tables in this section illustrate this fact, also highlighted by other authors (Morley, 2001, Székely, 2001). ${ }^{25}$ The inequality pattern for Panama is similar. In Costa Rica the distribution remained stable for decades at low levels of inequality (Londoño and Székely, 2000). Despite a small increase in inequality during the 90s, Costa

[^10]Rica remains one of the most equal countries in the region (see also Trejos, 1999). Inequality is much higher in the other Central American countries. The evidence suggests no significant inequality changes in Nicaragua, a drop in Honduras and a small increase in El Salvador during the 90s. Only one household survey is available for Guatemala, from which it emerges as one of the most unequal countries of the region.

Once more widespread among Caribbean countries, household surveys are now scarce in the region. During the 70s and 80s inequality increased in Bahamas and decreased in Trinidad and Tobago according to Fields (1989) and WIDER (2000). Some studies report mild inequality increases in Dominican Republic (Hausman and Rigobon, 1993). The income distribution has remained quite stable in Jamaica in the last decade as shown in this and other studies (Chen et al., 1995 and World Bank Indicators, 1999). Data for Puerto Rico suggests a quite stable distribution during the 70s and 80s (WIDER, 2000). Inequality in the Caribbean seems to have always been lower than in Latin America.

There is always the temptation of giving account of inequality patterns by means of a simple explanation, for instance referring to a few macro variables. Inequality decreased in the 70 s during times of relative economic prosperity, and increased in the lost decade of the 80s. According to this simple view, the recovery of the 90s should have brought distributional improvements. However, there is no evidence that this has happened. Of course many changes that occurred in the 90 s can be blamed for the distributional failure, but that leads us to more complex explanations. ${ }^{26} \mathrm{~A}$ sign of this complexity is the multiplicity of distributional stories across relative homogeneous countries that results from the evidence shown in this section.

## 5. Other dimensions of the income distribution

Inequality, the main topic of this paper is just one dimension of the income distribution. In this section we briefly study two other relevant dimensions: polarization and aggregate welfare.

[^11]
### 5.1 Polarization

The notion of polarization refers to homogeneous clusters that antagonize with each other. A case of maximum polarization would be one where half the population is penniless, and the other half shares total income equally. The conjecture that motivates research on polarization is that contrasts among homogeneous groups can cause social tension. The literature has recently developed some indices to measure income polarization. ${ }^{27}$ These measures depend on three factors: (i) the number of groups and their relative sizes, (ii) the degree of equality within each group (identification) and (iii) the degree of income differences among groups (alienation). Intuitively, a higher identification and a higher alienation would raise polarization. It is worth noting that polarization can increase when inequality decreases (and vice versa). For instance, some transfers from the middle class to the poor and the rich can lead to lower inequality and higher polarization (see Esteban and Ray, 1994). Thus, the analysis of income polarization is complementary to that of income inequality.

From the sample of household surveys we compute two bipolarization indices for each country/year: the Wolfson Index, which cuts the distribution at the median income, and the EGR Index, which finds the optimal income cut-off. ${ }^{28}$ Table 5.1 shows the results for these bipolarization measures, along with the Gini coefficient, for both the distribution of household per capita income and the distribution of equivalized household income.

As with inequality measures, polarization increased in several South American countries and remained stable in Central America and the Caribbean. Argentina, Bolivia, Uruguay and Venezuela experienced the largest increases in polarization. Among the economies with falling bipolarization measures there are cases where inequality increased: Chile is one example. Notice from Tables 3.1 and/or Table 3.3 that in Chile the share of the top decile substantially increased in the last decade, driving inequality measures up. Among the main losers of the distributional

[^12]changes of the 90 s were people in the deciles 7 to 9 , i.e. people that are considered by bipolarization measures as belonging to the same "class" of the winners of the top decile. This fact weakens the identification within the high-income group, driving bipolarization measures down. Paraguay shows an opposite pattern between 1995 and 1999: the share of the top decile went down, while the share of deciles 7 to 9 substantially increased, implying a fall in inequality but an increase in bipolarization driven by a tighter identification within the high-income group.

### 5.2 Aggregate welfare

To assess the aggregate welfare of an economy both the mean and the inequality level of the income distribution should be taken into account. It could be the case that inequality increases but everybody's incomes go up. In that case most people would agree that aggregate welfare in this economy has increased despite the inequality growth. As we should not assess the performance of an economy by considering only inequality statistics, the opposite mistake of just looking at average statistics, very common in Economics, should be avoided, as well. Average income may rise, but inequality may also increase in such a way that some people suffer reductions in their real incomes, which may be translated into a negative assessment of the overall performance of the economy, according to some value judgments.

Table 5.2 presents welfare measures for all the countries in the sample with more than one observation. Each column shows the value of a given aggregate welfare function for a given country/year. Values are rescaled so as to make the first observation for each country equal to 100. Four abbreviated social welfare functions are considered. The first one is represented by the average income of the population: according to this value judgment inequality is irrelevant. In columns (ii) to (iv) and (vi) to (viii) three widely used functions that take inequality into account are considered. ${ }^{29}$ In the first panel we take real per capita GDP from National

[^13]Accounts as the average income measure, and combine it with the inequality indices shown in Table 3.2. ${ }^{30}$ Given that most assessments of the performance of an economy are made by looking at per capita GDP, we use this variable and complement it with inequality indices from our study to obtain rough estimates of the value of aggregate welfare according to different value judgments. ${ }^{31}$ For various reasons per capita income from household surveys differs from National Accounts estimates. In the second panel we replicate the exercise using information only from household surveys.

Most LAC economies managed to grow during the 90s. However, at the same time, in many of these economies the income distribution became more unequal. This combination led to ambiguous results in terms of aggregate welfare. In all ten economies of Figure 5.1 real per capita GDP increased during the 90s. However, in Peru and Venezuela according to value judgments that attach more weight to the poorest individuals $-\operatorname{Atk}(2)$ in the Figure- the assessment of the performance of the economy was negative, while in others like El Salvador and Uruguay the welfare increase was significantly smaller than the GDP growth. In Argentina the contrast is more dramatic: despite an $11 \%$ increase in per capita GDP measured by National Accounts between 1992 and 2001, aggregate welfare decreased for all the value judgments implicit in the calculations that do not neglect distributional issues. The increase in inequality was large enough to offset the growth in mean income. In contrast, aggregate welfare unambiguously increased in Costa Rica and Chile despite the unequalizing distributional changes. In Brazil and Panama aggregate welfare grew fueled by both growing per capita income and a more equal distribution. ${ }^{32}$

Clearly, the scope of these exercises is rather limited, as it is assumed that aggregate welfare is a function only of household income. Other

[^14]factors like freedom, security, political power, access to basic services, health status and many more should be also considered as arguments of an individual well-being. However, a comprehensive welfare study including these factors is beyond the scope of this paper.

## 6. Concluding remarks

This descriptive paper presents statistics on inequality, polarization and aggregate welfare for the LAC region. We have assembled a dataset of household surveys from 20 LAC countries, and used it to compute statistics on the income distribution. Results drawn from various authors complete the picture of LAC inequality presented in this paper.

Income inequality has increased in the region since World War II. During the 90 s the trends have not been uniform across countries: on average inequality has increased in South America, and remained stable in Central America and the Caribbean. Two paradigmatic cases are neighbors Argentina and Brazil. Argentina, once a very low-inequality country by LAC standards, has experienced dramatic unequalizing changes. In contrast, in Brazil, the most unequal country in the region, inequality has fallen during the 90 s . The evidence shown in the paper suggests a movement toward convergence in the country inequality levels for the whole region. LAC economies, already quite homogeneous in terms of inequality, are becoming even more uniform.

