



Poverty and income distribution

A. A LOOK AT POVERTY IN LATIN AMERICA TODAY

After having climbed between 2000 and 2002, the poverty rate in Latin America is practically the same as it was in 1997. This shows that, relatively speaking, progress towards the eradication of poverty has stalled in the last five years. The poor now number close to 220 million, of whom 98 million are indigent or extremely poor. What is more, the sluggish economic growth projected for 2003 will probably translate into a fresh downturn in living conditions in the region.

ECONOMIC DEVELOPMENTS

Between 2000 and 2002 the expansion of output slowed sharply: average annual GDP growth barely exceeded 1% and per capita output shrank. After a year of relatively good growth in 2000, when Latin America's overall economic expansion averaged 3.8%, 2001 brought a significant slowdown, with regional output expanding by only 0.4%, the lowest rate in 11 years. Per capita GDP declined by 1.1% with respect to its 2000 level.¹

The sluggish growth recorded in 2001 was mainly the result of contractions in Argentina (-4.4%) and Uruguay (-3.5%), combined with the poor performance of large economies such as Brazil (1.5%) and Mexico (0.5%). While rates of

economic expansion topped 2% in a number of countries, they generally fell short of their levels of the previous year, thereby accentuating the downturn with respect to 2000.

In 2002 regional output contracted. Economic activity slipped by 0.6%, which dragged down per capita GDP for the second year in a row, this time by 2.1%. This was partly attributable to a sharp drop in output in Argentina (-10.9%), Uruguay (-10.7%) and Venezuela (-9%). At the same time, many countries managed to turn in only modest rates of growth, which in most cases did not exceed 2%. The biggest increases in output were achieved by Peru (5.3%), the Dominican Republic (4.3%) and Ecuador (3.8%).

¹ See ECLAC (2003a).

According to ECLAC, the countries fall into at least four groups in terms of the factors that impinged most on their economic performance in 2002. Slack growth in United States demand was the main determinant of economic performance in the first group, comprising Mexico, the Central American Common Market countries, Haiti, Panama and the Dominican Republic. Chile and Peru were affected mainly by a downturn in their terms of trade. By contrast, difficulties in access to international financing and high levels of speculation hurt the MERCOSUR countries and, indirectly, Bolivia. Lastly, in Ecuador, Venezuela and Colombia, domestic factors underlay the performance of output.²

Despite the poor economic performance recorded in 2002, in general terms a slight upturn in growth is expected for 2003. Indeed, by mid-2002 most of the countries had seen a break in the output trend, which has been interpreted as the onset of a fresh cycle of economic expansion. GDP is expected to climb by 1.5% in 2003, which would represent a stagnation in per capita output.

One of the defining features of 2002 was an increase in unemployment rates across the countries of the region, with few exceptions. This represented a continuation of the upward trend seen in 2001,

which brought region-wide unemployment to 8.9%, its highest level in more than a decade. The South American countries have been the hardest hit by the expansion of unemployment over the past few years: unlike the other countries, they had higher average unemployment in the period 2000–2002 than in the period 1990–1999 (see table I.1).

Another feature of 2002 was a substantial rise in the rate of inflation in a number of Latin American countries, particularly Argentina, Venezuela, Uruguay and Paraguay. Those increases reversed the downward trend which inflation had displayed in previous years, and in most cases were associated with currency devaluations. This suggests that they should be interpreted as short-lived phenomena (see table 1 of the statistical appendix).

CHANGES IN POVERTY AND INDIGENCE

According to the latest estimates (in 2002) 44% of Latin America's population was living in poverty, while the poor numbered just over 220 million. Of these, a little over 97 million, or 19.4% of the region's population, were indigent or extremely poor (see tables I.2 and I.3).³

² See ECLAC (2002a).

³ See box I.1 for a description of the method used to measure poverty.

Table I.1

LATIN AMERICA: SELECTED SOCIO-ECONOMIC INDICATORS, 1990–2002									
Country Year	Per capita GDP (Average annual rate of variation) a/	Urban unemployment Simple average for the period b/ (Percentages)	Real average wage c/	Urban minimum wage	Country Year	Per capita GDP (Average annual rate of variation) a/	Urban unemployment Simple average for the period b/ (Percentages)	Real average wage c/	Urban minimum wage
			(Average annual rate of variation)					(Average annual rate of variation)	
Argentina					Honduras				
1990–1999	2.6	11.9	0.6	0.8	1990–1999	-0.2	6.1	...	1.0
2000–2002	-6.6	17.4	-4.6	-6.4	2000–2002	0.9	6.0	...	4.4
Bolivia					Mexico				
1990–1999	1.6	5.5	3.0	7.4	1990–1999	1.5	3.6	0.8	-4.7
2000–2002	-0.1	8.2	2.6	6.1	2000–2002	0.8	2.5	4.7	0.6
Brazil					Nicaragua				
1990–1999	0.2	5.6	-1.0	-0.4	1990–1999	0.2	14.3	8.0	-1.8
2000–2002	1.0	6.8	-2.7	5.0	2000–2002	0.7	10.9	3.4	-4.6
Chile					Panama				
1990–1999	4.2	7.2	3.5	5.9	1990–1999	2.9	16.6	...	1.5
2000–2002	1.9	9.1	1.7	4.6	2000–2002	-0.6	16.1	...	3.3
Colombia					Paraguay				
1990–1999	0.6	11.6	1.3	-0.4	1990–1999	-0.6	6.3	0.3	-1.6
2000–2002	0.1	17.7	2.7	0.8	2000–2002	-2.7	11.8	-1.4	2.4
Costa Rica					Peru				
1990–1999	2.6	5.4	2.1	1.1	1990–1999	1.3	8.5	-0.8	1.4
2000–2002	-0.3	6.0	1.9	-0.3	2000–2002	0.9	9.1	1.5	3.9
Cuba					Dominican Rep.				
1990–1999	-3.6	...	...	...	1990–1999	2.7	16.9	...	2.6
2000–2002	3.0	...	...	...	2000–2002	3.1	15.1	...	1.6
Ecuador					Uruguay				
1990–1999	0.2	9.4	5.3	0.9	1990–1999	2.4	10.0	0.5	-5.9
2000–2002	1.5	11.0	...	2.9	2000–2002	-6.2	15.3	-4.2	-4.5
El Salvador					Venezuela c/				
1990–1999	2.6	7.8	...	-0.5	1990–1999	0.3	10.3	-3.9	-3.0
2000–2002	0.1	6.6	...	-2.6	2000–2002	-2.6	14.3	-2.2	-4.6
Guatemala					Latin America				
1990–1999	1.4	4.3	5.4	-9.8	1990–1999	0.9	7.3	...	...
2000–2002	0.1	3.6	1.1	4.3	2000–2002	-0.4	8.5	...	...
Haiti									
1990–1999	-2.8	...	...	-8.3					
2000–2002	-1.5	...	...	-10.8					

Source: ECLAC, on the basis of official figures.

a/ Based on per capita GDP in constant 1995 dollars. The figure shown for 2002 is a preliminary estimate.

b/ In Chile, Guatemala, Nicaragua, Dominican Republic and Venezuela, refers to total nationwide unemployment. In addition, in place of the periods 1990–1999 and 2000–2002, the following periods were taken into account: 1991–1999 and 2002 (Guatemala), 1990–1999 and 2001–2002 (Honduras), 1991–1999 and 2000–2002 (Dominican Republic) and 1992–1999 and 2000–2002 (Latin America).

c/ In general, the coverage of this index is very incomplete. In most of the countries it refers only to formal-sector workers in industry. The figure shown for 2002 is a preliminary estimate.

Table I.2

LATIN AMERICA: POVERTY AND INDIGENCE RATES, <i>a/</i> 1980–2002						
	Percentage of population					
	Poor <i>b/</i>			Indigent <i>c/</i>		
	Total	Urban	Rural	Total	Urban	Rural
1980	40.5	29.8	59.9	18.6	10.6	32.7
1990	48.3	41.4	65.4	22.5	15.3	40.4
1997	43.5	36.5	63.0	19.0	12.3	37.6
1999	43.8	37.1	63.7	18.5	11.9	38.3
2000	42.5	35.9	62.5	18.1	11.7	37.8
2001	43.2	37.0	62.3	18.5	12.2	38.0
2002	44.0	38.4	61.8	19.4	13.5	37.9

Source: ECLAC, on the basis of special tabulations of data from household surveys conducted in the respective countries.

a/ Estimate for 18 countries of the region plus Haiti.

b/ Percentage of the population with income below the poverty line. Includes the population living in indigence.

c/ Percentage of the population with income below the indigence line.

Table I.3

LATIN AMERICA: POOR AND INDIGENT POPULATION, <i>a/</i> 1980–2002						
	Millions of people					
	Poor <i>b/</i>			Indigent <i>c/</i>		
	Total	Urban	Rural	Total	Urban	Rural
1980	135.9	62.9	73.0	62.4	22.5	39.9
1990	200.2	121.7	78.5	93.4	45.0	48.4
1997	203.8	125.7	78.2	88.8	42.2	46.6
1999	211.4	134.2	77.2	89.4	43.0	46.4
2000	207.1	131.8	75.3	88.4	42.8	45.6
2001	213.9	138.7	75.2	91.7	45.8	45.9
2002	221.4	146.7	74.8	97.4	51.6	45.8

Source: ECLAC, on the basis of special tabulations of data from household surveys conducted in the respective countries.

a/ Estimate for 18 countries of the region plus Haiti.

b/ Number of people with income below the poverty line. Includes people living in indigence.

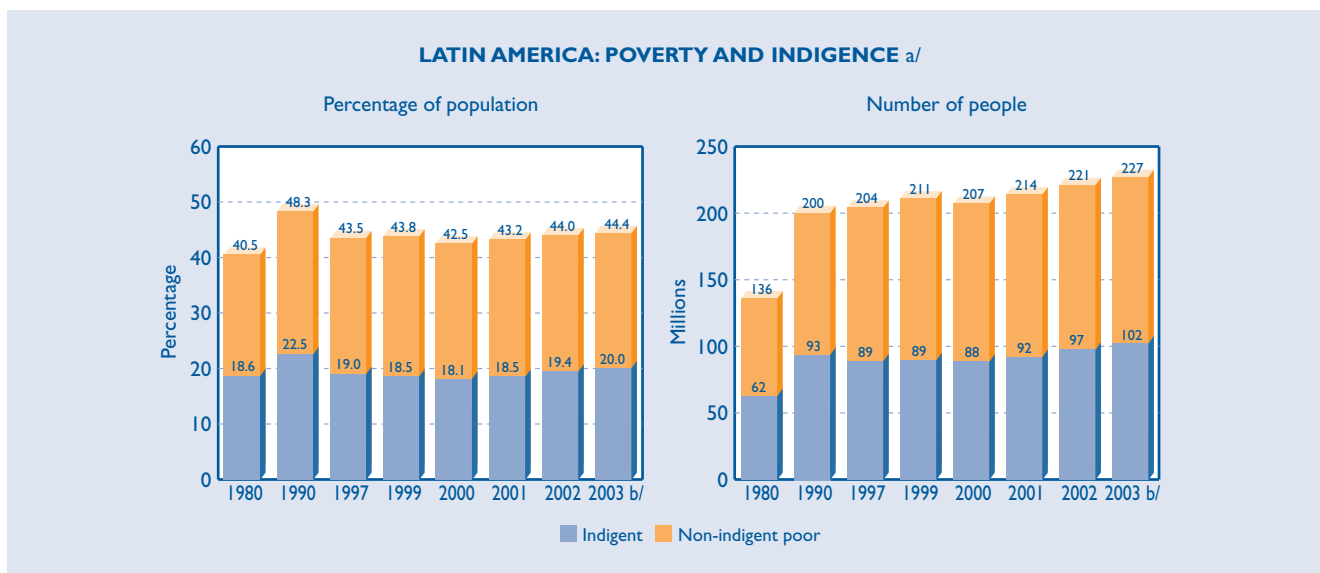
c/ Number of people with income below the indigence line.

When compared with data from previous years, these figures appear to indicate that progress toward the eradication of poverty in the region has come to a relative standstill. Between 1999 and 2002 the poverty rate stayed almost constant, rising by two tenths of a percentage point, while extreme poverty rose by nine tenths of a point. As a result, the poor in Latin America numbered 10 million more than in 1999. Also worrying is the fact that most of this increase reflected a rise in the level of indigence. The number of indigents rose by 8

million, apparently indicating that poverty has deepened.

