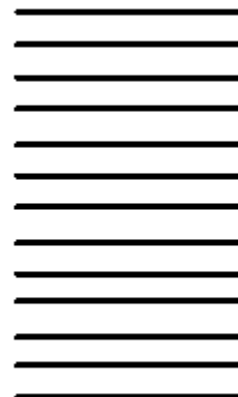
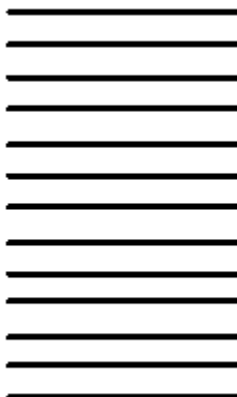


**WORKING PAPERS  
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**The Orientation of Social  
Spending in Latin America**

**Nohra Rey de Marulanda  
Jorge Ugaz  
Julio Guzmán**



**Integration and Regional Programs Department  
Inter-American Institute for Social Development**



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**The Orientation of Social  
Spending in Latin America**

**Nohra Rey de Marulanda <sup>1</sup>**  
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## **Abstract**

The orientation of social spending is a decisive element for the creation and allocation of opportunities for all because it reveals, to some degree, the priorities and relative importance a government assigns to directly and indirectly tackling poverty, inequality and their consequences. Paradoxically, there are only a few studies that analyze the orientation of social spending by socioeconomic groups in Latin America.

The present study tries to solve this, presenting and analyzing the incidence of social spending on education, health, and social security for the majority of Latin American countries in order to understand how State actions contribute to providing for the needs of the poorest groups of the population.

This study concludes that only five of the 11 countries under examination had progressive social expenditures; furthermore, the pace of change seems to be very slow. Although there are some positive trends – for example, spending in primary education – social spending in secondary education, tertiary education, and social security and pensions are highly regressive, even more than expected. This creates a greater sense of urgency in the region to deal forcefully with the issue of equity in social spending.





## 1. Introduction<sup>4</sup>

Latin America remains the most unequal region in the world. Indeed, in statistical terms, that has been the case for as long as data have been available for analysis. Socioeconomic inequality has not been the only recurring phenomenon in the region. Poverty itself has been incessantly persistent in Latin America, even if it has shown its gravest side during periods of crisis and seen a decline during times of relative economical boom. Indeed, in the past fifty years, no less than 35% of its population has been living in poverty (Londoño, 1996).<sup>5</sup> The ongoing confluence of these phenomena has created a scenario in which significant groups in society suffer from extreme necessities and socioeconomic exclusion, while other small groups enjoy levels of consumption and well-being similar to those in the upper strata of developed countries.

This deplorable social situation is not the sole result of economic cycles. While poverty does indeed worsen during crisis periods, even during periods of stability and growth, Latin America –with very few exceptions– has not been able to advance significantly in dismantling the conditions that cause extreme poverty. These conditions have remained a chronic and structural feature in the region.

Most countries in the region display poverty levels higher than those expected based on their wealth. Indeed, with the exception of Chile, Uruguay, Panama and Costa Rica, the *actual percentage* of the population with an income below the level needed to purchase a basic survival basket exceeds the *estimated* percentage based on the country's Gross Domestic Product (GDP) per capita (Rey de Marulanda, 2005).

The results of the performance of other important social indicators are mixed. On average, Latin America has shown progress in elementary school enrollment, life expectancy at birth, infant mortality and access to basic services (e.g. potable water). Those variables are at least within an acceptable range in terms of the region's development, when measured by its output per inhabitant. These are not minor advances. Nonetheless, striking gaps still persist, especially those seen in access to secondary school, repetition rates in elementary and secondary school, sewer services and basic communications infrastructure.

Confronted with this situation, commitments to reduce poverty have been renewed internationally and locally. Today it is accepted that it is not enough to aim at economic growth without concurrently implementing policies designed to close those gaps. Multilateral organizations, within the cornerstone of their mandate to aid the development of their member countries, finance and devote special attention to implementing national poverty reduction programs, as well as to the social impact of the sector projects, both public and private. At the national level, Latin American governments have affirmed their political will to achieve the

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<sup>4</sup> A version of this document was included in ECLAC'S Social Panorama 2005. The authors are grateful to Robert Devlin, José Luis Machinea, Arturo León, Jeffrey Puryear, Vito Tanzi, and Luiz Villela for their useful and constructive comments.

<sup>5</sup> Estimates of regional poverty levels for the 1970s and 1980s are also available in Altimir (1979) and in Feres and León (1991).

