



## **Poverty, Social Development and the Environment**

*José Antonio Alonso*

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For Latin America, the year 2002 marked the end of a half-decade of negative economic results, in which the slowdown in growth was accompanied by pressures from international financial and currency markets and domestic challenges stemming from political crises of governance in a number of the countries in the region. Accompanying these developments has been the popular disappointment with the scant progress achieved in social well-being during this period. The decade of the 1990s –which had been heralded from the start as the coming decade of recovery– turned out to be, by the turn of the century, in the words of the ECLAC (Economic Commission for Latin America and the Caribbean), just another *lost half-decade*. Latin America's experience during the period, however, provides us with some important lessons as to what should constitute a new development agenda for the region. The belief that it is sufficient to combine an open economy with macroeconomic stability in order to achieve sustainable economic growth has ultimately proved to be unfounded, regardless of the desirability of all the stated objectives. Much to the dismay of market fundamentalists, Latin America's experience lays bare the need to develop a broader and more complex understanding of the development agenda (Ocampo and Uthoff, 2002). The region requires an agenda dedicated to more intense efforts at eliminating the accumulated social deficit, both as a prerequisite for making full use of available human resources and as a precondition for strengthening institutions and providing them with legitimacy. Considering the environmental degradation of many of the countries in the region, this agenda must also intensify its focus on sustainability. This chapter, therefore, will study this constellation of factors and analyze some of the key social and environmental aspects of development in Latin America.

This chapter contains six basic sections. The first is a brief summary of the economic and social situation in the region following years of reforms since the mid-1980s. Beyond providing the context for the following sections of this chapter, such an analysis underscores the difficulties the region has faced in transforming the economic progress of the period into improved social well-being. Persistently high levels of inequality and

relative poverty –chronic phenomena in Latin American development– reflect such difficulties. The second section deals directly with these phenomena. Once again, the analysis confirms the fact that even though economic growth is necessary for the elimination of poverty, it is far from sufficient for the achievement of this objective in Latin America. The creation of equal opportunities can only be built upon a foundation of economic growth accompanied by progress in providing equal access to resources and assets. Three lines of action are crucial for success: first, the formation of human capital through the provision of higher quality, more functional education for all; second, the generation of quality employment as a way to broaden the social base and support necessary for growth; and third, a universal system of social protection against risks must be consolidated. Finally, the environmental risks stemming from the chosen growth model will be discussed, as well as the steps necessary to resolve them. The chapter will conclude with a brief final section in which we take stock of the decade of the 1990s.

### **Economic and Social Situation of the Region**

At the turn of the new century, Latin America accounted for 8.5% of the world population and contributed approximately 4.5% of the aggregate world GDP. The mere mention of these figures suggests the relative dimension of the region in the international context and reveals the intermediate level of development characteristic of its countries. Nevertheless, aggregate figures may be misleading in a region characterized by considerable internal heterogeneity.

#### *Economic Development*

The countries of Latin America occupy three of the four levels of income established by the World Bank to classify the international community. While Honduras and Nicaragua belong to the aggregate of low-income countries, the rest of the region lies within the broad and heterogeneous stratum of medium-income countries. Within this group, Argentina, Brazil, Chile, Mexico, Uruguay and Venezuela are part of the group of middle-to-high income countries, while Bolivia, Colombia, Costa Rica, Cuba, Ecuador, El Salvador, Guatemala, Panama, Paraguay, Peru and the Dominican Republic belong to the group of middle-to-low income countries.

Moving beyond this preliminary classification, the magnitude of the differences between countries may be brought into focus. In 2002, Spain's per capita income (in purchasing power parity) was nearly 20,000 dollars, while Latin America as a whole had an average per capita GDP of 7,234 dollars, although the region encompasses countries with a per capita income ranging from 2,366 dollars in the case of Nicaragua to 12,377 dollars in Argentina (Table 1). Consequently, the relationship between the countries located at the extremes of income distribution was 1 to 5, which gives an idea as to the degree of heterogeneity in Latin America.

From the point of view of economic growth, the decade of the 1990s was a period of uncertain appraisal. On the one hand, the decade drew to an end for the American subcontinent with an annual accumulative growth rate of its per capita GDP of 1.7%, thus breaking with the negative trend begun during the *lost decade* of the 1980s. While this growth rate is indeed positive, it falls far short of that needed by the countries of the region to begin processes of institutional democratic consolidation and compensation for the

currently existing accumulated social deficit. Nor does this modest triumph attest to the efforts made for economic reform in these countries since the late 1980s, or to the expectations generated by those reforms. In fact, the contrast between the expectations brought about by efforts to reform and the reality of the modest results from this decade in terms of growth is one of the determining factors of opinion in Latin America at the present time. Even so, the performance of these countries throughout the period is far from homogeneous: while Chile's per capita GDP grew at a high rate during the decade (over 5%), there were economies like Venezuela, Paraguay and Ecuador with a negative aggregate balance. In most cases, however, the growth rates ranged from 1% to 2.5%.

With the ambiguous results of the 1990s, the transition to the new century took place within an exceptionally adverse context for the region, and this was translated into further disappointing economic results. For example, the GDP growth rate, which had reached 5% in 1997, fell to nearly 2% in 1998 and to 0.1% in 1999, rose briefly to 3.9% in 2000 only to fall again in 2001 to 0.4%, finally reaching the negative figure of -0.5% in 2002. Between 1997 and 2002, the average annual growth rate for the region as a whole was a very modest 1.22%. The evolution of this per capita GDP implies a setback for the period of nearly 2%, approximately a quarter of a point annually, breaking with the trend of the previous period. It is therefore understood why the ELALC used the term *lost half-decade* to describe this adverse period, straddling two centuries.

Although unsuccessful in generating sustained growth, the impact of the stabilization and reform policies implemented since the late 1980s should not be underestimated. The effects on stabilization are visible in most of the region's basic parameters. The inflation rate, for example, dropped dramatically from the high levels experienced during the 1980s and finally reached levels of between 5% and 10% in most countries at the end of the century. The most noteworthy exception to this stable performance was Ecuador, prior to the dollarization of its economy.

**Table 1. Selected Latin American Indicators**

	GDP per Capita 2000 (PPP US dollars)	Per Capita GDP Growth Rate (%) 1990-2000	Inflation 1999-2000 (%)	Open Urban Unemployment Rate 1999 (pop. aged 15+)		Gross Domestic Investment 1998 (% GDP)	Trade in Commodities (% GDP) (PPP US dollars)		Net Direct Foreign Investment 2000 (% GDP)	Debt Service 2000 (% GDP)
				Men	Women		1989	1999		
Argentina	12,377	3.0	-0.9	13.0	15.2	22	5.1	10.9	4.1	9.6
Chile	9,417	5.2	3.8	9.4	11.2	27	24.0	23.7	5.2	8.7
Uruguay	9,035	2.6	4.8	8.6	14.6	13	14.6	19.0	1.5	6.7
Costa Rica	8,650	3.0	11.0	5.3	7.4	27	19.9	40.6	2.6	4.1
Mexico	9,023	1.4	9.5	3.7	2.7	26	14.1	35.6	2.3	10.1
Cuba		3.7								
Panama	6,000	2.3	1.4	12.4	19.7	27	15.1	26.3	6.1	9.4
Colombia	6,248	1.1	9.5	16.2	23.0	18	6.7	9.3	2.9	6.4
Venezuela	5,794	-0.6	-98.8	13.6	16.1	16	22.6	26.6	3.7	4.9
Brazil	7,625	1.5	7.0	9.4	14.1	21	6.3	8.4	5.5	10.5
Peru	4,799	2.9	3.8	8.1	13.8	25	7.5	12.2	1.3	8.1
Paraguay	4,426	-0.4	9.0	6.0	7.7	21	11.0	12.8	1.1	4.4
Ecuador	3,203	-0.3	96.1	10.5	19.5	21	15.5	20.1	5.2	9.4
Dominican Republic	6,033	4.2	7.7	10.9	26.1	26	21.4	29.0	4.8	2.6
El Salvador	4,497	2.6	2.3	8.8	5.5	17	11.4	16.1	1.4	2.8
Bolivia	2,424	1.6	4.6	3.7	3.6	19	12.5	14.6	8.9	8.0
Honduras	2,453	0.4	-15.1	6.2	4.0	30	18.4	26.9	4.8	9.7
Nicaragua	2,366	0.6		13.6	12.6	28	11.0	21.3	10.6	12.5
Guatemala	3,821	1.4	6.0	3.5	1.9	14	11.5	16.6	1.2	2.3
Lat Am & Caribbean	7,234	1.7				22	10.2	18.2	3.9	9.2

(1) The unemployment rate (% of the labour force) in 1999 is 15.9% for Spain and 13.9% for Portugal.  
Sources: Report on Human Development 2002, UNDP; Statistical Yearbook for Latin America and the Caribbean, 2001, ELALC; World Development Indicators, 2001, World Bank; World Development Report 1999-2000, World Bank.

