Income inequality in Latin America and the Caribbean:

Evidence from household surveys [#]

Leonardo Gasparini [*]
CEDLAS-Universidad Nacional de La Plata and FIEL

Abstract

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 not been significant in Central America and the Caribbean. Aggregate welfare has increased in most countries fueled by economic growth and despite unequalizing distributional changes.

JEL Classification: D3, D63, I2, I31, J11, J21, J31, J82, N36

Keywords: inequality, distribution, income, wages, education, Latin America, Caribbean.

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

[#] This paper is part of chapter 2 of the World Bank LAC Flagship Report 2003. 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 (Centro de Estudios Distributivos, Laborales y Sociales, 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 throughout the process of writing this paper. The usual disclaimer applies.

[*] Centro de Estudios Distributivos, Laborales y Sociales, Departamento de Economía, Universidad Nacional de La Plata and FIEL. E-mail: leonardo@depeco.econo.unlp.edu.ar

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 chapter 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. 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 urban population, which nonetheless represents more than 85% of the total population in both countries.[1] 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 chapter 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 co-authors at the IADB have gathered information from household surveys to analyze income distribution in the region.[2] 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, and on inequality in the distribution of other

[1] For reference, we have worked with some surveys that cover only urban areas also in Bolivia, Colombia and Paraguay for the early 90s.
[2] See IADB (1998), Londoño and Székely (2000), Székely and Hilgert (1999 and 2001) and Székely (2001).

relevant demographic and socio-economic variables.[3] Finally, we periodically update our results with new information in the web site of this study (www.depeco.econo.unlp.edu.ar/cedlas/wb).[4]

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. However, perfect comparability is not assured, as the coverage and questionnaires of household surveys differ among countries, and frequently also within countries over time.[5]

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 by far 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 discarded. Following the practice of national statistical offices we take a broad definition of household, but excluding servants, renters and their families. 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.

Table 3.1 shows what are probably the most tangible measures of inequality: the income shares of different income strata.[6] 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.[7] 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.

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

3 Statistics on demographic and socio-economic variables are not presented in this short version the paper.
[4] At the time of writing this paper we were working to include information on Argentina, 2002; Bolivia, 2002 and Nicaragua, 2001.
[5] When a trade-off arises, we generally decided to preserve comparability within a country over time rather than across countries.
[6] 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).
[7] 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.

entropy index with different parameters.[8] 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.[9]

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 $\left(A+\alpha_1.K_1+\alpha_2.K_2\right)^{\theta}$, where *A* is the number of adults, K_1 the number of children under 5 years old, and K_2 the number of children between 6 and 14. Parameters α allow for different weights for adults and kids, while θ regulates the degree of household economies of scale. Following Deaton and Zaidi (2002) we take intermediate values of the αs (α_1=0.5 and α_2=0.75), and a rather high value of θ (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).[10] Venezuela follows with an increase of nearly 4 Gini points.[11] The income distribution has also become more unequal in Bolivia, Chile, Ecuador, Peru, Uruguay and possibly Paraguay.[12] 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 90s, 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, 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.[13] 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 significantly 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

[8] See Lambert (1993) and Cowell (1995, 2000) for details on these inequality indices.
[9] 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.
[10] Even ignoring the last crisis, the inequality increase is very large (around 5 Gini points between 1992 and 1998).
[11] 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 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.
[12] See below for a discussion on Paraguay.
[13] The survey frame significantly changed in Dominican Republic between 1995 and 1997, making the results of the comparisons difficult to interpret.

distribution of Gini coefficients in the region 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 90s 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 significantly 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/high-inequality group, Costa Rica, Honduras, and Colombia have move 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 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 cross-country comparisons do not significantly 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 income variables, but the main results remain quite robust to these methodological changes.

4. Income inequality since the 50s

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).[14]

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 significant 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 90s. 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 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.[15] 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.[16] Inequality also increased in the neighbor Uruguay during the 90s, although the increase was smaller. Moreover, there were no significant 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).

[14] See Fields (1989) for Brazil, Gonzales-Vega and Cespedes (1993) for Costa Rica and Altimir (1994 and 1996) for the rest.
[15] See Altimir (1986) and Gasparini, Marchionni and Sosa Escudero (2001), among others who document similar inequality trends in Argentina.
[16] 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.

Brazil has traditionally been the most unequal economy in the LAC region. The Brazilian economy experienced a significant 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 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.[17] 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.[18]

Income distribution in Colombia and Venezuela became more equal in the 70s and more unequal in the 80s. In the 90s 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 90s suggests a significant 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).[19] 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 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 significantly 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 70s 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 significant distributional improvements.

[17] This result is in line with those reported by CEPAL (1996), Morley and Vos (1997) and Robles (1999).
[18] 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.
[19] 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).

However, there is no evidence that this has happened. Of course many changes that occurred in the 90s can be blamed for the distributional failure, but that leads us to more complex explanations. 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.

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.[20] 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.[21] 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 experimented 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 significantly increased in the last decade, driving inequality measures up. Among the main losers of the distributional changes of the 90s 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 significantly increased, implying a fall in inequality but an increase in bipolarization driven by a tighter identification within the high-income group.[22]

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

[20] Readers interested in technical details can consult Esteban and Ray (1994), Wolfson (1994), Esteban, Gradín and Ray (1999) and a note by Matías Busso in the web site of this study.
[21] EGR refers to Esteban, Gradín and Ray (1999).
[22] The next step in the research agenda would be considering measures of polarization with more than two groups in order to enrich the analysis.

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.[23] In the first panel we take real per capita GDP from National Accounts as the average income measure, and combine it with the inequality indices shown in Table 3.2.[24] 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.[25] 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 -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.[26]

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

[23] 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.
[24] The source for GDP figures is World Bank (2001), World Development Indicators, WDI -CD-ROM.
[25] See Gasparini and Sosa Escudero (2001) for a more complete justification of this kind of study.
[26] 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).

Income inequality has increased in the region since World War II. During the 90s 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 significantly fallen during the 90s. 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 90s. 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.

References

Altimir, O. (1986). Estimaciones de la distribución del ingreso en la Argentina, 1953-1980. *Desarrollo Económico* 25 (100), enero-marzo.

Altimir, O. (1994). Income distribution and poverty through crisis and adjustment. *CEPAL Review* 52: 7-31.

Altimir, O. (1996). Cambios de la desigualdad y la pobreza en la América Latina. *El Trimestre Económico* 241 LXI, 1, enero-marzo.

CEDLAS (2003). *Estadísticas distributivas de la Argentina*. Centro de Estudios Distributivos, Laborales y Sociales, Universidad Nacional de La Plata.

CEPAL (1996). *Anuario Estadístico para América Latina y el Caribe*.

Contreras, D., Larrañaga, O., Litchfield, J., and Valdés, A. (2001). Poverty and income distribution in Chile 1987-1998. New evidence. *Cuadernos de Economía* 38 (114), 191-208.

Cowell, F. (1995). *Measuring inequality*. LSE Handbooks in Economic Series, Prentice Hall/Harvester Wheatsheaf.

Cowell, F. (2000). Measurement of inequality. In Atkinson and Bourguignon (eds.). *Handbook of Income Distribution*. Elsevier Science B.V. 87-166.

Esteban, J. and Ray, D. (1994). On the measurement of polarization. *Econometrica*, 62 (4), 819-851.

Esteban, J., Gradin, C. and Ray, D. (1999). Extension of a measure of polarization, with an application to the income distribution of five OECD countries. Instituto de Estudios Economicos de Galicia Pedro Barrie de la Maza Working Papers Series 24.