The upward trend of poverty in earlier periods (1990–1997 and 1997–1999) was broken in 2000, when the improved performance of the Latin American economies was reflected not only in a 1.3–point decrease in the proportion of poor people compared to the preceding year, but also in a reduction in the number of poor people by more than 4 million (see figure I.1).

Figure I.1



Source: ECLAC, on the basis of special tabulations of data from household surveys conducted in the respective countries.

a/ Nationwide total.

b/ The figures for 2003 are projections.

Box I.1

METHOD USED FOR POVERTY MEASUREMENT

The method used in this report to estimate poverty classifies a person as "poor" when the per capita income of the household in which he or she lives is below the "poverty line", or the minimum income the members of a household must have in order to meet their basic needs. Poverty lines are based on the calculation of the cost of a particular basket of goods and services, employing the "cost of basic needs" method.

Where the relevant information was available, the cost of a basic food basket covering the population's nutritional needs was estimated for each country and geographical area, taking into account consumption habits, the effective availability of foodstuffs and their relative prices, as well as the differences between metropolitan areas, other urban areas and rural areas. To the value of this basket, which constituted the "indigence line", was then added an estimate of the resources households need to satisfy their basic non-nutritional needs, to make up the total value of the poverty line. For this purpose, the indigence line was multiplied by a constant factor of 2 for urban areas and 1.75 for rural areas.^a

In most cases, data concerning the structure of household consumption, of both foodstuffs and other goods and services, came from surveys on household budgets conducted in the respective countries.^b Since these surveys were carried out before the poverty estimates were prepared, the value of the poverty lines was updated according to the cumulative variation in the consumer price index.

The data on household income were taken from household surveys conducted in the respective countries, in the years that correspond to the poverty estimates contained in this publication. In line with the usual practice, both missing answers

METHOD USED FOR POVERTY MEASUREMENT

to certain questions on income—in the case of wage-earners, independent workers and retirees—and probable biases arising from underreporting were corrected. This was done by comparing the survey entries for income with figures from an estimate of the household income and expenditure account of each country's system of national accounts (SNA), prepared for this purpose using official information. Income was understood to consist of total current income; i.e., income from wage labour (monetary and in kind), from independent labour (including self-supply and the consumption value of home-made products), from property, from retirement and other pensions and from other transfers received by households. In most of the countries, household income included the imputed rental value of owner-occupied dwellings.

- a The sole exceptions to this general rule were Brazil and Peru. For Brazil, the study used new indigence lines estimated for different geographical areas within the country, in the framework of a joint project conducted by the Brazilian Institute of Geography and Statistics, the Brazilian Institute of Applied Economic Research and ECLAC. For Peru, the indigence and poverty lines used were estimates prepared by the National Institute of Statistics and Informatics under the programme to improve surveys on living conditions in Latin America and the Caribbean (MECOVI) in Peru.
- b When data from the processing of a recent survey of this type were not available, other information on household consumption was used.

In the two years that followed, poverty and indigence indicators worsened again, albeit slightly. In 2001 poverty increased by seven tenths of a percentage point, which was three tenths of a point more than the increase in extreme poverty. Although small, these variations represented an increase of about 7 million in the number of poor people, including 3 million indigents. The downturn in living conditions was slightly worse in 2002, when poverty and indigence rose by eight tenths and nine tenths of a percentage point, respectively. These variations represented increases of 8 and 6 million in the number of people living in poverty and indigence, respectively.

A comparison between poverty and indigence levels in 2002 and in earlier periods reveals mixed trends, which as a rule reflect the region's economic performance. The most recent figures show a rise of half a percentage point in the poverty rate and four tenths of a point in the indigence rate with respect to 1997, which was a very significant year for Latin America because it marked the onset of a series of

major financial crises. This confirms that progress towards eradicating poverty has been stalled for at least five years. By contrast, a comparison between recent figures and data from the early 1990s paints a more encouraging picture: despite the increases mentioned, in 2002 poverty and indigence rates were, respectively, 4.3 and 3.1 percentage points lower than the equivalent rates in 1990. This means that, even though the recent crises have undone much of the progress made in reducing poverty over the past decade, the net outcome of the efforts of the past 13 years is still positive. On the other hand, if 1980 is taken as the reference year, it can be seen that standards of living in the region have not improved substantially in the last 22 years, at least in terms of the proportion of people whose income covers their basic needs. Poverty and indigence rates were still higher in 2002 than in 1980, by 3.5 and 0.8 percentage points, respectively.⁴

Poverty and indigence trends were uneven among individual countries between 1999 and 2001–2002. Some countries displayed fairly small

⁴ In this regard, the lack of progress in raising standards of living in terms of income does not mean that other aspects of living conditions have not improved, as shown by the indicators presented in the third section of this chapter.

variations, while others experienced much bigger changes.⁵ Brazil, Costa Rica, El Salvador, Nicaragua, Panama (urban areas), Paraguay and Venezuela recorded variations of less than a percentage point in the poverty rate. Of these countries, only Paraguay saw an increase in poverty, while in Brazil and Costa Rica it remained constant. In Venezuela, a small reduction in the poverty rate (by eight tenths of a percentage point) over this period reflected a reduction of more than five percentage points in 2000, followed by a sharp increase in 2002 as a result of the drastic fall in GDP that year (-9.6%) (see table 15 of the statistical appendix).

Interestingly, in most of the countries in this group, rates of indigence or extreme poverty tended to rise, albeit by less than one percentage point. The only exceptions were Nicaragua, where the indigence rate declined by 2.2 points and the poverty rate, by only half a point, and Paraguay, where the indigence rate dropped by six tenths of a point. The divergence between variations in poverty and variations in indigence in the period 1999–2002 is thought to indicate the relatively greater capacity of the non-indigent poor to deal with the adverse effects of episodes of slow growth or outright stagnation.

The only cases in which there was a marked deterioration in the population's living conditions were Argentina and, to a lesser extent, Uruguay. In Argentina (greater Buenos Aires), the poverty rate doubled between 1999 and 2002, jumping from 19.7% to 41.5%, while indigence nearly quadrupled, from 4.8% to 18.6%, especially after the crisis broke out at the end of 2001. Uruguay (urban areas) also recorded an increase in poverty which, though significant, was less dramatic and involved lower

rates than the one in Argentina. The poverty rate rose from 9.4% to 15.4%, but indigence remained low, affecting only 2.5% of the population.

By contrast, in Mexico, Ecuador (urban areas), Honduras and the Dominican Republic, both poverty and indigence declined appreciably. Although Mexico's per capita GDP decreased in 2001 and 2002 (-2.6% over the biennium), the most recent household survey available for that country shows a 1.7-point reduction in the nationwide poverty rate and a 2.6-point reduction in the indigence rate, both with respect to the 2000 figure. Nevertheless, this reduction appears to be attributable exclusively to the decline recorded in rural areas, since, in urban areas, poverty remained constant and indigence even increased slightly.⁶ Meanwhile, Ecuador significantly improved its urban poverty and indigence rates in 2002, achieving reductions of 14.6 and 11.9 percentage points, respectively, after having suffered a recession in 1999 that had raised the poverty rate to nearly 64%. The fact that the poor now represent less than 50% of the population is a clear sign of the progress the country has made since the 1990s in improving social conditions. In Honduras the rates of both poverty and indigence fell by 2.4 percentage points in relation to their 1999 levels, bringing the percentage of the population living in poverty to 77.3% and the percentage living in indigence to 54.4% in 2002. In this case, the decrease leaves the country in a better position, or at least no worse off, than in 1990 and 1997. Lastly, in 2002 poverty in the Dominican Republic fell by 2 percentage points and indigence, by 1.8 points in relation to the 2000 rates, placing these indicators at 44.9% and 20.3% of the population, respectively (see table 1.4).

⁵ Box 1.5 contains a brief analysis of poverty in the Caribbean countries.

⁶ It should be noted that, in some countries, the changes introduced in household surveys may make their results hard to compare to those of previous surveys. See box 1.3 for a brief analysis of this problem. With respect to Mexico in particular, box 1.4 reviews factors that may affect survey comparability.

Table I.4

LATIN AMERICA (18 COUNTRIES): POVERTY AND INDIGENCE INDICATORS, 1990–2001/2002 a/ (Percentages)									
Country	Year	Households and population below the:							
		Poverty line b/				Indigence line			
		H		PG	FGT ₂	H		PG	FGT ₂
		Households	Population			Households	Population		
Argentina c/	1990	16.2	21.2	7.2	3.4	3.5	5.2	1.6	0.8
	1997	13.1	17.8	6.2	3.1	3.3	4.8	1.5	0.7
	1999	13.1	19.7	6.8	3.3	3.1	4.8	1.4	0.7
	2002	31.6	41.5	19.1	11.5	12.0	18.6	7.5	4.1
Bolivia	1989 d/	48.9	52.6	24.5	15.0	21.9	23.0	9.7	6.1
	1997	56.7	62.1	33.6	22.8	32.7	37.2	18.6	12.1
	1999	54.7	60.6	33.9	24.1	32.5	36.4	20.3	14.7
	2002	55.5	62.4	34.4	23.8	31.7	37.1	19.5	13.5
Brazil	1990	41.4	48.0	23.5	14.7	18.3	23.4	9.7	5.5
	1996	28.6	35.8	16.7	10.4	10.5	13.9	6.2	4.0
	1999	29.9	37.5	17.0	10.2	9.6	12.9	5.3	3.3
	2001	29.9	37.5	17.3	10.7	10.0	13.2	5.8	3.8
Chile	1990	33.3	38.6	14.8	7.9	10.6	12.9	4.3	2.3
	1996	19.7	23.2	7.8	3.8	4.9	5.7	1.9	1.1
	2000	16.6	20.6	7.1	3.7	4.6	5.7	2.1	1.2
Colombia	1994	47.3	52.5	26.6	17.5	25.0	28.5	13.8	9.1
	1997	44.9	50.9	22.9	13.8	20.1	23.5	9.7	5.8
	1999	48.7	54.9	25.6	15.7	23.2	26.8	11.2	6.9
	2002 e/	44.6	50.6	24.1	15.0	20.7	23.7	10.0	6.3
Costa Rica	1990	23.6	26.3	10.7	6.5	10.0	10.1	4.8	3.4
	1997	20.2	22.5	8.5	4.9	7.3	7.8	3.5	2.3
	1999	18.2	20.3	8.1	4.8	7.5	7.8	3.5	2.3
	2002	18.6	20.3	8.4	5.2	7.7	8.2	3.9	2.7
Ecuador e/	1990	55.8	62.1	27.6	15.8	22.6	26.2	9.2	4.9
	1997	49.8	56.2	23.9	13.5	18.6	22.2	7.7	4.1
	1999	58.0	63.5	30.1	18.2	27.2	31.3	11.5	6.3
	2002	42.6	49.0	20.8	11.8	16.3	19.4	6.9	3.7
El Salvador	1995	47.6	54.2	24.0	14.3	18.2	21.7	9.1	5.6
	1997	48.0	55.5	24.4	13.9	18.5	23.3	8.3	4.0
	1999	43.5	49.8	22.9	14.0	18.3	21.9	9.4	5.8
	2001	42.9	48.9	22.7	14.0	18.3	22.1	9.5	5.7
Guatemala	1989	63.0	69.4	35.9	23.1	36.7	42.0	18.5	11.2
	1998	53.5	61.1	27.3	15.4	26.1	31.6	10.7	5.1
	2002	52.3	59.9	26.4	14.8	26.3	30.3	10.1	4.9
Honduras	1990	75.2	80.8	50.2	35.9	53.9	60.9	31.5	20.2
	1997	73.8	79.1	45.6	30.8	48.3	54.4	25.4	15.4
	1999	74.3	79.7	47.4	32.9	50.6	56.8	27.9	17.5
	2002	70.9	77.3	45.3	31.2	47.1	54.4	26.6	16.2
Mexico	1989	39.0	47.7	18.7	9.9	14.0	18.7	5.9	2.7
	1996	43.4	52.9	21.8	11.7	15.6	22.0	7.1	3.3
	2000	33.3	41.1	15.8	8.1	10.7	15.2	4.7	2.1
	2002	31.8	39.4	13.9	6.7	9.1	12.6	3.5	1.4
Nicaragua	1993	68.1	73.6	41.9	29.3	43.2	48.4	24.3	16.2
	1998	65.1	69.9	39.4	27.3	40.1	44.6	22.6	15.1
	2001	62.9	69.4	36.9	24.3	36.3	42.4	19.0	11.7
Panama e/	1991	33.6	39.9	17.9	10.9	13.9	16.2	7.3	4.7
	1997	24.6	29.7	12.1	6.9	8.6	10.7	4.3	2.5
	1999	20.8	25.7	9.9	5.4	6.6	8.1	3.1	1.8
	2002	21.4	25.3	10.0	5.6	8.0	8.9	3.3	1.8