A similar adjustment process was implemented in public finance, significantly reducing the levels of fiscal deficit of previous periods. The revaluing of part of the productive assets under public ownership, by means of the privatization processes carried out during the previous decade, gave these states extraordinary resources with which to reorganize public finances, alleviating part of the burden accumulated during the previous period. Although the balance was positive, it should be pointed out that the crisis of the last half-decade has brought about a certain reversal of previous achievements: in 2002, inflation was 12% and the fiscal deficit seemed to have exhausted all possibilities of contraction in the second half of the 1990s.

The other aspect of economic reform dealt with in the late 1980s and early 1990s relates to the strengthening of market forces in economic allocation, both on the domestic market and in foreign transactions. This process undoubtedly facilitated the correction of previous imbalances related to excessive state intervention in the economy with the abusive presence of regulatory obstacles in the markets, high levels of trade protection and preservation of the domestic market. While this process did provide the markets with greater flexibility and facilitated some improvement in the levels of competitiveness, the most visible economic effect of the reform was associated with the privatization of public companies and the capturing of foreign capital that took place in Latin America towards the end of the nineties. In fact, the unexpected weight acquired by some of the region's markets as recipients of foreign investment became one of the most typical characteristics of Latin America's new style of penetration in the international economy during the 1990s.

Latin America's negative growth rates (both modest and volatile) fall at the other end of the spectrum and constitute the deficit of the reform processes. The same is true of the limited capacity to translate the aforementioned changes into effective improvements in rates of employment and the competitive capacity of the economy. The region's slow pace of growth underpinned the persistently high unemployment rates which were also aggravated by the considerable growth in the working-age population. Added to this is the progressive incorporation of women into the labour force, a change which transcends the purely economic sphere, increasing the percentage of the population searching for jobs.

With regard to competitiveness, in spite of the foreign investment made in the region and the significant progress made in the internationalization of its economies, increases in the market shares of Latin American exports were very modest. This fact translates not only into a weaker impulse of this demand factor on growth, but also to a greater severity in the restriction that the foreign equilibrium imposes on economic dynamics. Both factors signal the great challenge of improving competitiveness based on dynamic trade advantages as a way to facilitate Latin America's penetration of international trade markets.

#### *Social Situation and Development*

Latin America is as heterogeneous with regard to social development as it is in economic issues. This phenomenon can be analyzed by means of the Human Development Index (HDI) which takes into account not only the per capita GDP, but also health and levels of

education of the population. The relationship between levels of human development with data from the year 2000 (prior to the current crisis), puts Argentina at the lead with an index of 0.840 and Guatemala with the lowest rating at 0.631. The rest of the countries fall in between these two extremes (Table 2). From an aggregate perspective and in accordance with the UNDP classification, Argentina, Chile, Uruguay and Costa Rica belong to the group of 'high development' to which 53 countries belong. The rest of the region falls within the very broad group of 'medium development' comprising 84 countries within the world economy.

Of all the developing regions, Latin America is the most highly urbanised, with almost three-quarters of its population being town-dwellers. Furthermore, it is one of the regions to have seen the greatest progress in terms of demographic transition, with low average mortality rates and, to a lesser extent, low birth rates. The population's growth rate, however, continues to be substantial. Between 1973 and 1998 it was 2.01%, which was higher than the average world rate, which was 1.66% at that time. The differences between countries are also outstanding with regard to demographic trends: while the population growth rate in Uruguay is a modest 1%, in Paraguay and certain countries of Central America it is above 3%.

In some of these countries, along with other factors related to the demographic transition, the impact of emigration has had a considerable effect on the decrease in the average family size. Such is the case of Mexico or the countries of Central America with respect to the United States, or Peru and Ecuador with respect to Europe. The emigration effect is particularly noticeable in the cases of El Salvador and Ecuador, the only country of the region having already registered a decrease in population as a result of the swelling waves of emigration. Nevertheless, the impact of this factor transcends the realm of demographics and affects social relations as a whole, particularly family behaviour, the possibilities of social integration and the capacity for future growth of the countries in question.

Although resources are insufficient to meet needs, it is undeniable that throughout the 1990s Latin American countries have striven to make progress in social policy. In fact, the per capita expenditure on social programmes increased, from an average of 360 dollars per capita to 540 dollars per capita during that decade (ELALC, 2002). In any event, there are significant differences in the importance that the countries give to social spending. Those most committed to it are Costa Rica and Panama whose social spending surpasses the regional average. At the other extreme are El Salvador, Guatemala, Peru and the Dominican Republic. In any event, the region's experience confirms the vulnerability of social policies which are highly dependent upon economic cycles, expanding at moments of economic growth and contracting in times of crisis.

A closer look at those services more strictly related to human development –education and health– once again shows that the differences in the region are considerable. For example, spending on public education as a percentage of GDP fluctuates between somewhat more than 6% and somewhat less than 2%. At the extreme of those countries most committed to such programmes are Cuba, Costa Rica, Panama, Venezuela and Brazil; those least committed are Guatemala, El Salvador, the Dominican Republic and Peru. With regard to health, those coefficients fluctuate between somewhat more than 5% and somewhat less

than 2%. In the group of countries giving most attention to this issue are Costa Rica, Colombia and Panama and the least committed are Guatemala, Ecuador and Paraguay.

Latin America's great shortcoming in the social realm during this period has been the persistence of poverty, which has been greater than what might be expected given the levels of economic development experienced by the countries of the region. This problem is clearly related to the region's predominant distribution pattern, which is characterized by a high degree of inequality, undermining the capacity of economic growth to reduce poverty. Thus, the initial push towards reducing poverty early in the decade gradually lost strength as the economy slowed down and was ultimately reversed in some of the countries towards the end of the decade.

The effects of the high degree of inequality which is characteristic of many of the countries of the Latin American subcontinent transcend the plight of those social groups most affected by poverty and weakens institutions, obstructs governability, reduces the productivity of individuals and the possibilities of the economy's aggregate growth. The purpose of the next section will be to analyse these issues.

**Table 2. Latin American Social Indicators**

	HDI, 2000	Avg Annual Population Growth, 1990-98	Urban Population, 2000 (% total pop.)	Life Expectancy at Birth, 2000	Expenditure on Public Education (% GDP), 1995-97 (1)	Adult Literacy Rate (% aged 15+), 2000	Public Health Expenditure (% GDP), 1998	Share of Income Wealthiest 10% (2)	Gini Coefficient (2)	Pop. Under the Poverty Line (%)	Inf. Mort. Rate (Pop. Aged < 5) (4)	Pop. w/o Access to Drinking Water, 2000 (% total pop.)
				Women Men		Female Male				1 \$ 2 \$		
Argentina	0.844	1.5	88.2	77.2 70.1	3.5	96.8 96.8	2.4				22	21
Chile	0.831	1.8	85.8	78.6 72.6	3.6	95.6 96.0	2.7	45.6	56.6	(4) 8.7	12	6
Uruguay	0.831	0.8	91.9	78.5 71.0	3.3	98.1 97.3	1.9	32.7	42.3	(4) 6.6	17	2
Costa Rica	0.820	2.1	59.0	79.3 74.6	5.4	95.7 95.5	5.2	34.6	45.9	12.6 26.0	14	2
Mexico	0.796	2.0	74.4	76.0 70.0	4.9	89.5 93.4	2.6	41.7	53.1	15.9 37.7	33	14
Cuba	0.795		75.3	78.4 74.5	6.7	96.6 96.8						5
Panama	0.787	2.0	56.3	76.8 72.2	5.1	91.3 92.5	4.9	35.6	48.5	14.0 29.0	27	13
Colombia	0.772	2.2	75.0	74.8 68.2	4.1	91.7 91.7	5.2	46.1	57.1	19.7 36.0	31	9
Venezuela	0.770	2.5	86.9	76.2 70.4	5.2	92.1 93.1	2.6	36.5	49.5	23.0 47.0	23	16
Brazil	0.757	1.6	81.2	72.0 64.1	5.1	85.4 85.1	2.9	48.0	60.7	11.6 26.5	40	13
Peru	0.747	2.0	72.8	71.6 66.6	2.9	85.3 94.7	2.4	35.4	46.2	15.5 41.4	52	23
Paraguay	0.740	3.0	56.0	72.6 68.0	4.0	92.2 94.4	1.7	43.8	57.7	19.5 49.3	32	21
Ecuador	0.732	2.4	63.0	73.0 67.8	3.5	90.0 93.3	1.7	33.8	43.7	20.2 52.3	35	29
Dominican Rep.	0.727	2.1	65.4	70.0 64.8	2.3	83.6 83.6	1.9	37.8	47.4	3.2 16.0	49	21
El Salvador	0.706	2.4	60.3	73.1 67.1	2.5	76.1 81.6	2.6	39.5	52.2	21.0 44.5	42	26
Bolivia	0.653	2.7	62.4	64.2 60.8	4.9	79.3 92.0	4.1	32.0	44.7	14.4 34.3	83	21
Honduras	0.638	3.3	52.7	68.9 63.2	3.6	74.5 74.7	3.6	42.7	56.3	24.3 45.1	42	10
Nicaragua	0.635	3.2	56.1	71.1 66.4	3.9	66.8 66.3	3.9	48.8	60.3		47	21
Guatemala	0.631	3.0	39.7	68.0 62.2	1.7	61.2 76.1	1.7	46.0	55.8	10.0 33.8	60	8
Latam & Caribbean	0.767	1.9	75.4	70.0		88.3						