Felix, D. (1982). Income distribution trends in Mexico and the Kuznets curves. In Hewlett and Weinert (eds.) *Brazil and Mexico. Patterns in recent development.* Institute for the study of Human Issues, 265-317.

Ferreira, F. and Litchfield, J. (1996). Growing apart: inequality and poverty trends in Brazil in the 1980s. *LSE STICERD DARP Discussion Paper* 23.

Ferreira, F. and Litchfield, J. (1999). Calm after the storms: income distribution and welfare in Chile, 1987-94. *The World Bank Economic Review* 13 (3), 509-38.

Fields, G. (1989). *A compendium of data on inequality and poverty for the Developing World*. Cornell University.

Gasparini, L. (2003). Different lives: Inequality in Latin America and the Caribbean. WB 2003 LAC Flagship Report, chapter 2.

Gasparini, L., Marchionni, M. and Sosa Escudero, W. (2001). *La distribución del ingreso en la Argentina*. Editorial Triunfar.

Gasparini, L. and Sosa Escudero, W. (2001). Assessing aggregate welfare: growth and inequality in Argentina. *Cuadernos de Economía* 38 (113), Santiago de Chile.

González, E. (2001). Paraguay: determinantes regionales en la inequidad de ingresos. ¿Son desiguales las regiones del país? CADEP, Asunción.

Gonzales-Vega, C. and Cespedes, V. (1993). *Costa Rica*. In Rottemberg (ed.). *The political economy of poverty, equity and growth: Costa Rica and Uruguay*. A World Bank comparative study.

IADB (1998). *América Latina frente a la desigualdad*. Banco Interamericano de Desarrollo, Washington, D.C.

Lambert, P. (1993). *The distribution and redistribution of income*. Manchester University Press.

Londoño, J. and Székely, M. (2000). Persistent poverty and excess inequality: Latin America, 1970-1995. *Journal of Applied Economics* 3 (1). 93-134.

Morley, S. (2001). *The income distribution problem in Latin America and the Caribbean*. CEPAL, Santiago, Chile.

Morley, S. and Vos, R. (1997). Poverty and dualistic growth in Paraguay. Banco Inter-Americano de Desarrollo, mimeo.

Neri, M. and Camargo, J. (1999). Structural reforms, macroeconomic fluctuations and income distribution in Brazil. Reformas Económicas series 39, ECLAC.

Ocampo, J. *et al*. (1998). Macroeconomía, ajuste estructural y equidad en Colombia: 1978-1996. In Ganuza, Taylor and Morley (eds.). *Política macroeconómica y pobreza en América Latina y el Caribe*. United Nations Development Programme (UNDP).

Robles, M. (1999). Pobreza y distribución del ingreso en Paraguay. Programa MECOVI-DGEEC, Paraguay.

Székely, M. (2001). The 1990s in Latin America: another decade of persistent inequality, but with somewhat lower poverty. *IADB Working Paper* # 454.

Székely, M. and Hilgert, M (1999). What's behind the inequality we measure: an investigation using Latin American data. *IADB Working Paper* # 409.

Székely, M. and Hilgert, M. (2001). What drives differences in inequality across countries? *IADB Working Paper* # 439.

Trejos, J. (1999). Reformas económicas y distribución del ingreso en Costa Rica. Reformas Económicas series 37, ECLAC.

WIDER (2000). UNU/WIDER-UNDP World Income Database, Version 1.0.

Wodon, Q. *et al*. (2001). Poverty in Latin America: trends (1986-1998) and determinants, 127-153. *Cuadernos de Economía* 38 (114).

Wolfson, M. (1994). When inequalities diverge. *The American Economic Review*. 84 (2), 353-358.

Table 2.1
Household surveys in LAC
Coverage and characteristics

Country	Year	Name of Survey	Coverage	Sample size Individuals	Population (in millions)	Does the survey report Expenditures?	Non-labor income?	Non-monetary income?	Implicit rent own housing?
	(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)
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	EH-MO	National	39,562	2.9	No	Yes	No	No
Paraguay	1990	EH-MO	Urban	4,795	4.2	No	Yes	Yes	No
	1995	EH-MO	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	EHM	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 Propositos Multiples, 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 Propositos Multiples, 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 Medicion 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	Share of deciles										Income ratios		
	1	2	3	4	5	6	7	8	9	10	10/1	90/10	95/80
	(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)	(x)	(xi)	(xii)	(xiii)
Argentina													
1992	1.8	3.1	4.1	5.2	6.3	7.7	9.4	12.1	16.6	33.8	18.5	7.8	2.0
1996	1.4	2.7	3.7	4.7	5.9	7.3	9.2	11.9	16.8	36.4	25.4	9.6	2.2
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
2001	1.0	2.1	3.1	4.1	5.4	6.9	9.0	12.0	17.5	38.9	39.1	13.8	2.4
Bolivia													
Urban													
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
1996	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
National													
1996	0.5	1.5	2.6	3.7	5.0	6.4	8.4	11.1	16.4	44.4	81.2	20.8	2.5
1999	0.3	1.0	2.3	3.6	5.1	6.8	8.9	11.9	17.8	42.3	143.5	38.6	2.4
Brazil													
1990	0.8	1.5	2.2	3.0	4.1	5.4	7.3	10.4	16.5	48.7	63.2	19.2	3.0
1995	0.8	1.6	2.4	3.3	4.3	5.5	7.4	10.3	16.3	48.1	58.0	17.6	3.0
2001	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
1996	1.2	2.2	3.0	3.8	4.7	5.9	7.6	10.3	15.7	45.5	36.4	11.5	2.7
2000	1.2	2.2	2.9	3.7	4.7	5.8	7.4	10.0	15.2	47.0	40.6	11.4	2.9
Colombia													
Bogotá													
1992	1.0	2.2	3.0	3.9	4.9	6.3	8.1	11.0	16.8	42.7	42.0	12.9	2.8
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
National													
1996	0.9	2.1	3.0	3.9	5.0	6.2	7.9	10.4	15.1	45.4	50.3	12.3	2.7
1999	0.8	1.9	2.8	3.7	4.8	6.1	7.7	10.3	15.4	46.5	57.8	14.5	2.8
Costa Rica													
1990	1.3	2.9	4.1	5.1	6.3	7.8	9.7	12.3	16.4	34.0	25.5	9.1	2.1
1995	1.4	2.9	4.0	5.1	6.3	7.7	9.6	12.2	16.5	34.2	24.1	9.0	2.0
2000	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
Dominican R.													
1995	1.5	2.6	3.5	4.4	5.4	6.7	8.3	10.9	15.6	41.2	26.8	9.4	2.5
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
Ecuador													
1994	0.9	2.2	3.1	4.1	5.2	6.6	8.2	10.6	15.5	43.7	51.2	12.9	2.6
1998	0.7	1.9	2.9	3.9	5.0	6.4	8.3	10.8	15.9	44.2	63.6	15.2	2.6
El Salvador													
1991	1.1	2.3	3.3	4.3	5.4	6.7	8.5	11.1	15.7	41.5	37.4	10.8	2.4
1995	1.0	2.4	3.4	4.5	5.7	7.1	8.9	11.4	16.1	39.6	38.3	11.1	2.3
2000	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
Guatemala													
2000	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
Honduras													
1990	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
1995	1.0	2.0	2.8	3.8	4.9	6.3	8.0	10.8	16.2	44.2	44.9	13.4	2.5
1999	0.9	1.9	2.8	3.9	5.1	6.7	8.5	11.4	16.7	42.2	49.1	15.1	2.5
Jamaica													
1990	1.2	2.3	3.3	4.2	5.4	7.1	9.1	11.5	15.7	40.1	32.7	10.8	2.3
1996	0.9	2.1	3.1	4.0	5.3	6.7	8.2	10.9	16.2	42.7	46.9	13.7	2.6
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													
1992	1.0	2.1	3.0	4.0	5.0	6.3	7.9	10.4	15.6	44.8	47.1	13.2	2.5
1996	1.0	2.2	3.2	4.1	5.2	6.5	8.2	10.8	15.6	43.3	41.9	11.7	2.6
2000	1.0	2.1	3.1	4.1	5.2	6.5	8.2	10.7	16.0	43.1	45.0	12.9	2.5
Nicaragua													
1993	0.8	1.8	2.8	3.8	4.9	6.5	8.6	11.4	16.5	43.0	55.3	15.5	2.4
1998	0.8	1.9	2.9	4.0	5.2	6.5	8.3	11.0	15.6	43.9	56.2	14.6	2.3
Panama													
1991	0.5	1.5	2.7	3.8	5.0	6.4	8.6	11.9	17.7	42.0	80.5	22.7	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
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
Paraguay													
1995	0.7	1.5	2.4	3.4	4.5	6.0	7.8	10.5	15.6	47.5	67.9	18.0	2.8
1999	0.6	1.6	2.7	3.8	5.0	6.5	8.4	11.2	16.5	43.8	70.4	19.0	2.4
Peru													
Regions													
1991	1.1	2.5	3.8	5.1	6.5	8.1	9.9	12.6	16.8	33.7	30.9	11.3	2.0
1994	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
National													
1994	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
2000	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
Trinidad & Tobago													
1992	0.9	2.3	3.6	4.9	6.0	7.4	9.2	11.9	17.2	36.6	40.6	12.7	2.1
Uruguay													
1989	2.0	3.4	4.5	5.6	6.8	8.0	9.7	11.9	15.7	32.4	16.0	6.5	1.9
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
2000	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													
1989	1.7	3.1	4.2	5.3	6.5	7.9	9.7	12.2	16.3	33.2	19.5	7.9	2.0
1995	1.5	2.8	3.8	4.9	6.2	7.6	9.4	11.9	16.3	35.6	23.6	8.7	2.1
1998	1.3	2.7	3.7	4.9	6.1	7.6	9.4	12.0	16.7	35.6	28.2	9.5	2.2