Fueled by GDP growth, aggregate welfare has increased in most LAC countries in the 90 s. However, increases in inequality have reduced the positive effects of growth: in several LAC countries the assessment of the performance of the economy is less optimistic when considering distributional issues.

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Table 2.1 Household surveys in LAC. Coverage and characteristics

| Country | Year | Name of Survey (ii) | Coverage | Sample size Individuals (iv) | $\begin{gathered} \text { Population } \\ \text { (in millions) } \\ \text { (v) } \end{gathered}$ | Does the survey report |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | Expenditures? <br> (vi) | Non-labor income? <br> (vii) | Non-monetary income? <br> (viii) | $\begin{aligned} & \text { Implicit rent } \\ & \text { own housing? } \end{aligned}$ |
| Argentina | 1992 | EPH | Urban | 67,776 | 33.4 | No | Yes | No | No |
|  | 1996 | EPH | Urban | 63,387 | 35.2 | No | Yes | No | No |
|  | 2001 | EPH | Urban | 48,048 | 37.5 | No | Yes | No | No |
| Bolivia | 1992 | EIH | Urban | 28,502 | 6.9 | Yes | Yes | No | No |
|  | 1996 | ENE | National | 35,648 | 7.6 | No | Yes | No | No |
|  | 1999 | ECH | National | 13,031 | 8.1 | Yes | Yes | Yes | Yes |
| Brazil | 1990 | PNAD | National | 306,493 | 144.7 | No | Yes | No | No |
|  | 1995 | PNAD | National | 334,106 | 155.8 | No | Yes | No | No |
|  | 2001 | PNAD | National | 378,837 | 172.6 | No | Yes | No | No |
| Chile | 1990 | CASEN | National | 105,189 | 13.1 | No | Yes | Yes | Yes |
|  | 1996 | CASEN | National | 134,262 | 14.4 | No | Yes | Yes | Yes |
|  | 2000 | CASEN | National | 252,748 | 15.2 | No | Yes | Yes | Yes |
| Colombia | 1992 | ENH-FT | Urban | 13,936 | 36.4 | No | Yes | Yes | No |
|  | 1996 | ENH-FT | National | 137,423 | 39.3 | No | Yes | Yes | No |
|  | 1999 | ENH-FT | National | 152,298 | 41.6 | No | Yes | Yes | No |
| Costa Rica | 1990 | EHPM | National | 36,272 | 3.0 | No | Yes | No | No |
|  | 1995 | EHPM | National | 40,613 | 3.3 | No | Yes | No | No |
|  | 2000 | EHPM | National | 40,509 | 3.6 | No | Yes | No | No |
| Dominican Republic | 1995 | ENFT | National | 23,730 | 7.7 | No | No | No | No |
|  | 1997 | ENFT | National | 15,842 | 8.0 | No | Yes | Yes | No |
| Ecuador | 1994 | ECV | National | 20,873 | 11.2 | Yes | Yes | Yes | Yes |
|  | 1998 | ECV | National | 26,129 | 12.2 | Yes | Yes | Yes | Yes |
| El Salvador | 1991 | EHPM | National | 90,624 | 5.4 | No | Yes | No | Yes |
|  | 1995 | EHPM | National | 40,004 | 5.7 | No | Yes | No | Yes |
|  | 2000 | EHPM | National | 71,665 | 6.3 | No | Yes | Yes | No |
| Guatemala | 2000 | Encovi | National | 37,771 | 11.4 | Yes | Yes | Yes | Yes |
| Honduras | 1990 | EPHPM | National | 47,056 | 4.8 | No | No | No | No |
|  | 1995 | EPHPM | National | 29,804 | 5.6 | No | No | No | No |
|  | 1999 | EPHPM | National | 33,772 | 6.4 | No | Yes | Yes | No |
| Jamaica | 1990 | JSLC/LFS | National | 8,269 | 2.4 | Yes | Yes | No | No |
|  | 1996 | JSLC/LFS | National | 8,280 | 2.5 | Yes | Yes | No | No |
|  | 1999 | JSLC/LFS | National | 8,921 | 2.6 | Yes | Yes | No | No |
| Mexico | 1992 | Enigh | National | 50,862 | 86.4 | Yes | Yes | Yes | Yes |
|  | 1996 | ENIGH | National | 64,916 | 92.7 | Yes | Yes | Yes | Yes |
|  | 2000 | ENIGH | National | 42,535 | 98.0 | Yes | Yes | Yes | Yes |
| Nicaragua | 1993 | Emnv | National | 25,162 | 4.3 | Yes | Yes | Yes | No |
|  | 1998 | EMNV | National | 22,423 | 4.8 | Yes | Yes | Yes | No |
| Panamá | 1991 | EH-mo | National | 38,000 | 2.4 | No | Yes | No | No |
|  | 1995 | EH-MO | National | 40,320 | 2.6 | No | Yes | No | No |
|  | 2000 | еН-MO | National | 39,562 | 2.9 | No | Yes | No | No |
| Paraguay | 1990 | EH-mo | Urban | 4,795 | 4.2 | No | Yes | Yes | No |
|  | 1995 | ен-мо | National | 21,910 | 4.8 | No | Yes | Yes | No |
|  | 1999 | EPH | National | 24,193 | 5.4 | No | Yes | Yes | No |
| Perú | 1991 | EnNiv | National | 11,845 | 22.0 | Yes | Yes | Yes | Yes |
|  | 1994 | ENNIV | National | 18,662 | 23.1 | Yes | Yes | Yes | Yes |
|  | 2000 | ENNIV | National | 19,961 | 25.7 | Yes | Yes | Yes | Yes |
| Trinidad \& Tobago | 1992 | ECV | National | 6,220 | 1.2 | Yes | No | No | No |
| Uruguay | 1989 | ECH | Urban | 31,766 | 3.1 | No | Yes | Yes | Yes |
|  | 1995 | ECH | Urban | 64,930 | 3.2 | No | Yes | Yes | Yes |
|  | 2000 | ECH | Urban | 57,984 | 3.3 | No | Yes | Yes | Yes |
| Venezuela | 1989 | енм | National | 224,172 | 18.9 | No | No | No | No |
|  | 1995 | EHM | National | 92,450 | 21.8 | No | Yes | Yes | Yes |
|  | 1998 | EHM | National | 80,311 | 23.4 | No | Yes | Yes | Yes |

Note: EPH: Encuesta Permanente de Hogares - onda octubre, EIH: Encuesta Integrada de Hogares, ENE: Encuesta Nacional de Empleo, ECH: Encuesta Continua de Hogares, PNAD: Pesquisa Nacional por Amostra de Domicilios, CASEN: Encuesta de Caracterización Socioeconómica Nacional, ENH-FT: Encuesta Nacional de Hogares-Fuerza de Trabajo, EHPM: Encuesta de Hogares de Propósitos Múltiples, ENCOVI: Encuesta Nacional sobre Condiciones de Vida, ENFT: Encuesta Nacional de Fuerza de Trabajo, ECV: Encuesta de Condiciones de Vida, EPHPM: Encuesta Permanente de Hogares de Propósitos Múltiples, JSLC: Jamaica Survey of Living Conditions, LFS: Labor Force Survey, ENIGH: Encuesta Nacional de Ingresos y Gastos de los Hogares, EMNV and ENNIV: Encuesta Nacional de Hogares Sobre Medición de Niveles de Vida, EH-MO: Encuesta de Hogares-Mano de Obra, EHM: Encuesta de Hogares por Muestreo.