Millennium Development Goals that were proposed by the United Nations and that are focused on reaching specific social targets in the areas of poverty, malnutrition and child mortality, among others.<sup>6</sup>

But how are we to know just how paramount and effective is the struggle against poverty, inequality, and the inadequacy of basic social services in Latin America? One way of answering such questions is to examine the role played in each country of the region by public social spending (volume and orientation, trends and importance relative to total public spending) and social policy, and the relationship between the latter and economic policy.

Numerous factors determine the opportunities available to people living in situations of poverty and inequality. Economic policy, for example, determines the probabilities of access to new and better sources of income by decisively influencing the rate and quality of output growth. Macroeconomic management also has a direct impact on income level through its effects on inflation levels, interest rates, opportunities to access credit, and the sustainability of the external balance. The role of economic policy is also fundamental in creating the conditions for the operation of the labor market and its impact on the creation of employment and underemployment (both formal and informal).

The importance of economic policy in the creation and distribution of economic opportunities for the entire population is beyond question. Nevertheless, the orientation of social policy is another crucial element that must not be ignored. Its orientation and the role it plays in public policies reveal the priorities and relative importance given by a government to the social sectors. Public social spending is the manifestation of the direct action of the State in allocating fiscal resources to address social needs. This spending and its relationship to total public spending should then openly indicate the uncovered preferences of governments for directly and indirectly tackling poverty, inequality, and their consequences.

However, opposing economic, political and social factors may endanger the implementation of the State's preferences in the social realm. Governments in power may experience complications when implementing policies if they reveal their priorities in the social realm. Such priorities may be in the form of inertia from past spending or expenses linked to constitutional mandates, the pressures of elites with resources for lobbying, or social groups' (such as the middle classes) ability to rally opposition. In addition, governments may find difficulties in bureaucratic structures that differ organizationally and dynamically from those required to implement spending policies that place a priority on serving low-income groups. These dangers are latent. It is, nevertheless, the responsibility of a democratically elected government to deal with these dangers by implementing the social agenda that reflects its preferences. That is precisely what "governing" means.

This study is an attempt to highlight such preferences by means of analyzing by income levels of the population the volume and allocation of public spending on education and health. These constitute – on simple average – over 50% of total public social spending in Latin America.<sup>7</sup>

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<sup>6</sup> More detailed information on the agreements reached under the Millennium Development Goals framework is available in Organización de las Naciones Unidas (2005).

<sup>7</sup> The research is focused on the orientation of social spending without any type of tax deduction, which is also called *gross social spending* (Adema, 2001). Studies on the allocation of net social spending, namely, that which

The aim of the study is to understand how State action contributes to providing for the needs of the poorest groups of the population. Social spending is only one of a number of explanatory variables in shaping the conditions of poverty, inequality, and exclusion.

It is important and revealing to understand to what extent spending on education and health – which on simple average is 7.3% of the GDP of the countries - is intended to solve the problems of the lowest-income social groups or whether, on the contrary, such spending is not decisively aimed at resolving such problems, but instead reveals an orientation toward higher income groups (CEPAL, 2003). This study does not issue value judgments on whether the countries of the region *should or should not* orient their social spending based on a specific spending pattern. The intention is rather to highlight the fact that in those countries where social spending is not progressively distributed, the search for equity in the provision of basic public social services is plainly still not one of its priorities.

### ***Priorities of Social Policy***

In theory it can be problematic to define the scope and limits of social policy, as well as the programs contained in it. A comprehensive analysis of government strategy in the social realm is complicated by the number, the diversity and the differentiation of the target populations, as well as the variety of agencies carrying out treasury-financed social projects. However, the existence of complexities in the definition of social policy should not be the source of conceptual misunderstandings between social policy and the programs for reducing poverty and serving low-income groups. These are compensatory in nature and aimed at specific target populations and, therefore, inherently progressive.

In this study, social policy is understood as the entire set of actions taken by the State in the social sectors (for example, education, health, housing, sanitation and social security). Furthermore, they are national in scope and to a greater or lesser extent they must affect all citizens, whether poor or non-poor. Therefore, the level, sector composition, and pattern of allocation of resources among the various income groups represent the preferences and priorities of a government vis-à-vis social issues. It is the expression or embodiment of social policy.

Unfortunately, there are few national studies on the composition and orientation of social spending by socioeconomic levels. For mostly statistical and methodological reasons, the publications have been limited to a series of occasional isolated initiatives, most of them based on information from the past ten years and on methodologies that were not strictly alike. Nevertheless, studies of this nature are fundamental for understanding the priorities of social policy and for appreciating how social spending helps address those priorities.