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	Gini (i)	Theil (ii)	CV (iii)	A(.5) (iv)	A(1) (v)	A(2) (vi)	E(0) (vii)	E(2) (viii)
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								
Urban								
1992	49.5	0.490	1.408	0.203	0.346	0.541	0.425	0.991
1996	51.1	0.532	1.539	0.216	0.363	0.551	0.450	1.185
National								
1996	57.6	0.675	1.846	0.282	0.493	0.790	0.679	1.704
1999	57.8	0.633	1.643	0.287	0.532	0.851	0.760	1.349
Brazil								
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
2001	59.0	0.713	1.866	0.289	0.481	0.714	0.655	1.740
Chile								
1990	55.9	0.668	1.944	0.262	0.430	0.655	0.562	1.889
1996	56.1	0.652	1.803	0.261	0.431	0.651	0.564	1.626
2000	57.1	0.703	2.022	0.274	0.447	0.674	0.592	2.043
Colombia								
Bogotá								
1992	54.6	0.569	1.440	0.246	0.434	0.778	0.569	1.037
1996	52.4	0.540	1.422	0.224	0.374	0.551	0.469	1.010
National								
1996	56.1	0.707	2.811	0.270	0.447	0.701	0.593	3.951
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
2000	46.5	0.389	1.083	0.177	0.326	0.581	0.396	0.586
Dominican R.								
1995	51.5	0.542	1.578	0.221	0.371	0.563	0.462	1.244
1997	49.7	0.498	1.520	0.207	0.359	0.580	0.444	1.155
Ecuador								
1994	54.8	0.627	1.758	0.255	0.436	0.706	0.573	1.546
1998	56.2	0.658	1.866	0.269	0.463	0.755	0.623	1.741
El Salvador								
1991	52.7	0.585	1.867	0.236	0.402	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	0.739	0.656	1.662
Honduras								
1990	57.8	0.733	2.295	0.283	0.466	0.696	0.627	2.633
1995	56.1	0.653	1.793	0.264	0.444	0.678	0.586	1.608
1999	55.0	0.586	1.525	0.251	0.440	0.705	0.580	1.163
Jamaica								
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
1999	52.0	0.585	1.954	0.232	0.394	0.627	0.501	1.909
Mexico								
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								
Regions								
1991	46.5	0.394	1.131	0.182	0.344	0.642	0.422	0.640
1994	47.9	0.444	1.338	0.196	0.362	0.666	0.449	0.895
National								
1994	48.6	0.453	1.344	0.200	0.371	0.676	0.463	0.903
2000	49.4	0.477	1.358	0.211	0.392	0.721	0.497	0.923
Trinidad & Tobago								
1992	49.5	0.472	1.480	0.208	0.383	0.687	0.482	1.095
Uruguay								
1989	42.2	0.364	1.383	0.151	0.268	0.457	0.311	0.956
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.
CV=coefficient of variation. A(ε) refers to the Atkinson index with a CES function with parameter ε. E(ε) refers to the generalized entropy index with parameter ε. 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

