Participation by the *poor in the* fruits of growth

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The influence of economic growth on numerous aspects of the economy and society is a frequently recurring topic among economists, especially at present, when profound economic and social transformations are under way in most of the countries of the region, while simultaneously there is an awareness that there are great shortcomings in terms of income distribution and that a high percentage of the population is in a state of poverty. A strong desire therefore exists to determine the capacity of economic growth to cope with those problems. This article begins by placing the issue in a conceptual and Latin American context and then going on to analyse it in the light of abundant statistical evidence. In particular, the assertion made in a recent study that "growth is good for the poor" is subjected to analysis and testing in the Latin American context.

I

Introduction

This article seeks to analyse the evolution of the income of the poor groups of Latin American society during the 1980s and 1990s. Such an analysis can be addressed from two perspectives. The first is to determine what proportion of the lowest-income households are above absolute levels corresponding to the indigence and poverty lines. The second is to analyse the share of such households in the total income of all households. Fundamentally, we will concentrate here on the second approach, since the first one has been extensively covered in various issues of the *Social Panorama of Latin America*, published by ECLAC.

This second approach has been used recently in the study of a large set of countries made by Dollar and Kraay (2000). Here, we will review the situation of Latin America to see how far the conclusions of that study are applicable to the region.

II

Growth and poverty: a brief conceptual analysis

A brief conceptual analysis would appear to be in order here, in order to place this matter in the broader context that it requires.

The econometric study included in the study by Dollar and Kraay establishes a direct relation between growth and the share of the poor groups in total income, thus suggesting that growth is the determining factor. Moreover, when the relation is established over a lengthy period of time (over 20 years), the impression may be gained that that effect displays a certain homogeneity over time.

ECLAC has always recognized and stressed the importance of economic growth when addressing social problems. Indeed, in its studies it coined the term "dynamic insufficiency" to express the difficulty or impossibility of absorbing the labour force in productive jobs when growth rates are low. At the same time, however, it also emphasized some other aspects which are complementary and essential for the analysis. Thus, for example, it used the term "styles of development" to express the possibilities of achieving similar growth rates through changes in production of different natures, the aim being to achieve greater sustainability over time, greater economic dynamism and, above all, differentiated consumption structures and broader social dissemination of the fruits of economic growth.

Emphasis has also been placed in other documents on the existence of degrees of freedom, within a given form of development, to apply different types of economic policies.[1] Another important example of the possibility of influencing income distribution for a given growth rate is the idea of changing the size and destination of social spending.

It should also be recalled that in the 1980s and 1990s intensive reform processes were carried out in the Latin American region with the aim of changing the prevailing forms of development. Analysing the changes which the new forms of development can cause in the social dissemination of growth is therefore a matter of the greatest importance, and it has in fact been extensively explored in various issues of the *Social Panorama of Latin America*. Such an analysis involves studying the relation between growth and the income of the poor, separating the analysis into different periods when necessary. Indeed, the study by Dollar and Kraay begins with quotations from critics and defenders of the new form of development which is being installed today in the majority of Latin American countries. Its critics accuse this new form of having harmful effects on the poor, and one of the main objectives of the study

[1] See, for example, Calcagno and Sáinz (1992).

in question is precisely to show that this is not so. The fundamental variable chosen to show this is the proportion of income growth captured by the poor deciles.

In view of this, it seems important, before taking up the question of the amount of income captured by the poor deciles, to review some aspects which represent degrees of freedom with respect to growth within a given form of development. Thus, for example, low-income households faced with difficult situations in terms of income sometimes manage to increase the number of employed members and generate extra income by providing services which are not customary in less critical situations, while the government may be able to change the structure of public expenditure in order to increase the proportion of social spending in it and focus it on the neediest sectors. It must be borne in mind that although much of this spending is usually destined for education and health, with effects that are observed in the medium and long term, a significant portion of it has more immediate effects, as for example in the case of increases in pensions for the poor groups, monetary transfers for subsistence purposes, and increases in the number of jobs and rates of pay of the lowest-level public employees.