Table I.4 (concluded)

LATIN AMERICA (18 COUNTRIES): POVERTY AND INDIGENCE INDICATORS, 1990–2001/2002 a/									
(Percentages)									
Country	Year	Households and population below the:							
		Poverty line b/				Indigence line			
		H		PG	FGT ₂	H		PG	FGT ₂
		Households	Population			Households	Population		
Paraguay	1990 f/	36.8	43.2	16.1	8.0	10.4	13.1	3.6	1.5
	1996 e/	39.6	46.3	18.5	9.8	13.0	16.3	5.0	2.4
	1999	51.7	60.6	30.2	19.0	26.0	33.8	14.5	8.5
	2001	52.0	61.0	30.3	19.5	26.5	33.2	15.4	9.6
Peru	1997	40.5	47.6	20.8	12.0	20.4	25.1	10.1	5.7
	1999	42.3	48.6	20.6	11.7	18.7	22.4	9.2	5.1
	2001 g/	46.8	54.8	-	-	20.1	24.4	-	-
Dominican Republic	2000	43.0	46.9	22.1	13.9	20.6	22.1	10.1	6.7
	2002	40.9	44.9	20.5	12.9	18.6	20.3	9.3	6.3
Uruguay e/	1990	11.8	17.9	5.3	2.4	2.0	3.4	0.9	0.4
	1997	5.7	9.5	2.8	1.2	0.9	1.7	0.5	0.2
	1999	5.6	9.4	2.7	1.2	0.9	1.8	0.4	0.2
	2002	9.3	15.4	4.5	1.9	1.3	2.5	0.6	0.2
Venezuela	1990	34.2	39.8	15.7	8.5	11.8	14.4	5.0	2.4
	1997	42.3	48.0	21.0	12.0	17.1	20.5	7.4	3.8
	1999	44.0	49.4	22.6	13.7	19.4	21.7	9.0	5.5
	2002	43.3	48.6	22.1	13.4	19.7	22.2	9.3	5.7
Latin America h/	1990	41.0	48.3	-	-	17.7	22.5	-	-
	1997	35.5	43.5	-	-	14.4	19.0	-	-
	1999	35.3	43.8	-	-	13.9	18.5	-	-
	2000	34.5	42.5	-	-	13.8	18.1	-	-
	2001	35.0	43.2	-	-	13.9	18.5	-	-
	2002	36.1	44.0	-	-	14.6	19.4	-	-

Source: ECLAC, on the basis of special tabulations of data from household surveys conducted in the respective countries.

a/ See box I.2 for the definition of each indicator. The PG and FGT₂ indices are calculated on the basis of the distribution of the poor population.

b/ Includes households (people) living in indigence or extreme poverty.

c/ Greater Buenos Aires.

d/ Eight departmental capitals plus El Alto.

e/ Urban areas.

f/ Asunción metropolitan area.

g/ Figures from the National Institute of Statistics and Informatics (INEI) of Peru. These figures are not comparable to data from earlier years because of a change in the household survey sample frame. According to INEI, the new figures display a relative overestimate in relation to those derived from the previous methodology, of 25% for poverty and 10% for indigence.

h/ Estimate for 18 countries of the region plus Haiti.

As well as the proportion of the population living in poverty and indigence, an analysis of the magnitude of poverty must consider such aspects as the “depth” and “severity” of poverty. The headcount index, which indicates only the

proportion of poor people, does not reveal how poor they are or how their income is distributed. This extra information is reflected in the indices known as the “poverty gap” (PG) and “severity of poverty” (FGT₂) indices (see box I.2).

INDICATORS FOR MEASURING POVERTY

The process of measuring poverty encompasses at least two stages: (i) the identification of the poor, and (ii) the aggregation of poverty into a synthetic measurement. The first stage, which is described in box 1.1, consists of identifying the population whose per capita income is lower than the cost of a basket of items that satisfy basic needs. The second stage –aggregation– consists of measuring poverty using indicators that synthesize the information into a single figure.

The poverty measurements used in this document are in the family of parametric indices proposed by Foster, Greer and Thorbecke, which are obtained from the following equation:

$$FGT_{\alpha} = \frac{1}{n} \sum_{i=1}^q \left(\frac{z - y_i}{z} \right)^{\alpha} \quad (1)$$

where n represents the size of the population, q denotes the number of people with income below the poverty line (z), and the parameter $\alpha > 0$ assigns varying weights to the difference between the income (y) of each poor individual and the poverty line.

When $\alpha = 0$, equation (1) corresponds to what is known as the headcount index (**H**), which represents the proportion of the population with income lower than the poverty line:

$$H = q/n \quad (2)$$

Because it is easy to calculate and interpret, this indicator is the one most commonly used in poverty studies. However, the headcount index provides a very limited view of poverty, since it offers no information on “how poor the poor are”, nor does it consider income distribution.

When $\alpha = 1$, however, the equation yields an indicator that measures the relative income shortfall of poor people with respect to the value of the poverty line. This indicator is known as the poverty gap (**PG**):

$$PG = \frac{1}{n} \sum_{i=1}^q \left[\frac{z - y_i}{z} \right] \quad (3)$$

The poverty gap index is considered more complete than the headcount index because it takes into account not only the proportion of poor people, but also the difference between their incomes and the poverty line. In other words, it adds information about the depth of poverty.

Lastly, an index that also considers the degree of disparity in the distribution of income among the poor is obtained when $\alpha = 2$. This indicator also measures the distance between the poverty line and each person’s income, but it squares that difference in order to give greater relative weight in the final result to those who fall farthest below the poverty line:

$$FGT_2 = \frac{1}{n} \sum_{i=1}^q \left(\frac{z - y_i}{z} \right)^2 \quad (4)$$

The values of the FGT_2 index are not as simple to interpret as those of the **H** and **PG** indices. Since the values obtained from this index are more complete, however, they are the most suitable for use in designing and evaluating policies and in comparing poverty between geographical units or social groups.

All three of these indicators have the “additive decomposability” property, meaning that a population’s poverty index is equal to the weighted sum of the indices of the different subgroups of which it is composed. Accordingly, the national poverty and indigence indices contained in this document were calculated by averaging the indices for different geographical areas, weighted according to the percentage of the population living in each area.

Source: Prepared on the basis of James Foster, Joel Greer and Erik Thorbecke, “A class of decomposable poverty measures”, *Econometrica*, vol. 52, No. 3, 1984.

CHANGES IN INFORMATION SOURCES

The household surveys conducted in the Latin American countries are being used for an increasing number of analytical purposes. For several decades now, ECLAC has made intensive use of these sources of information to monitor trends in poverty and income distribution, among other issues, and to assess the impact of public policies designed to benefit low-income households.

Thanks to the work carried out by national statistical offices, often with the support of international agencies, the household surveys conducted in the countries of the region have improved considerably, and the data they generate are of better quality and more representative. This ongoing process of improvement, however, can sometimes hinder comparisons between data generated by surveys conducted at different times.

The comparability of estimates obtained from survey data can be affected by changes in:

- a) The type of survey used (employment, living conditions or household budgets), with their respective conceptual and methodological frameworks for gathering information;
- b) The nature of the survey (one-off or continuous);
- c) The sample frame and the design, size and distribution of the sample;
- d) The survey questionnaire;
- e) The income flows considered; i.e., the conceptual coverage of the income variable.

In several of the region's countries, poverty estimates for 2000 to 2002 reflect the effect of one or more of these changes in information sources. This report will not attempt to review all such cases, but it cannot fail to mention at least the countries below, since the changes they have made have had substantial effects on the levels and trends of their indicators.

- Colombia: in 2001 the country introduced a continuous survey with features that differed from earlier ones;
- Guatemala: the types of surveys conducted have changed constantly in the last five years;
- Panama: in 2001 the surveys began to cover the population living in remote and indigenous areas and to include the income of own-account agricultural workers, which had not previously been quantified;
- Peru: in 2001 the sample frame and sample size were changed;
- Dominican Republic: in 2000 the sample's size and geographical coverage were expanded.

Three special cases should be added to the countries mentioned above. One of them is Mexico, which is dealt with in greater detail in box I.4. Another is Argentina. Up to 2002, no changes were made that could affect comparability, but in 2003 a new continuous household survey was introduced. Lastly, Ecuador's most recent surveys need to be examined to rule out the possibility that the substantial decline in poverty they reveal may be due to changes in the source of information used.

In conclusion, any of these circumstances, as well as others not touched on here, can hinder the comparison of surveys and affect the monitoring of trends in indicators of the population's standard of living.

A comparison between the proportion of poor people and the information gleaned from the PG and FGT_2 indices reveals that in one group of countries, comprising Brazil, Costa Rica and Panama (urban areas), the headcount index stayed practically the same between 1999 and 2001–2002, or dropped slightly, in the case of Panama. The PG

and FGT_2 indices, however, show that the quality of life declined in this period, in some cases significantly. In other words, although the poverty rate may have remained unchanged or even decreased, the situation of the poor clearly worsened in terms of average income and, in particular, income distribution.

POVERTY IN MEXICO, 2000–2002

According to estimates for Mexico based on the national household income and expenditure survey (ENIGH), between 2000 and 2002 poverty and indigence declined by 1.7 and 2.6 percentage points, respectively. This reflects an upturn in standards of living, especially in rural areas, with a substantial decrease in income concentration. These findings are particularly striking in the light of the harsh macroeconomic environment prevailing in that period, in which output stood still and per capita income slumped by 2.6%. This had suggested that poverty was likely to increase or at least hold steady with respect to 2000.

In those circumstances, it is natural to question whether these variations are due to economic developments and the impact of social policy or whether they should be viewed as a strictly statistical phenomenon attributable to the fact that the 2002 ENIGH differs from the 2000 version in at least three respects: the considerations used to determine the size of the sample, which is much larger (17,167 households compared to 10,108); the housing distribution criteria used in designing the sample; and changes in the questionnaire, which made it possible to reflect larger amounts of income under certain items.

The following features of the new survey are especially noteworthy:

- The population trends implicit in the survey differ from those revealed by official statistics. While the ENIGH shows an annual population growth rate of 2%, figures from the National Population Council (CONAPO) indicate an annual rate of 1.6%, in keeping with the observed slowdown in population growth, which became more pronounced beginning in 1990.
- According to the 2002 ENIGH survey, the average number of employed persons has increased by 6.3% and the average number of employed persons receiving income, by almost 3%, with the biggest changes observed in rural areas and, in particular, in the groups with the fewest resources. According to the survey, the average size of extremely poor households in localities with fewer than 2,500 inhabitants dropped from 6 to 5.5 members; in rural areas, the average number of employed persons in the second per-capita income decile (which corresponds to extreme poverty) rose from 1.79 to 1.92 and the number of persons per household fell from 5.9 to 5.3.
- The subgroup of households in the primary sample units that coincide in the 2000 and 2002 surveys have an average of 3.98 members, while all the other households report an average of 4.2 members. In turn, in indigent households in localities with fewer than 2,500 inhabitants, the difference between the two groups is 0.6 people per household. Although this situation in itself is not surprising, its effect is far from negligible, considering that in the expanded figures this group represents 37% of households and 36% of the country's total population.
- Nationwide, the survey shows that real household income rose by 2.2%, despite the decline in per capita GDP. It also indicates that 80% of households saw an upturn in their income and that the first two deciles in rural areas increased their contribution to total income by over 20%. Rural families' real income from wages is shown to have risen by 17.5% and their income from transfers under the Direct Rural Support Programme, by 34.6%, even though the Programme's budget showed no appreciable alterations in the biennium.

It is clear that these factors could have a major effect on the findings with regard to poverty and income distribution. By way of illustration, if the size of low-income households had varied in line with expectations—for example, a decline of two tenths of a percentage point with respect to the 2000 figure (5.9 people)—the extreme poverty rate would stand at about 18%, which is higher than the estimates derived from the 2002 ENIGH data.