Country	Share of deciles										Income ratios		
	1	2	3	4	5	6	7	8	9	10	10/1	90/10	95/80
	(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)	(x)	(xi)	(xii)	(xiii)
Argentina													
1992	2.0	3.4	4.4	5.4	6.5	7.9	9.5	12.0	16.5	32.4	15.9	7.0	2.0
1996	1.7	3.0	4.0	5.0	6.2	7.6	9.3	11.9	16.6	34.7	20.9	8.4	2.1
2001	1.1	2.4	3.4	4.4	5.6	7.1	9.0	11.9	17.2	37.8	32.9	11.8	2.4
Bolivia													
Urban													
1992	1.9	3.0	3.9	4.8	5.9	7.0	8.6	11.1	15.4	38.2	20.5	7.5	2.3
1996	1.8	2.9	3.8	4.6	5.6	6.8	8.4	10.9	15.7	39.6	21.6	8.1	2.3
National													
1996	0.6	1.6	2.8	4.0	5.3	6.7	8.7	11.3	16.3	42.8	72.9	18.6	2.5
1999	0.3	1.1	2.5	3.9	5.5	7.2	9.1	12.1	17.6	40.7	126.5	33.8	2.4
Brazil													
1990	0.9	1.7	2.4	3.2	4.3	5.7	7.5	10.5	16.6	47.3	53.4	17.1	2.9
1995	1.0	1.8	2.6	3.5	4.5	5.7	7.6	10.4	16.3	46.6	48.1	15.3	2.9
2001	1.0	1.9	2.8	3.7	4.7	5.9	7.7	10.5	16.1	45.7	45.4	14.0	2.8
Chile													
1990	1.4	2.5	3.2	4.0	4.9	6.0	7.6	10.1	15.3	45.0	32.5	10.1	2.9
1996	1.4	2.4	3.1	4.0	4.9	6.0	7.7	10.3	15.5	44.7	32.7	10.5	2.7
2000	1.3	2.3	3.1	3.9	4.8	5.9	7.4	10.0	15.0	46.3	37.0	10.4	2.8
Colombia													
Bogotá													
1992	1.1	2.4	3.3	4.1	5.2	6.7	8.4	11.2	17.0	40.5	36.1	11.7	2.7
1996	1.8	2.8	3.6	4.5	5.4	6.5	7.9	10.2	15.9	41.4	23.1	9.1	2.7
National													
1996	1.0	2.3	3.3	4.2	5.3	6.5	8.1	10.5	14.9	43.9	44.1	11.1	2.7
1999	0.9	2.1	3.1	4.0	5.0	6.3	7.9	10.4	15.3	45.0	51.3	13.0	2.8
Costa Rica													
1990	1.4	3.1	4.4	5.5	6.6	8.0	9.8	12.2	16.2	32.9	22.9	8.3	2.1
1995	1.5	3.1	4.3	5.4	6.6	7.9	9.7	12.1	16.2	33.1	21.5	8.0	2.0
2000	1.5	3.0	4.2	5.3	6.4	7.8	9.7	12.2	16.4	33.5	22.4	8.7	2.2
Dominican R.													
1995	1.6	2.7	3.6	4.6	5.5	6.8	8.5	10.8	15.6	40.2	24.5	8.9	2.4
1997	1.5	2.8	3.8	4.9	6.0	7.3	9.1	11.6	15.8	37.3	25.3	8.9	2.2
Ecuador													
1994	0.9	2.3	3.4	4.3	5.5	6.8	8.4	10.7	15.2	42.3	45.4	11.2	2.6
1998	0.7	2.1	3.2	4.2	5.3	6.7	8.5	10.9	15.8	42.6	57.5	13.7	2.5
El Salvador													
1991	1.2	2.6	3.6	4.7	5.7	7.0	8.7	11.2	15.5	39.7	32.6	9.4	2.3
1995	1.1	2.6	3.7	4.8	6.0	7.3	9.0	11.4	15.9	38.1	33.7	9.9	2.3
2000	0.9	2.2	3.3	4.4	5.7	7.2	9.0	11.5	16.2	39.6	43.0	12.8	2.2
Guatemala													
2000	0.8	1.9	2.9	4.0	5.1	6.4	8.2	10.6	15.6	44.6	54.2	14.6	2.8
Honduras													
1990	1.0	2.0	3.0	3.9	5.0	6.4	8.2	10.9	15.9	43.9	45.7	13.2	2.5
1995	1.1	2.1	3.1	4.1	5.2	6.6	8.4	11.0	16.0	42.5	39.3	11.9	2.4
1999	1.0	2.0	3.0	4.2	5.4	7.0	8.8	11.6	16.7	40.3	42.4	13.5	2.4
Jamaica													
1990	1.4	2.6	3.5	4.5	5.7	7.4	9.3	11.6	15.5	38.4	28.3	8.9	2.2
1996	1.1	2.3	3.3	4.4	5.7	7.2	8.9	11.0	16.0	40.1	37.5	11.7	2.5
1999	1.3	2.5	3.6	4.7	5.9	7.4	9.4	11.9	16.1	37.1	28.4	10.1	2.0
Mexico													
1992	1.1	2.3	3.3	4.2	5.3	6.5	8.1	10.5	15.5	43.2	40.7	11.7	2.5
1996	1.2	2.4	3.4	4.3	5.4	6.7	8.3	10.8	15.6	41.8	36.1	10.6	2.6
2000	1.1	2.3	3.3	4.3	5.4	6.7	8.5	10.9	15.9	41.5	39.0	11.8	2.6
Nicaragua													
1993	0.9	2.0	3.0	4.0	5.2	6.8	8.8	11.6	16.4	41.4	48.1	14.9	2.4
1998	0.8	2.0	3.1	4.2	5.5	6.8	8.6	11.1	15.5	42.3	50.0	13.5	2.2
Panama													
1991	0.6	1.6	2.9	4.0	5.3	6.8	8.8	11.9	17.5	40.5	71.6	21.1	2.4
1995	0.7	1.9	3.0	4.1	5.3	6.8	8.7	11.7	16.8	41.0	60.2	16.3	2.5
2000	0.8	1.9	3.0	4.1	5.2	6.6	8.5	11.4	16.9	41.5	53.5	15.7	2.5
Paraguay													
1995	0.8	1.7	2.6	3.6	4.8	6.3	8.1	10.6	15.4	46.1	58.6	15.7	2.7
1999	0.7	1.7	2.9	4.2	5.3	6.8	8.6	11.3	16.4	42.1	60.3	17.0	2.4
Peru													
Regions													
1991	1.1	2.6	4.0	5.3	6.7	8.2	10.1	12.6	16.6	32.7	28.6	10.5	1.9
1994	1.2	2.7	4.0	5.3	6.4	8.0	9.9	12.3	16.3	33.9	29.4	9.6	1.9
National													
1994	1.1	2.6	4.0	5.2	6.4	7.9	9.8	12.3	16.5	34.2	31.4	10.0	1.9
2000	0.9	2.4	3.8	5.1	6.5	8.1	9.7	12.0	15.9	35.6	41.0	11.0	2.0
Trinidad & Tobago													
1992	1.0	2.6	3.9	5.2	6.3	7.7	9.4	12.1	17.0	34.8	35.5	11.6	2.1
Uruguay													
1989	2.3	3.7	4.7	5.7	6.8	8.1	9.7	11.8	15.5	31.7	14.0	5.8	1.9
1995	2.1	3.5	4.7	5.7	6.8	8.1	9.8	12.2	16.2	31.0	15.0	6.7	2.0
2000	2.0	3.4	4.4	5.5	6.6	7.9	9.6	11.9	16.4	32.3	15.8	7.1	2.0
Venezuela													
1989	1.9	3.4	4.5	5.6	6.8	8.2	9.9	12.3	16.0	31.4	16.6	6.9	1.9
1995	1.7	3.1	4.2	5.3	6.5	7.9	9.6	12.0	16.0	33.8	20.2	7.6	2.0
1998	1.4	2.9	4.0	5.2	6.4	7.9	9.6	12.1	16.5	34.0	24.6	8.4	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 3.4
Distribution of equivalized household income
Inequality indices

Country	Gini (i)	Theil (ii)	CV (iii)	A(.5) (iv)	A(1) (v)	A(2) (vi)	E(0) (vii)	E(2) (viii)
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								
1992	47.7	0.457	1.349	0.190	0.324	0.515	0.392	0.910
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
1999	55.9	0.587	1.487	0.271	0.511	0.836	0.715	1.105
Brazil								
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
2001	57.2	0.665	1.780	0.271	0.453	0.681	0.603	1.584
Chile								
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								
Bogotá								
1992	52.4	0.510	1.295	0.226	0.407	0.761	0.522	0.838
1996	50.8	0.508	1.374	0.211	0.354	0.525	0.437	0.944
National								
1996	54.3	0.662	2.735	0.253	0.423	0.677	0.551	3.740
1999	55.8	0.676	2.102	0.266	0.446	0.706	0.591	2.209
Costa Rica								
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
Dominican R.								
1995	50.2	0.516	1.524	0.210	0.354	0.543	0.437	1.161
1997	48.1	0.462	1.438	0.194	0.339	0.557	0.413	1.033
Ecuador								
1994	53.0	0.585	1.670	0.240	0.415	0.688	0.535	1.395
1998	54.3	0.606	1.709	0.252	0.441	0.740	0.581	1.460
El Salvador								
1991	50.5	0.536	1.726	0.218	0.375	0.626	0.470	1.490
1995	49.4	0.490	1.462	0.207	0.368	0.641	0.459	1.068
2000	51.8	0.558	1.839	0.230	0.404	0.681	0.518	1.690
Guatemala								
2000	56.0	0.632	1.659	0.263	0.450	0.713	0.599	1.376
Honduras								
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
1999	53.0	0.537	1.414	0.234	0.415	0.680	0.535	1.000
Jamaica								
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
1999	49.0	0.513	1.756	0.206	0.357	0.584	0.441	1.541
Mexico								
1992	53.9	0.612	1.773	0.246	0.415	0.659	0.536	1.571
1996	52.5	0.571	1.770	0.233	0.398	0.655	0.508	1.566
2000	52.7	0.558	1.568	0.233	0.404	0.665	0.518	1.229
Nicaragua								
1993	54.2	0.583	1.602	0.246	0.431	0.697	0.564	1.283
1998	54.1	0.639	2.008	0.253	0.432	0.699	0.565	2.017
Panama								
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	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
National								
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								
1992	47.2	0.415	1.277	0.188	0.355	0.661	0.438	0.815
Uruguay								
1989	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
2000	42.5	0.324	0.980	0.146	0.266	0.454	0.309	0.480
Venezuela								
1989	41.7	0.317	0.989	0.144	0.266	0.484	0.309	0.489
1995	44.5	0.374	1.138	0.165	0.300	0.539	0.356	0.647
1998	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.
CV=coefficient of variation. A(ε) refers to the Atkinson index with a CES function with parameter ε. E(ε) refers to the generalized entropy index with parameter ε. 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 (i)	Mid 90s (ii)	Early 00s (iii)	Change (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			