At the same time, the economic changes under way can also lead to changes in relative prices which have an impact on absolute poverty. These changes are not independent of the different types of policies considered acceptable within the form of development adopted. Thus, for example, exchange rate policies have varied from one country to another and from one period to another and have had unequal effects on the evolution of relative prices, especially those affecting the consumption of the lower-income groups, such as their consumption of food. They also usually have an unequal effect on the evolution on the production of the various sectors and hence also on the level and structure of employment and on wages.

None of these factors evolve lineally with income. For a given form of development, however, there can be no doubt that higher economic growth does have positive effects on employment, income and the possibilities of expanding public expenditure.

Analysis of the evolution of economic growth and of some of the above-mentioned factors during the 1990s shows that in different countries there are different relations between economic growth and the reduction of poverty. In order to illustrate these differences, we will henceforth take the figures for the three Latin American countries which have registered reductions of over ten percentage points in the number of households in a state of poverty: Brazil, Chile and Panama (table 1). The first thing that attracts our attention is that the per capita annual growth rates of these three countries differ considerably (between 1% and 5%). Although the fall in poverty in Chile was more marked than in Brazil and Panama, the respective falls are by no means proportional to the growth rates. Moreover, there are appreciable differences between the transfer policies of the three countries, both in rural and urban areas. Thus, transfers increased significantly in Brazil, especially in rural areas, and they also increased in Panama, but they changed little in Chile.

TABLE 1

Brazil, Chile and Panama: Indicators of growth and poverty, 1991-1997

	Brazil		Chile		Panama	
Total poverty reduction	From 41.4 to 29.9 11%		From 33.3 to 17.8 15%		From 36.2 to 24.2 12%	
Reduction in urban poverty		10%		16%		13%
Reduction in rural poverty		19%		11%		10%
Per capita annual growth	90-99	0.95%	90-98	5.36%	91-99	2.40%
Proportion of transfers in the income of poor urban households	1990 1996	11.1% 15.1%	1990 1996	12.4% 12.6%	1991 1997	12.7% 17.5%
Proportion of transfers in the income of poor rural households	1990 1996	8.6% 24.8%	1990 1996	12.8% 15.8%	1991 1997	19.7% 23.0%
Occupational density around the poverty line	1990 1996	0.45 0.49	1990 1996	0.31 0.34	1991 1997	0.30 0.34

Another factor which is relatively independent of the economic growth rate is that comprising demographic changes and migrations. Within a given country, a given growth rate –but of different geographical origin– can give rise to different types of migrations which affect the incomes of different social groups likewise differently. If the incidence of poverty in rural and urban areas differs significantly, and if the urban areas have some capacity to absorb labour productively, then migrations will tend to reduce the national coefficient of poverty, other conditions of the urban and rural coefficients being equal. Extreme conditions of recession or political crisis can also give rise to international migrations. In this latter case, the relation between growth and poverty takes on special features which are further accentuated if, in the medium term, those who have emigrated begin to send back remittances.

III

Economic growth and the income of the poor in Latin America in the 1980s and 1990s

It has already been noted that poverty is influenced by factors which depend to different degrees on economic growth and which give rise to differences in the effects that a given economic growth rate can have on poverty, and it has also been noted that the effect of these factors varies from one country to another. We will now examine the empirical evidence available in Latin America on the evolution of economic growth and the income of poor households: especially the information on the percentage of total household income actually received by poor households.

This article deals with what happened in the 1980s and 1990s in a group of 17 countries. In view of the fact that the percentages of absolute poverty in most of those countries (especially those with the largest economies and populations) range between 10% and 40% and that income distribution studies generally cover the income of the poorest 40% of the population, we will present here data on the percentages of total income received by the poorest 10%, 20%, 30% and 40% of households. Moreover, since the nature and evolution of urban poverty differ considerably from rural poverty, the two types will be examined separately.

In Latin America, the 1980s and the 1990s showed opposite signs in terms of economic growth: the 1980s was a period of recession, whereas for many countries the 1990s was a decade of growth and recovery. In most countries, these variations in income in the two decades took place in substantially different macroeconomic, institutional and hence structural contexts. This is why it is important to study the two periods separately. Moreover, there is a qualitative difference between investigating how far the slowdown in the economy affected the poor and studying the evolution of their income in a period of positive growth.