(1) Most recent year during this period (1995-97).

(2) Data for 1997, except for Paraguay (1989), Spain (1990), Portugal (1994-95) and Ecuador (1995).

(3) PPP 1993 US dollars.

(4) Data refer to the most recent year of the period 1983-2000.

(5) Less than US\$1 per day.

Sources: Report on Human Development 2002, UNDP; Statistical Yearbook for Latin America and the Caribbean, 2001, ELALC; World Development Indicators, 2001, World Bank; World Development Report 1999-2000, World Bank.

## **Poverty and Inequality**

One of the basic shortcomings of the most recent developments in Latin America is the persistence of high levels of social inequality and poverty. With regard to inequality, it is safe to say that little progress has been made and that, in certain cases, distributive patterns have even worsened throughout the decade, turning poverty and inequality into chronic problems and making Latin America the most unequal region on the planet. Nevertheless, poverty improved somewhat during this period: according to ELALC estimates based on national poverty lines, it dropped from 48% of the population in 1990 to 43% in 2002 (indigence dropped from 22% to 18% during a similar period). However, this improvement did not translate into absolute terms for the sectors of the population in question which actually grew by 14 million, eventually reaching 214 million people (and 92 million indigents).

A first glance at these figures suggests that the concepts of inequality and poverty are distinct and may be influenced by different factors. The former, inequality, refers to the characteristics of the distribution of a given variable across the entire population. It is therefore measured by statistics that focus on the degree of dispersion/concentration of the variable. On the other hand, absolute poverty refers to that segment of the population that is below a given minimum –the so-called poverty line– which is considered to be socially necessary for a decent life. In the latter case, it is obviously worth justifying the criteria determining the threshold of minimum income (or expenditure) below which poverty, as defined, takes place. As observed, there is no such single and universal criterion serving as a reference for the compiling of all international statistics.

One of the most commonly used indicators to measure inequality is the Gini index which expresses in relative terms the distance between a given distribution pattern and the conditions required for an equitable distribution (the higher the index, the greater the inequality of the distribution). As a point of reference, the Gini index values for Spain and Portugal are 32% and 35% respectively but for certain Latin American countries, like Brazil or Guatemala, they surpass 60%. Chile, Mexico, Colombia, Paraguay, El Salvador, Honduras and Guatemala have indexes surpassing 50. In the rest of the region, it is higher than 40 and Uruguay, at 42, has the lowest level of inequality.

Such inequality is confirmed by the analysis of the levels of concentration of income corresponding to the highest income categories. For example, the wealthiest 10% of the Brazilian population receives 48% of income. The quota corresponding to this category is similar in Nicaragua. Other countries, short of reaching these levels of inequality, have a quota surpassing 40%. They are Chile, Mexico, Colombia, Paraguay, Honduras and Guatemala (Table 3). Given these numbers, it is not unusual that the income received by the wealthiest 10% is more than 90 times the income of the poorest 10% of the population in Paraguay, this being a truly extreme case on an international scale. In the cases of Guatemala, it is 70 times higher and 65 times higher in Brazil. These are very high rates which clearly express the current levels of inequality.

Shifting our focus now to poverty, it is evident that the levels of incidence depend fundamentally on the threshold defined in each case. If the poverty line is set at one dollar per day, as the World Bank usually does, the percentage of poor is approximately 10% on an aggregate scale. Nevertheless, there are countries like Colombia, Venezuela, Paraguay, Ecuador and Honduras for which the quota approximates or surpasses 20% of the population. If the poverty line is set at two dollars per day –a more adequate parameter for the development levels of the region– approximately one-third of the population is considered to be living in poverty. But the quota surpasses 40% in Venezuela, Peru, Paraguay, El Salvador and Honduras.

In addition to the estimates made by the World Bank and the UNDP, ELALC has been making its own estimates of poverty in the region for some time now, based on the setting of specific poverty lines for each country and even for each zone, based on their respective costs of living and distinguishing between metropolitan, urban and rural areas. The resulting figures do not significantly challenge those previously mentioned (Table 4). Poverty affects 43% of the population of Latin America, somewhat more than 214 million people, with a slightly expansive tendency during the decade of the 1990s. In relative terms, this means 43% of the region's total population. However, poverty affects more than half the population of countries like Honduras, Bolivia, Colombia, Ecuador, Guatemala, Nicaragua and Paraguay. The country with the lowest poverty level is Uruguay, where only 11% of the population lives in poverty.

**Table 3. Inequality and Poverty in Latin America**

Country	Year of Survey	% over Income or Consumption		Measures of Inequality				Poverty		
		Poorest 10%	Wealthiest 10%	10/10	20/20	Gini Index	IPH	Under US\$1 (%)	Under US\$2 (%)	National Line
Chile	1998	1.3	45.6	35.6	18.6	56.6	4.1	2	8.7	21.2
Uruguay	1989	2.1	32.7	15.4	8.9	42.3	3.9	2	6.6	
Costa Rica	1997	1.7	34.6	20.7	11.5	45.9	4	12.6	26	22
Trinidad & Tobago	1992	2.1	29.9	14	8.3	40.3	7.9	12.4	39	21
Mexico	1998	1.3	41.7	32.6	16.5	53.1	9.4	15.9	37.7	10.1
Panama	1997	1.2	35.6	29	14.8	48.5	8.4	14	29	37.3
Colombia	1996	1.1	46.1	42.7	20.3	57.1	8.9	19.7	36	17.7
Venezuela	1998	0.8	36.5	44	17.7	49.5	8.5	23	47	31.3
Brazil	1998	0.7	48	65.8	29.7	60.7	12.2	11.6	26.5	17.4
Peru	1996	1.6	35.4	22.3	11.7	46.2	12.8	15.5	41.4	49
Jamaica	2000	2.7	30.3	11.2	6.9	37.9	13.2	3.2	25.2	18.7
Paraguay	1998	0.5	43.8	91.1	31.8	57.7	10.2	19.5	49.3	21.8
Ecuador	1995	2.2	33.8	15.4	9.2	43.7	16.1	20.2	52.3	35
Dominican Rep.	1998	2.1	37.8	17.7	10.5	47.4	14	3.2	16	20.6
El Salvador	1998	1.2	39.5	33.5	17.2	52.2	18.1	21	44.5	48.3
Bolivia	1999	1.3	32	24.2	12.4	44.7	16.3	14.4	34.3	
Honduras	1998	0.6	42.7	72.3	27.4	56.3	20.5	24.3	45.1	53
Nicaragua	1998	0.7	48.8	70.7	27.9	60.3	24.4			50.3
Guatemala	1998	1.6	46	29.1	15.8	55.8	23.5	10	33.8	57.9

Source: PNUD, *Informe sobre el desarrollo humano, 2002*, Mundiprensa, Madrid,



If indigence is taken into consideration –closer to the concept of poverty used by the World Bank– the total population living in poverty surpasses 92 million people, ie, 18.6% of the total. The countries in which indigence is more widespread are Honduras, where over half the population is affected, followed by Nicaragua where it affects 41%. Countries with quotas surpassing 30% are Bolivia, Guatemala and Paraguay. Once again, Uruguay is the country in which this phenomenon is less pervasive.