Source: author's calculations based on microdata from household surveys.
Notes: The Gini coefficients for Bolivia and Colombia for the early 90s 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.

Table 3.6
Gini coefficients
Distribution of household income divided by alternative equivalent scales, household per capita income for urban and rural areas, household labor and monetary income per capita, total household income, and equivalized income for different age groups

Country	Per capita income	Equivalized income A	Equivalized income B	Equivalized income C	Equivalized income D	Equivalized income E	Per capita income Only urban	Per capita income Only rural	Per capita income Only labor	Per capita income Only monet	Per capita income Only labor monetary	Per capita income Urban labor monetary	Total household income	Equivalized income A Age 0-10	Equivalized income A Age 20-30	Equivalized income A Age 40-50	Equivalized income A Age 60-70
	(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)	(x)	(xi)	(xii)	(xiii)	(xiv)	(xv)	(xvi)	(xvii)
Argentina																	
1992	44.7	42.6	41.9	41.9	41.3	43.0	44.7		44.5	44.7	44.5	44.5	44.2	42.9	40.0	44.1	41.8
1996	48.2	45.8	44.8	45.0	44.1	46.3	48.2		47.9	48.2	47.9	47.9	45.3	45.0	43.8	48.0	42.7
2001	52.2	50.4	49.4	49.6	48.8	50.8	52.2		53.3	52.2	53.3	53.3	47.9	51.9	46.5	50.7	47.2
Bolivia																	
Urban																	
1992	49.5	47.7	47.2	47.1	46.6	47.9	49.5		49.3	49.5	49.3	49.3	48.7	47.1	46.6	49.7	48.9
1996	51.1	49.3	48.7	48.5	48.1	49.3	51.0		51.3	51.1	51.3	51.3	51.0	49.2	47.8	48.7	49.5
National																	
1996	57.6	55.8	55.4	55.1	54.8	55.8	50.7	59.1	57.4	57.6	57.4	51.1	58.0	54.9	52.4	57.5	61.7
1999	57.8	55.9	55.3	55.2	54.8	56.1	48.2	63.0	58.3	57.7	58.4	48.9	56.8	57.0	50.3	55.6	60.9
Brazil																	
1990	61.2	59.5	58.7	58.9	58.2	59.9	58.6	53.9	61.0	61.2	61.0	58.5	58.3	59.6	56.0	59.9	62.0
1995	60.0	58.3	57.5	57.6	56.9	58.6	58.0	54.2	60.6	60.0	60.5	58.2	56.9	57.8	55.7	58.8	57.4
2001	59.0	57.2	56.4	56.5	55.8	57.5	57.7	53.1	59.9	59.0	60.0	58.3	55.8	56.7	54.2	56.9	56.4
Chile																	
1990	55.9	54.7	54.1	54.3	53.8	54.9	54.9	58.2	56.8		57.1	55.5	55.4	55.7	52.7	54.4	55.1
1996	56.1	54.9	54.4	54.6	54.1	55.2	55.2	49.9	58.0		57.6	56.4	55.3	56.1	52.9	54.9	53.7
2000	57.1	56.1	55.5	55.9	55.3	56.4	56.5	52.4	58.5		57.8	56.9	55.5	57.9	52.6	59.4	52.7
Colombia																	
Bogotá																	
1992	54.6	52.4	51.6	52.2	51.3	52.9	54.6		55.4	56.0	55.5	55.5	51.7	52.5	50.7	52.2	55.0
1996	52.4	50.8	50.3	50.1	49.8	51.0	52.4		52.6	53.1	52.9	52.9	51.8	49.7	48.0	53.0	49.5
National																	
1996	56.1	54.3	53.5	53.4	52.9	54.5	53.6	50.2	55.0	56.9	55.3	52.9	54.4	53.1	51.2	55.4	57.7
1999	57.6	55.8	55.0	55.2	54.4	56.3	55.1	55.0	57.2	58.6	57.7	55.9	55.1	55.1	52.0	58.9	58.2
Costa Rica																	
1990	45.6	43.9	43.3	43.2	42.7	44.0	42.9	43.2	45.5	45.6	45.5	43.2	45.0	43.8	41.2	42.9	46.8
1995	45.7	44.0	43.3	43.3	42.8	44.1	42.9	43.7	45.5	45.7	45.5	43.1	44.9	44.8	40.1	45.1	45.1
2000	46.5	44.6	44.1	43.8	43.4	44.8	44.2	44.0	46.4	46.5	46.4	44.7	46.4	44.0	42.7	43.4	48.6
Dominican R.																	
1995	51.5	50.2	49.6	49.7	49.2	50.5	53.5	44.4	51.5	51.5	51.5	53.4	50.3	49.0	48.0	53.2	52.4
1997	49.7	48.1	47.5	47.3	46.9	48.3	48.0	47.5	48.8	50.0	49.0	47.5	49.7	46.5	45.1	47.3	52.2
Ecuador																	
1994	54.8	53.0	52.2	52.3	51.6	53.3	51.8	51.5	54.0	55.3	55.3	52.2	52.8	53.8	50.4	55.3	53.7
1998	56.2	54.3	53.5	53.6	52.9	54.8	52.2	54.1	55.1	57.3	56.6	52.1	54.4	52.6	50.8	55.1	60.8
El Salvador																	
1991	52.7	50.5	49.7	49.5	48.9	50.7	49.5	47.8	54.9	52.7	54.9	50.0	50.8	49.4	48.6	51.1	54.3
1995	51.3	49.4	48.6	48.5	47.9	49.6	47.4	44.1	51.5	51.3	51.5	47.4	49.7	49.6	46.6	50.2	50.8
2000	53.2	51.8	51.0	51.0	50.4	52.2	50.3	46.8	52.8	53.2	52.8	50.8	51.3	48.2	49.0	50.6	59.2
Guatemala																	
2000	58.3	56.0	55.3	54.8	54.3	56.2	54.2	50.7	57.5	59.0	58.0	54.0	55.8	54.1	53.7	56.3	61.6
Honduras																	
1990	57.8	55.6	54.8	54.8	54.1	55.9	55.3	49.4	57.8	57.8	57.8	55.3	55.2	52.6	54.9	57.6	64.1
1995	56.1	54.1	53.3	53.2	52.6	54.4	52.2	55.5	56.1	56.1	56.1	52.2	53.6	51.9	50.4	57.3	54.3
1999	55.0	53.0	52.3	52.2	51.6	53.3	50.2	53.2	55.0	55.0	55.0	50.2	52.9	52.9	50.3	53.5	54.8
Jamaica																	
1990	51.7	49.6	48.7	48.8	48.1	49.9	49.8	52.4	52.6	51.7	52.6	50.3	48.8	49.5	48.9	49.1	45.9
1996	54.4	51.5	50.3	50.4	49.4	51.7	59.1	48.0	58.0	54.4	58.0	61.5	50.4	45.3	50.4	52.6	52.4
1999	52.0	49.0	47.4	47.9	46.5	49.7	54.9	46.8	55.4	52.0	55.4	57.3	48.2	46.5	46.8	54.8	49.1
Mexico																	
1992	55.9	53.9	53.0	53.1	52.3	54.2	52.7	52.4	56.3	55.2	55.5	52.4	52.8	52.6	52.5	56.8	59.5
1996	54.4	52.5	51.5	51.8	50.9	52.9	51.7	50.8	55.7	53.8	55.0	51.8	50.3	51.8	50.9	53.4	52.4
2000	54.6	52.7	51.8	52.0	51.3	53.0	50.9	52.1	55.0	54.6	54.9	50.8	51.3	51.2	49.9	53.6	57.6
Nicaragua																	
1993	55.9	54.2	53.3	53.6	52.9	54.6	52.5	53.9	56.3	57.7	57.6	54.4	53.4	54.1	52.2	53.4	53.1
1998	55.9	54.1	53.5	53.4	52.9	54.2	53.0	54.3	55.5	58.4	57.8	54.8	55.4	52.4	49.3	62.4	53.9
Panama																	
1991	56.4	54.7	53.8	54.0	53.3	55.1			54.4	56.4	54.4		54.0	54.9	51.0	55.5	57.0
1995	55.9	54.0	53.2	53.3	52.6	54.4	51.5	52.7	55.1	55.9	55.1	52.5	53.5	54.8	49.9	53.3	55.5
2000	56.4	54.4	53.6	53.5	52.9	54.7	52.2	54.2	56.9	56.4	56.9	53.2	54.4	53.6	50.6	52.5	59.0
Paraguay																	
1995	59.5	57.8	57.3	57.0	56.6	57.8	53.3	56.7	59.9		50.7	48.7	56.7	57.2	53.5	58.4	58.2
1999	56.8	54.9	54.3	53.9	53.5	54.8	50.3	59.9	57.2		65.7	65.2	54.3	53.2	51.4	56.8	52.9
Peru																	
Regions																	
1991	46.5	45.2	44.9	44.8	44.5	45.4	42.8	48.7	46.5	47.1	47.0	43.4	47.5	46.5	42.8	46.0	51.2
1994	47.9	45.9	45.2	44.9	44.5	46.0	44.0	49.8	48.4	48.3	48.7	45.3	46.9	45.2	43.1	46.7	46.2
National																	
1994	48.6	46.4	45.8	45.5	45.0	46.6	44.2	49.3	48.8	48.9	49.2	45.4	47.2	45.9	43.7	47.4	46.2
2000	49.4	47.7	47.4	46.9	46.7	47.8	43.8	45.7	49.5	49.5	49.6	44.4	49.9	48.5	45.8	46.6	49.2
Trinidad & Tobago																	
1992	49.5	47.2	45.7	46.5	45.2	47.8	51.4	47.8	49.5	49.5	49.5	51.4	43.7	46.4	44.6	44.2	61.8
Uruguay																	
1989	42.2	40.8	40.2	40.3	39.9	41.0	42.2		45.0	43.3	46.1	46.1	43.2	41.5	37.6	40.2	41.8
1995	42.7	40.9	40.2	40.3	39.8	41.3	42.7		46.2	44.0	47.8	47.8	42.3	42.0	38.7	40.7	39.7
2000	44.6	42.5	41.5	41.8	41.0	43.1	44.6		47.9	45.8	49.5	49.5	42.0	43.0	40.9	41.6	40.6
Venezuela																	
1989	44.2	41.7	40.6	40.7	39.7	42.1	42.3	42.6	44.2	44.2	44.2	42.3	40.7	40.7	39.0	43.5	44.2
1995	46.9	44.5	43.7	43.4	42.8	44.7	45.4	45.3	46.7	46.9	46.7	45.1	45.1	42.7	42.4	43.8	46.2
1998	47.6	45.5	44.7	44.7	44.0	45.9	46.4	45.4	47.9	47.6	47.9	46.9	46.0	45.1	43.5	44.9	47.4