In the 1990s most of the countries studied had a very low level of per capita growth. Nevertheless, there were changes –sometimes appreciable– in their poverty situations, so that it would appear that other factors as well as economic growth must be taken into account in order to explain the differences in the evolution of poverty in different Latin American countries.

Details of the shares of the 10%, 20%, 30% and 40% poorest households in total income are given in table 2. Information on the 1980s and 1990s is available for about half of the 17 countries studied, and data on the evolution of rural and urban income are available for most of them. These results will be examined below, first of all analysing the information given in the table and then using econometric instruments.

It will be seen from the table that there is a sharp contrast between the 1980s and the 1990s and that there are significant differences between rural and urban areas. Thus, in all the countries for which information is available on the evolution of urban income distribution in the 1980s (between 1980 and 1990), except for Uruguay and the city of Asunción in Paraguay, households in the deciles studied here, which contain the bulk of the poor population, lost shares in total household income, often significantly. Indeed, in many cases the loss up to the second or third decile was 1% or more of total income, and in some particular cases the loss up to the third or fourth decile was 3% or more. Moreover, in those countries this trend was

TABLE 2

Latin America (15 countries): Per capita income distribution of households, 1980-1999[a]
(Percentages)

Country	Year	Share of 10% poorest in total income		Share of 20% poorest in total income		Share of 30% poorest in total income		Share of 40% poorest in total income	
		Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural
		(Percentages)							
Argentina	1980	2.71	-	6.60	-	11.39	-	17.23	-
(Greater Buenos Aires)	1990	2.29	-	6.15	-	10.31	-	14.88	-
	1999	2.31	-	6.02	-	10.45	-	15.85	-
(Urban areas)	1994	2.19	-	5.17	-	-	-	-	-
	1999	2.42	-	6.09	-	10.26	-	15.35	-
Bolivia[b]	1989	0.72	-	3.43	-	7.37	-	12.05	-
(17 urban centres)	1992	1.52	-	4.51	-	8.53	-	13.29	-
(Urban)	1997	1.55	0.85	4.64	2.87	8.60	6.02	13.64	9.77
	1999	1.64	0.50	5.09	1.69	9.53	3.82	15.22	6.86
Brazil	1979	1.30	1.86	3.91	5.79	7.52	10.76	11.79	16.59
	1990	1.14	1.88	3.29	5.16	6.33	9.04	10.27	14.51
	1999	1.13	1.52	3.45	4.54	6.58	8.50	10.57	13.74
Chile[c]	1987	1.57	2.69	4.35	6.86	8.05	11.95	12.60	17.67
	1990	1.72	1.75	4.69	4.93	8.64	8.95	13.41	13.80
	1998	1.68	2.44	4.63	6.38	8.52	11.17	13.31	16.88
Colombia	1991	2.01	0.98	5.57	3.73	10.33	7.64	15.99	12.25
	1999	1.20	0.91	4.00	3.89	7.66	8.20	12.35	13.98
Costa Rica	1981	2.25	2.17	6.71	5.95	12.11	10.71	18.82	17.18
	1990	1.60	1.18	5.71	5.17	11.02	10.77	17.82	17.59
	1999	1.71	1.32	5.55	4.70	10.32	9.57	16.15	15.78
Ecuador	1990	2.05	-	5.87	-	10.88	-	17.14	-
	1999	1.45	-	4.73	-	9.04	-	14.12	-
El Salvador	1995	2.13	1.27	6.20	4.89	11.37	10.32	17.34	16.97
	1997	2.13	2.87	6.12	7.06	11.21	12.69	17.81	19.38
Guatemala	1989	1.02	1.20	3.66	4.39	7.39	8.77	12.10	14.41
	1998	2.05	2.21	5.45	5.50	9.45	9.85	14.69	15.22
Honduras	1990	1.46	1.42	3.93	4.25	7.38	8.35	12.81	13.13
	1999	1.49	1.25	4.50	4.42	8.93	9.03	14.63	14.31
Mexico[d]	1984	3.15	2.94	7.80	7.80	13.67	13.78	20.11	20.25
	1989	2.47	2.71	6.20	7.04	10.96	12.35	16.25	18.68
	1998	2.77	3.00	6.74	7.46	11.65	12.46	17.22	17.95
Panama	1979	1.17	2.82	4.68	6.64	9.52	11.73	15.48	17.85
	1991	1.06	1.89	3.86	5.38	8.01	9.67	13.30	14.96
	1999	1.57	2.33	4.75	6.02	8.96	10.86	14.19	16.24
Paraguay	1986	2.39	-	6.35	-	11.25	-	17.39	-
(Asunción)	1990	2.59	-	7.05	-	12.48	-	18.94	-
	1999	2.92	-	7.03	-	11.93	-	18.64	-
Uruguay	1981	2.72	-	6.78	-	11.87	-	17.68	-
	1990	3.49	-	8.18	-	13.82	-	20.11	-
	1999	3.60	-	8.73	-	14.81	-	21.59	-
Venezuela[e]	1981	2.54	3.05	6.97	7.69	13.09	13.67	20.20	20.75
	1990	2.00	2.74	5.67	7.10	10.87	13.17	16.77	19.83
	1999	1.19	-	4.42	-	8.97	-	14.55	-