The analysis of the evolution over time of these two distributive factors –inequality and poverty– reveals that poverty is more sensitive to economic cycles. Poverty levels drop during economic upswings, even when the levels of inequality remain the same (the opposite occurs during recessions). This is not true of inequality, however, which is very stable over time, even during periods of prosperity. But when growth does not affect distribution, inequality does influence the effect of growth in terms of poverty reduction: the more egalitarian the society, the greater is the impact of growth on poverty. Latin America’s evolution clearly sheds light on this complex system of relationships.

**Table 4. Poverty and Indigence in Latin America (% of the population)**

	Poverty			Indigence		
	1990	1999	2001	1990	1999	2001
Argentina		19.7	30.1		4.8	10.2
Bolivia		60.6	61.2		36.4	37.3
Brazil	48.0	37.5	36.9	23.4	12.9	13.0
Chile	38.6	21.7	20.0	12.9	5.6	5.4
Colombia	56.1*	54.9	54.9	26.1*	26.8	27.6
Costa Rica	26.2	20.3	21.7	9.8	7.8	8.3
Ecuador		63.6	60.2		31.3	28.1
El Salvador	54.2*	49.8	49.9	21.7*	21.9	22.5
Guatemala		60.5	60.4		34.1	34.4
Honduras	80.5	79.7	79.1	60.6	56.8	56.0
Mexico	47.8*	46.9	42.3	18.8*	18.5	16.4
Nicaragua	73.6*	69.9	67.4	48.4*	44.6	41.5
Panama	42.8*	30.2	30.8	19.2*	10.7	11.6
Paraguay		60.6	61.8		33.8	36.1
Peru		48.6	49.0		22.4	23.2
Dominican Rep.		37.2	29.2		14.4	10.9
Uruguay		9.4	11.4		1.8	2.4
Venezuela	40.0	49.4	48.5	14.6	21.7	21.2
<b>Latin America</b>						
<b>Percentage of population</b>	<b>48.3</b>	<b>43.8</b>	<b>43.0</b>	<b>22.5</b>	<b>18.5</b>	<b>18.6</b>
<b>In millions</b>	<b>200.2</b>	<b>211.4</b>	<b>214.3</b>	<b>93.4</b>	<b>89.4</b>	<b>92.8</b>

\*Colombia 1991, El Salvador 1995, México 1989, Nicaragua 1993, Panamá 1991.

Source: ELALC, *Panorama social de América Latina, 2001-2002*, Santiago de Chile.

Specifically, a recent IDB study (Székely, 2001) closely examines these relationships by providing comparative data, compiled according to homogeneous criteria. The study uses available series on inequality and poverty in Latin America (Table 5). The series, in the best case scenario, does not extend beyond the late 1980s, but does reveal the effect of the reforms. In all, it is a sample of seventeen countries, including those with the greatest weight in the region, for which there are between two and seven observations over time. In one group (Group A), inequality is on the rise although poverty is declining. This is a broader group, in which we find most of the countries of greater weight in the region, such as Argentina, Chile and Brazil. The second group (Group B) is comprised of those countries in which both poverty and inequality increased simultaneously. This is the group with the worst social performance. Within this group are Mexico, Venezuela, Peru and

Nicaragua. Last, we have Group C, formed by the countries in which both inequality and poverty have declined. Only two countries fall within this category: Colombia and the Dominican Republic. It is worth mentioning that no countries fall within a fourth category, that of decreasing equality and increasing poverty, a fact that confirms the unlikelihood of such a scenario, especially during a period of economic growth, as is the case here.

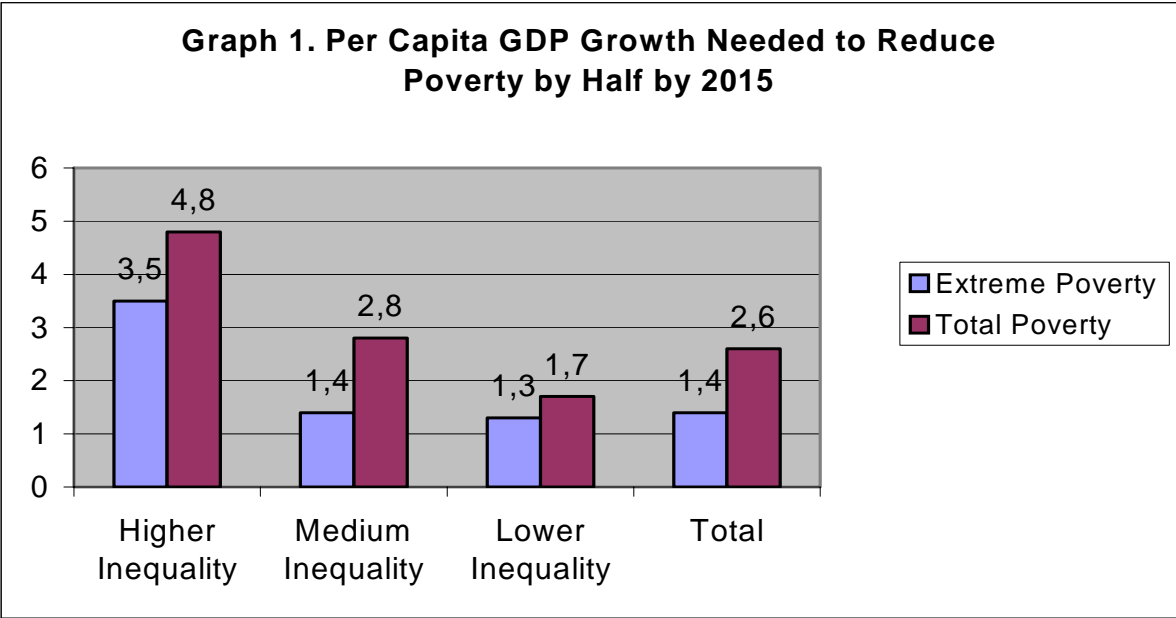
Taken as a whole, these data confirm two interesting conclusions. First, economic growth might reduce the number of poor in the region, but not necessarily alter the levels of poverty, unless it acts directly upon this variable. Secondly, the effectiveness of growth in terms of poverty reduction is highly conditioned by the starting point of each country. Both conclusions unveil the need to reduce the existing levels of inequality as the central criteria for any development agenda with hopes for success (Birdsall and Székely, 2003).

**Table 5. Inequality, 1989-99**

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
<b>Group A</b>											
<b>Argentina</b>											
Gini								47.7		49.4	
Poverty								18.4		17.9	
<b>Bolivia</b>											
Gini		54.5			53.2		52.7	58.8	58.9		60.1
Poverty		65.6			63.4		63.6	62.1	62.3		61.3
<b>Brazil</b>											
Gini				57.3	59.5		59.1	59.1	59.2	59	58.5
Poverty				48.2	49.6		44.6	41.5	41.2	41.9	41.2
<b>Chile</b>											
Gini		54.7		52.2		55.6		56.4		55.9	
Poverty		32.3		19.7		22.7		18.3		16.1	
<b>Costa Rica</b>											
Gini	46		46		45.5		45.7		45.9	46.1	
Poverty	35.8		34.2		29.2		28.7		30.8	30.4	
<b>Ecuador</b>											
Gini							56			56.2	
Poverty							49.5			47.9	
<b>Honduras</b>											
Gini	57			54.9				52.8	59.1	58.5	58.4
Poverty	77.2			75.9				76.3	74.7	74.8	75.2
<b>Panama</b>											
Gini			56.3				56		57.6	56.5	56.3
Poverty			47.7				47.8		43.5	38	36.6
<b>Uruguay</b>											
Gini	40.6			43.2			42.1		43	43.9	
Poverty	23.1			19.5			16.6		11.7	13.6	
<b>Group B</b>											
<b>Mexico</b>											
Gini	53.1			53.4		53.6		52.8		53.8	
Poverty	19.7			16.1		15.3		21.2		21.1	
<b>Nicaragua</b>											
Gini					56.7					60.2	
Poverty					70.6					72.6	
<b>Paraguay</b>											
Gini							57			56.9	59.4
Poverty							52.1			51	61.1
<b>Peru</b>											
Gini			46.4			48.3			50.6		
Poverty			41.8			43.9			43.2		
<b>El Salvador</b>											
Gini							50.5		52	55.9	54.6
Poverty							58.6		61.2	63.9	63.9
<b>Venezuela</b>											
Gini	44			42.9			46.7		48.6	47.1	46.8
Poverty	12.5			8.6			15.2		17.9	18.8	20.6
<b>Group C</b>											
<b>Colombia</b>											
Gini			56.7		60.4		57		57.8	56.8	56.2
Poverty			42.4		44.6		38.8		38.3	37.8	39.3
<b>Dominican Rep.</b>											
Gini								48.1		47.8	
Poverty								38.1		34.5	

Source: M. Székely (2001).