Source: author's calculations based on microdata from household surveys.

Note: Equivalized income A: θ=0.9, α1=0.5 and α2=0.75; *B*: θ=0.75, α_1=0.5 and α_2=0.75; *C*: θ=0.9, α_1=0.3 and α_2=0.5; *D*: θ=0.75, α_1=0.3 and α_2=0.5; *E*: Amsterdam scale. Adult equivalent equal to 0.98 for men between 14 and 17, 0.9 for women over 14, 0.52 for children under 14, and 1 for the rest.

Table 4.1
Trends in income inequality in LAC countries since 1970
Signs of the changes in the Gini coefficient.
Distribution of household per capita income

Country	70s		80s		90s	
	Londoño & Székely (i)	Morley/ Altimir (ii)	Londoño & Székely (iii)	Morley/ Altimir (iv)	Székely (v)	This study (vi)
Argentina		+		+		+
Bahamas	-	=	+	=		
Bolivia					+	+
Brazil	=	- or =	+	+	=	-
Chile	+	+ or =	+	+	=	+
Colombia	-	- or =	=	+ or -	=	=
Costa Rica		- or =	=	=	=	= or +
Dominican Rep.	=		+	+		
Ecuador					=	+
El Salvador					+	= or +
Guatemala	=		+			
Honduras	=		=		+	-
Jamaica	=	=	-	-	-	=
Mexico	-	-	+	+	=	= or -
Nicaragua					+	=
Panama	-		+	+	=	=
Paraguay					+	
Peru	-	+ or =	=		+	+
Uruguay		+ or =		-	=	+
Venezuela	-	-	=	+	+	+

Sources: Altimir (1994 and 1996), Morley (2001), Londoño and Székely (2000) and Székely (2001).
Note: signs refer to changes in the Gini coefficient of the distribution of household per capita income.

Table 5.1
Indices of bipolarization (EGR and Wolfson) and inequality (Gini)
Household per capita income and equivalized household income