Source: ECLAC, on the basis of special tabulations of household surveys of the respective countries.

[a] Calculated on the basis of the distribution by deciles of per capita household income.
[b] The 1989 survey covers the eight departmental capitals and El Alto. This survey also includes eight cities representing altogether 8.2% of the total.
[c] Calculations based on the national socioeconomic profile surveys (CASEN) for 1987, 1990, 1994, 1996 and 1998. Estimates in line with new figures from the household income and expenditure account provided by the Ministry of Planning and Cooperation (MIDEPLAN).
[d] Data from national household income and expenditure surveys (ENIG).
[e] As from 1997, the census sample design no longer permits a rural-urban breakdown. The figures therefore correspond to the total for the whole country.

observed not only for the group of households below the poverty line but for all households without exception in the poorest 10%, 20%, 30% and 40% of households.

It should be recalled that Latin America is noted for its poor income distribution, and therefore the amounts received by these low-income households are extremely small. Thus, in urban areas the poorest decile receives only between 1% and 2.5% of the total income in the great majority of the countries, while the poorest 40% of households receive between 10% and 20%. This helps to place in its proper context the seriousness of, for example, losing three percentage points in a period of recession, as occurred in some countries in the case of the poorest 30% and 40% of households. It also helps to weigh the question of whether it can be considered a success for the poor when they merely maintain their share in total household income.

In urban areas of Brazil, Guatemala, Mexico and Panama, the 1990s witnessed a partial recovery of the ground lost in the 1980s, but in Ecuador and Venezuela the situation continued to deteriorate. In Argentina the situation of the poorest 20% of households remained unchanged or suffered a slight deterioration, but there was a partial recovery at the level of the poorest 30% and 40%. In Costa Rica the situation of most of the poorest 40% of households deteriorated. It may thus be seen that in these countries there was marked asymmetry between the size of the losses in the 1980s and the magnitude of the recovery –if any– in the 1990s. This would appear to show that in many cases the poor were receiving smaller percentages of total income at the end of the 1990s than at the beginning of the 1980s.

Information for Chile is only available for the 1990s, when the percentage share of the poor remained unchanged in a context of rapid growth of per capita GDP, so that the elasticity was very close to 1.

When analysing the situation in rural areas, it should be remembered that the evolution of the income of dwellers in such areas is not as closely associated with global economic growth as in urban areas and also that in rural areas internal and international migrations may have had different effects. In order to avoid possible distortions, the percentage shares used have been calculated with respect to the total income of rural households.

Among the few countries for which information is available on rural areas for the 1980s, the share of the poorer sectors went down in Brazil, Mexico, Panama and Venezuela, while it remained unchanged in Costa Rica. This occurred even though the per capita income of rural households as a whole did not go down in Panama and remained unchanged in Brazil. If the analysis is extended beyond the households with a per capita income close to the poverty line, it is noted that in the first four countries the decline affected all of the first four deciles, except in the case of the first decile in Brazil, whose share remained unchanged. In Costa Rica, where households under the third decile maintained their share, there was a decline in the shares of those under the second decile but an increase in the share of the fourth decile.