In short, the findings of the 2002 survey are probably not fully comparable to the 2000 results, particularly in low-density (rural) areas, owing to changes in the sample design of the most recent household income and expenditure survey, basically affecting sample size and distribution.

In a second group of countries, which includes Argentina, on the one hand, and Ecuador, Mexico and Nicaragua, on the other, the PG and FGT₂ indicators moved in the same direction as the poverty rate, but in much larger proportions. In Argentina, between 1999 and 2002, the headcount

index increased by a factor of 2.1; the poverty gap, by almost 3; and the severity of poverty, by 3.5. As well as an increase in the proportion of poor people, this points to a downturn in both average income and income distribution among the poor. In Ecuador, Mexico and Nicaragua, the PG and FGT₂ indices

decreased much more than the poverty rate, indicating that the situation of the poor improved more significantly than the reduction in the proportion of poor people alone would suggest (see table I.4).

With regard to geographical trends in the poverty rate, urban and nationwide indicators have behaved in a very similar manner, declining by 1.2 percentage points in 2000 with respect to 1999, then rising by 1.1 and 1.4 percentage points in 2001 and 2002, respectively. Indigence, in turn, dropped by two tenths of a point in 2000, then increased by half a point and by 1.3 points in 2001 and 2002. The region's urban poverty rate currently stands at 38.4% and the indigence rate, at 13.5% (see table I.2).

Rural poverty has behaved somewhat differently. In 2000 both poverty and indigence declined at rates similar to those seen in urban areas, by 1.2 and 0.5 percentage points, respectively. Rural poverty decreased again in 2001 (by two tenths of a point), however, unlike the urban and nationwide indicators. In these three years rural indigence stayed virtually the same, at around 37.9%.

Rural areas have therefore turned in a slightly better cumulative performance than their urban counterparts. This is particularly evident when 1997 is taken as a reference year; between 1997 and 2002 urban poverty and indigence rose by 1.9 and 1.2 percentage points, respectively, by contrast to rural poverty, which decreased by 1.2 points, and rural indigence, which increased by only three tenths of a point.

Projections for 2003 based on the economic growth anticipated for the different countries and for the region as a whole indicate that region-wide poverty and indigence rates are likely to rise slightly this year, mainly because of the absence of growth in per capita GDP. Although the projected increase is small in percentage terms, the number of poor people will swell by about six million. Living conditions are expected to show little change in most of the countries; the exceptions are Venezuela, where poverty could increase significantly, and Argentina, where renewed economic growth will probably help to bring down the percentage of poor people (see figure I.1).⁷

7 According to the nationwide estimates published by Argentina's National Institute of Statistics and Censuses, in May 2003 the urban poverty rate was estimated to be almost 3 percentage points lower than the figure recorded in October 2002, while urban indigence was estimated to have declined by one percentage point.

POVERTY IN THE CARIBBEAN

As in the past, poverty and inequality are hard to measure in the Caribbean countries, owing mainly to the lack of sufficiently accurate household surveys and to problems of comparability among the survey data available. Nevertheless, a number of positive processes introduced in recent years are worthy of mention: in Jamaica a survey on living conditions has been conducted annually since 1988, in Guyana two surveys were conducted in the 1990s, and since 1995 the Caribbean Development Bank has promoted poverty assessments in countries such as Anguilla, Belize, British Virgin Islands, Dominica, Grenada, Saint Kitts and Nevis, Saint Lucia and Saint Vincent and the Grenadines.

The most recent available information on poverty in the Caribbean was reviewed using a procedure similar to the one employed for the 2000–2001 edition of the *Social panorama*. Since the data come from a wide variety of sources and methodologies, extreme care should be taken in comparing them. They do, however, make it possible to draw some general conclusions about poverty in the subregion. Haiti has the highest rates of poverty (over 80%) and indigence, not only in the Caribbean, but probably in the entire region. Dominica, Guyana, Saint Vincent and the Grenadines and Suriname also have poverty rates higher than those of the other countries, albeit well below Haiti's rates. At the other extreme, absolute poverty in the Bahamas is exceptionally low, rivalling the rates seen in countries with highly developed economies.

Available data show that, at least in Guyana and Jamaica, poverty declined significantly in the 1990s, from 43% in 1993 to 35% in 1999 and from 28% in 1990 to 17% in 1999, respectively. This trend is not uniform throughout the subregion, however. In Dominica, Grenada, Saint Lucia and Saint Vincent and the Grenadines, among other countries, an ailing banana industry and a rise in rates of unemployment and underemployment are probably to blame for higher poverty rates.

Despite the differences in the figures, certain features can be found that are common to most of the Caribbean countries. First, as in Latin America, rural poverty is higher than urban poverty. In Jamaica, poverty rates in rural areas are triple the ones found in urban areas, while in Guyana, almost the entire rural population is poor. The situation is similar in Belize, Dominica, Grenada, Guyana, Saint Kitts and Nevis, Saint Lucia and Saint Vincent and the Grenadines.

Another common characteristic is that poor households tend to have more members than non-poor ones and to suffer from overcrowding. In Belize, Grenada, Saint Lucia and Saint Vincent and the Grenadines, households in the poorest quintile have an average of 5 to 6 members, while those in the richest quintile have an average of 2 to 3 members.

The poor tend to be less educated than the rest of the population. In Saint Lucia, the gross secondary-school attendance rate for the poorest quintile is a meagre 45.8%, while the rate for the richest quintile is 78.8%. By the same token, in Jamaica and Guyana access to quality education is highly dependent on socio-economic status.

In general, unemployment in the Caribbean countries is high and shows similar rates in poor and non-poor population groups (except in Trinidad and Tobago and Saint Lucia, where unemployment is higher among the poor). The poor tend to remain unemployed for longer periods of time, however. Moreover, it is common for participants in the labour market to earn less than the value of the poverty line, especially when they are employed in the informal sector or in low-paid agricultural work.

Specific studies conducted in some Caribbean countries have found that poverty is strongly linked to crime, drug trafficking, domestic violence and child abuse.

Lastly, natural disasters such as hurricanes, storms and volcanic eruptions, which are common in the Caribbean, are more devastating for people who are poor or whose income is just above the poverty line, since they lack savings to see them through difficult periods.

Source: Prepared on the basis of ECLAC, "Education and its impact on poverty: equity or exclusion" (LC/CAR/G.609), Port of Spain, ECLAC subregional headquarters for the Caribbean, 2000, and "Poverty and social integration in the Caribbean" (LC/CAR/G.619), paper presented at the Regional Meeting on Education for All in the Americas (Santo Domingo, 10–12 February 2000), Port of Spain, ECLAC subregional headquarters for the Caribbean, 2000.

POVERTY IN THE CARIBBEAN

Population size and poverty and indigence rates
in selected Caribbean economies

Economy	Total population 2003 (Thousands of people)	Year of poverty estimate	Poverty rate (Percentage of the population)	Indigence rate (Percentage of the population)
Anguilla	12	2002	23	2
Antigua and Barbuda	65	Early 1990s	12	-
Bahamas	316	..	5	-
Barbados	270	1997	14	1
Belize	240	1995	33	13
Dominica	70	2002	39	15
Grenada	94	1998	32	13
Guyana	767	1999	35	21
Haiti	8 827	1995	81 a/	66 a/
British Virgin Islands	26	2002	22	1
Jamaica	2 645	2001	17	-
Nevis	38 b/	2000	32	17
Saint Kitts	38 b/	2000	31	11
Saint Vincent and the Grenadines	115	1996	38	26
Saint Lucia	153	1995	25	7
Suriname	423	1993	77 c/	63 c/
Trinidad and Tobago	1 312	1992	21	11

Source: Prepared on the basis of population data from the United Nations Population Division, *World Population Prospects: The 2002 Revision*, New York, 2002, and on the basis of data from World Bank poverty and indigence studies conducted in Antigua and Barbuda, Bahamas and Trinidad and Tobago, *Poverty Reduction and Human Resource Development in the Caribbean*, Washington, D.C., May 1996; Anguilla, *Poverty Assessment Study*, Anguilla Statistics Unit, 2002; Barbados, European Community, *Country Strategy Paper*, Brussels, 2002; Caribbean Development Bank, *Saint Lucia Poverty Assessment Report*, Saint Michael, 1995, *Belize Poverty Assessment Report*, Saint Michael, 1996, *Saint Vincent and Grenadines Poverty Assessment Report*, Saint Michael, 1996, *Grenada Poverty Assessment Report*, Saint Michael, 1999, *Saint Kitts & Nevis Poverty Assessment Report*, Saint Michael, March 2001, *British Virgin Islands Poverty Assessment Report*, Saint Michael, 2003, *Dominica Poverty Assessment Report*, Saint Michael, 2003; Government of Guyana, *Guyana: Poverty Reduction Strategy Paper*, May 2002; M. Neri and J. Menke, "Poverty in Suriname: Assessment, Monitoring and Capital Enhancing Policies", document prepared by the United Nations Development Programme (UNDP), 1999; World Bank, "Haiti, The Challenges of Poverty Reduction", *Sector Report*, No. 17242, Washington, D.C., August 1998, and World Bank, "Jamaica Country Assistance Strategy", *Progress Report*, vol. I, No. 24689, Washington, D.C., September 2002.

a/ Rural areas only.

b/ Total Saint Kitts and Nevis.

c/ Includes only Paramaribo and Wanica.

B. PROGRESS TOWARDS THE POVERTY REDUCTION TARGET FOR 2015

The poor economic performance of the Latin American countries over the past biennium has reduced their chances of meeting the target of halving extreme poverty by 2015. The region's per capita output would have to expand at an annual rate of 2.6% for the next 13 years in order to meet the relevant Millennium Declaration goal, if income distribution remains essentially unchanged throughout the period. Although the target now looks further off than it did in 2000, it may nevertheless still be achieved in a number of countries in the region, if they are able to regain growth rates comparable to their best performances of the 1990s.

Since the Millennium Declaration was adopted, the goals and targets it contains have become essential benchmarks for assessing development throughout the world, for countries and international agencies alike, including ECLAC.⁸ Given the importance of meeting these goals, progress towards them must be constantly monitored and, in particular, potential problems must be identified. Accordingly, this section gives a brief analysis of the region's chances of halving extreme poverty by 2015, to follow up the analyses presented in the last two editions of the *Social panorama*.

By 2000, Latin America had already made about 40% of the progress required towards this goal. This percentage was equivalent to the amount of time that had elapsed within the period 1990–2015, indicating that the region was advancing quickly enough to meet the target. Nonetheless, the economic and social setbacks of 2001 and 2002 whittled down this cumulative progress to 27.6% in 2002, whereas almost half (48%) of the time allowed for achieving the extreme poverty reduction target had already passed (see figure I.2).

8 See ECLAC (2002b), box I.3.

Figure I.2



Source: ECLAC, on the basis of special tabulations of data from household surveys conducted in the respective countries.
a/ Urban areas.

Chile is the only country that has already met this target ahead of time. In addition, Brazil (which has made 82% of the progress required), Ecuador (52%), Guatemala (55%), Mexico (66%), Panama (48%) and Uruguay (55%, despite the setbacks it suffered in 2002) have made at least 48% of the progress needed. The other countries, however, are lagging behind with regard to the first of the Millennium Development Goals. The most worrisome cases are unquestionably those of Argentina, Colombia and Venezuela, whose indigence levels in 2002 not only were not lower than their 1990 levels, but actually exceeded them.

Moreover, progress towards halving total poverty by 2015 –a target which, in principle, is more in keeping with Latin America’s level of development relative to the rest of the world– has been much slower than progress towards the target of halving extreme poverty. By 2002, poverty rates in the region were only 18% lower than they had been in 1990, which represents a setback of 6 percentage points compared to the 2000 figures.