The prevailing levels of inequality condition Latin America’s possibilities of complying with the *Millenium Objectives*. One of the central objectives is to decrease by 50% the poverty existing in 1990 by the year 2015. Since poverty is sensitive to the trend of the economic cycle, one might consider trying to achieve this objective by means of economic growth, without altering the existing distribution pattern. ELALC estimated the pace of per capita GDP growth that would have to be sustained in order to reach this goal, with regard to both total poverty and extreme poverty (Graph 1). With respect to the former, the growth rate necessary in the countries with lower levels of inequality seems feasible (1.7%). It is more difficult to reach that required in the countries of mid-level inequality (2.8%) and seems totally improbable in the case of the countries of greater inequality (4.8%). These rates drop if the criterion is extreme poverty, but even then the rate for the countries with higher levels of inequality (3.5%) is still far beyond their possibilities, bearing in mind their history in this realm. Therefore, unless corrective action is taken against inequality to correct its current levels, it is likely that some countries in Latin America will find it difficult to achieve the *Millenium Objectives*.



Therefore, if national governments wish to make headway in social cohesion, institution-building and the consolidation of democracy, they will necessarily have to address the issue of inequality, and its most extreme expression, poverty. All of these phenomena are crucial to the solid functioning of a good government and to the construction of a national project for economic development and social solvency. In order to make progress toward these objectives, distribution policies must be implemented, not only for income but also for assets, both tangible and intangible, that improve the opportunities for progress of the poor (Atanasio and Székely, 2001). An intangible asset of great value to the distribution of opportunities is education.

## Education and Social Inequality

There are two types of arguments that express the relevance of education as both a human right and as a means to promote more dynamic growth and a more democratic society. On the one hand, education is a *substantial* part of the very concept of development, since it broadens the skills of individuals by facilitating their access to the range of knowledge which is useful to society. On the other hand, its value is instrumental, to the extent that it is a means to improve the efficiency of the effort of transformation and progress in society. As pointed out by ELALC, 'education is a privileged means to ensure the productive dynamism with social equality and also to strengthen democracy based on the broad and non-exclusionist exercise of citizenship' (ELALC, 1992).

Throughout recent years, unquestionable progress has been made in the realm of education in Latin America, even when it fell far short of reaching the levels of coverage and quality that would be demanded in accordance with the level of per capita income in the region (Ferrante et al., 2002). The registration rates for primary schooling have progressed to levels above 90%, but they are still relatively low with regard to secondary education, which fall below 70%, and university education, which is approximately 26% (Table No. 6). Progress has also been made in correcting given factors of segregation or inequality in education coverage, as in the case of gender discrimination, but others relating to social differences (level of family income) and accessibility for the population (urban and rural zones) have remained constant or have even become accentuated.

**Table 6. Education**

Country	Age Group			Relation Between Extreme Quartiles		
	6 to 13	14 to 17	18 to 25	6 to 13	14 to 17	18 to 25
Argentina (1999)	99.2	85.1	42.4	1.00	1.19	2.06
Bolivia (1997)	93.0	77.5	37.2	1.07	1.11	1.37
Brazil (1999)	94.6	81.7	31.6	1.06	1.20	1.90
Chile (2000)	98.6	90.0	33.9	1.01	1.13	2.43
Colombia (1999)	90.5	69.7	24.5	1.07	1.10	2.04
Costa Rica (1999)	94.2	64.5	29.8	1.06	1.31	2.15
Ecuador (1999)	92.5	77.2	33.1	1.07	1.25	2.06
El Salvador (1999)	85.2	65.3	22.3	1.20	1.26	2.39
Guatemala (1998)	69.4	41.9	15.9	1.26	1.69	3.62
Honduras (1999)	81.6	44.7	16.3	1.21	1.41	2.59
Mexico (1998)	94.6	60.1	21	1.08	1.63	3.20
Nicaragua (1993)	74.3	54.9	20.6	1.27	1.42	1.72
Panama (1999)	96.5	77.1	32.8	1.05	1.23	2.68
Paraguay (1999)	93.1	66.6	25.4	1.07	1.33	2.93
Dominican Rep.	91.3	82.7	34.2	1.05	1.01	1.09

(19997) Uruguay (1999)	97.9	76.5	31.7	1.02	1.47	4.00
Venezuela (1999) Average	95.6	70.5	19.0	1.06	1.26	1.54
1990	87.6	61.6	21.8	1.10	1.25	1.99
1999	93.3	69.8	26.1	1.07	1.26	2.24

Source: ELALC (2002b).

With regard to primary education, the aggregate registration rates have improved, rising from 87.6% to 93.3% throughout the 1990s. But considerable differences persist among countries, which vary between 95% in countries like Chile, Panama or Venezuela, to less than 75%, in the case of Guatemala. The differences in accession to this type of education, although still perceptible, seem to be progressively decreasing. In fact, there is little difference between the sexes in access to primary education. The inequalities in the conditions of access of the rural population with respect to the urban population dropped for 12 % in 1990 to approximately 5% ten years later. The differences according to income level, among the highest and lowest quartiles decreased for almost 10% to somewhat less than 7% during the same period.

The differences in access to primary education are still significant, however, in some Central American countries, like El Salvador, Guatemala, Nicaragua and Honduras, as well as Brazil. For example, the differences in registration rates in the highest and lowest quartiles is less than 16% in Honduras and El Salvador, 17% in Guatemala and over 18% in Brazil and Nicaragua. Likewise, the differences in registration rates between the urban and rural population is 13% in Guatemala and El Salvador and 23% in Nicaragua.

The registration rate for secondary education showed greater progress during this period, although there are noteworthy differences among countries, with quotas that range between 90% in Chile and 45% in Guatemala and Honduras. At this level of education, the factors of discrimination become more visible. In fact, at the aggregate level, the difference between the rates corresponding to the upper and lower quartiles is 17%, but is 20% in Paraguay, Nicaragua, Mexico, Guatemala and Brazil. With regard to the differences between urban and rural population, at the aggregate level they are 20% in Honduras, Guatemala and Bolivia.

Last, throughout the decade of the nineties, significant progress was made in university education, the registration rate ultimately reaching over 25% of the population. However, the differences among countries are considerable, fluctuating between 33%, in the cases of Bolivia, Chile and Panama and the Dominican Republic and 6% in Guatemala and Honduras. In this realm, inequalities of family income are also significant, with a difference in registration rates between the two extreme quartiles of approximately 22%. Between urban and rural population, there is a difference of 18%.

In taking stock of these changes, one may safely say that progress has been made in the levels of coverage of the educational system which, although they were general, had a special effect on the levels of secondary education. In spite of these advances, there are still significant differences in the levels of educational coverage between countries of the region and, within countries, there are noteworthy inequalities in the population's access to

educational services, particularly as a function of family income and urban or rural dwelling. These differences become particularly visible with regard to secondary and university education, and no visible progress seems to have been made toward the correction of these deficiencies throughout the decade. It may even be said that university education has undergone a process of increasing 'elitization', as pointed out by ELALC, since the difference in the registration rates between the extreme quartiles of income distribution was 16% in 1990 and reached 22% ten years later.

Even the progress made in the realm of education loses lustre when compared with the progress made in more advanced countries. An illustrative fact is that during recent decades, school life expectancy as constructed by UNESCO, increased in the region by 0.4 years, but in the OECD countries, it grew by 2.3 years. Thus, by the end of the century, the difference in school life expectancy between one region and the other had doubled, from 2.4 to 4.3 years. This indicator reached its highest figures (over 14) in Chile and Argentina and its lowest (under 10) in Honduras and Guatemala. These figures express one of the region's weaknesses in the realm of education: high dropout rates. In fact, the limited capacity to students within primary and, even more so, secondary education programs is one of the basic deficiencies of the education system in Latin America.