The figures for rural income distribution in the 1990s show that there was a decline in the shares of all deciles in Brazil and of most deciles in Costa Rica, whereas the shares of the first three deciles recovered in Mexico and the same occurred in the case of all four deciles in Panama, all this taking place in the context of an increase in the average income of rural households as a whole. Among the countries for which figures are only available for the 1990s, there was a significant improvement in the shares of all deciles in Chile, Guatemala and Honduras and in those of the second to fourth deciles in Colombia.

On the basis of these same figures, a broad econometric study was carried out, covering both rural and urban households in the 1980s and 1990s. Basically, two types of regressions were prepared. The first one was effected by studying the relation between the per capita income of the 10%, 20%, 30% and 40% poorest urban and rural households and the corresponding per capita income of all households, both measured in terms of the respective poverty lines.[2] The second regression was carried out by studying the annual rate of variation of the average per capita income of households in the poorest 10%, 20%, 30% and 40%, as a function of the annual growth rate of the average per capita income of all households. Both rates were deduced from consecutive observations for each country. In both cases the regressions were estimated for rural and urban areas.

The cases considered are those included in table 2, adding the available intermediate years. Obviously, the number of observations is a good deal larger for the first type of relations than for the second.

The specifications used for these types of relations were of the following type:

$$LOG\ ING_i = a + b\ LOG\ ING + \varepsilon \qquad [1]$$

$$TING_i = c + d\ TING + \varepsilon \qquad [2]$$

[2] The data for each year are expressed in current prices, so that the shares are not affected by the poverty lines. When the data for different years are placed together, however, the poverty lines act as deflators.

where

ING_i = per capita income of households *i* in which *i* = 10%, 20%, 30% and 40%.
ING = per capita income of all households.
$TING_i$ = annual growth rate of per capita income of households *i* in which *i* = 10%, 20%, 30% and 40%.
TING = annual growth rate of per capita income of all households.

Equations [1] and [2] were estimated separately for the urban and rural sectors.

These relations make it possible to analyse the main subject raised in the study by Dollar and Kraay, namely, the changes in the share of the poor in total household income when the latter varies. As may easily be understood, as the first type of relations place different countries and years together, they reflect both the effect of differences in income between countries and that of the evolution of income over time within a country, and this makes it more difficult to interpret the results.

It has repeatedly been shown in many studies, especially those by ECLAC, that the relation between the level of income and the quality of income distribution is neither simple nor, much less, linear. The second type of relation (using rates) is conceptually sounder, since all the observations refer to growth rates within a country and are measured in a homogeneous dimension which does not incorporate differences in income between countries.

It should be noted that, unlike in Dollar and Kraay (2000), it was not necessary here to estimate data on the basis of assumptions, as the information was available from the ECLAC data base. Among the available household surveys it was possible to select those measuring income in the 1980s and 1990s for 17 countries. The income was edited in all cases using additional information, especially from national accounts. It was also possible to present rural and urban areas separately and to refer the shares of groups of households to the total income of the corresponding urban and rural households, without needing to refer to the total income of the whole economy.

The equations of type 1 were estimated for the 1980s and 1990s and for both decades together. Because of the nature of each observation, it is not known whether the point corresponding to it refers to a period of growth or recession. If we separate the 1980s and 1990s, however, we know that periods of recession predominated in the former, while the opposite was the case in the latter. Because of the smaller amount of observations and the fact that working with rates clearly indicates whether each observation corresponds to growth or recession, the regressions for the equations of type 2 were only made for the two decades taken together.

The results of the regressions for the type 1 equations were generally good or acceptable; those for the type 2 equations were not of such good quality for urban areas and were of poor quality for rural areas.

Table 3 gives the values of the coefficient *b*, which represents an estimate of the income elasticity of the different groups of households with respect to total income, both for the 1980s and the 1990s. In addition, in order to be able to compare these results with those of other studies which simultaneously include the data for all the years available, estimates are included for both decades together.