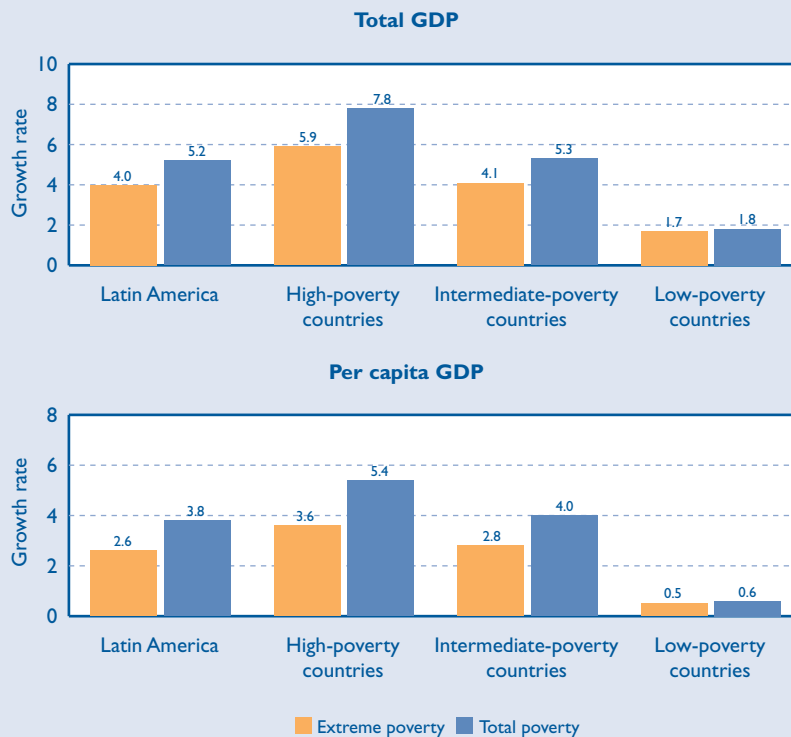
In contrast to the situation with regard to extreme poverty, none of the countries have yet managed to halve total poverty. Chile and Panama are the only countries that have made more progress than expected, after 12 of the 25 years established as a deadline by the international community have gone by.

According to simulations based on the most recent available household surveys for the countries of the region, Latin America’s per capita output would have to expand at an annual rate of 2.6% for the next 13 years to meet the target of halving extreme poverty, if income distribution remains unchanged over this period. This rate is equivalent to an annual growth rate of 4% in total output.

Because of the differences in extreme poverty rates from one country to another, the rate of expansion each country needs to meet the target also varies enormously. The countries with the highest levels of indigence (above 30%) would have to post per capita GDP growth rates of 3.6% a year to meet the target, while countries with intermediate levels (11% to 30%) would have to post rates of 2.8%, and those with the lowest levels (under 11%), only 0.5% (see figure I.3).⁹ As mentioned in the preceding edition of the *Social panorama*, the countries with the highest poverty rates face a much bigger challenge than the others, not only because they have a longer distance to cover (that is, a wider difference in percentage points between indigence in 1990 and the target for 2015), but also because progress between 1990 and 2002 was limited or even negative.

9 The countries in each category do not coincide exactly with those cited in the *Social panorama of Latin America, 2001–2002* (see ECLAC, 2002b). In particular, two countries formerly classified as “low poverty” (Argentina and Panama) and one formerly considered “high poverty” (Ecuador) have moved into the “intermediate poverty” group.

**LATIN AMERICA: TOTAL GDP AND PER CAPITA GDP GROWTH RATES
NEEDED TO REDUCE THE 1990 POVERTY RATE BY HALF, 2002–2015**
(Annual average)



Source: ECLAC, on the basis of special tabulations of data from household surveys conducted in the respective countries.

The growth rates needed to halve total poverty are even higher, and in some cases clearly unattainable. Average regional per capita output would have to increase by 3.8% a year, or 5.4% for the countries with the highest poverty levels, 4% for those with intermediate levels and 0.6% for those with the lowest levels.

The setbacks that the poverty reduction effort suffered in 2001 and 2002 mean that the expansion required to meet either of the two targets is much higher than the rates calculated from data for 2000. The progress made up to 2000 indicated that to reduce extreme poverty by half, per capita output would have to grow by 1.4% a year, while 2.6% a year would have been enough to halve total poverty. As noted above, these rates have now risen to 2.6% and 3.8% a year, respectively.

These new estimates do not affect all the countries equally, however. While countries with high and intermediate poverty levels face a tougher challenge than they did in 2000, the minimum growth required by those with low indigence levels is eight tenths of a point lower than it was in 2000. Thus, the differences between countries in terms of their chances of reaching the targets have sharpened in these two years.

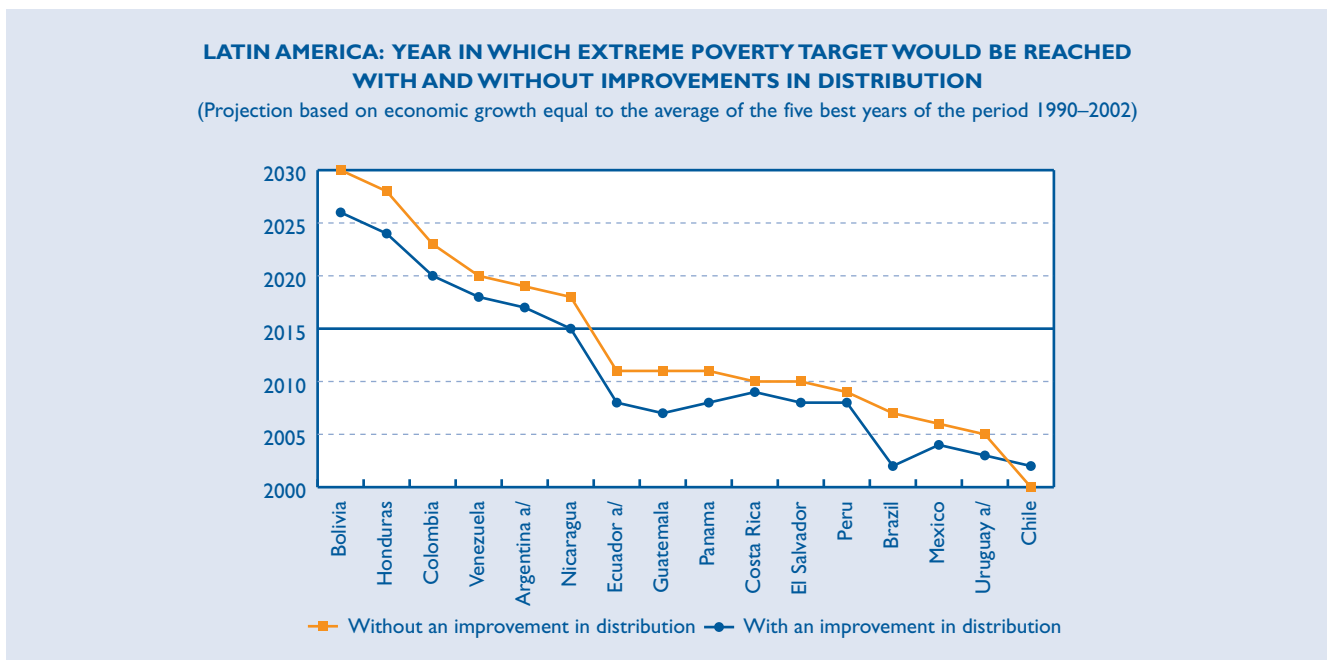
The targets' feasibility can also be evaluated in terms of the number of years needed to achieve them, assuming growth rates consistent with historical trends. Although the most obvious historical reference for predicting future economic expansion might appear to be each country's average annual growth in the period 1990–2002, this period includes episodes of crisis that can reasonably be

expected not to recur in the next few years. To exclude these episodes, the estimate uses the simple average of each country's five highest annual growth rates in this period.

From this standpoint, in addition to Chile, which has already met the target, nine more countries are in a position to do so by 2015. In other words, half the countries of Latin America, accounting for some 70% of the region's population, could halve their indigence levels by the target date. Were the deadline to be extended by five years beyond 2015, Nicaragua, Argentina and Venezuela would be able to meet the goal, while only Bolivia, Colombia, Honduras and Paraguay would need still more time.

In addition, as ECLAC has pointed out time and again, better income distribution can magnify the effect of economic growth on poverty reduction. For example, a 5% reduction in the Gini index (equivalent to approximately 0.025 points of the value of that indicator) can cut down by two to five years the amount of time needed to halve extreme poverty. Growth with redistribution would enable countries such as Mexico, Uruguay and Brazil to meet the target in less than three years, whereas none of them will be able to do so by 2005 without distributive improvements. Similarly, Costa Rica, Ecuador, Guatemala, Panama and El Salvador would reach the target before or during 2009, but are unlikely to do so without such a change in distribution (see figure I.4).

Figure I.4



Source: ECLAC, on the basis of special tabulations of data from household surveys conducted in the respective countries.
a/ Urban areas.

METHODOLOGY USED FOR PROJECTIONS

Defining the relationship between a country's poverty trends and GDP growth is a highly complex undertaking. Given the paramount importance of assessing the region's chances of improving its standards of living in the years to come, however, poverty projections were made for the 2001–2002 edition of the *Social panorama of Latin America*. Although these projections were very general, they served as a basis for the generation of preliminary estimates of the rates at which the Latin American countries will probably have to grow in order to halve extreme poverty by 2015.

The methodology used consisted of calculating a new distribution of income (y^*) using given rates of growth (β) and of distributive change (α) in households' per capita income (y) in each country, by means of the following equation:

$$y^* = (1 + \beta)[(1 - \alpha)y_i + \alpha\mu]$$

where μ denotes the mean value of the income distribution.

The methodological approach used here is similar to the one described above, with a small modification with respect to distributive changes:

$$\begin{aligned} \text{When } y \geq \mu: y^* &= (1 + \beta)[(1 - \alpha)y_i + \alpha\mu] \\ \text{When } y < \mu: y^* &= (1 + \beta)[\theta y_i], \text{ where } \theta \text{ is calculated such that } \mu^* = (1 + \beta)\mu \end{aligned}$$

This means that below-average income has been increased at a rate that is fixed, instead of being proportional to the difference between actual income and the mean value. Applying a constant rate of variation to below-average income yields a truer reflection of the regional data in this regard, which indicate that the share of the poorest deciles tends to change only moderately when income concentration decreases.

The main result of this modification is that the impact of distributive improvements on poverty, and particularly on indigence, is lessened. The previous formula overestimated this impact in some cases by generating an excessive increase in the lowest incomes to reduce income concentration. Lastly, although the new formula is useful for the purposes of this document, it is less general than the original, since it does not keep the distributional ranking unchanged and may not generate the desired results for high values of α .

Source: Economic Commission for Latin America and the Caribbean/Institute of Applied Economic Research/United Nations Development Programme (ECLAC/IPEA/UNDP) (2002), "Meeting the Millennium Poverty Reduction Targets in Latin America and the Caribbean", *Libros de la CEPAL series*, No. 70 (LC/G.2188-P), Santiago, Chile, December. United Nations publication, Sales No. E.02.II.G.125.

C. MULTIDIMENSIONAL MANIFESTATIONS OF POVERTY

A holistic look at the social situation in Latin America, covering not only the problem of insufficient income to meet basic needs but also shortfalls in other areas, shows that significant headway has been made in improving the population's quality of life in the past decade. Life expectancy, child mortality, illiteracy and access to drinking water are some of the indicators that have improved steadily since at least the 1980s. Social development is far from having reached an acceptable level in many countries of the region, however. Sharp disparities in access to social services within individual countries are another impediment to the achievement of more comprehensive social development.

Poverty is a complex and multidimensional phenomenon that encompasses deprivation in many aspects of individual and collective well-being. This deprivation can be quantified by examining people's capacity to meet their most basic needs, using an indicator such as household income (or consumption). The poverty and indigence estimates in the foregoing sections are based on precisely this approach, which offers the advantage of providing information on well-being in the form of a single figure. An evaluation of standards of living can also be based on indicators that reflect the real extent to which needs are met. This means that there must be at least one variable for each dimension of well-being considered, such as nutrition, education, health, housing, access to water and sanitation, among many others. This approach has the virtue of pinpointing the areas where needs are not being met, but it does not synthesize the information into a single indicator.

This section briefly looks at certain dimensions of living conditions in Latin America, in order to build on and enrich the analysis of poverty on the basis of income.