Finally, two distinctions deserve attention. First, it is important to distinguish between the *preferences* revealed by the State in the social realm – as manifested in the level, sector composition, and orientation of public social spending among income groups - and the *effectiveness* of that spending in providing services. A certain level of spending per capita, a high sector allocation of fiscal resources toward the social realm, and an orientation of those

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incorporates the payment of direct and indirect taxes by income groups, and on total net social spending, which includes social payments made by the private sector, are very few in the region).

monies to the most vulnerable groups do not necessarily produce the expected or desired results. The cycle between spending and results or impacts can only be evaluated by examining the process of implementation, that is, the disbursement of resources. Second, this study shows statistical information on the distribution by income quintiles of social *spending*, and not strictly speaking of the *benefits* resulting from the disbursement of those funds. Insofar as the social spending allocated on the books to low-income groups is partly “captured” by higher income strata individuals who do not provide quality social services (through, for example, salaries for excessive or dysfunctional bureaucracies of teachers, doctors, nurses, and so forth), the real benefits obtained by the poorest population will be less than the fiscal resources formally budgeted to serve their needs (Tanzi, 1974).

### ***The Challenges of Social Security***

While this study is focused on the orientation of public social spending in education and health care, it also provides available statistical information on the orientation of total public spending on social security by socioeconomic levels in eight countries of the region<sup>8</sup>. Even though it is not the focus of this study, it is difficult not to comment on social security, given the very revealing nature of the figures, which show that the social security system in Latin America is extremely unequal and concentrated on higher income groups.

Over a century ago, the modern idea of social security was introduced in Germany, and later it was taken up by the International Labor Organization (ILO) as a “fundamental tool for protecting workers and their families against certain social risks” (Mesa-Lago, 2004). As an idea for protecting vulnerable populations, social security is unquestionably a social gain that must be preserved in Latin America, a region historically affected by inequality and poverty.

However, a social security system that protects only a minimal fraction of the workforce, with huge inequalities in the allocation of pensions in its already limited number of beneficiaries while absorbing a very high proportion of fiscal resources, represents a distorted version of the pension system as it was initially conceived.<sup>9</sup> In Latin America, where the bulk of the workforce is not salaried, and indeed is increasingly employed in the informal sector, the social security system must be rethought carefully and responsibly.

## **2. Incidence of Social Spending: the Importance of Data**

There is a striking scarcity of regional information on the incidence of public social spending by socioeconomic strata. Unlike statistics from national accounts, data on the allocation of social spending by income levels is obtained through household surveys of living standards. These have only been conducted in Latin America in a uniform fashion and with representative

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<sup>8</sup> It must be noted that out of social public spending, the total spending on social security, in addition to public contributions, also contains the contributions of individuals and companies that benefit from it. To some extent it reflects the savings of persons during their working life. It should be stated, however, that public contributions to social security are taken from fiscal revenues and absorb a significant portion of the State’s available resources. Hence, their distribution by income quintiles is relevant for this study.

<sup>9</sup> According to the World Bank (1994), on simple average only 39% of the labor force was covered by the pension system in the 1990s in Latin America. Uruguay had the highest coverage (69%) and Bolivia the lowest (12%).

coverage since the second half of the 1990s.<sup>10</sup> Perhaps due to the difficulty of obtaining rigorous statistics, this type of analysis has unfortunately not been given much priority in the production of social research in recent years in the region. Hence, the analysis and implications of the orientation of social spending by socioeconomic income levels has not been incorporated into the agenda of public policy makers in recent years. Since the statistical inputs became available, no clear willingness has been noted in the region for making assessments of the orientation of total social spending. All this, combined with the relative methodological complexity of calculating the impact of social spending, has limited publications to a series of occasional isolated initiatives mostly based on information from the past ten years, and based on methodologies that are not strictly alike.<sup>11</sup> These restrictions make comparative analysis difficult. Comparisons between two points in time (for countries on which information exists) and calculations of regional averages may yield results that are questionable from a statistical standpoint and hardly representative of reality.

Even taking into account these limitations, collecting research of a national scope on the incidence of social spending is highly useful. Indeed, case-by-case observation is not subject to the restrictions inherent in comparative analysis, and can contribute significantly to the improved design and evaluation of public policies in the social sector. A set of national studies in Latin America not only allows for a broader look at the state of the orientation of social spending in the region but also facilitates the internal evaluation of policies of the budget allocation for social needs. Furthermore, while comparative analysis has its limits, studies of a representative number of countries can suggest a certain regional ordering of the degree of progressivity in the disbursement of social spending. Finally, obtaining a statistical series of indices of progressivity of social spending in the region makes it possible to evaluate the correlation between measures of the orientation of social spending and, for example, distribution of wealth or the quality of institutions. Is social spending less progressive in countries with greater inequalities in the distribution of wealth? Is institutional quality associated with greater levels of progressivity in social spending?