Table 3.1 Distribution of household per capita income.
Share of deciles and income ratios

| Country | $\frac{1}{(i)}$ | (ii) | $\begin{array}{\|c} \left(\begin{array}{l} 3 \\ \hline(\text { (ii) } \end{array}\right. \\ \hline \end{array}$ | $\begin{aligned} & 4 \\ & \text { (iv) } \end{aligned}$ |  |  |  | $\begin{aligned} & (\text { viii) } \\ & \text { (1) } \end{aligned}$ | $\underset{(\text { (ix) }}{(9)}$ | $\begin{aligned} & \hline 10 \\ & \hline(x) \\ & \hline \end{aligned}$ | $\begin{aligned} & \hline \text { Incom } \\ & \substack{1071 \\ (x i)} \\ & \hline \end{aligned}$ |  | $\begin{gathered} 95 / 80 \\ (x i i i) \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ${ }_{1092}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ${ }_{1996}^{1992}$ | 1.4 | ${ }_{2} 3.7$ | ${ }_{3}^{4.7}$ | 4.7 | 5.9 | ${ }_{7}^{7.3}$ | ${ }_{9.2}^{9.4}$ | ${ }_{11.9}^{12.1}$ | ${ }_{16.8}^{16.6}$ | ${ }^{33.8}$ | ${ }_{25.4}^{18.5}$ | ${ }_{9.6}^{7.8}$ | ${ }_{2.2}^{2.0}$ |
| 1998 | 1.3 | 2.6 | 3.6 | 4.6 | 5.7 | 7.0 | 9.0 | 11.8 | 16.6 | 37.8 | 29.0 | 10.3 | 2.4 |
| BoliviaUrban |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1992 | 1.7 | 2.8 | 3.7 | 4.6 | 5.6 | 6.8 | 8.5 | 11.1 | 15.6 | 39.5 | 23.1 | 8.4 | 2.3 2.4 |
| ${ }^{19996}$ | 1.7 | 2.7 | 3.5 | 4.4 | 5.4 | 6.6 | 8.2 | 10.9 | 15.9 | 40.8 | 24.5 | 9.3 | 2.4 |
| 1996 1999 | 0.5 0.3 | ${ }_{1.0}^{1.5}$ | ${ }_{2.3}^{2.6}$ | ${ }_{3.6}^{3.7}$ | ${ }_{5.1}^{5.0}$ | ${ }_{6.8}^{6.4}$ | 88.9 | 11.1 | ${ }_{17}^{16.4}$ | ${ }_{42.3}^{44.4}$ | 81.2 143.5 | ${ }_{38.6}^{20.8}$ | ${ }_{2.4}^{2.5}$ |
| Brazil ${ }^{1999}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1990 | 0.8 0.8 | ${ }_{1.6}^{1.5}$ | ${ }_{2.4}^{2.2}$ | ${ }_{3.3}^{3.0}$ | ${ }_{4}^{4.1}$ | 5.5 | ${ }_{7}^{7.4}$ | 10.4 10.3 | ${ }_{16.3}^{16.5}$ | ${ }_{48.1}^{48.7}$ | 63.2 58.0 | 19.2 17.6 | 3.0 3.0 |
| Chile ${ }^{200}$ | 0.9 | 1.7 | 2.5 | 3.4 | 4.5 | 5.8 | 7.5 | 10.4 | 16.1 | 47.2 | 54.4 | 16.1 | 2.9 |
| Chile 1990 | 1.3 | 2.3 | 3.0 | 3.8 | 4.8 | 6.0 | 7.6 | 10.1 | 15.4 | 45.8 | 36.2 | 11.1 | 2.9 |
| ${ }_{2000}^{1996}$ | ${ }_{1.2}^{1.2}$ | ${ }_{2.2}^{2.2}$ | ${ }_{2}^{3.9}$ | ${ }_{3.7}^{3.8}$ | 4.7 | ${ }_{5.8}^{5.9}$ | ${ }_{7.4}^{7.6}$ | ${ }_{10.0}^{10.3}$ | ${ }_{15.2}^{15.7}$ | ${ }_{47}^{45.5}$ | 36.4 40.6 | ${ }_{11.4}^{11.5}$ | ${ }_{2.9}^{2.7}$ |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ${ }_{1992}$ | 1.0 | 2.2 | 3.0 | 3.9 | 4.9 | 6.3 |  |  |  | 42.7 |  |  |  |
| 1996 | 1.7 | 2.6 | 3.4 | 4.2 | 5.2 | 6.4 | 7.8 | 10.2 | 16.1 | 42.5 | 25.6 | 10.1 | 2.7 |
| 1996 | 0.9 | 2.1 | ${ }_{28}^{3.0}$ | 3.9 3 | ${ }_{4}^{5.0}$ | ${ }_{6.1}^{6.2}$ | 7.9 | ${ }_{10.4}^{10.4}$ | 15.1 | ${ }_{46.5}^{45.4}$ | ${ }_{50.3}^{50.8}$ | ${ }_{124}^{12.3}$ | 2.7 2.8 |
| 21ca |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1990 | 1.3 | 2.9 | 4.1 | ${ }_{5}^{5.1}$ | ${ }_{6}^{6.3}$ | 7.8 | 9.7 | ${ }_{12.3}^{12.3}$ | 16.4 | 34.0 | ${ }_{24,}^{25.5}$ | 9.1 | 2.1 |
| DominicanR $\begin{gathered}\text { 2000 } \\ 1995\end{gathered}$ | 1.4 | 2.8 | 3.9 | 5.0 | 6.1 | 7.6 | 9.5 | 12.2 | 16.7 | 34.8 | 25.1 | 9.5 | 2.2 |
|  | 1.5 | 2.6 | 3.5 | 4.4 |  |  | 8.3 | 10.9 |  | 41.2 | 26.8 | 9.4 | 2.5 |
| Ecuador ${ }^{1997}$ | 1.4 | 2.6 | 3.6 | 4.6 | 5.8 | 7.1 | 8.9 | 11.5 | 15.8 | 38.6 | 28.4 | 9.5 | 2.3 |
| 1994 1998 | ${ }_{0}^{0.9}$ | ${ }_{1.9}^{2.2}$ | ${ }_{2.9}^{3.1}$ | ${ }_{3.9}^{4.1}$ | 5.0 | ${ }_{6.4}^{6.6}$ | ${ }_{8.3}^{8.2}$ | 10.6 108 | 15.5 | ${ }_{44.2}^{43.7}$ | ${ }_{51.2}$ | 12.9 15.2 | 2.6 |