All the estimates of coefficient *b* were statistically significant at the 1% level. When the results for urban areas for the 1980s and 1990s together are analysed, the elasticities (combining inter-temporal and inter-country effects) for the poorest 10%, 20%, 30% and 40% of households range between 1.00 and 1.10. It is worth noting that the value estimated for the 20% poorest households (1.03) is close to the elasticity obtained by Dollar and Kraay (2000).

In the case of Latin America, however, when the 1980s and 1990s are examined separately it is seen that the elasticities for the period of income recession (the 1980s) are between 1.20 and 1.42, so that it may be concluded, in so far as the regression includes both the

TABLE 3
Latin America (17 countries): Elasticities of income of poor households with respect to total income[a]
(Coefficient b)

	1980-1989		1990-1999		1980-1999	
	b	t	b	t	b	t
Urban areas						
INGU 10/INGU	1.42	5.03	1.03	10.00	1.10	10.02
INGU 20/INGU	1.27	6.06	0.98	11.31	1.03	12.75
INGU 30/INGU	1.26	7.20	0.96	13.93	1.01	15.37
INGU 40/INGU	1.21	7.64	0.95	15.31	1.00	16.86
Rural areas						
INGR 10/INGR	1.36	5.65	1.31	7.49	1.34	8.45
INGR 20/INGR	1.21	8.59	1.28	9.38	1.28	10.61
INGR 30/INGR	1.07	6.70	1.18	9.74	1.19	11.30
INGR 40/INGR	1.15	9.67	1.17	11.46	1.17	13.16

[a] INGU: urban income; INGR: rural income.

variations between countries and within each country, that the economic downturn was extremely unfavourable for the poor. When we look at the 1990s, we see that the respective elasticities are between 0.95 and 1.03, so that, in general terms, during economic growth this group continued to receive shares similar to those registered after the losses of the 1980s.

This separate treatment of the 1980s and 1990s leads to a conclusion which is the opposite to that deduced if they are considered together. Thus, it might be concluded from analysis of the two decades together that growth is neutral for the income shares of the poor groups. When they are analysed separately, however, this confirms what was said in ECLAC's studies: namely, that there is a marked asymmetry between periods of recession and those of growth. In the former, income distribution becomes even worse for the poor, while in the latter it displays rigidity.

At all events, caution is called for in drawing conclusions from these elasticities, because as already noted, combining cross-temporal and cross-country observations can lead to conclusions which are not applicable to any country in particular. Moreover, this result does not coincide with the country study made earlier.

It would appear to be more interesting to study the second type of relations, which, as already noted, do not suffer from the problem of the different income levels of the countries. Analysis of the results of these estimates raises econometric problems, however, since only coefficient *d* (the angular coefficient) is statistically significant. This coefficient shows that the relation between the growth rates for urban areas is always significantly less than 1. As may be seen from table 4, the values of *d* for the different groups of households range between 0.76 and 0.86. This means that for the 1980s and the 1990s taken together, the growth rate of the income of the lowest-income households is in all cases between 15% and 25% less than that of total household income.

TABLE 4

Latin America (17 countries): Growth rate of income of poor urban households compared with growth rate of total income, 1980-1999

(Coefficient d)

TINGU 10/TINGU	0.805
TINGU 20/TINGU	0.763
TINGU 30/TINGU	0.855
TINGU 40/TINGU	0.830

This result is contrary to the findings of Dollar and Kraay (2000), and it makes it clear that in urban areas the growth in the per capita income of the lowest-income deciles was significantly lower than that of the per capita income of all households taken together. This finding should not come as a surprise to analysts of Latin American income distribution in the 1980s and 1990s.

For the countries for which figures are available on the 1980s and 1990s (Argentina, Brazil, Costa Rica, Mexico, Panama, Uruguay and Venezuela), the annual growth rates of per capita income were calculated for urban households as a whole and for the poorest 10%, 20%, 30% and 40% among them (table 5).

The results show that in Argentina total income virtually stagnated and the growth rates for the various groups ranged between -1.5% and -2%. In Venezuela, where total income suffered declines of -2.5% per year, the incomes of the different groups went down by between -4% and -6%. In the cases of Brazil, Costa Rica, Mexico, Panama and Uruguay, where total household income grew by between 0.8% per year in Uruguay and 1.9% per year in Panama, the income growth of practically all the lower-income groups was lower than this, except in Uruguay and in the case of the poorest 10% and 20% in Panama. The long-term evidence (covering over 14 years in the cases studied) thus fits in perfectly with the results of the regression.