Despite the gradual stagnation of progress in eradicating monetary poverty in the 1990s, a wide variety of social indicators did improve, on average, over this period, in a continuation of the trends observed in earlier decades. In fact, Latin Americans' life expectancy at birth increased by a little over a year, to the age of 70, according to data for the period 1995–2000. In turn, thanks to an average reduction of 13% in the last decade, the child mortality rate in the countries of the region is no higher than 66 per thousand (the figure for Bolivia and Haiti), and in many of them it is less than 30 per thousand. The under-five mortality rate has also declined in the last 10 years, by between 8% (in Ecuador) and 25% (in Cuba). With very few

exceptions, the proportion of undernourished people has also dropped significantly. Excluding Haiti, where malnutrition is as high as 50%, in 2000 the highest figure recorded in the region was 29% in Nicaragua, which was 11 percentage points lower than the highest figure for 1990, which corresponded to Peru.¹⁰ Major improvements have also been seen in education. The illiteracy rate has dropped, in some cases (Bolivia, Guatemala and Haiti) by more than seven percentage points. In 2000 the average proportion of Latin Americans and Caribbeans over the age of 14 who could neither read nor write was 11.1%, or 3.8 percentage points lower than in 1990. In addition, in many countries, access to drinking water and basic sanitation improved considerably in the 1990s. The percentage of the population with access to an improved source of water increased by at least 11 percentage points in Bolivia, Ecuador, El Salvador, Guatemala and Paraguay, and by at least five points in four other countries. The proportion of the population with access to sanitation rose by over 14 percentage points in Bolivia, Ecuador and Honduras, which means that this basic need is now met for an average of 78% of the population of Latin America and the Caribbean (see table I.5).

The relative improvement in these social indicators is not exclusively a phenomenon of the 1990s, but represents the continuation of a more long-standing trend that began in the 1980s. Life expectancy at birth, child mortality and under-five mortality and illiteracy rates improved in all the countries between 1980 and 2000, not only in respect of the total population, but also when disaggregated by sex (see table 2 of the statistical appendix).

The indicators also show, however, that several of the region's countries are lagging behind considerably in terms of social development, with very sharp disparities between different Latin

American countries. While life expectancy is 77 years in Costa Rica, it is 61 years in Bolivia and, in Haiti, the average lifespan is only 57 years. The illiteracy rate for the population aged 15 or over is just 3% in Cuba, compared to 36% in Nicaragua and 50% in Haiti. The under-five mortality rate in Haiti, at 109 per thousand live births, is more than 10 times Cuba's rate of 10 per thousand.

Poverty by income level is largely consistent with the rest of the social indicators considered. The countries with the lowest poverty rates, such as Chile, Costa Rica and Uruguay, almost without exception display better social indicators than the rest. By the same token, countries that have high rates of poverty and indigence, such as Bolivia, Guatemala and Nicaragua, suffer the most severe social deficiencies. However, insufficient income is not always correlated with shortfalls in respect of other basic needs. For example, in 2000 Honduras had the highest poverty rate in Latin America, at almost 80%, but the social indicators considered displayed higher values in that country than in many other countries with lower poverty rates.

In this regard, it is illustrative to examine how closely the classification of countries by their rates of monetary poverty is correlated with a ranking based on other social indicators. The indicators most closely correlated with poverty levels are life expectancy and child mortality (0.7 in both cases) and under-five mortality (0.8). This suggests that the degree of insufficiency of monetary resources is a sound indicator of deprivation in other dimensions such the ones mentioned, at least for the purposes of comparison between countries. The correlation between poverty rates and the proportion of people lacking access to sanitation is relatively low (0.4), however, which shows that certain aspects of well-being are less closely associated with monetary poverty.

¹⁰ See chapter II for a detailed analysis of the level and development of nutritional deficiencies in Latin America.

Table I.5

LATIN AMERICA: SELECTED SOCIAL DEVELOPMENT INDICATORS 1990–2000								
Country	Life expectancy at birth (Number of years)		Infant mortality rate (Rate per 1,000 live births)		Under-five mortality rate (Rate per 1,000 live births)		Proportion of undernourished persons (Percentage of total population)	
	1990 – 1995	1995 – 2000	1990 – 1995	1995 – 2000	1990 – 1995	1995 – 2000	1990/1992	1998/2000
Argentina	72.1	73.1	24.3	21.8	28	25	2	2
Bolivia	59.3	61.4	75.1	66.7	99	87	26	23
Brazil	66.4	67.9	47.2	42.2	54	48	13	10
Chile	74.4	75.2	14.5	11.8	17	15	8	4
Colombia	68.6	70.7	35.2	30.0	47	39	17	13
Costa Rica	75.7	76.5	13.7	12.1	17	15	6	5
Cuba	75.3	76.0	10.0	7.5	13	10	5	13
Ecuador	68.8	69.9	49.7	45.6	65	60	8	5
El Salvador	67.1	69.4	40.2	32.0	51	41	12	14
Guatemala	62.6	64.2	51.1	46.0	68	61	14	25
Haiti	55.4	57.2	74.1	66.1	121	109	64	50
Honduras	67.7	69.8	43.0	35.0	60	50	23	21
Mexico	71.5	72.4	34.0	31.0	42	38	5	5
Nicaragua	66.1	68.0	48.0	39.5	62	50	30	29
Panama	72.9	74.0	27.0	23.7	33	28	19	18
Paraguay	68.5	69.7	43.3	39.2	53	48	18	14
Peru	66.7	68.3	55.5	42.1	77	65	40	11
Dominican Republic	67.0	68.6	46.6	40.0	65	56	27	26
Uruguay	73.0	74.1	20.1	17.5	23	20	6	3
Venezuela	71.8	72.8	23.2	20.9	28	25	11	21
Latin America	68.6	70.0	40.6	35.7	...	...	13 a/	11 a/
Country	Rate of illiteracy in the population aged 15 or over (Percentage of the population of the same age)		Access to an improved water source (Percentage of total population)		Access to sanitation (Percentage of total population)			
	1990	2000	1990	2000	1990	2000		
Argentina	4.3	3.2	94	...	82	...		
Bolivia	21.9	14.6	71	83	52	70		
Brazil	18.0	13.1	83	87	71	76		
Chile	6.0	4.2	90	93	97	96		
Colombia	11.6	8.4	94	91	83	86		
Costa Rica	6.1	4.4	...	95	...	93		
Cuba	4.9	3.3	...	91	98	...		
Ecuador	12.4	8.4	71	85	70	86		
El Salvador	27.6	21.3	66	77	73	82		
Guatemala	39.0	31.5	76	92	70	81		
Haiti	60.3	50.2	53	46	23	28		
Honduras	31.9	25.0	83	88	61	75		
Mexico	12.7	8.8	80	88	70	74		
Nicaragua	37.3	33.5	70	77	76	85		
Panama	11.0	8.1	...	90	...	92		
Paraguay	9.7	6.7	63	78	93	94		
Peru	14.5	10.1	74	80	60	71		
Dominican Republic	20.6	16.3	83	86	66	67		
Uruguay	3.5	2.4	...	98	...	94		
Venezuela	11.1	7.5	...	83	...	68		
Latin America	14.9 b/	11.1 b/	82 b/	87 b/	72 b/	78 b/		

Source: CELADE – Population Division of ECLAC (life expectancy at birth, infant mortality, under-five mortality), FAO (undernourishment), WHO/UNICEF (drinking water, sanitation) and UNESCO (illiteracy).

a/ Population-weighted average for 24 countries.

b/ Includes the Caribbean countries.

An analysis of the social situation in Latin America reveals major disparities in access to social services. For example, in urban areas school attendance among 13- to 19-year-olds living in households in the highest income quintile is invariably higher than it is among those in the poorest quintile. Disparity in access to secondary education varies considerably in magnitude, however. The lowest level of inequity is found in Argentina, where young people in the richest group have an attendance rate of 87.6%, compared to 73.4% in the poorest group. The biggest difference between socio-economic groups is found in Guatemala, where the 86.6% attendance rate of the richest quintile is almost double the figure for the poorest quintile, 43.6% (see table 10 of the statistical appendix).

Access to education among 20- to 24-year-olds, which corresponds roughly to the period of higher

education, is even more unequal. With the exception of Venezuela, where enrolment in higher education on the part of young people in the highest income quintile is 1.9 times the rate for the poorest quintile, no country displays a ratio below 2.7, which is the value found in Argentina, Brazil, Ecuador and Peru. At the other extreme, the enrolment of young people from well-off households can be as much as nine times the rate for those from low-income households (Guatemala).

In conclusion, a number of aspects of Latin Americans' quality of life have improved significantly in the last two decades, painting a more optimistic picture than an analysis of poverty in terms of income alone. Much remains to be done, however, not only with regard to levels of social development, but also in terms of equity, with a view to correcting the sharp disparities that persist between different socio-economic groups.¹¹

11 In Latin America disparities can be found not only between socio-economic groups, but also between different geographical locations (urban versus rural areas), genders and ethnic or racial groups. The analysis of these kinds of inequity is outside the scope of this section, however.

D. UNEQUAL INCOME DISTRIBUTION AT THE DAWN OF THE NEW MILLENNIUM

Between 2000 and 2002, trends in distributive inequality varied from one country to another in Latin America. Some experienced only slight variations in inequality with respect to 1999, while others saw pronounced changes in terms of either progress or setbacks. In most of the region, however, income distribution has worsened since 1997. From a more long-term perspective, income concentration has been rigid downward since the 1990s, and the failure to conclusively reverse this trend is an obstacle to the timely achievement of the poverty reduction target.

Highly unequal income distribution is one of the hallmarks of Latin America's social panorama. A first approach to analysing this phenomenon is to evaluate the prevailing distribution structure in the countries of the region, based on the percentage of total income received by individual households, ranked in ascending order by per capita income. On average, households in the first four income deciles (the poorest 40%) receive about 13.6% of total income. The proportions observed in the different countries do not diverge much from this average, except in the extreme cases of Bolivia (9.5%) and, particularly, Uruguay (21.6%). In the other countries, the first four deciles receive between 10.2% and 15.7% –in other words, a small share– of total income (see table I.6).

The changes in the proportion of income received by the poorest households between 1999 and 2001–2002 are mixed, but almost invariably

small. Indeed, only four countries display variations of more than one percentage point. Furthermore, the biggest of these variations take place in opposite directions: the proportion rose by 1.8 points in Nicaragua and fell by 2 points in Argentina.

On average, households in the fifth, sixth and seventh deciles –the ones in the middle of the income distribution– receive 23% of total national income. In respect of these households, the countries with the lowest and highest shares were Bolivia (17.5%) and Costa Rica (25.6%), respectively. Meanwhile, the eighth and ninth deciles receive an average of 27.3% of monetary household income. This average fluctuates within a small range, from 25.3% in Argentina to 29.7% in Costa Rica. This shows that the relative position of the 20% of households in the upper–middle–income bracket is much the same throughout the region.