Country	Household per capita income			Equivalized income		
	EGR	Wolfson	Gini	EGR	Wolfson	Gini
	(i)	(ii)	(iii)	(iv)	(v)	(vi)
Argentina						
1992	0.149	0.427	44.7	0.140	0.397	42.6
1996	0.158	0.454	48.2	0.147	0.419	45.8
2001	0.175	0.519	52.2	0.164	0.472	50.4
Bolivia						
Urban						
1992	0.171	0.442	49.5	0.162	0.413	47.7
1996	0.179	0.462	51.1	0.171	0.429	49.3
National						
1996	0.192	0.543	57.6	0.178	0.502	55.8
1999	0.200	0.630	57.8	0.188	0.587	55.9
Brazil						
1990	0.245	0.634	61.2	0.236	0.611	59.5
1995	0.239	0.629	60.0	0.230	0.593	58.3
2001	0.229	0.460	59.0	0.221	0.429	57.2
Chile						
1990	0.208	0.478	55.9	0.202	0.452	54.7
1996	0.195	0.482	56.1	0.189	0.454	54.9
2000	0.190	0.458	57.1	0.183	0.431	56.1
Colombia						
Bogotá						
1992	0.200	0.504	54.6	0.189	0.467	52.4
1996	0.190	0.425	52.4	0.183	0.393	50.8
National						
1996	0.183	0.422	56.1	0.172	0.391	54.3
1999	0.195	0.462	57.6	0.185	0.434	55.8
Costa Rica						
1990	0.146	0.430	45.6	0.137	0.396	43.9
1995	0.147	0.414	45.7	0.137	0.384	44.0
2000	0.155	0.442	46.5	0.145	0.412	44.6
Dominican R.						
1995	0.187	0.475	51.5	0.181	0.459	50.2
1997	0.163	0.446	49.7	0.156	0.428	48.1
Ecuador						
1994	0.196	0.496	54.8	0.185	0.466	53.0
1998	0.197	0.547	56.2	0.185	0.509	54.3
El Salvador						
1991	0.175	0.455	52.7	0.162	0.422	50.5
1995	0.163	0.446	51.3	0.151	0.414	49.4
2000	0.166	0.485	53.2	0.156	0.460	51.8
Guatemala						
2000	0.209	0.567	58.3	0.193	0.520	56.0
Honduras						
1990	0.209	0.519	57.8	0.196	0.483	55.6
1995	0.190	0.483	56.1	0.178	0.446	54.1
1999	0.189	0.496	55.0	0.177	0.461	53.0
Jamaica						
1990	0.168	0.492	51.7	0.155	0.447	49.6
1996	0.185	0.448	54.4	0.163	0.432	51.5
1999	0.171	0.473	52.0	0.155	0.440	49.0
Mexico						
1992	0.190	0.489	55.9	0.178	0.464	53.9
1996	0.185	0.490	54.4	0.176	0.460	52.5
2000	0.178	0.480	54.6	0.170	0.457	52.7
Nicaragua						
1993	0.204	0.569	55.9	0.194	0.537	54.2
1998	0.194	0.532	55.9	0.183	0.497	54.1
Panama						
1991	0.207	0.587	56.4	0.195	0.545	54.7
1995	0.199	0.537	55.9	0.186	0.499	54.0
2000	0.202	0.566	56.4	0.189	0.528	54.4
Paraguay						
1995	0.213	0.590	59.5	0.201	0.544	57.8
1999	0.225	0.609	56.8	0.214	0.564	54.9
Peru						
Regions						
1991	0.144	0.409	46.5	0.137	0.398	45.2
1994	0.151	0.461	47.9	0.143	0.430	45.9
National						
1994	0.158	0.471	48.6	0.148	0.436	46.4
2000	0.146	0.423	49.4	0.136	0.400	47.7
Trinidad & Tobago						
1992	0.161	0.445	49.5	0.151	0.414	47.2
Uruguay						
1989	0.130	0.352	42.2	0.126	0.343	40.8
1995	0.136	0.385	42.7	0.130	0.365	40.9
2000	0.151	0.426	44.6	0.144	0.398	42.5
Venezuela						
1989	0.135	0.392	44.2	0.125	0.364	41.7
1995	0.144	0.418	46.9	0.132	0.381	44.5
1998	0.149	0.440	47.6	0.139	0.404	45.5

Source: author's calculations based on microdata from household surveys.
Note: EGR=Esteban, Gradín and Ray.

Table 5.2
Aggregate welfare

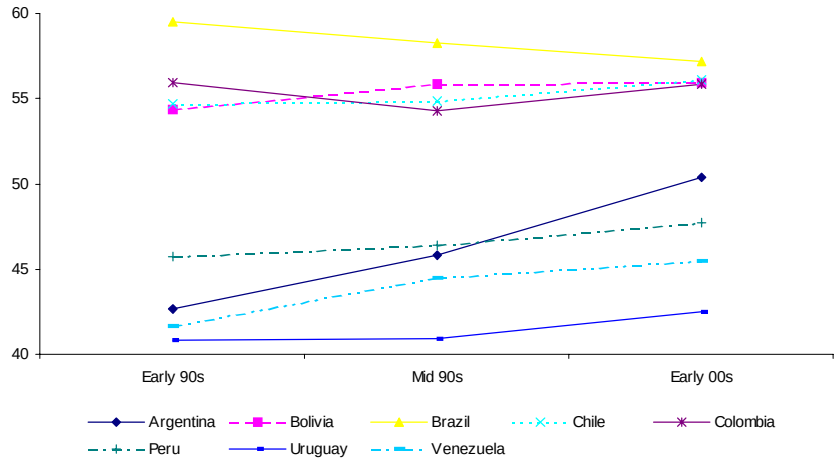
	Mean income from National Accounts				Mean income from household surveys			
Country	Mean income	Sen	Atk(1)	Atk(2)	Mean income	Sen	Atk(1)	Atk(2)
	(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)
Argentina								
1992	100	100	100	100	100	100	100	100
1996	109	102	102	90	91	86	85	76
1998	119	109	108	96	101	92	92	82
2001	111	96	94	72	89	77	75	58
Bolivia								
1996	100	100	100	100	100	100	100	100
1999	104	104	96	74	122	122	112	87
Brazil								
1990	100	100	100	100	100	100	100	100
1995	108	111	112	115	137	141	142	145
2001	113	120	120	124	133	140	141	145
Chile								
1990	100	100	100	100	100	100	100	100
1996	148	147	148	150	142	142	142	144
2000	161	157	157	153	153	149	148	144
Costa Rica								
1990	100	100	100	100	100	100	100	100
1995	116	116	116	118	119	118	119	121
2000	123	121	122	123	125	123	124	125
Dominicana								
1995	100	100	100	100	100	100	100	100
1997	112	116	114	108	119	123	121	114
Ecuador								
1994	100	100	100	100	100	100	100	100
1998	100	97	95	83	96	93	91	80
El Salvador								
1991	100	100	100	100				
1995	120	123	122	115				
2000	126	125	122	110				
Honduras								
1990	100	100	100	100				
1995	103	107	107	109				
1999	101	108	106	98				
Mexico								
1992	100	100	100	100	100	100	100	100
1996	98	101	101	99	78	80	80	78
2000	116	120	119	114	104	107	107	102
Nicaragua								
1993	100	100	100	100	100	100	100	100
1998	108	108	108	108	111	111	111	111
Panama								
1991	100	100	100	100	100	100	100	100
1995	111	112	114	118	128	129	131	135
2000	123	123	127	143	130	130	134	151
Paraguay								
1995	100	100	100	100	100	100	100	100
1999	92	99	96	86	90	96	94	84
Peru								
1991	100	100	100	100	100	100	100	100
1994	112	107	107	101				
2000	124	118	115	97	114	108	106	89
Uruguay								
1989	100	100	100	100	100	100	100	100
1995	116	115	115	110	100	99	99	94
2000	123	118	118	114	112	107	108	104
Venezuela								
1989	100	100	100	100	100	100	100	100
1995	109	104	104	98	90	86	86	81
1998	109	102	101	85	94	88	87	73

Source: author's calculations based on microdata from household surveys and per capita GDP from World Bank (2001), World Development Indicators, WDI -CD-ROM.