TABLE 5

Latin America (seven countries): Household per capita income, 1980-1999

(Growth rates in percentages)

		Total	Poorest 10%	Poorest 20%	Poorest 30%	Poorest 40%
Argentina	1980-1999	0.02	-2.04	-1.83	-1.65	-1.50
Brazil	1979-1999	1.27	0.34	0.34	0.45	0.48
Costa Rica	1981-1999	0.88	-0.20	0.10	0.03	0.05
Mexico	1984-1998	1.04	0.06	-0.17	-0.26	-0.35
Panama	1979-1999	1.87	2.97	2.15	1.84	1.69
Uruguay	1981-1999	0.78	1.29	1.64	1.22	1.19
Venezuela	1981-1999	-2.54	-6.21	-4.88	-4.41	-4.13

IV

Interpretation of the econometric results

The analysis presented in the foregoing pages warrants some reflections on the use of econometrics in the study of these matters. The study by Dollar and Kraay repeatedly tests the hypothesis that the value of 1 cannot be ruled out for the income-elasticity of the amounts received by the poorest deciles and for the value of the coefficient linking the income growth rates of the poorest deciles to total income. This means asserting that, in the light of the evidence from the sample studied, it cannot be dismissed with a sufficient degree of confidence that a value of 1 is a possible figure for the population of the sample.

It might be asked what need there would be to test hypothesis 1 in the case of a Latin American analyst working with the data with which this regression has been prepared, in which the significance of the total population with respect to the sample is by no means clear. Indeed, on the basis of the available data there can be no doubt that in the great majority of the Latin American countries the poor deciles did worse in terms of income than the total universe of households, both in the 1980s and the 1990s. It could be argued that in some cases the recovery in the 1990s corresponded to a rigid form of evolution of income distribution which could back up the hypothesis of a coefficient with a value of 1. However, for a number of countries which went through crises in the 1990s this hypothesis does not seem to have much point. Moreover, nothing indicates that there could be any substantive interpretation of this hypothesis applicable to the 1980s and 1990s as a whole.

If the hypothesis of a particular value for the coefficient *d* is put to the test, the results obtained on the basis of the available data would indicate –with a coefficient of confidence of 95%– that acceptable values (i.e., values that could not be rejected) which could be taken as probable "certain" values of the population parameter would be those coming within the following ranges for the four urban equations studied:

Equation for the poorest 10%:	0.40 to 1.22
Equation for the poorest 20%:	0.51 to 1.01
Equation for the poorest 30%:	0.64 to 1.08
Equation for the poorest 40%:	0.63 to 1.03

Consequently, an analyst who used econometrics in this way in order to prove that 0.75 is a feasible value for the respective population parameter could accept the hypothesis just as easily as for the value 1.

V

Conclusions

Latin America's per capita GDP went down in the 1980s and grew only slowly in the 1990s. The question that arises with respect to the 1980s is therefore whether this decline in GDP adversely affected the income of the poor more, equally or less than the income of the other strata. The answer is that in the great majority of countries it affected the poor more. The slight recovery of growth in the 1990s only enabled the poor to recoup part of their losses, and even in the country with the highest growth rate distribution was rigid, so that the poor strata only managed to maintain their previous share. This illustrates the Latin American asymmetry between crises and periods of growth: concentration of income in the former and rigidity in the latter. Another aspect worthy of attention is the very small proportion of total income received by the poorer groups, so that it is doubtful whether merely maintaining their share of total income is "good" for them, unless they simply resign themselves to this situation. Finally, it has been shown that in the 1980s and 1990s, for the majority of countries for which information is available, which account for the bulk of the region's population, the incomes of the poorest 10%, 20%, 30% and 40% of households grew significantly

less than total household income. With regard to the total group of countries for which information is available, whether for the 1980s or the 1990s, an econometric study shows that the relation between the income growth rates of the urban deciles studied and total household income was between 0.76 and 0.85.

(Original: Spanish)

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