Table I.6

LATIN AMERICA (18 COUNTRIES): HOUSEHOLD INCOME DISTRIBUTION, 1990–2001/2002 ^{a/}								
(Percentages)								
Country	Year	Average income ^{b/}	Share of total income of:				Ratio of average per capita income ^{c/}	
			Poorest 40%	Next 30%	20% below the richest 10%	Richest 10%	D ¹⁰ /D ^(1 to 4)	Q ⁵ /Q ¹
Argentina ^{d/}	1990	10.6	14.9	23.6	26.7	34.8	13.5	13.5
	1997	12.4	14.9	22.3	27.1	35.8	16.0	16.4
	1999	12.5	15.4	21.6	26.1	37.0	16.4	16.5
	2002	8.1	13.4	19.3	25.3	42.1	20.0	21.8
Bolivia	1989 ^{e/}	7.7	12.1	22.0	27.9	38.2	17.1	21.4
	1997	5.8	9.4	22.0	27.9	40.7	25.9	34.6
	1999	5.7	9.2	24.0	29.6	37.2	26.7	48.1
	2002	6.1	9.5	21.3	28.3	41.0	30.3	44.2
Brazil	1990	9.3	9.5	18.6	28.0	43.9	31.2	35.0
	1996	12.3	9.9	17.7	26.5	46.0	32.2	38.0
	1999	11.3	10.1	17.3	25.5	47.1	32.0	35.6
	2001	11.0	10.2	17.5	25.6	46.8	32.2	36.9
Chile	1990	9.4	13.2	20.8	25.4	40.7	18.2	18.4
	1996	12.9	13.1	20.5	26.2	40.2	18.3	18.6
	2000	13.6	13.8	20.8	25.1	40.3	18.7	19.0
Colombia	1994	8.4	10.0	21.3	26.9	41.8	26.8	35.2
	1997	7.3	12.5	21.7	25.7	40.1	21.4	24.1
	1999	6.7	12.3	21.6	26.0	40.1	22.3	25.6
	2002 ^{f/}	7.2	11.9	22.2	26.8	39.1	25.0	29.6
Costa Rica	1990	9.5	16.7	27.4	30.2	25.6	10.1	13.1
	1997	10.0	16.5	26.8	29.4	27.3	10.8	13.0
	1999	11.4	15.3	25.7	29.7	29.4	12.6	15.3
	2002	11.7	14.5	25.6	29.7	30.2	13.7	16.9
Ecuador ^{f/}	1990	5.5	17.1	25.4	27.0	30.5	11.4	12.3
	1997	6.0	17.0	24.7	26.4	31.9	11.5	12.2
	1999	5.6	14.1	22.8	26.5	36.6	17.2	18.4
	2002	6.7	15.4	24.3	26.0	34.3	15.7	16.8
El Salvador	1995	6.2	15.4	24.8	26.9	32.9	14.1	16.9
	1997	6.1	15.3	24.5	27.3	33.0	14.8	15.9
	1999	6.6	13.8	25.0	29.1	32.1	15.2	19.6
	2001	6.7	13.4	24.6	28.7	33.3	16.2	20.3
Guatemala	1989	6.0	11.8	20.9	26.8	40.6	23.5	27.3
	1998	7.1	14.3	21.6	25.0	39.1	20.4	19.8
	2002	6.8	14.2	22.2	26.8	36.8	18.4	18.7
Honduras	1990	4.3	10.1	19.7	27.0	43.1	27.4	30.7
	1997	4.1	12.6	22.5	27.3	37.7	21.1	23.7
	1999	3.9	11.8	22.9	28.9	36.5	22.3	26.5
	2002	4.3	11.3	21.7	27.6	39.4	23.6	26.3
Mexico	1989	8.6	15.8	22.5	25.1	36.6	17.2	16.9
	1998	7.7	15.1	22.7	25.6	36.7	18.4	18.5
	2000	8.5	14.6	22.5	26.5	36.4	17.9	18.5
	2002	8.2	15.7	23.8	27.3	33.2	15.1	15.5
Nicaragua	1993	5.2	10.4	22.8	28.4	38.4	26.1	37.7
	1998	5.6	10.4	22.1	27.1	40.5	25.3	33.1
	2001	5.9	12.2	21.5	25.7	40.7	23.6	27.2
Panama ^{f/}	1991	9.5	13.3	23.9	28.6	34.2	18.3	22.7
	1997	12.0	13.3	22.4	27.0	37.3	19.6	21.6
	1999	12.2	14.2	23.9	26.8	35.1	17.1	19.1
	2002	11.9	14.2	25.0	28.2	32.7	15.0	17.9

Table I.6 (concluded)

LATIN AMERICA (18 COUNTRIES): HOUSEHOLD INCOME DISTRIBUTION, 1990–2001/2002 a/								
(Percentages)								
Country	Year	Average income b/	Share of total income of:				Ratio of average per capita income c/	
			Poorest 40%	Next 30%	20% below the richest 10%	Richest 10%	D ¹⁰ /D ^(1 to 4)	Q ² /Q ¹
Paraguay	1990 g/	7.7	18.6	25.7	26.9	28.9	10.2	10.6
	1996 f/	7.4	16.7	24.6	25.3	33.4	13.0	13.4
	1999	6.2	13.1	23.0	27.8	36.2	19.3	22.6
	2001	6.2	12.9	23.5	26.4	37.3	20.9	25.6
Peru	1997	8.1	13.4	24.6	28.7	33.3	17.9	20.8
	1999	8.2	13.4	23.1	27.1	36.5	19.5	21.6
	2001	6.2	13.4	24.6	28.5	33.5	17.4	19.3
Dominican Republic	2000	7.2	11.4	22.2	27.6	38.8	21.1	26.9
	2002	7.2	12.0	22.6	27.0	38.3	19.3	24.9
Uruguay f/	1990	9.3	20.1	24.6	24.1	31.2	9.4	9.4
	1997	11.2	22.0	26.1	26.1	25.8	8.5	9.1
	1999	11.9	21.6	25.5	25.9	27.0	8.8	9.5
	2002	9.4	21.6	25.4	25.6	27.3	9.5	10.2
Venezuela	1990	8.9	16.7	25.7	28.9	28.7	12.1	13.4
	1997	7.8	14.7	24.0	28.6	32.8	14.9	16.1
	1999	7.2	14.6	25.1	29.0	31.4	15.0	18.0
	2002	7.1	14.3	24.9	29.5	31.3	14.5	18.1

Source: ECLAC, on the basis of special tabulations of data from household surveys conducted in the respective countries.

a/ Households ranked by per capita income.

b/ Average monthly household income, in multiples of the per capita poverty line.

c/ D^(1 to 4) represents the 40% of households with the lowest income, while D¹⁰ represents the 10% of households with the highest income.

The same notation is used in the case of quintiles (Q), each of which represents 20% of total households.

d/ Greater Buenos Aires.

e/ Eight major cities plus El Alto.

f/ Total urban areas.

g/ Asunción metropolitan area.

The share of the middle- and upper-middle-income groups, which account for 50% of the households in the individual countries, shows some noteworthy changes with respect to 1999. In the fifth, sixth and seventh deciles, seven countries posted variations of over one percentage point. This change was negative in three cases (Argentina, Bolivia and Honduras) and positive in four (Ecuador, Mexico, Panama and Peru). Only Argentina and Bolivia recorded variations of more than two percentage points (2.3 and 2.7 points, respectively). The share of the eighth and ninth deciles with respect to 1999 changed by more than one percentage point in seven cases as well. Four of these changes were negative (in Bolivia, Honduras, Nicaragua and Paraguay) and three were positive (in

Guatemala, Panama and Peru). Although these variations give an idea of how the structure of income distribution has changed, they do not directly imply that income concentration has become better or worse, since this also depends on simultaneous developments in the richest and poorest groups.

Lastly, the richest decile takes in an average of 36.1% of all household income in the Latin American countries. The figures recorded in some countries diverge substantially from the average, however, ranging from 27.3% in Uruguay to 46.8% in Brazil. Nevertheless, these percentages again reveal that this group's hefty share of total income is one of the hallmarks of income concentration in Latin America.

Between 2000 and 2002 the richest decile's share of income rose by more than one percentage point in five of the countries considered and fell by the same amount in five others. The biggest increases were observed in Argentina, Bolivia and Honduras (5.1, 3.8 and 2.9 percentage points, respectively); at the other extreme, the biggest decreases were seen in Mexico and Peru (3.2 and 3 percentage points, respectively).

Comparatively speaking, although the structure of income distribution in most of the Latin American countries is highly inequitable, this inequity takes different forms. The fact that the richest decile has a large share does not necessarily mean that the poorest decile has a very small share. For example, although Argentina's richest decile receives 42.1% of income (the second-highest figure out of the countries considered), the poorest decile receives 13.4%, which is only just below the regional average. The share of the first four deciles in the Dominican Republic is smaller, at just 12%, but the last decile also receives fewer resources than the richest households in Argentina (38.3%).

The ratio between the average income of the groups at the top and bottom of the income distribution also serves to illustrate the wide disparity in access to monetary resources in Latin America. The average income of the richest decile is 19.1 times the average of the four poorest deciles, while the average income of the last quintile is 22.5 times that of the first. These indicators are significantly higher in Brazil and Bolivia than in the other countries. The ratio of average income between the last decile and the first four deciles is over 30 in both countries, while in the others it does not exceed 24. The ratio of average income between the richest quintile and the poorest quintile is 44.2 in Bolivia and 36.9 in Brazil, whereas the highest

ratio among the rest of the countries is 27.2, in Nicaragua.

The figures for 2002 do not reveal any particular prevailing trend in comparison to 1999. Contrary to what might be expected, in some cases the indicators have moved in opposite directions. This is very clear in Bolivia, where the ratio between the average income of the last decile and the first four deciles rose by 3.6 percentage points, but the ratio between the income of the first two deciles and the last two deciles dropped by 3.9 percentage points.

The percentage of people whose income falls short of a given relative threshold, such as the average or median income, also helps to illustrate the pattern of income distribution. At least 67% of Latin America's population receives below-average income, and in Argentina, Bolivia, Brazil and Nicaragua, among others, this figure exceeds 73%.

By taking a fraction of the average as a relative threshold, instead of the average itself, it is also possible to determine relative poverty, or the approximate proportion of the population whose income does not afford them access to goods regarded as essential in their society. On the basis of this method, 44% of Latin America's population receives an income which is lower than 50% of the average.

In the three-year period 2000–2002, income distribution worsened in seven countries, according to the relative threshold approach. The proportion of people whose income was lower than both the average and half the average increased by at least one percentage point in Argentina, Bolivia, Honduras and Nicaragua. Only in Mexico, Panama and Peru did both of these indicators drop significantly (see table I.7).

Table I.7

LATIN AMERICA (18 COUNTRIES): INCOME CONCENTRATION INDICATORS, 1990–2001/2002 a/							
Country	Year	Percentage of people with per capita income lower than:		Concentration indices			
		The average	50% of the average	Gini b/	Logarithmic deviation	Theil	Atkinson
Argentina c/	1990	70.6	39.1	0.501	0.982	0.555	0.570
	1997	72.1	43.4	0.530	1.143	0.601	0.607
	1999	72.5	44.2	0.542	1.183	0.681	0.623
	2002	74.0	47.9	0.590	1.603	0.742	0.702
Bolivia	1989 d/	71.9	44.1	0.538	1.528	0.574	0.771
	1997	73.1	47.7	0.595	2.024	0.728	0.795
	1999	70.4	45.5	0.586	2.548	0.658	0.867
	2002	73.6	49.6	0.614	2.510	0.776	0.865
Brazil	1990	75.2	53.9	0.627	1.938	0.816	0.790
	1996	76.3	54.4	0.638	1.962	0.871	0.762
	1999	77.1	54.8	0.640	1.913	0.914	0.754
	2001	76.9	54.4	0.639	1.925	0.914	0.760
Chile	1990	74.6	46.5	0.554	1.258	0.644	0.671
	1996	73.9	46.9	0.553	1.261	0.630	0.667
	2000	75.0	46.4	0.559	1.278	0.666	0.658
Colombia	1994	73.6	48.9	0.601	2.042	0.794	0.817
	1997	74.2	46.4	0.569	1.399	0.857	0.822
	1999	74.5	46.6	0.572	1.456	0.734	0.945
	2002 e/	74.2	47.0	0.575	1.413	0.714	0.701
Costa Rica	1990	65.0	31.6	0.438	0.833	0.328	0.539
	1997	66.6	33.0	0.450	0.860	0.356	0.535
	1999	67.6	36.1	0.473	0.974	0.395	0.573
	2002	68.5	37.1	0.488	1.080	0.440	0.646
Ecuador e/	1990	69.6	33.8	0.461	0.823	0.403	0.591
	1997	68.9	34.8	0.469	0.832	0.409	0.510
	1999	72.1	42.0	0.521	1.075	0.567	0.597
	2002	72.3	39.8	0.513	1.031	0.563	0.593
El Salvador	1995	69.7	38.4	0.507	1.192	0.502	0.695
	1997	69.9	40.2	0.510	1.083	0.512	0.583
	1999	68.5	40.6	0.518	1.548	0.496	0.798
	2001	69.1	40.8	0.525	1.559	0.528	0.779
Guatemala	1989	74.9	47.9	0.582	1.477	0.736	0.700
	1998	75.3	46.6	0.560	1.182	0.760	0.618
	2002	72.8	47.9	0.543	1.142	0.589	0.595
Honduras	1990	75.1	52.3	0.615	1.842	0.817	0.746
	1997	72.5	45.4	0.558	1.388	0.652	0.697
	1999	71.8	46.4	0.564	1.560	0.636	0.746
	2002	72.8	49.6	0.588	1.607	0.719	0.709
Mexico	1989	74.2	43.5	0.536	1.096	0.680	0.598
	1998	72.8	43.1	0.539	1.142	0.634	0.599
	2000	73.2	44.0	0.542	1.221	0.603	0.621
	2002	71.7	41.2	0.514	1.045	0.521	0.571
Nicaragua	1993	71.5	45.9	0.582	1.598	0.671	0.802
	1998	73.1	45.9	0.584	1.800	0.731	0.822
	2001	74.6	46.9	0.579	1.594	0.783	0.767

Table I.7 (concluded)

LATIN AMERICA (18 COUNTRIES): INCOME CONCENTRATION INDICATORS, 1990–2001/2002 a/							
Country	Year	Percentage of people with per capita income lower than:		Concentration indices			
		The average	50% of the average	Gini b/	Logarithmic deviation	Theil	Atkinson
Panama e/	1991	70.3	44.2	0.545	1.312	0.577	0.656
	1997	71.8	45.6	0.552	1.362	0.632	0.673
	1999	71.4	43.8	0.533	1.223	0.558	0.629
	2002	70.3	41.1	0.515	1.217	0.488	0.640
Paraguay	1990 f/	69.2	33.4	0.447	0.737	0.365	0.468
	1996 e/	72.9	37.9	0.493	0.916	0.515	0.544
	1999	72.3	46.3	0.565	1.555	0.668	0.716
	2001	72.9	44.4	0.570	1.705	0.702	0.782
Peru	1997	70.1	41.4	0.532	1.348	0.567	0.663
	1999	71.7	42.7	0.545	1.358	0.599	0.673
	2001	70.3	41.5	0.525	1.219	0.556	0.636
Dominican Republic	2000	71.6	44.3	0.554	1.250	0.583	0.635
	2002	71.6	43.0	0.544	1.216	0.570	0.637
Uruguay e/	1990	73.2	36.8	0.492	0.812	0.699	0.519
	1997	66.8	31.3	0.430	0.730	0.336	0.475
	1999	67.1	32.2	0.440	0.764	0.354	0.483
	2002	67.9	34.6	0.455	0.802	0.385	0.661
Venezuela	1990	68.0	35.5	0.471	0.930	0.416	0.545
	1997	70.8	40.7	0.507	1.223	0.508	0.985
	1999	69.4	38.6	0.498	1.134	0.464	0.664
	2002	68.7	38.8	0.500	1.122	0.456	0.866

Source: ECLAC, on the basis of special tabulations of data from household surveys conducted in the respective countries.

a/ Calculated on the basis of the distribution of per capita income.

b/ Includes people with income equal to zero.

c/ Greater Buenos Aires.

d/ Eight major cities plus El Alto.

e/ Total urban areas.

f/ Asunción metropolitan area.