ELALC made a commendable effort at determining the magnitude of school dropout rates, which is concentrated in the critical adolescent period of between 15 and 19 years of age (ELALC, 2002a). In 2002, nearly 15 million young people, constituting a total of 49 million, had abandoned their education prior to the completion of 12 years of study. Approximately 70% of them had done so before completing primary education, seriously damaging the sustainability of the education received. In this realm, there are also considerable inequalities within countries so that the dropout rate in rural areas is almost twice that of urban areas (48% as opposed to 26%). Likewise, the differences among countries were significant, revealing higher dropout rates (over 40%) in Honduras and Guatemala, followed by Costa Rica, Ecuador, El Salvador, Mexico, Nicaragua, Paraguay, Uruguay and Venezuela, with rates between 25% and 35%.

Also significant are the deficiencies perceived in the quality of education, which is translated into low comparative educational results. This aspect is conditioned by the public or private nature of the schools and, therefore, also related to the levels of family income of the students. Thus, the average educational result of fourth grade primary school students in language is 71.9 (over 100) for the higher level, 58.4 for the intermediate level and 47.9 for the lower level, respectively. These data underline the need to accompany the increasing coverage of the education system with specific actions aiming to improve performance in the poorest sectors if education is to promote social mobility and increase social equality.

Additional differences are found in the equipment of educational centres. This not only affects educational performance, but also the teachers' and students' capacity to access Information and Communication Technologies (ICT). Given the speed of technological change and the key role that ICT plays in this process, these deficiencies only serve to widen the region's technological gap.

The capacity of the educational system to function as a mechanism of social mobility depends not only on its basic features –coverage, equality and quality of its service– but also on its connection with the productive structure and labour market of the country in question. In other words, it depends on the economy’s capacity to convert skills acquired in the education system en assets valued by the market which may be a source of income for those possessing such skills. This, in turn, is related with the productive system’s capacity to generate quality employment. This aspect will be discussed in the following section.

### **Capacity to Generate Employment**

In an increasingly globalized world, a considerable part of adjustments befalls labour. This is true particularly if one bears in mind the high degree of rigidity which often characterizes falling nominal wages. Having reduced the margins of manoeuvre in monetary policy and, to a lesser extent, fiscal policy, the international differentials in terms of productivity –or competitiveness– are manifested in terms of capacity to generate employment in the respective economies. The costs of this process are greater if, as in the case of Latin America, the evolution of the economy is accompanied by a high level of variability in the growth rates.

In fact, the achievements of the process of stabilization and reform do not seem to have reached the labour market where high rates of unemployment persist. The achievements of the process of stabilization and reform do not seem to have reached the labour market where high rates of unemployment persist. The limited rates of growth in the region are at the root of unrelenting unemployment rates which are further fed by the significant increase in working-age population. In brief, the potentially active population is growing at a rate of nearly 2.5% annually.

The capacity to generate employment is not helped by the model of productive specialization which many of the economies of the region have tended to embrace, with an increasing presence of industries intensive in natural resources. Industries producing raw materials and commodities require a high level of capital consumption, but their capacity to generate employment is limited. Industries intensive in the consumption of imported inputs (like assembly and cross-border plants) demand more labour, but the employment they offer is usually of lower quality in terms of stability, pay and working conditions.

The difficulty in generating employment is also intensified by the progressive incorporation of women in the labour market, a trend that has become more accentuated in recent years, especially among young women and its effect transcends economic sphere. Nevertheless, considerable gender inequalities exist in labour, as is revealed in the respective activity rates, which fluctuate between 73% and 84%. The same occurs with unemployment rates in the Dominican Republic and Colombia, which are higher for women.

It is important to consider not only the employment supply generated, but also the quality of employment. In this sense, the need to increase the flexibility of the economy and to facilitate labour mobility to adapt to the pace of technological change has paved the way for the precarious labour contracts. Labour insecurity and instability is thus accentuated in a context of saturated labour markets with very limited protection against unemployment. In brief, the coverage for this type of figures is very low, falling somewhere between 4% and

29% and, while the circumstances which determine coverage change significantly from country to country, the most protected groups are those located in the middle and upper-income strata. The poorest sectors receive lower degrees of coverage and are therefore affected not only by the shift to more precarious forms of hiring, but also by the incapacity to accede to protection against unemployment.

In these conditions, it is not unusual that the informality of the Latin American economies is on the rise. This trend is spurred on by the limited progress made in the generation of employment and by the existing rigidity in the regulatory framework for business initiatives. In fact, it is estimated that between one third and half of the work force in urban areas is employed in the informal sector. This figure is even higher in rural areas. The percentage of women working in the informal sector are even higher than the average as a consequence of the difficulty they have in penetrating the formal labour market.

Under this set of circumstances, the labour market itself functions, on the one hand, as a mechanism consolidating inequality, due to the differences in the levels of remuneration, productivity and qualification of jobs. On the other hand, it also foments exclusion, due to the lack of quality jobs, the increasing precariousness of existing jobs and the limited degree of coverage that the protection systems offer against unemployment. Thus, the exclusion and the social segmentation derived from the limits on access to jobs with adequate labour conditions are determining factors of poverty and social exclusion which consolidate over time and which offer limited possibilities of eventually being corrected.

### **Social Protection**

The system of social protection of any country, via preventive or support actions, reduce the level of risk that citizens face in situations that increase their vulnerability. This type of system is often comprised of a set of benefits derived from the contributions to social security (related to pensions, disability or health insurance) and by social assistance financed by public contributions (medical care, employment programs, transfers, subsidies). In developed countries, the Welfare State was built upon the effectiveness of these programs in the second half of the twentieth century.

In Latin America, however, the coverage offered by such systems is very limited. In fact, only one third of the countries of the region has programs offering protection against unemployment, disability and programmes for family subsidies. Such deficiencies are not only the consequence of the development level of the countries, but also the lack of will to implement social programs of universal scope. As pointed out by ELALC (2002a), ‘... the significant deficit in coverage is probably the greatest problem pending in the systems of social protection.’ This deficiency becomes even more outstanding as one of the factors associated with the globalization process is the increase in the level of risk, derived not only from the greater volatility of growth, but also from the limited capacity to translate this growth into quality employment.

The lack of mechanisms of social protection with universal coverage is translated into high levels of vulnerability for the population that lives below or around the poverty line. According to ELALC’s data, poverty affects 35% of the households and 44% of the people, but a large percentage of households (approximately 25%) is found between the two



poverty lines, so that any adverse contingency provokes a decline into a situation of extreme poverty. The extension of the efficiency and the degree of coverage of the mechanisms of social protection would facilitate the reduction of poverty's sensitivity to the contention of growth in moments of economic difficulty.

However, the increase in the risks inherent to globalization not only affect the families living below or around the poverty line: a large part of the shrinking middle class feels equals threatened by the instability and growing precariousness of the labour market and by the limited capacity and coverage of the region's systems of social protection. The data are revealing (Table 7): while three quarters of the households are comprised of husband and wife, in only one-third are both employed. In these cases, the incidence of relative poverty (less than half of the average available income) affects 12% of the households. This figure increases to 31% if only one spouse is employed. It reaches 80% when neither of the two have a job. Likewise, the percentage of households living in relative poverty reaches 26% when comprised of only one employed spouse and it reaches 79% when he or she is unemployed. In brief, in Latin America it is only possible to overcome poverty when two members of the family receive labour income. This objective is elusive given the saturation, instability and precariousness of the labour market.

The above results also derive from the social protection systems' limited capacity to mobilize transfers and to cover risks. Table No. 7 provides information in this respect. In brief, Latin America's transfer structure (passing from primary to disposable income) has managed to reduce poverty from 31% to 26% of the households in which only one spouse is employed and from 80% to 62% when neither receives labour wages. This decrease is very small if compared to those derived from the effectiveness of the social protection systems in the OECD where relative poverty is reduced by half in both situations (dropping from 35% to 18% and from 89% to 42%, respectively), as a result of the implementation of social protection programs.

The increase in effectiveness and coverage of the social protection systems is challenged by the limited fiscal capacity of the Latin American states, in a context of low economic growth. In response to this imbalance, two types of policy have been put forth. First, the universalization of social policies has been replaced by concentrating programs and their resources on those risks that are considered to be more important and on the more vulnerable social sectors. The results thus obtained are ambiguous, depending upon the sustainability of the program and its orientation. In some cases, these initiatives attempted to strengthen the poorer sectors' capacity to acquire assets (including education). Such is the case of the programme *Progres*a, renamed *Oportunidad*, in Mexico, *Bolsa Escola* and *Fome Zero* (Zero Hunger) in Brazil, and *Chile Jóven* (Young Chile), in Chile. These programs are characterized, however, by their political vulnerability and the costs derived from the segregation of the beneficiaries, lacking a universal vocation (Birdsall and Székény, 2003).