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<sup>10</sup> Since the mid-1980s, the World Bank (WB) has conducted Standard of Living Surveys, starting with a small group of countries in the region. In 1996, the Inter-American Development Bank (IDB), the WB and the United Nations Economic Commission for Latin America and the Caribbean (ECLAC) created the Program for the Improvement of Living Standards Measurement Survey (LSMS, or *MECOVI: Mejoramiento de las Encuestas y la Medición de Condiciones de Vida*), the primary aim of which is to support national efforts in constructing periodic and comparable household surveys. As of 2005, the program has been implemented in 10 countries, which together with Brazil, Mexico and Chile, which already had greater experience in the preparation of household surveys, represent 90% of the region's population.

<sup>11</sup> Of the methodological problems involved in calculating the incidence of social spending, two deserve particular attention. The first has to do with the criterion with which the unit cost of a social service is assessed in monetary terms. In primary education, for example, while it is possible to project the number of children who actually attend school with information from household surveys, the challenge centers on quantifying the cost per student (in each social and geographical segment) faced by the State based on public spending on primary education. The second problem – following the same example – lies in defining the limits of social spending on primary education within the national budget for the education sector. There is no clear criterion for allocating a variety of expenses that in some countries may reach up to 10% of the sector budget – for example, those allocated to culture and sports, and certain expenditures of the central government – as exclusive to a particular education level. Furthermore, it is important to keep in mind that the information presented on the orientation of social spending in countries with a federal structure (Mexico, Brazil and Argentina) does not incorporate the pattern of allocation of spending in social areas under the responsibility of local governments, and that could alter the results in these cases.

### 3. Evidence and Empirical Results

In *Social Panorama 2000-2001*, ECLAC made a first effort to gather data from six national studies on the impact of Public Social Spending by socioeconomic levels and covering the period 1986-1997.<sup>12</sup> Four years later and thanks to a greater production of household surveys, it has become possible to broaden regional coverage. This section presents information on the focalization of public social spending on education, health and social security in 17 countries of Latin America between the years 1997 and 2003, which represent 90% of the population and 94% of regional Gross Domestic Product (GDP). The statistics have been gathered from various national studies (see Annex 1).

Figure 1 shows the pattern of the allocation of social spending (education and health) by income quintiles excluding contributions for social security for 11 countries in the region on which aggregate information is available.<sup>13</sup> Table 1 includes detailed sector information for 17 countries. Two facts stand out immediately. First, the degree of orientation of social spending varies widely among the countries of the region. Chile and Nicaragua present two contrasting patterns. In Chile, the poorest 20% of the population is the recipient of 33% of social spending, while the richest quintile receives 7% of it. In contrast, in Nicaragua the poorest 20% receives only 14% of spending in the social area, while the richest 20% of the population receives 27% of those expenditures. The second striking aspect is the dispersion of countries within the regional range. According to the Concentration Coefficients (Figure 2), social spending is *progressive* in five countries (Argentina, Chile, Colombia, Costa Rica, and Uruguay) and *regressive* in six of them (Bolivia, Brazil, Guatemala, Mexico, Nicaragua, and Peru). Social spending is progressive when it is distributed more than proportionately to low-income groups, and regressive when a greater portion of the social budget goes to high-income groups.<sup>14</sup>

The absence of a defined pattern in the measurements of the concentration of social spending in Latin America is, however, not a phenomenon occurring at the subregional level. Furthermore, at first glance, statistical evidence would seem to suggest the existence of trends in the orientation of social spending by regional blocs. Aggregate social spending tends to be progressive in the group of Southern Cone countries (Argentina, Uruguay, and Chile) and regressive in Brazil and the Andean region (Ecuador, Peru and Bolivia), with the exception of Colombia.<sup>15</sup> In Central American countries for which information is available (Costa Rica, Guatemala, Mexico and Nicaragua), the results are mixed and closer to the reality of the entire region. Similar conclusions are drawn from the analysis of sector spending, particularly the education and health sectors. Differences in the orientation of social spending by regional blocs, as will be suggested below, may be more associated with the level of per capita income, distribution of wealth, institutional quality, and the prevailing biases in the design of social policy objectives in different parts of the region.