Another way to look at income distribution is to use synthetic indicators that sum up the overall situation on the basis of the income of the entire population, not only of a specific subgroup. There is a wide variety of such indicators, which are differentiated, among other things, by the relative importance they assign to lower-income households

versus higher-income households. Although the Gini index is the best known and the most widely used to measure inequality, it does not assign a higher weighting to the lower part of the distribution structure. The Theil and Atkinson indices, however, do offer this trait, which is desirable from a theoretical point of view (see box I.7).

MEASURING INEQUALITY

A wide range of indicators can be used to measure the degree to which income distribution is concentrated. In order to generate coherent findings, however, inequality indicators should have a number of basic properties, including the following:

- i) Weak principle of transfers: any transfer of income from a “rich” household to a “poor” one should be reflected in a decline in the degree of inequality shown by the indicator.
- ii) Scale independence: the indicator should not be affected by proportional changes in income or changes of scale, such as modifications in the unit of measurement of income.
- iii) Population principle: two populations with identical Lorenz curves should exhibit the same income concentration, regardless of their size.
- iv) Additive decomposability: a population’s income concentration should be equal to the weighted sum of the inequality found in all the subgroups of which it is composed.
- v) Strong principle of transfers: any transfer of income from a “rich” household to a “poor” one should generate a decline in inequality that sharpens as the distance between the two households’ incomes increases.

The following are among the most commonly used indicators of inequality: a/

i) **Gini index**
$$G = \frac{I}{2n^2 \mu} \sum_{i=1}^n \sum_{j=1}^n |y_i - y_j|$$

Geometrically, the Gini index represents the area between the Lorenz curve and the line of absolute equality. It is the index most widely used to analyse income distribution, even though it does not possess all the desirable properties: specifically, it does not satisfy the strong principle of transfers or the additive decomposability axiom. It takes values between zero and one, with zero corresponding to absolute equity and one to absolute inequity.

ii) **Theil index**
$$T = \frac{I}{n} \sum_{i=1}^n \frac{y_i}{\mu} \log \left(\frac{y_i}{\mu} \right)$$

This index gives more weight to transfers that take place at the lower end of the distribution scale, and therefore satisfies the strong principle of transfers. A further advantage is that it exhibits additive decomposability. Its minimum value is zero (absolute equity) and its maximum value is $\log(n)$, where n denotes the size of the population.

iii) **Atkinson index**
$$A_\epsilon = I - \left[\frac{I}{n} \sum_{i=1}^n \left(\frac{y_i}{\mu} \right)^{1-\epsilon} \right]^{\frac{1}{1-\epsilon}}$$

The Atkinson index takes values between zero and one. It has the special feature of incorporating an “inequality aversion” parameter (ϵ), which indicates the weighting assigned to observations of the lower end of the distribution scale.

All inequality indicators are ordinal in nature and therefore cannot be compared to each other. Moreover, since each indicator measures partial aspects of inequality, they often generate different distributional rankings. For this reason, no ranking can be regarded as definitive unless it stays the same regardless of the index used. It is therefore best to use different inequality indices in a complementary fashion and to analyse their results in conjunction with one another.

Source: Prepared on the basis of Frank Cowell, “Measuring Inequality”, LSE Handbooks in Economics, Prentice Hall, 2000 (<http://sticerd.lse.ac.uk/research/frankweb/measuringinequality.pdf>).

a/ The notation used is as follows: n = population size, y_i = per capita income of the i -th individual, μ = mean income.

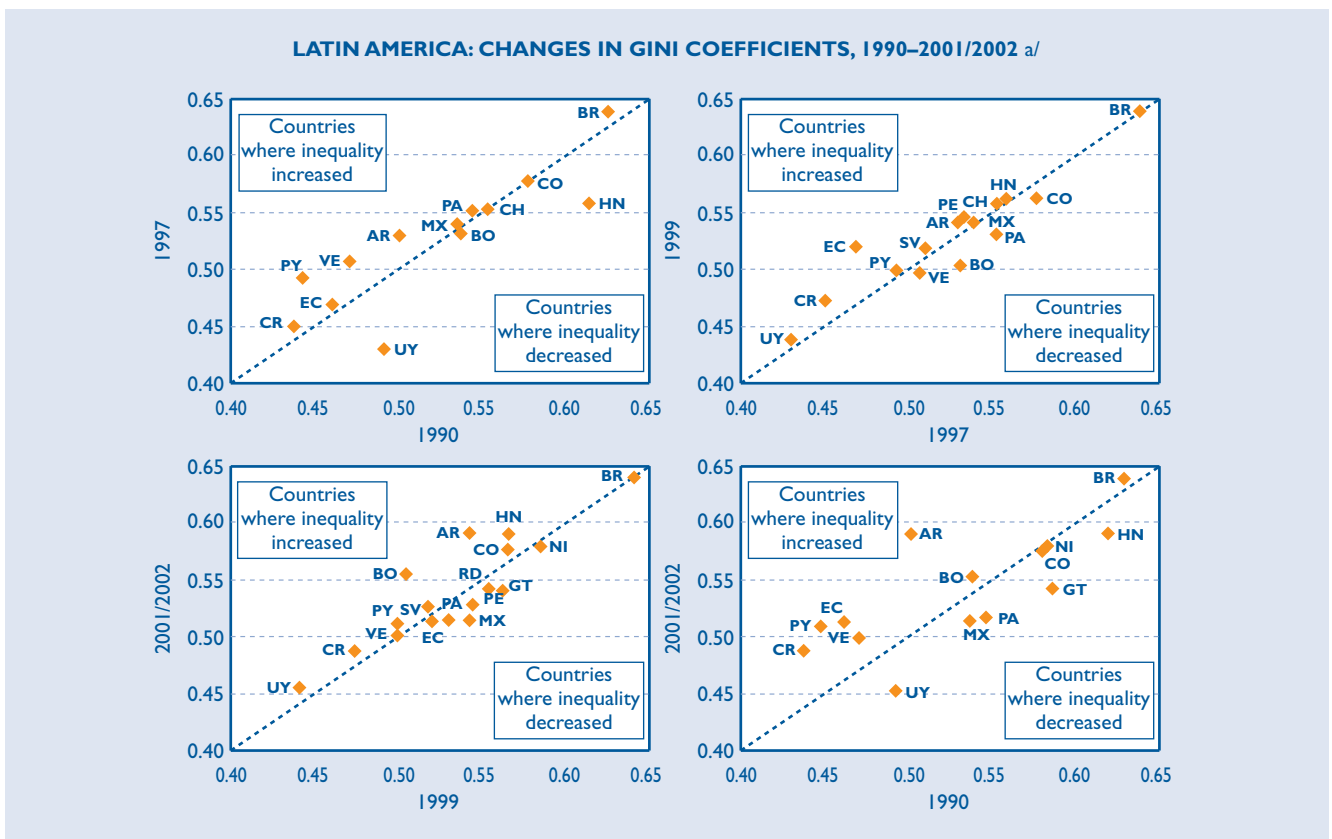
According to the Gini coefficient, the Latin American countries with the highest levels of income concentration in 2002 were Brazil (0.64) and Bolivia (0.61) –the only cases in which the indicator exceeded 0.6–, closely followed by

Argentina (0.59), Honduras (0.59), Nicaragua (0.58) and Paraguay (0.57). The region’s lowest Gini coefficients were recorded by Uruguay (0.46) and Costa Rica (0.49), the only countries with indicators below 0.5.

Changes in the Gini index between 1999 and 2001–2002 show that distributive inequality remained relatively unchanged in seven countries (Brazil, Dominican Republic, Ecuador, El Salvador, Nicaragua, Paraguay and Venezuela). In five others (Argentina, Bolivia, Costa Rica, Honduras and Uruguay), the index's value went up by at least 0.01. Among these, Argentina and Bolivia posted the largest increases, of 0.05 and 0.03, respectively. In Guatemala, Mexico, Panama and Peru the Gini coefficient's value has dropped by more than 0.01 over the last three years, although the results in Mexico and Peru should be viewed with caution, since the latest available data may not be comparable to information from earlier years (see box I.3).

From the standpoint of a longer time-frame, two additional features of the index's behaviour up to 2001–2002 should be mentioned. First, most of the countries have experienced a deterioration in distribution with respect to the Gini coefficients recorded in 1997; very few exhibit less income concentration than they did at that time. The last five years can therefore be labelled, in general terms, as a period of worsening distribution. With respect to 1990, however, the countries where distribution deteriorated do not greatly outnumber those whose concentration indices improved. In effect, the net outcome for the period 1990–2002 was clearly positive for Guatemala, Honduras, Mexico, Panama and Uruguay, and negative for Argentina, Ecuador, Costa Rica, Paraguay and Venezuela (see figure I.5).

Figure I.5



Source: ECLAC, on the basis of special tabulations of data from household surveys conducted in the respective countries.
 a/ Calculated on the basis of the distribution of people ranked by per capita income. Data for Bolivia, Colombia, Ecuador, Panama, Paraguay and Uruguay are for urban areas. Data for Argentina are for greater Buenos Aires, those for Bolivia (1990) are for eight major cities plus El Alto and those for Paraguay (1990) are for the Asunción metropolitan area.

The classification of countries by levels of inequality according to the Theil and Atkinson indices does not necessarily coincide with the results obtained using the Gini coefficient.¹² While both the Gini and Theil indices identify Brazil as the country with the region's highest level of inequality, the Atkinson index (calculated using an inequality aversion parameter of two, which places particular emphasis on the poorest households in the distribution analysis) identifies Venezuela. The Atkinson index also diverges from the other two in identifying the country with the lowest income concentration, since six countries display Atkinson indices lower than that of Uruguay.

It is necessary to deal carefully with the ambiguity that arises from using different types of indicators, since it can either help to pinpoint

precisely those aspects in which a country has higher income concentration or generate distortions in the analysis. For example, Brazil is more inequitable than Venezuela if the two are compared in terms of the richest decile's share of total income, the ratio of average income between the richest and poorest groups, the percentage of people with below-average income and the Gini and Theil indices. Venezuela's Atkinson index is higher than Brazil's, however, because a small percentage of its poorest population has a smaller share of total income. In this case, therefore, the Atkinson index shows that not all of Brazil's low-income households are worse off, relatively speaking, than low-income households in other countries. Nevertheless, in general terms, Brazil can undoubtedly be considered the country with the region's highest level of inequality, based on the simultaneous analysis of various indices.

¹² In this respect, exact comparisons between levels of inequality can only be made when the countries' Lorenz curves do not cross. Otherwise, different indicators will generate dissimilar results, according to the relative weighting they assign to each stratum of the income distribution.