The second policy response is the increase in the capacity to finance these systems by means of procedures serving as alternatives to fiscal backing, thus strengthening the beneficiary-contribution relationship, through insurance. This response, while it alleviates

the financial difficulties of the system nevertheless has high costs in terms of equality and universality in the access to protection schemes.

**Table 7. Effects of Social Protection**

	% of Households	Relative Poverty		
		Primary Income	Disposable Income	Difference (%)
Latin America	100			
Households: Husband and Wife	75			
Employed	27.6	12.0	10.2	-15
Subemployed	42.7	30.5	26.1	-15
Unemployed	1.5	80.4	62.3	-23
Inactive	3.2	64.6	23.2	-65
Households: without partner	25			
Employed	17.4	26.3	19.5	-26
Subemployed	1.2	79.5	57.8	-28
Unemployed	6.4	63.6	32.6	-49

Source: ELALC (2002b).

### **Environmental Sustainability**

Latin America is one of the regions of the world with the greatest and most valuable endowments of natural capital, the effects of which transcend its borders only to become ecological reserves of international value. It is therefore difficult to conceive of a process of sustainable development in Latin America without considering the environmental dimensions involved in the dynamics of change. This is, however, a difficult aspect to study due to the complexity of the interactions established between industrialization, spreading globalization, and environmental sustainability. The environmental consequences generally have long-term dynamics that must be foreseen, with accumulative and interactive processes of multiple dimensions, some of which are difficult to measure since they deal with qualitative parameters. Here we will only consider some of the possible aspects related with the Latin America's process of growth and productive specialization, with an energy consumption pattern and its effect on climatic change and the derivative costs of vulnerability in natural catastrophes.

The first of the environmental effects refers to the impact of productive activity on natural and environmental resources. Economic growth during the most recent historical period brought about diverse changes in the productive structure, with both positive and negative effects on the environment. On the one hand, population growth has produced growing pressure on agricultural land. Consequently, though at a slower pace, the agricultural frontier continued along its expansive process throughout the decade of the nineties, at a time when changes in soil use took place, replacing forests for cultivated land or pastures and the extension of cultivatable land to areas unsuitable due to their fragile ecosystems.

Specifically, between 1961 and 1999, over 150 million hectares were put to use for agricultural production, most of which had been forests. In fact, according to FAO data, deforestation continues, although at a slower pace, and advanced by 0.4% for the entire decade of the nineties in Latin America, 1.2% in Central America and approximately 0.9% in the Caribbean. The extension of agricultural areas, together with population growth and the modernization of exploitations have led to an increased use of fertilizers and pesticides, which also has aggressive effects on the environment. This process is accentuated by the extension of agricultural activity which necessitates an intensive and specialized use of land, with more aggressive effects on the environment.

**Table 8. Evolution of the Use of Environmental Resources (Accumulative Growth Rates)**

Physical Indicators	1989/1980	1999/1990
Arable surface area	7.3	6.3
Volume of agricultural production	26.8	28.3
Total consumption of fertilizers	5.3	42.2
Livestock	7.4	0.8
Volume of industrial wood production	25.4	18.1
Production of timber and coal	12.3	0.4
Production of marine fisheries	17.9	-24.3
Production of marine fish farming	165.0	116.0
Volume of mining production, including oil	25.9	43.1
Volume of mining production, excluding oil	46.2	67.6
Carbon dioxide emissions	22.9	37.1
Carbon monoxide emissions	23.5	28.4
Accumulated population growth	21.9	17.0
Accumulated GDP growth (in US dollars)	13.9	33.2

Source: ELALC (2002c).

This very dynamic of increasing exploitation of natural resources, spurred on by international specialization, is noticeable with regard to forest and fishing resources. In some cases (in fishing, for example), the loss of extractive efficiency is the result of the over-exploitation of resources (Table 8). For example, the growth rate of industrial wood production during the decade of the 1990s is clearly inferior to that of the 1980s (18% as opposed to 25%). Something similar occurs with respect to the growth rate for coal and timber production (0.4% as opposed to 12.3%), and the growth rate of sea fishing which is even negative (-24% as opposed to 18%). With regard to the latter, the substitution of marine production by aquiculture has negative environmental effects, although it presents a new opportunity for the exploitation of comparative advantages in the region.

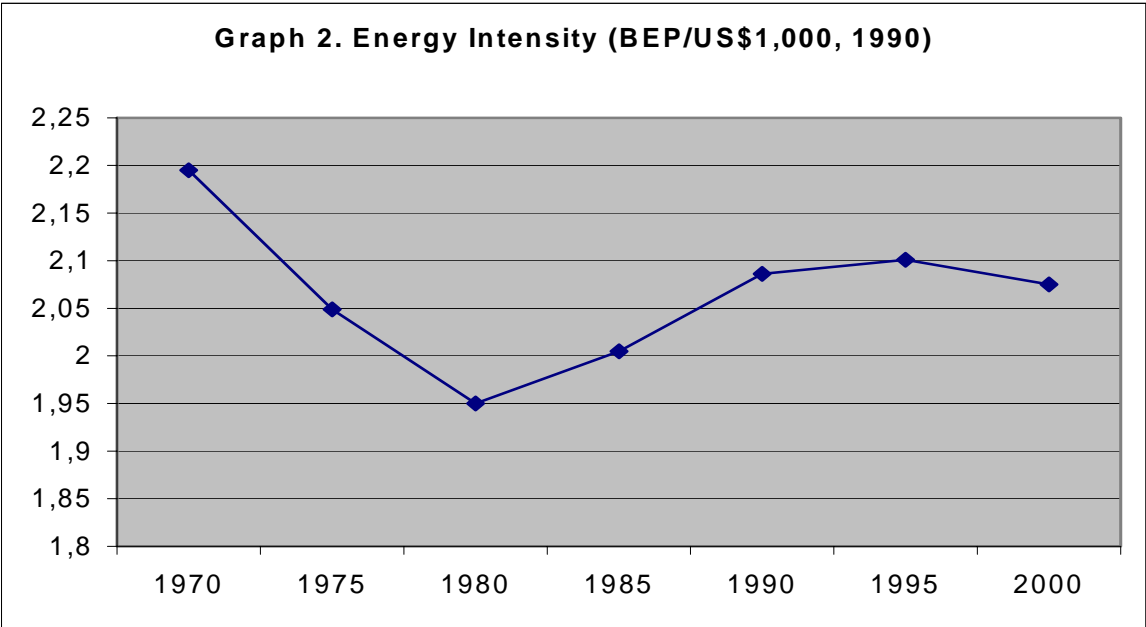
With respect to industry's impact on the environment, processes with both positive and negative effects are at play simultaneously. On the one hand, the increased internationalization of Latin American economies encouraged the reallocation of production according to the logic of international specialization. This led to the identification of industries intensive in natural resources as the foundation for gaining comparative advantages for the region. From this perspective, it would be safe to speak of an increasing 'primarization' of Latin American export specialization during the 1990s. Another noteworthy factor is the penetration of foreign capital which, while it did gravitate to a greater extent toward service industries, part of its resources were destined to the exploitation of natural resources or the implantation of industries intensive in the consumption of those resources. Both processes have accentuated the pressure of growth on the environment. This is the case, for example, of the production of intermediate industrial goods, such as iron and steel, petrochemical products, non-iron minerals, cellulose and paper, copper and aluminium, which are considered by the World Bank as being environmentally sensitive industries. This occurs not only in production, but also in export: throughout the decade of the nineties, the export of industrially sensitive goods grew at an annual rate of 2% in Mercosur, and as much as 7% in the Andean Community.

Nevertheless, the development of industrial activity and the presence of foreign capital has had positive effects on the growing awareness and sound environmental practices. Various factors have facilitated change in this sense: first, by importing environmental control systems in effect within the multinational business group or by competitive groups; second,

the conquest of international markets necessitates such control since greater quality demands in this field are therein required; and third, because consumers have begun to value the environmental images of firms. The regulations of ISO 14001, the concepts of ecoefficiency and ISO 9000 for quality management have been conceived in this spirit. ELALC points out the fact that there exists a growing trend among firm in the region, both national and foreign, to invest in obtaining the 14001 certification for their environmental management systems.

A second crucial factor for the estimation of the environmental impact of economic activity is energy consumption. It is usually thought that intensity of energy use progresses in changing manner in accordance with the a country’s level of development: it increases during the initial stages of development, depending upon how industrialization moves forward; it later stagnates as the industrialization process stabilizes; and finally it decreases, as a result of the technological improvements and energy output. Nevertheless, available data suggest that this does not seem to be true of the region as a whole. In truth, energy intensiveness decreased between 1970 and 1980, only to increase following a trend that was neither uniform no linear but that, as a whole, remains constant over time until the present, with no sign of sustained improvement in energy efficiency (Graph No. 2).