| EISalvacor $\begin{gathered}1998 \\ 1901\end{gathered}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1991 | ${ }_{1.0}^{1.1}$ | ${ }_{2.4}^{2.3}$ | ${ }_{3.4}^{3.3}$ | 4.5 | 5.7 | ${ }_{7.1}^{6.7}$ | ${ }_{8.9}^{8.5}$ | ${ }_{11.1}^{11.1}$ | ${ }_{16.1}^{15.7}$ | ${ }_{39.6}^{41.5}$ | 37.4 38.3 | ${ }_{11.1}^{10.8}$ | 2.4 2.3 |
|  | 0.9 | 2.0 | 3.1 | 4.2 | 5.5 | 6.9 | 8.8 | 11.4 | 16.5 | 40.6 | 47.4 | 14.1 | 2.3 |
|  | 0.7 | 1.7 | 2.6 | 3.6 | 4.7 | 6.1 | 7.8 | 10.4 | 15.6 | 46.8 | 63.3 | 16.6 | 2.9 |
| $\begin{array}{r} \text { Honduras } \\ 1990 \end{array}$ | 0.9 | 1.8 | 2.7 | 3.6 | 4.7 | 6.0 | 7.9 | 10.5 | 15.7 | 46.1 | 52.6 | 14.7 | 2.6 |
| 1999 | ${ }_{0}^{1.0}$ | 2.0 1.9 | ${ }_{2.8}^{2.8}$ | ${ }_{3.9}^{3.8}$ | 4.1 | 6.3 6.7 | 8.8 | 11.4 | ${ }_{16.7}^{16.2}$ | ${ }_{42.2}^{44.2}$ | 44.9 | 13.4 15.1 | ${ }_{2.5}^{2.5}$ |
| Jamaica ${ }^{1999}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1990 | ${ }^{1.2}$ | ${ }_{2.1}^{2.3}$ | ${ }_{3.1}^{3.3}$ | 4.0 | ${ }_{5}^{5.4}$ | 7.1 6.7 | $\begin{aligned} & 9.1 \\ & 8.2 \end{aligned}$ | 11.9 | ${ }_{16.2}^{15.7}$ | $\begin{aligned} & 40.1 \\ & 42.7 \end{aligned}$ | 32.7 46.9 | 10.8 13.7 | ${ }_{2.6}^{2.3}$ |
| Mexico ${ }^{1999}$ | 1.1 | 2.3 | ${ }^{3.3}$ | 4.3 | 5.5 | 7.0 | 8.9 | 11.5 | 16.1 | 40.1 | 35.5 | 11.2 | 2.3 |
| Mexico | 1.0 |  |  |  |  |  |  |  |  |  |  |  |  |
| ${ }_{2000}^{1996}$ | 1.0 | ${ }_{2.1}^{2.2}$ | ${ }_{3.1}^{3.2}$ | 4.1 | $\begin{aligned} & 5.2 \\ & 5.2 \end{aligned}$ | $\begin{aligned} & 6.5 \\ & 6.5 \end{aligned}$ | $\begin{aligned} & 8.2 \\ & 8.2 \end{aligned}$ | 10.8 10.7 | ${ }_{16.0}^{15.6}$ | $\begin{aligned} & \begin{array}{c} 43.3 \\ 43.1 \end{array} \end{aligned}$ | 41.9 | 11.7 12.9 | ${ }_{2}^{2.5}$ |
| Nicaragua $\begin{gathered}2000 \\ 1993\end{gathered}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Panama ${ }^{1998}$ | 0.8 0.8 | 1.9 | ${ }_{2.9}^{2.8}$ | 4.8 | 4.2 | ${ }_{6.5}^{6.5}$ | ${ }_{8.3}^{8.6}$ | 11.4 | ${ }_{15.6}^{16.5}$ | ${ }_{43.9}^{43.0}$ | ${ }_{56.2}^{55.3}$ | 15.5 | ${ }_{2.3}^{2.4}$ |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1995 | 0.6 | 1.7 | 2.7 | 3.8 | 5.0 | 6.5 | 8.5 | 11.6 | 17.0 | 42.5 | 69.4 | 17.7 | 2.5 |
| Paraguay ${ }_{1900}{ }^{2000}$ | 0.7 | 1.7 | 2.7 | 3.8 | 4.9 | 6.3 | 8.3 | 11.3 | 17.0 | 43.3 | 62.3 | 18.2 | 2.6 |
| ${ }_{1999}^{1995}$ | ${ }_{0.6}^{0.7}$ | ${ }_{1.6}^{1.5}$ | 2.4 | 3.4 3.8 | ${ }_{5.0}^{4.5}$ | ${ }_{6.5}^{6.0}$ | ${ }_{8.4}^{7.8}$ | 10.5 11.2 | ${ }_{16.5}^{15.6}$ | ${ }_{43.8}^{47.5}$ | ${ }_{70.4}^{67.9}$ | 18.0 19.0 | 2.4 |
| PeruRegions |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Regions ${ }_{1991}$ | 1.1 | 2.5 |  |  | 6.5 | 8.1 |  |  |  | 33.7 |  |  |  |
| $\begin{gathered} 1994 \\ \text { National } \\ 1994 \end{gathered}$ | 1.0 | 2.5 | 3.7 | 4.9 | 6.1 | 7.8 | 9.7 | 12.2 | 16.4 | 35.6 | 34.1 | 11.0 | 2.0 |
|  | 1.0 | 2.4 | 3.6 | 4.9 | 6.1 | 7.6 | 9.7 | 12.2 | 16.6 | 35.9 | 36.5 | 11.3 | 2.0 |
|  | ${ }^{0.8}$ | 2.3 | 3.6 | 4.8 | 6.3 | 7.8 | 9.5 | 12.0 | 16.0 | 36.9 | 46.2 | 12.2 | 2.1 |
|  | 0.9 | 2.3 | 3.6 | 4.9 | 6.0 | 1.4 | 9.2 | 11.9 | 17.2 | 36.6 | 40.6 | 12.7 | 2.1 |
| Uruguay | 2.0 |  |  |  |  |  |  |  |  |  |  |  |  |
| 1995 | 1.8 | 3.2 | 4.4 | 5.5 | 6.7 | 8.0 | 9.7 | 12.2 | 16.4 | 32.1 | 17.6 | 7.6 | 2.0 |
| venezuela | 1.8 | 3.0 | 4.1 | 5.2 | 6.4 | 7.8 | 9.5 | 12.1 | 16.6 | 33.5 | 18.9 | 8.1 | 2.1 |
| Venezuela 198 | 1.7 |  |  | 5.3 | 6.5 | 7.9 | 9.7 | 12.2 | 16.3 | 33.2 | 19.5 | 7.9 | 2.0 |
| ${ }_{1998}^{1995}$ | ${ }_{1.3}^{1.5}$ | $\begin{aligned} & 2.8 \\ & 2.7 \end{aligned}$ | $\begin{aligned} & 3.8 \\ & 3.7 \end{aligned}$ | 4.9 | ${ }_{6.1}^{6.2}$ | ${ }_{7.6}^{7.6}$ | ${ }_{9.4}^{9.4}$ | ${ }_{12.0}^{11.9}$ | ${ }_{16.7}^{16.3}$ | ${ }_{35}^{35.6}$ | ${ }_{28.2}^{23.6}$ | ${ }_{9.5}$ | ${ }_{2.2}^{2.1}$ |