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<sup>12</sup> Bolivia (1990), Chile (1996), Colombia (1997), Costa Rica (1986), Ecuador (1994) and Uruguay (1993). Studies of the cities of Buenos Aires, Argentina (1991) and São Paulo, Brazil (1994) were also included.

<sup>13</sup> Henceforth total or aggregate social spending is regarded as that which includes public spending on education and health. Although they are part of the statistical information provided, expenditures on social security have been excluded from the unit of analysis.

<sup>14</sup> Box 1 includes a discussion on the concept of progressivity in social spending.

<sup>15</sup> No information is available for the cases of Venezuela and Paraguay.

### ***Education: Toward Progressive Spending on Primary Education***

From the standpoint of public policies, the region's most significant achievement, by the end of the 1990s, is the establishment of a progressive pattern in the disbursement of spending on primary education. As shown in Figure 3, the distribution of public resources on primary education is tilted toward the poorest quintile of the population in the 11 countries for which information is available. Moreover, the portion of fiscal resources for the social realm allocated to each income group shows a rising pattern favoring the poorest quintiles, with the sole exception of Guatemala.

It cannot be asserted with absolute certainty that the establishment of a pattern of progressive spending on primary education is a recent phenomenon, due to the lack of comparable similar indicators for previous years. However, the statistical evidence gathered on related variables – used as data in preparing the measures of the incidence of spending – suggests that it probably bears the mark of the end of the late twentieth century. Two important indicators were revitalized in the 1990s. First, according to ECLAC, in all countries of the region, social spending per capita on education grew between 1990 and 2001, at a rate ranging from 15% (Brazil) to over 300% (Dominican Republic). This resulted in an average regional growth of 64.6% (from US\$79 to US\$130, US\$51 more per inhabitant). Forty-two percent of this expansion (US\$21) was the result of an increase of national budgets in the education sector spurred by the political decision to promote access to basic services for the population most in need of basic services. Second, the rate of net primary school enrollment rose consistently throughout the region in the same period, from an average of 88% in 1990 to an average of 92% by 2001. In short, increased public spending on education, greater elementary school attendance, the shared political decision to extend education services, and the relative — albeit still insufficient — improvements in the institutional quality of the region in the 1990s all suggest that the high progressivity of public spending on primary education is an achievement that has been accentuated in the past decade thanks to the above-mentioned factors.

Two factors could partly explain the greater social spending on education on the poorest quintiles. First, poor families tend to have more school-age children than those from higher income strata.<sup>16</sup> In addition, richer families are more averse to sending their children to public school.<sup>17</sup> Second, even assuming that the number of direct beneficiaries per income group was the same, social spending allocated to the lowest income quintiles could be higher due to the higher cost per student encountered by the government in providing education services to those population groups. Generally speaking, the cost of providing a social service is higher, the greater the needs are of the target population to be served. The cost per capita of identifying, organizing and training marginalized social groups to use and maintain basic education and health services, as well as government expenses for improving the social environment so that the social services may be better utilized, are significantly higher than those needed to implement similar services aimed, for example, at the middle classes.

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<sup>16</sup> This reasoning is valid insofar as that social spending has been allocated by income levels calculated on a household basis. Of the 16 national studies that provide information on methodology, 10 use households as the unit of analysis, while six use persons.

<sup>17</sup> As public education improves at all social levels, the differences between the quality of the education provided by the State and some private schools diminish, leading to a lesser segmentation between public and private school.

The foregoing does not detract in the least from the political will noted in the region for redirecting fiscal resources toward the provision of social services. Quite the contrary, it recognizes the efforts of the region's governments which, faced with greater obstacles, both financial and inherent in the social structure, decided to make a commitment to expand social services for those most in need.

Nevertheless, distribution of social spending on secondary education proves regressive for the most part, with eight countries where social spending falls more than proportionally on higher-income groups and two whose spending converges toward neutrality (Costa Rica and Ecuador). The sole exception is Colombia, a country which has made progress in the orientation of spending on education beyond elementary school. A common feature in the region is the manifest tilt toward the middle classes (Figure 4). The explanations that could underlie the predominant inverted-U form of the distribution of spending on secondary education are the high opportunity cost for students of the poorer quintiles when faced with the decision of whether to continue secondary studies, and the low return on public education as compared with private education in Latin America. On the one hand, the need for new sources of income in poorer households causes an increase in school dropout rates in the lower quintiles. On the other hand, the reduced return expected from public as opposed to private education lessens the incentives for higher-income groups to seek access to public school. According to the World Bank (1995), the rate of return on public primary education between the early 1980s and early 1990s was 17.9%, as opposed to 26.2% in private elementary school. Likewise, public secondary education showed a yield of 12.8%, compared with 16.8% for private education at a similar level.