When analyzing the components of energy consumption, one of the factors explaining this behaviour comes into focus. In recent years, there has been a decrease in the share of family consumption of total energy consumption (decreasing from 33% in 1970 to 18% in 2000), but a considerable increase takes place in the relative weight of the transportation sector (from 17% to 35%) and, to a lesser degree, of industry (from 31% to 35%). With respect to the latter, the shift toward industrial specialization must have been determinant, as it has tended to favour the presence of more energy- intensive industries.



As a consequence of the evolution of energy consumption, there has been a sustainable increase in emissions of carbon dioxide from 1970 to the present time. This growth took place even when the emissions are considered as a percentage of GDP. In brief, between 1970 and 2000, the rate of emissions by unit of GDP grew by 16%. This rate becomes particularly outstanding as of the mid-1980s. The emissions are not only a function of the achievements in energy efficiency, but also of the changes in energy sources, giving way to a greater presence of those derived from thermal plants, which are more environmentally damaging than alternative sources.

In spite of the above, the relative weight of carbon dioxide emissions (3.8% of the world total) in Latin America is still below its relative weight in the world economy (4.5% of the aggregate GDP), which is resultant of its lower level of relative development. The emissions growth rate is, however, cause for concern. The share of the world total has increased from 2.6% to 3.8%, between 1970 and 2000 and it is expected to reach 7% by the year 2020. Taking into account all of the gases responsible for the greenhouse effect, Latin America's share reaches 5.4% of the total. The greatest producer of emissions in the region is Mexico, followed by Brazil and, taken together, the two countries account for 53% of the regional total. Two thirds of the regional emissions originate in the burning of liquid fuel (petroleum and its derivatives). Even so, by product unit, Latin America's emissions are lesser than the world average, due to the greater availability of renewable energy for general supply.

With respect to the emission of greenhouse gases, it is worth mentioning that it is possible for the region to become a net supplier of global environmental services, in terms of initiatives for the capturing of carbon dioxide, which could become a source of future income, if a quasi-market is eventually created for such a service.

Last, one environmental issue that has increasingly become a cause of concern is the region's vulnerability, understood to be the propensity to undesirable changes caused by unexpected phenomena. Most factors of environmental vulnerability are natural catastrophes and the effects of climate change. Latin America has a high degree of exposure to this type of natural risk, with high destructive potential due to the low level of adaptation and preparation and high levels of social vulnerability. The latter factor has to do with others, such as poverty, inadequate infrastructures and the deterioration of ecological environments. Within the region as a whole, Central America is the most vulnerable, to such an extent that the annual subregional costs derived from catastrophes occurred since the early 1970s is 2% of the annual GDP (ELALC, 2002c).

The effects of climatic change are also worthy of consideration as part of an analysis of vulnerability. In spite of the fact that research does not provide totally conclusive results, work done by the Intergovernmental Group of Experts on Climatic Change identify areas and activities that attract greater risk. The Caribbean subregion is where a large part of the foremost threats are located, particularly in relation to the rising of water levels on coastal areas, atolls and reefs. The fact that much of the cultivatable land is located in areas near coastlines increases foreseeable costs, not only due to the flooding of seawater onto fertile land, but also due to the salinization of clearwater aquifers, damage to infrastructure and the deterioration of ecological environments like reefs and mangroves. Tourism may also be

adversely affected by this process. Beyond the Caribbean area, the effects of climatic change may spread into the entire region by the alterations provoked by the El Niño phenomenon, possibly affecting agriculture and fishing in various countries of the region. Changes in precipitation may affect the availability of water resources in some areas with already fragile equilibria, and this may affect agriculture and food and energy production.

Held in 1992, the United Nations Conference on Environment and Development (UNCED), laid the groundwork for the countries of the region to try to institutionalize their environmental policies. Ministries and lower-ranking administrative units were created expressly for this task, while commissions, institutes and national programs with environmental objectives, such as biodiversity and climatic change, were constituted. An effort was thus made, at the national level, to institutionalize the development and follow-up on the international agenda agreed upon during the Earth Summit meeting.

The attempt to institutionalize environmental policy in Latin America has also fomented processes of subregional integration. Thus the Forum of Environment Ministers of Latin America and the Caribbean which brings together 33 ministries or analogous institutions, receives technical support from the Interagency Technical Committee and, in it, ELALC, the UNDP, the UNEP, the World Bank and the IDB participate. Finally, there is no lack of multilateral agreements in this realm for the management of shared resources (like the Amazon Cooperation Treaty), either for the establishing of common policies (like the Small Island Developing States Programme of Action for Sustainable Development of 1994) signed by the countries of the Caribbean, with their own action programme.

In spite of this progress, the financial effort made by the countries of the region remains small. ELALC estimates on spending, though it varies among countries, does not exceed 1% of the GDP, taking both private and public resources into account. If only public funds are considered, the share does not surpass 3% of total public expenditures. The fact that much of the action taken in favour of environmental protection must be assumed by subnational administrations (municipal or regional) and this complicates things, given the budgetary restraints placed upon this type of institution. Apart from that, there exists a certain imbalance among components on the environmental agenda since, although it is true that international support is available for the *green agenda*, such support is small when compared to the brown agenda which deals with the treatment of the residue of urban areas. This is, however, a central problem for a large part of the cities of Latin America.

### **Final Observations**

In the previous pages, diverse aspects of poverty, social development and sustainability in Latin America have been analyzed. Although progress has been made in some of these aspects in recent years, the pending challenges are daunting. Listed below are seven key aspects of the human and sustainable development of the region, far from exhaustive, but which serves as a reminder of the main ideas developed in this chapter.

- First, it appears necessary to responsibly address the problem of poverty in Latin America, not just for reasons of ethics related to poverty's inherent denial of individuals' rights and dignity, but also for its costs in terms of political and

economic stability and the strength of institutions which ultimately affect the countries' possibility of growth.

- It is impossible to make progress in the struggle against poverty at an adequate pace without correcting the pattern of distribution – of income and assets – characterized by high levels of social inequality. In order to correct inequality, it is not sufficient to implement policies focused income distribution: it is also necessary to put into effect policies for the redistribution of assets – both tangible and intangible - which allow the more vulnerable social sectors to participate more successfully in economic activities.
- One of the necessary ways to promote this redistribution of assets is to increase the supply of training in order to enhance the endowment of human capital in individuals. However, an increase in training will have a limited effect if it is not accompanied by a change in the scope of coverage, equality, and effectiveness of the system and if the education system is not more solidly integrated into the productive system of the economy. In other words, in order for education to assist in the promotion of social mobility the markets must value the assets that people acquire in the educational process, and this is related to society's capacity to generate employment.
- The above aspect refers to the functioning of labour markets in the region. The most recent trends underline the limited capacity of the system to translate economic growth into expansion of job supply, at least at the pace required by the growth in population demanding employment. This limitation is accompanied the labour market's tendency to be precarious, thus reducing the levels of security, redistributive capacity and working conditions. In order to correct this process, it is not only necessary to achieve greater stability and dynamism in economic growth, but also to give greater attention to the model of productive specialization, so as to give greater value to the availability of jobs in the region, and promoting industries more intensive in labour in the region.
- Given the vulnerability of growth, it is necessary to support the development of a system of social protection that reduces the risk for people, as a condition for their full social integration. Nevertheless, a system of social protection cannot be understood as an independent or subsidiary mechanism (like compensatory action) of the development strategy adopted, but rather as a central mechanism – with the growth of a broad social base and redistributive action – in a strategy aiming to reduce poverty and to improve the levels of well-being in the region. This objective should be primary if the social and economic stability is to be achieved in the region.
- The implementation of such a system of social protection should respond to criteria of effectiveness and financial capacity, but also universality. From this perspective, focalization should be understood as a way to ensure that basic services have universal coverage and are not viewed as a means of eluding this objective, and the criteria of equivalence between contributions and benefits should be compatible with the principle of solidarity and equity.
- Finally, it is not possible to progress towards sustainable development if progress is not also made in addressing environmental impact, with a medium- and long-term perspective. The region has possibilities to maximise the use of its outstanding

endowment of natural capital, but it must foment a specialization that does not accelerate the depletion of resources.

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*Professor of Applied Economics, Instituto Complutense de Estudios Internacionales*

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