Source: author's calculations based on microdata from household surveys.
Note 1: Column (xi)=income ratio between deciles 10 and 1; column (xii)=income ratio between percentiles 90 and 10 , and
column (xiii)=income ratio between percentiles 95 and 80 .
Note 2: Data for Dominican Republic 1995, Honduras, Trinidad \& Tobago, and Venezuela 1989 includes only monetary income from labor sources.

Table 3.2 Distribution of household per capita income.
Inequality indices

| Country | $\begin{aligned} & \hline \hline \text { Gini } \\ & \text { (i) } \\ & \hline \end{aligned}$ | Theil (ii) | $\begin{aligned} & \hline \mathbf{C V} \\ & \text { (iii) } \\ & \hline \end{aligned}$ | $\begin{aligned} & \hline \hline \mathrm{A}(.5) \\ & \text { (iv) } \\ & \hline \end{aligned}$ | $\begin{gathered} \hline \hline A(1) \\ (v) \end{gathered}$ | $\overline{A(2)}$ (vi) | $\begin{aligned} & \hline \hline \text { E(0) } \\ & \text { (vii) } \end{aligned}$ | $\begin{aligned} & \hline \hline \text { E(2) } \\ & \text { (viii) } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Argentina |  |  |  |  |  |  |  |  |
| 1992 | 44.7 | 0.362 | 1.074 | 0.162 | 0.295 | 0.503 | 0.349 | 0.576 |
| 1996 | 48.2 | 0.435 | 1.249 | 0.191 | 0.343 | 0.588 | 0.419 | 0.780 |
| 1998 | 49.5 | 0.451 | 1.208 | 0.200 | 0.359 | 0.599 | 0.444 | 0.730 |
| 2001 | 52.2 | 0.497 | 1.276 | 0.223 | 0.405 | 0.677 | 0.517 | 0.814 |
| Bolivia ${ }_{\text {Urban }}$ |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| 1992 | 49.5 | 0.490 | 1.408 | 0.203 | 0.346 | 0.541 | 0.425 | 0.991 |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| 1996 | 57.6 | 0.675 | 1.846 | 0.282 | 0.493 | 0.790 | 0.679 | 1.704 |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| 1990 | 61.2 | 0.767 | 2.062 | 0.310 | 0.511 | 0.739 | 0.716 | 2.125 |
| 1995 | 60.0 | 0.735 | 1.875 | 0.299 | 0.494 | 0.722 | 0.681 | 1.759 |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| 1996 | 56.1 |  |  |  |  |  |  | 1.626 |
| 2000 | 57.1 | ${ }_{0}^{0.703}$ | 2.022 | 0.274 | 0.447 | 0.674 | ${ }_{0}^{0.592}$ | ${ }_{2}^{1.043}$ |
| ColombaaBogota |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| 1992 | 54.6 | 0.569 | 1.440 | 0.246 | 0.434 | 0.778 | 0.569 | 1.037 |
| National |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| 1999 | 57.6 | 0.721 | 2.191 | 0.282 | 0.469 | 0.728 | 0.633 | 2.399 |
| Costa Rica |  |  |  |  |  |  |  |  |
| 1990 | 45.6 | 0.381 | 1.111 | 0.173 | 0.321 | 0.581 | 0.387 | 0.617 |
| 1995 | 45.7 | 0.383 | 1.111 | 0.173 | 0.319 | 0.573 | 0.384 | 0.617 |
| Dominican R. |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| 1995 | 51.5 | 0.542 | 1.578 | 0.221 | 0.371 | 0.563 | 0.462 | 1.244 |
| Ecuador |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| 1994 | 54.8 | 0.627 | 1.758 | 0.255 | 0.436 | 0.706 | 0.573 | 1.546 |
| El Salvador |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| 1995 | 52.7 | 0.585 | 1.81 | 0.236 | . 402 | 0.655 | 0.514 | 1.742 |
| 1995 | 51.3 | 0.526 | 1.511 | 0.223 | 0.393 | 0.669 | 0.499 | 1.141 |
| 2000 | 53.2 | 0.582 | 1.914 | 0.241 | 0.422 | 0.699 | 0.548 | 1.831 |
| Guatemala |  |  |  |  |  |  |  |  |
| 2000 | 58.3 | 0.697 | 1.823 | 0.285 | 0.482 | 0.73 | 0.65 | . 662 |
| Honduras |  |  |  |  |  |  |  |  |
| 1995 | 56.1 | ${ }_{0} 0.653$ | 1.793 | 0.264 | 0.444 | ${ }_{0}^{0.678}$ | 0.586 | ${ }_{1}^{2} .608$ |
| Jamaica ${ }^{19} 5$ |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| 1990 | 51.7 | 0.520 | 1.406 | 0.222 | 0.388 | 0.637 | 0.491 | 0.988 |
| 1996 | 54.4 | 0.583 | 1.535 | 0.247 | 0.427 | 0.685 | 0.558 | 1.178 |
| Mexico $\begin{array}{lllllllll}1999 & 52.0 & 0.585 & 1.954 & 0.232 & 0.394 & 0.627 & 0.501 & 1.909\end{array}$ |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| 1992 | 55.9 | 0.667 | 1.935 | 0.264 | 0.441 | 0.685 | 0.582 | 1.872 |
| 1996 | 54.4 | 0.616 | 1.864 | 0.249 | 0.424 | 0.683 | 0.551 | 1.738 |
| 2000 | 54.6 | 0.609 | 1.692 | 0.251 | 0.429 | 0.693 | 0.561 | 1.431 |
| Nicaragua |  |  |  |  |  |  |  |  |
| 1993 | 55.9 | 0.629 | 1.711 | 0.263 | 0.454 | 0.719 | 0.605 | 1.463 |
| 1998 | 55.9 | 0.693 | 2.202 | 0.270 | 0.455 | 0.719 | 0.606 | 2.424 |
| Panama |  |  |  |  |  |  |  |  |
| 1991 | 56.4 | 0.603 | 1.518 | 0.267 | 0.483 | 0.784 | 0.659 | 1.153 |
| 1995 | 55.9 | 0.593 | 1.465 | 0.261 | 0.469 | 0.771 | 0.632 | 1.073 |
| 2000 | 56.4 | 0.613 | 1.531 | 0.265 | 0.466 | 0.748 | 0.626 | 1.172 |
| Paraguay |  |  |  |  |  |  |  |  |
| 1995 | 59.5 | 0.728 | 1.830 | 0.297 | 0.497 | 0.742 | 0.688 | 1.675 |
| 1999 | 56.8 | 0.690 | 2.370 | 0.277 | 0.477 | 0.760 | 0.649 | 2.808 |
| Peru |  |  |  |  |  |  |  |  |
| 1991 |  | 0.394 | 1.131 |  |  | 0.642 | 0.422 |  |
| 1994 | 47.9 | 0.444 | 1.338 | 0.196 | 0.362 | 0.666 | 0.449 | 0.895 |
|  |  |  |  |  |  |  |  |  |
| 1994 | 48.6 | 0.453 | 1.344 | 0.200 | 0.371 | 0.676 | 0.463 | 0.903 |
|  | 49.4 | 0.477 | 1.358 | 0.211 | 0.392 | 0.721 | 0.497 | 0.923 |
| Trinidad \& Tobago |  |  |  |  |  |  |  |  |
| 1992 | 49.5 | 472 | 480 | 0.208 | 0.383 | 0.687 | 0.482 | 1.095 |
| Uruguay |  |  |  |  |  |  |  |  |
| 1995 | 42.7 | 0.326 | 0.982 | 0.149 | 0.275 | 0.487 | 0.321 | 0.482 |
| 2000 | 44.6 | 0.357 | 1.040 | 0.161 | 0.293 | 0.497 | 0.347 | 0.541 |
| Venezuela |  |  |  |  |  |  |  |  |
| 1989 | 44.2 | 0.360 | 1.087 | 0.161 | 0.294 | 0.521 | 0.348 | 0.591 |
| 1995 | 46.9 | 0.418 | 1.230 | 0.183 | 0.327 | 0.571 | 0.398 | 0.757 |
| 1998 | 47.6 | 0.420 | 1.216 | 0.188 | 0.345 | 0.626 | 0.424 | 0.740 |

Source: author's calculations based on microdata from household surveys.
$\mathrm{CV}=$ coefficient of variation. $\mathrm{A}(\varepsilon)$ refers to the Atkinson index with a CES function with parameter $\varepsilon$. $\mathrm{E}(\varepsilon)$ refers to the
generalized entropy index with parameter $\varepsilon$. $\mathrm{E}(1)=$ Theil.
Note: Data for Dominican Republic 1995, Honduras, Trinidad \& Tobago, and Venezuela 1989 includes only monetary income from labor sources.