As a natural consequence of the limited access by the lower-income segments to secondary education, spending on university education is significantly regressive. Figure 5 shows a high concentration of spending on higher education on the wealthiest 40% of the population. This social segment absorbs a percentage of public resources that ranges from 70% to 97% in the eight-country sample for which information is available. Even more extreme are the cases of Guatemala and Brazil, where 76% and 82%, respectively, of the resources allocated for tertiary education benefit the highest-earning 20% of the population.

Spending on higher education in science and technology is extremely important in Latin America, a region that urgently needs to improve its levels of competitiveness in an ever more globalized world. However, for reasons already mentioned, the poorest segments of the population have restricted access to higher education. On the contrary, students of higher-income strata are direct beneficiaries of government subsidies, which are thereby regressive and financed with scarce fiscal resources. There is an urgent need in the region for a debate - over terms of fairness - with respect to the component of public subsidy that ought to accompany the provision of higher education. This would ensure that policies are put in place to promote and facilitate access to higher education by low-income youth who managed to complete their secondary studies, for example through loan programs, scholarships, and other financing arrangements. Given the short supply of additional fiscal resources to satisfy the demands for higher education of the lowest income groups, the public subsidy oriented toward the wealthiest groups could gradually decline.



### ***Health: Mixed Results***

Just as in the case of aggregate social spending, the orientation of public spending on health shows a rather wide range of variance in the region (Figure 6). However, there are more — and more accentuated — cases in which public spending on health is progressive. In eight of the 14 countries for which information is available, the public budget in the health sector is distributed more than proportionately to low-income groups (Figure 7).

Does the current inclination toward progressivity in how spending is applied to public health represent an improvement over past decades? Unlike the case of primary education, analysis based on related variables does not lead in any clear direction. In the 1990s, favorable conditions were indeed created for improving the orientation of sector spending, such as increased per capita spending on health (25% on average, US\$23 more), the existence of a political will to extend basic services embodied in the expansion of sector resources as a percentage of the national social budget by 10%, and institutional improvements.

Nonetheless, the evaluation of the potential distributive impact of such conditions is complicated by certain considerations. For example, after achieving the difficult task of identifying the target population in extreme poverty, the obstacles entailed in establishing a hospital or clinic are significantly greater compared with those faced in setting up an educational facility, because the former are more dependent on a more demanding physical infrastructure, such as systems for electric power, potable water, sewage, and so forth. These obvious greater related costs may have restricted the reallocation of fiscal resources in the health sector toward the more disadvantaged population groups, despite the increase of the overall budget for this sector.

Another factor complicating the analysis of the orientation of public social spending on health is the fact that, in most of the countries studied, the information on this type of spending has been obtained in aggregate form, making it impossible to evaluate the allocation of public spending on health by income levels according to types of service (for example, preventive or curative).

For purposes of analysis of the net distributive impact of public social spending (an issue evaluated in the following section of *Social Panorama*), the health sector presents peculiar complications. These are due to the recurrence of private spending associated with providing the services — either because the free public health service requires a private counterpart (medications, and so forth), or because that service, not being available to certain social groups, is entirely shouldered by the families.<sup>18</sup> These private expenses are, in proportion to income, higher for lower-income households. Hence, any analysis of the distributive impact in the health sector should factor in such flows of public spending on the sector by income quintiles.

Based on the overall and sector analysis of public social spending, it can be said that, in general, there are indications suggesting that the pattern of disbursement of social spending on

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<sup>18</sup> This phenomenon is not as common in the education sector, where in view of lack of access to public school education, low-income families decide to not send their children to school because they do not have option of accessing the service with their own resources.

education and health in Latin America seems to be undergoing a significant shift toward progressivity, if slow and unequal. Among these signs are increased social spending per inhabitant, sustained increases in the levels of primary and secondary school enrollment, greater access to health services, institutional improvements, and the political will of the region's governments to reallocate fiscal resources for social spending as a percentage of total public spending in the 1990s. Thus, while according to the statistics presented, only five of the 11 countries analyzed showed progressive aggregate social spending at the beginning of the twenty-first century, the evidence suggests that *in comparison with* ten years before, the number of countries in the region whose social spending is more progressive (or less regressive) would seem to be significantly higher. This fact makes it possible to assert, with a certain degree of optimism, that should this trend continue, within a similar period in Latin America a strategy of progressive disbursement of social spending could be taking hold. This could potentially affect the living standards of the lowest income groups and levels of inequality.