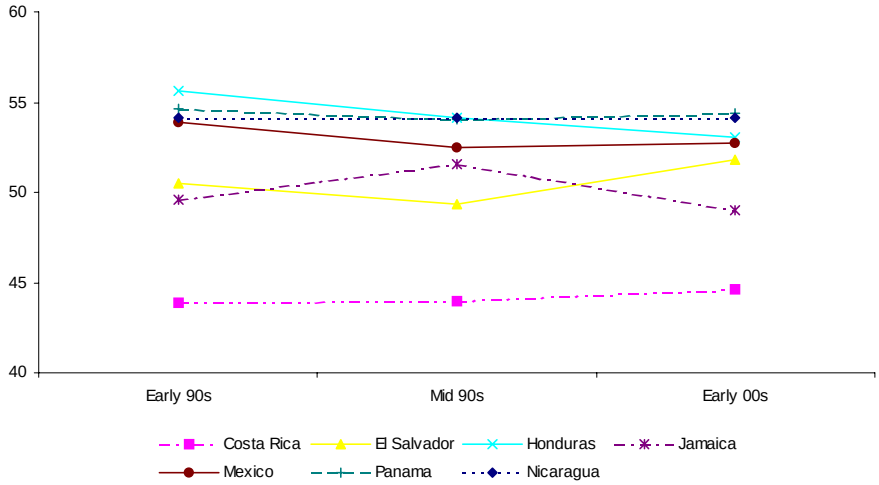
Note: see Lambert (1993) for details on the aggregate welfare functions. Atk(ε) refers to the function proposed by Atkinson (1970): a CES function with parameter equal to ε. First observation for each country=100

Figure 3.1
Gini coefficient
Equivalized household income

South American countries



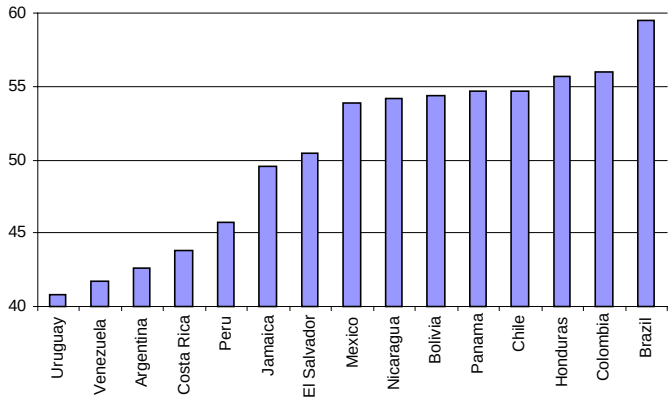
Central American and Caribbean countries



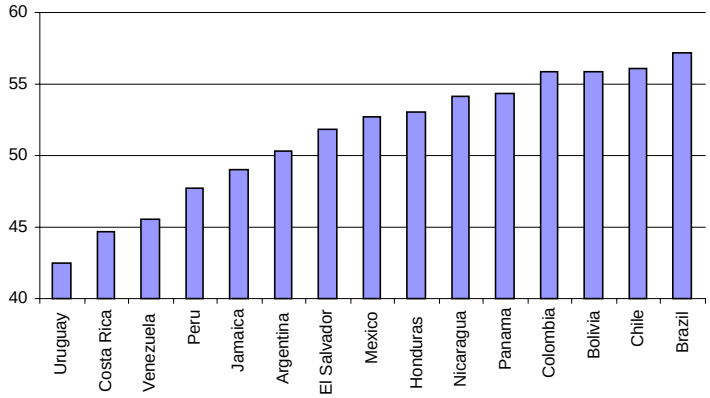
Source: author's calculations based on microdata from household surveys.

Figure 3.2
Gini coefficient
Equivalized household income

A. Early 90s

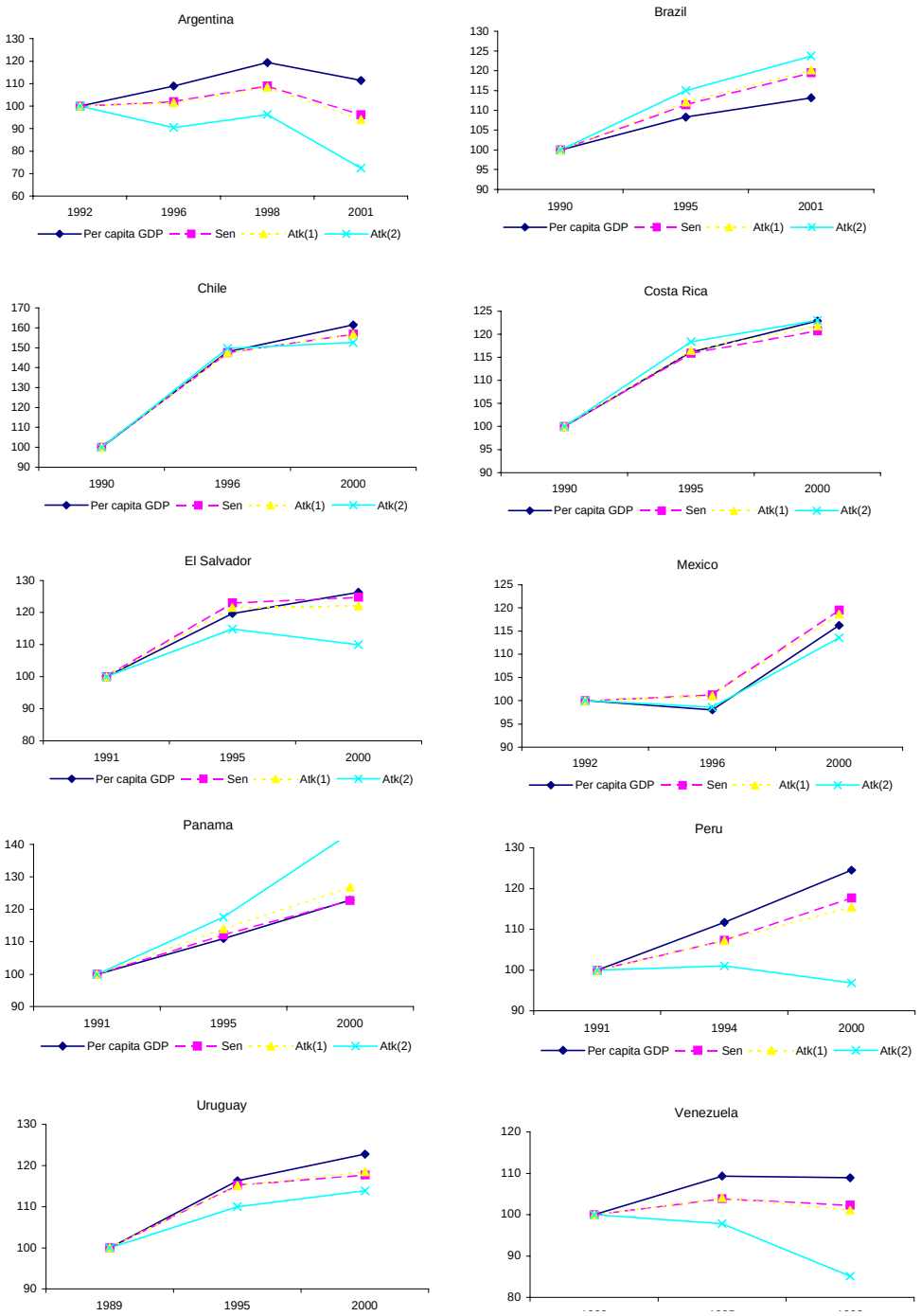


B. Late 90s or Early 00s



Source: author's calculations based on microdata from household surveys.

Figure 5.1
Aggregate welfare measures



Source: author's calculations based on microdata from household surveys and per capita GDP from World Bank (2001), World Development Indicators, WDI -CD-ROM.
Note: see Lambert (1993) for details on the aggregate welfare functions. Atk(e) refers to the function proposed by Atkinson (1970): a CES function with parameter equal to e. First observation for each country=100