Table 3.3 Distribution of equivalized household income.
Share of deciles and income ratios


Source: author's calculations based on microdata from household surveys.
Note 1: Column (xi)=income ratio between deciles 10 and 1; column (xii)=income ratio between percentiles 90 and 10 , and
column (xiii)=income ratio between percentiles 95 and 80 .
Note 2: Data for Dominican Republic 1995, Honduras, Trinidad \& Tobago, and Venezuela 1989 includes only monetary income from labor sources.

Table 3.4 Distribution of equivalized household income.
Inequality indices

| Country | $\begin{gathered} \hline \hline \text { Gini } \\ (\mathrm{i}) \\ \hline \end{gathered}$ | $\begin{aligned} & \hline \hline \text { Theil } \\ & \text { (ii) } \\ & \hline \end{aligned}$ | $\begin{aligned} & \hline \overline{C V} \\ & \text { (iii) } \\ & \hline \end{aligned}$ | $\begin{gathered} \hline \hline \mathrm{A}(.5) \\ \text { (iv) } \\ \hline \end{gathered}$ | $\begin{gathered} \hline \hline A(1) \\ (v) \\ \hline \end{gathered}$ | $\begin{aligned} & \hline \hline A(2) \\ & (\text { vii) } \end{aligned}$ | $\begin{aligned} & \hline \hline E(0) \\ & \text { (vii) } \end{aligned}$ | $\begin{aligned} & \hline \hline E(2) \\ & \text { (viii) } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Argentina |  |  |  |  |  |  |  |  |
| 1992 | 42.6 | 0.327 | 0.996 | 0.147 | 0.269 | 0.463 | 0.313 | 0.496 |
| 1996 | 45.8 | 0.391 | 1.155 | 0.173 | 0.311 | 0.541 | 0.373 | 0.667 |
| 2001 | 50.4 | 0.461 | 1.210 | 0.207 | 0.376 | 0.639 | 0.471 | 0.732 |
| Bolivia Urban |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| 1996 | 49.3 | 0.496 | 1.473 | 0.202 | 0.340 | 0.522 | 0.416 | 1.085 |
| National |  |  |  |  |  |  |  |  |
| 1996 | 55.8 | 0.630 | 1.727 | 0.267 | 0.473 | 0.777 | 0.640 | 1.492 |
| Brazil | 55.9 | 0.587 | 1.487 | 0.271 | 0.511 | 0.836 | 0.715 | 1.105 |
|  |  |  |  |  |  |  |  |  |
| 1990 | 59.5 | 0.717 | 1.916 | 0.293 | 0.486 | 0.710 | 0.666 | 1.836 |
| 1995 | 58.3 | 0.684 | 1.752 | 0.280 | 0.466 | 0.690 | 0.628 | 1.535 |
| Cnile 2001 | 57.2 | 0.665 | 1.780 | 0.271 | 0.453 | 0.681 | 0.603 | 1.584 |
|  |  |  |  |  |  |  |  |  |
| 1990 | 54.7 | 0.635 | 1.837 | 0.251 | 0.412 | 0.632 | 0.531 | 1.687 |
| 1996 | 54.9 | 0.624 | 1.722 | 0.251 | 0.414 | 0.631 | 0.535 | 1.483 |
| 2000 | 56.1 | 0.681 | 1.955 | 0.265 | 0.432 | 0.655 | 0.565 | 1.911 |
| Colombia Bogota |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| 1992 | 52.4 | 0.510 | 1.295 | 0.226 | 0.407 | 0.761 | 0.522 | 0.838 |
| National ${ }^{1996}$ | 50.8 | 0.508 | 1.374 | 0.211 | 0.354 | 0.525 | 0.437 | 0.944 |
|  |  |  |  |  |  |  |  |  |
| 1996 | 54.3 | 0.662 | 2.735 | 0.253 | 0.423 | 0.677 | 0.551 | 3.740 |
| Costa Rica | 55.8 | 0.676 | 2.102 | 0.266 | 0.446 | 0.706 | 0.591 | 2.209 |
|  |  |  |  |  |  |  |  |  |
| 1990 | 43.9 | 0.350 | 1.039 | 0.160 | 0.300 | 0.559 | 0.357 | 0.540 |
| 1995 | 44.0 | 0.352 | 1.043 | 0.160 | 0.298 | 0.545 | 0.353 | 0.544 |
| ( 2000 | 44.6 | 0.354 | 1.008 | 0.163 | 0.304 | 0.553 | 0.363 | 0.508 |
|  |  |  |  |  |  |  |  |  |
| 1995 | 50.2 | 0.516 | 1.524 | 0.210 | 0.354 | 0.543 | 0.437 | 1.161 |
| Ecuador ${ }^{1997}$ | 48.1 | 0.462 | 1.438 | 0.194 | 0.339 | 0.557 | 0.413 | 1.033 |
|  |  |  |  |  |  |  |  |  |
| 1994 | 53.0 | 0.585 | 1.670 | 0.240 | 0.415 | 0.688 | 0.535 | 1.395 |
| El Salvador ${ }^{1998}$ | 54.3 | 0.606 | 1.709 | 0.252 | 0.441 | 0.740 | 0.581 | 1.460 |
|  |  |  |  |  |  |  |  |  |
| 1991 | 50.5 | 0.536 | 1.726 | 0.218 | 0.375 | 0.626 | 0.470 | 1.490 |
| 1995 | 49.4 | 0.450 | 1.462 | 0.207 | 0.368 | 0.641 | 0.459 | 1.068 |
| Guatemala ${ }_{\text {20, }}$ | 51.8 | 0.558 | 1.839 | 0.230 | 0.404 | 0.681 | 0.518 | 1.690 |
|  |  |  |  |  |  |  |  |  |
| Honduras | 56.0 | 0.632 | 1.659 | 0.263 | 0.450 | 0.713 | 0.599 | 1.376 |
|  |  |  |  |  |  |  |  |  |
| 1990 | 55.6 | 0.664 | 2.083 | 0.262 | 0.438 | 0.672 | 0.577 | 2.169 |
| 1995 | 54.1 | 0.598 | 1.657 | 0.245 | 0.417 | 0.653 | 0.540 | 1.373 |
| Jamara ${ }^{1999}$ | 53.0 | 0.537 | 1.414 | 0.234 | 0.415 | 0.680 | 0.535 | 1.000 |
|  |  |  |  |  |  |  |  |  |
| 1990 | 49.6 | 0.484 | 1.362 | 0.206 | 0.362 | 0.611 | 0.449 | 0.927 |
| 1996 | 51.5 | 0.518 | 1.406 | 0.222 | ${ }^{0.391}$ | 0.648 | ${ }^{0.496}$ | 0.989 |
| Mexico ${ }^{1999}$ | 49.0 | 0.513 | 1.756 | 0.206 | 0.357 | 0.584 | 0.441 | 1.541 |
|  |  |  |  |  |  |  |  |  |
| 1992 | 53.9 | 0.612 | 1.773 | 0.246 | 0.415 | ${ }^{0.659}$ | 0.536 | 1.571 |
| 1996 | ${ }_{5}^{52.5}$ | 0.571 | 1.770 | 0.233 | 0.398 | 0.655 | 0.508 | 1.566 |
| Nicaragua 2000 | 52.7 | 0.558 | 1.568 | 0.233 | 0.404 | 0.665 | 0.518 | 1.229 |
|  |  |  |  |  |  |  |  |  |
| 1993 | 54.2 | 0.583 | 1.602 | 0.246 | 0.431 | 0.697 | ${ }_{0}^{0.564}$ | 1.283 |
| Panama | 54.1 | 0.639 | 2.008 | 0.253 | 0.432 | 0.699 | 0.565 | 2.017 |
|  |  |  |  |  |  |  |  |  |
| 1991 | 54.7 | 0.561 | 1.423 | 0.252 | 0.460 | 0.766 | 0.616 | 1.012 |
| 1995 | 54.0 | 0.549 | 1.378 | 0.244 | 0.443 | 0.749 | 0.585 | 0.949 |
| 2000 | 54.4 | 0.565 | 1.440 | 0.246 | 0.437 | 0.721 | 0.575 | 1.037 |
| Paraguay |  |  |  |  |  |  |  |  |
| 1995 | 57.8 | 0.693 | 1.808 | 0.282 | 0.473 | 0.717 | 0.640 | 1.635 |
| 1999 | 54.9 | 0.640 | 2.314 | 0.259 | 0.451 | 0.735 | 0.599 | 2.677 |
|  |  |  |  |  |  |  |  |  |
| Peru Regions 1991 |  |  |  |  |  |  |  |  |
| 1991 | 45.2 | 0.369 | 1.061 | 0.172 | 0.329 | 0.625 | 0.399 | 0.563 |
| 1994 | 45.9 | 0.399 | 1.207 | 0.179 | 0.335 | 0.635 | 0.409 | 0.729 |
| Natonal |  |  |  |  |  |  |  |  |
| 1994 | 46.4 | 0.406 | 1.213 | 0.183 | 0.344 | 0.647 | 0.421 | 0.735 |
| 2000 | 47.7 | 0.443 | 1.284 | 0.198 | 0.371 | 0.700 | 0.464 | 0.825 |
| Trinidad \& Tobago |  |  |  |  |  |  |  |  |
| Uruguay | 47.2 | 0.415 | 1.277 | 0.188 | 0.355 | 0.661 | 0.438 | 0.815 |
|  |  |  |  |  |  |  |  |  |
| 1989 1995 | 40.8 | 0.344 | 1.359 | 0.142 | 0.250 | 0.425 | 0.287 | 0.923 |
| 1995 | 40.9 | 0.297 | 0.923 | 0.136 | 0.252 | 0.448 | 0.290 | 0.426 |
|  | 42.5 | 0.324 | 0.980 | 0.146 | 0.266 | 454 | 0.309 | 0.480 |
|  |  |  |  |  |  |  |  |  |
| Venezuela ${ }_{1} 1989$ | 41.7 | 0.317 | 0.989 | 0.144 | 0.266 | 0.484 | 0.309 | 0.489 |
| $\begin{aligned} & 1995 \\ & 1998 \end{aligned}$ | 44.5 | 0.374 | 1.138 | 0.165 | 0.300 | 0.539 | 0.356 | 0.647 |
|  | 45.5 | 0.382 | 1.133 | 0.173 | 0.321 | 0.598 | 0.387 | 0.642 |