This cautious optimism, however, should be qualified by the fact that social spending on education and health was progressive in only five of the 11 countries based on current information, and that in those countries the pace of change seems very slow. In short, one could pose the question: is the glass half-full or half-empty? One should not lose optimism, but at the same time one must recognize that the region needs to deal with the issue of equity forcefully and with a greater sense of urgency so as to minimize the time needed for positive changes to become evident.

#### **4. The Correlations**

The observation of the evident regional variability in the incidence of public social spending by socioeconomic levels inevitably leads to the next question: Is the level of progressivity in the disbursement of public spending associated with other economic or social variables? If the answer to that question is yes, what are these variables? For example, are inequality in the distribution of wealth, social exclusion, and institutional quality all associated with the levels of progressivity of social spending? This section presents statistical information as a first approximation in the search for answers to these questions. Rather than conclusive arguments, the analysis is proposed as a good starting point for future academic research on the issue.

First, the distribution of social spending by income groups is correlated with the degree of inequality in income distribution (Figure 8a).<sup>19</sup> The simple relationship between the two variables suggests that more equal societies set in motion a social spending machinery that prioritizes the needs of the most disadvantaged groups. Different theories have attempted to explain the rationality of the link between inequality and distributive spending policies. Some of those theories propose that in markedly unequal countries or regions, the economic power of the elites merges with political power, thereby undermining the capability of the government to undertake social reforms aimed at meeting the demands of lower-income groups (Haggard, 1994; Bénabou, 1996). Others such as Engerman and Sokoloff (1997) point out that the existence of social groups with extensive economic and political power, resulting from the

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<sup>19</sup> Data on the GINI income distribution coefficients are from ECLAC, Social Panorama of Latin America 2004.

significant gaps in income distribution, promotes the development of less democratic societies. These prove less inclined to foster policies of human capital accumulation in the lower strata of the population. While the academic debate on the effect of wealth distribution on the recurrence of distributive public policies remains open, the acknowledgment of the restrictions imposed by inequality on the implementation of more progressive spending policies is fundamental in the design of social programs in Latin America, the most unequal region in the world.

Second, according to information available, the orientation of social spending is closely correlated to the average level of wealth. In higher income countries, social spending tends to be more progressive (Figure 8b). The dynamic that governs the distribution of public funds in the region could explain the nature of the association between progressivity of social spending and GDP per capita. Indeed, in low-income countries, the struggle between diverse and polarized social groups to capture scarce fiscal resources is extreme. In such a context, the population groups with a greater capacity for lobbying and resources to mobilize their demands – such as the upper and middle classes – are more successful in influencing the allocation of public funds, to the disadvantage of the populations in greatest need. Social conflict is also present in higher income countries, but it is less accentuated because there is more financial room for maneuver for meeting social demands, resulting in a more progressive (or less regressive) pattern of public spending.

The level of GDP per capita may influence the pattern of disbursement of social spending by socioeconomic segments through a second route. As mentioned earlier, the greater the needs of the target population to be served, the greater the cost is of providing a social service. The upshot is that in countries with greater fiscal resources it is more feasible, both financially and politically, to effectively implement social projects that take such restrictions into account. The greater the revenues, the more maneuvering room there is for dealing with the fiscal challenge of serving the most vulnerable.

Third, the type of orientation of social spending is associated with the quality of institutions (Figure 8c). Data available for 11 countries in the region show a clear negative relationship between the concentration coefficient of aggregate social spending and the Rule of Law Index.<sup>20</sup> Countries where the law is observed more strictly show more progressive social spending. In the private sphere, the quality of institutions determines the level of efficiency of markets by establishing rules and controls that are clear, coherent, credible, applicable and permanent over time to all economic actors alike (Burki and Perry, 1998). In the public social realm, solid institutions – not just governmental, but also political and civil – are linked to societies that monitor the government's social agenda through formal institutional mechanisms, demand accountability from the bureaucracy, identify responsibilities for the social outcomes, and are capable of enforcing the law when the circumstances so require. That could partly explain why in Latin America, a region formally committed to resolving the problems of those

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<sup>20</sup> The Rule of Law Index is one of the six indices of institutional quality constructed by Kaufmann, Kraay and Zoido-Lobaton (2002). The values of the index range between –2.5 and 2.5, where the highest values are associated with societies in which observance of the law is most widespread. The index has been constructed on the basis of surveys that gather the impressions of nongovernmental organizations, risk-classification agencies, and consulting firms. Data are available for 173 countries in the period 1997-2001.

most in need, those countries that enjoy greater institutional quality are those that likewise display a more progressive pattern of social spending.