Source: author's calculations based on microdata from household surveys.
$\mathrm{CV}=$ coefficient of variation. $\mathrm{A}(\varepsilon)$ refers to the Atkinson index with a CES function with parameter $\varepsilon$. $\mathrm{E}(\varepsilon)$ refers to the generalized entropy index with parameter $\varepsilon$. $\mathrm{E}(1)=$ Theil.
Note: Data for Dominican Republic 1995, Honduras, Trinidad \& Tobago, and Venezuela 1989 includes only monetary income from labor sources.

Table 3.5 Gini coefficient.
Distribution of equivalized household income

| Countries | Early 90s <br> (i) | Mid 90s <br> (ii) | Early 00s <br> (iii) | Change <br> (iv) |
| :--- | :---: | :---: | :---: | :---: |
| Argentina | 42.6 | 45.8 | 50.4 | 7.7 |
| Bolivia | 54.3 | 55.8 | 55.9 | 1.6 |
| Brazil | 59.5 | 58.3 | 57.2 | -2.3 |
| Chile | 54.7 | 54.9 | 56.1 | 1.4 |
| Colombia | 55.9 | 54.3 | 55.8 | -0.1 |
| Costa Rica | 43.9 | 44.0 | 44.6 | 0.8 |
| El Salvador | 50.5 | 49.4 | 51.8 | 1.3 |
| Honduras | 55.6 | 54.1 | 53.0 | -2.6 |
| Jamaica | 49.6 | 51.5 | 49.0 | -0.6 |
| Mexico | 53.9 | 52.5 | 52.7 | -1.2 |
| Nicaragua | 54.2 |  | 54.1 | -0.1 |
| Panama | 54.7 | 54.0 | 54.4 | -0.3 |
| Peru | 45.7 | 46.4 | 47.7 | 2.0 |
| Uruguay | 40.8 | 40.9 | 42.5 | 1.7 |
| Venezuela | 41.7 | 44.5 | 45.5 | 3.8 |
| Average (non-weighted) | 50.5 | 50.7 | 51.4 | 0.9 |
| Average (weighted) | 51.9 | 51.2 | 51.5 | -0.4 |
| Dominican Rep. |  | 50.2 | 48.1 |  |
| Ecuador |  | 53.0 | 54.3 |  |
| Guatemala |  | 56.0 |  |  |
| Paraguay | 57.8 | 54.9 |  |  |
| Trinidad and Tobago | 47.2 |  |  |  |
| Sare |  |  |  |  |

Source: author's calculations based on microdata from household surveys.
Notes: The Gini coefficients for Bolivia and Colombia for the early 90 s were estimated by extrapolating the changes in the Gini for urban areas (see Table 3.5). A similar procedure was applied for Peru using the regions covered in 1991. To compute the LAC average for mid 90s a Gini of 54.1 was assumed for Nicaragua.

# INCOME INEQUALITY IN LATIN AMERICA AND THE CARIBBEAN: EVIDENCE FROM HOUSEHOLD SURVEYS 

## LEONARDO GASPARINI

## SUMMARY

JEL Classification: D3, D63, I2, I31, J11, J21, J31, J82, N36.
This paper reports information on income inequality in Latin America and the Caribbean computed from a sample of more than 50 household surveys from 20 LAC countries from 1989 to 2001. Although the core of the statistics is on household income inequality, we also report results on aggregate welfare and polarization. Inequality has moderately increased in South America in the last decade. The two main exceptions are Argentina, with a very large inequality increase, and Brazil, where inequality actually decreased. Changes have been small in Central America and the Caribbean. Aggregate welfare has increased in most countries fueled by economic growth and despite unequalizing distributional changes.
Keywords: inequality, distribution, income, wages, education, Latin America, Caribbean.

## RESUMEN

Clasificación JEL: D3, D63, I2, I31, J11, J21, J31, J82, N36.
Este trabajo reporta información sobre la desigualdad del ingreso en América Latina y el Caribe, calculada a partir de una muestra de más de 50 encuestas de hogares de 20 países de LAC desde 1989 a 2001. Aunque la mayor parte de las estadísticas son de desigualdad del ingreso familiar, también se reportan resultados en el bienestar general y la polarización. La desigualdad aumentó moderadamente en América del Sur durante la última década. Las dos principales excepciones son Argentina, con un aumento muy grande en la desigualdad, y Brasil, donde la desigualdad disminuyó. Los cambios fueron muy pequeños en América Central y el Caribe. El bienestar agregado aumentó en la mayoría de los países gracias al crecimiento económico y a pese a los cambios distributivos desigualadores. Palabras claves: desigualdad, distribución, ingreso, salarios, educación, América Latina, Caribe.


[^0]:    ${ }^{1}$ JEL Classification: D3, D63, I2, I31, J11, J21, J31, J82, N36
    Keywords: inequality, distribution, income, wages, education, Latin America, Caribbean.
    ${ }^{2}$ This paper is in part based on chapter 2 of the World Bank LAC Flagship Report 2003 "Inequality in Latin America. Breaking with history?". I am very thankful to the able research assistance of Jorge Balat, Cecilia Calderón, Martín Cicowiez, Nicolás Epele, Federico Gutiérrez, Marcela Massini, Augusto Mercadier, Alejandro Támola and Julieta Trías (CEDLAS, Universidad Nacional de La Plata). I am especially grateful to Matías Busso, who actively participated in the project. I am also thankful to seminar participants at the World Bank, Universidad Nacional de La Plata, Universidad de San Andrés, and the Network of Inequality and Poverty LACEA/WB/IADB for useful comments and suggestions. I especially appreciate the encouragement and useful comments of Francisco Ferreira and Mike Walton. The usual disclaimer applies.
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[^1]:    ${ }^{4}$ See Le Grand $(1991)$ and Roemer $(1996,1998)$ for surveys of this debate.
    ${ }^{5}$ See Deaton (1997) and Deaton and Zaidi (2002) for arguments for the use of consumption as the best welfare indicator.

[^2]:    ${ }^{6}$ At CEDLAS we frequently update the distributional statistics for LAC. Visit www.depeco.econo.unlp.edu.ar/cedlas for updated information.

[^3]:    ${ }^{7}$ For reference, we have worked with some surveys that cover only urban areas also in Bolivia, Colombia and Paraguay for the early 90s.

[^4]:    ${ }^{8}$ See IADB (1998), Londoño and Székely (2000), Székely and Hilgert (1999 and 2001) and Székely (2001).
    ${ }^{9}$ See CEDLAS (2004).
    ${ }^{10}$ When a trade-off arises, we generally decided to preserve comparability within a country over time rather than across countries.
    ${ }^{11}$ Some inequality measures collapse when considering zero income. Inequality indicators are scale invariant and then rely on proportional income differences. Accepting zero income implies dividing by zero, which generates computational problems. Given this fact, and the likely unreliability of zero household income, families who report zero income are usually ignored when computing inequality indicators.

[^5]:    ${ }^{12}$ For some countries income definitions have varied over time. Although we have computed statistics for alternative definitions, for brevity in most cases we present in the tables a single line for each country/year. For instance, although the survey in El Salvador 2000 includes non-monetary income, in the tables we show statistics without those incomes to preserve comparability with previous surveys in that country. Alternative results for El Salvador, and also for Dominican Republic, Honduras, Paraguay, Peru, Uruguay and Venezuela are available upon request. In none of these cases the main results reported in the paper vary as we consider alternative income definitions. During 2001 Argentina was in a deep recession. For reference, in Tables 3.1 and 3.2 we also include statistics for year 1998, when the economy was still growing. In Bolivia 1992, Colombia 1992 and Peru 1991 the surveys excluded some areas of the country. For reference we compute all the statistics in Bolivia 1996, Colombia 1996 and Peru 1994 using alternatively (i) the whole national survey and (ii) only the observations from the areas covered in the early 90s. The label regional in Peru refers to all regions covered in the 1991 survey (all except Costa Rural, Selva Urbana and Selva Rural).
    ${ }^{13}$ The richest individual in the household survey of Mexico 2000 has an income 18 times greater than the median individual in the top decile. That distance (18 times) separates the median individual in the top decile from a person in the poorest second decile of the overall income distribution. This is an example of the long "upper tail" of the distributions.

[^6]:    ${ }^{14}$ See Lambert (1993) and Cowell $(1995,2000)$ for details on these inequality indices.
    ${ }^{15}$ The Gini coefficient ranges from 0 (complete equality) to 100 (all national income concentrated in one individual). It is also usual to present that coefficient in the [0,1] interval, instead of in the $[0,100]$ interval.
    ${ }^{16}$ Even ignoring the last crisis, the inequality increase is very large (around 5 Gini points between 1992 and 1998).
    ${ }^{17}$ The survey for Venezuela 1989 is not strictly comparable with 1995 and 1998, since it does not include non-labor income and non-monetary payments. However, ignoring these incomes in 1995 and 1998 does not significantly modify the results. For instance the Gini

[^7]:    for the distribution of household per capita income in 1995 goes from 46.9 with all income sources to 46.7 with only labor monetary income.
    ${ }^{18}$ See below for a discussion on Paraguay.
    ${ }^{19}$ The survey frame significantly changed in Dominican Republic between 1995 and 1997, making the results of the comparisons difficult to interpret.

[^8]:    ${ }^{20}$ See Fields (1989) for Brazil, Gonzales-Vega and Cespedes (1993) for Costa Rica and Altimir (1994 and 1996) for the rest.

[^9]:    ${ }^{21}$ See Altimir (1986) and Gasparini, Marchionni and Sosa Escudero (2001), among others who document similar inequality trends in Argentina.
    ${ }^{22}$ This pattern is hardly attributed to informational problems, for instance due to the urban coverage of the household survey: more than $85 \%$ of Argentineans live in cities and there have not been significant migratory movements in the last three decades.

[^10]:    ${ }^{23}$ This result is in line with those reported by CEPAL (1996), Morley and Vos (1997) and Robles (1999).
    ${ }^{24}$ We find a decrease of nearly 3 points in the Gini between 1995 and 1999, even after dropping out an extreme outlier in the 1995 survey. Székely and Hilgert (1999) do not find significant changes between 1995 and 1998, and report an increase between 1998 and 1999. Instead, Gonzalez (2001) finds a drop of 1 Gini point between 1998 and 1999.
    ${ }^{25}$ The Gini actually fell around 1 point, which is just in the limit to be a non-significant change from a statistical point of view (at $95 \%$ confidence).

[^11]:    ${ }^{26}$ See Behrman et al. (2003), Morley (2001), and Sanchez Páramo and Schady (2003) for alternative explanations.

[^12]:    ${ }^{27}$ Readers interested in technical details can read Esteban and Ray (1994), Wolfson (1994), and Esteban, Gradín and Ray (1999).
    ${ }^{28}$ EGR refers to Esteban, Gradín and Ray (1999).

[^13]:    ${ }^{29}$ The one proposed by Sen (equal to the mean times 1 minus the Gini coefficient) and two proposed by Atkinson (CES functions with two alternative parameters of inequality aversion). See Lambert (1993) for technical details.

[^14]:    ${ }^{30}$ The source for GDP figures is World Bank (2001), World Development Indicators, WDI -CD-ROM.
    ${ }^{31}$ See Gasparini and Sosa Escudero (2001) for a more complete justification of this kind of study.
    ${ }^{32}$ Notice that in Panama the share of the bottom deciles increased, leading to a fall in inequality indices with greater weights in that part of the distribution (e.g. Atkinson with parameter equal to 2 ).