Finally, statistical evidence shows that regressive social spending policies seem to go hand-in-hand with greater ethnic diversity (Figure 8d), as measured by the Ethno-Linguistic Fragmentation Index.<sup>21</sup>

Presenting definitive conclusions on the relationship between the pattern of social spending by income groups and variables such as GDP per capita, institutional quality, inequity, and ethnic differences implies bypassing a series of theoretical and empirical considerations. Social spending aggregated by socioeconomic levels does not make explicit distinctions about how resources are distributed among sectors and programs. Likewise, the analysis of simple correlations should be followed by an exhaustive process of incorporating new explanatory and control variables, assuring inclusion of observations from other continents and Latin American countries not considered in this study. In addition, the analysis should include quantitative procedures inherent in a more rigorous methodology, in order to evaluate the existence – and direction - of a possible relationship of causality between the orientation of social spending and those variables. However, the analysis has been limited by the scarcity of information on the orientation of social spending. Nevertheless, the intention in venturing a first look at the possible relationship between social spending policies and economic and social phenomena is to promote new research on the issue by seeking to identify new tools for the better design of public policies in the social realm.

## **5. Spending on Social Assistance**

Spending on social assistance programs is often confused with public social spending. Both differ in nature, target populations, level of resources that they concentrate, and often the type of services that they finance. Unlike public social spending, whose ideal purpose is to offer social services to all citizens without distinction, the objective of social assistance programs is to focus their resources on serving the social groups with the greatest needs. While the fields of action in which the resources of social assistance programs are deployed and the programs financed by public social spending are not exclusive (for example, education and health), assistance programs often encompass a broader range of services, such as those aimed at meeting school lunch and maternal nutrition requirements, transferring monetary subsidies, and so forth.

In Latin America the resources devoted to social assistance programs amount to a small fraction of both public social spending and total public spending. As a simple average, the resources allocated to assistance programs are around 15.1% of public social spending and 7.7% of total public spending in the 10 countries for which statistical information is available.

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<sup>21</sup> The Ethno-Linguistic Fragmentation Index is the average of five indices that measure the degree of ethnic diversity in a particular country. The values of the index go from 0 to 1. The higher the index, the greater the ethno-linguistic fragmentation. Data are available for 161 countries and were obtained from La Porta, López-de-Silanes, Shleifer and Vishny (1998).

Peru shows the highest fiscal budget for this type of programs as a percentage of aggregate social spending (32.3%), while Brazil has the lowest (2.2%) (Table 2)<sup>22</sup>.

In terms of orientation by income quintiles, all the countries –with the exception of Guatemala - show progressive spending patterns in the allocation of resources administered by social assistance programs, significantly favoring low-income groups. Within these groups, the pattern of spending on social assistance shows a rather broad range of progressivity, with Mexico leading the countries that allocate this type of aid more than proportionately to low-income groups. This is largely explained by its successful government program *Oportunidades*.

While the importance of social assistance programs for reaching the poorest should not be ignored, we must not lose sight of the fact that those efforts are insufficient, considering that they only amount to a small portion of total fiscal resources allocated for social needs. In a region marked by poverty and inequality, to regard social assistance programs as *the* social policy means failing to recognize the full range of issues underlying both phenomena, and ignoring the enormous responsibility of social policy – embodied in public social spending – for producing changes in the structural problems that produce inequality, poverty, and social exclusion in the region.

Furthermore, regarding spending on social assistance as equivalent to *the* social policy can, in practice, convert social services aimed at the very poor into inferior goods.<sup>23</sup> The delivery of social services in a democratic society should not be segmented into two types of services: those provided to low-income families and those offered to the rest of the population (middle and upper classes). Such segmentation creates huge risks in terms of quality of public service and of fragmentation of the citizenry. While in many countries of the region such segmentation is inevitable in the short term due to the insufficiency of fiscal revenues, the pursuit of high-quality and uniform-content social services must be a desirable medium- and long-term goal.

## 6. Conclusions

Analysis of the orientation of public social spending by income groups in Latin America leads to the following reflections:

1. The orientation of public social spending is important insofar as it unveils the preferences of governments for addressing poverty, inequality and their consequences. However, the *level* of spending is also important. Even if public social spending is distributed only proportionally among the different income groups, a greater level of aggregate spending would more than proportionately benefit the lower-income groups. Thus, increased public social spending in Latin America is a necessary –albeit not sufficient – condition for reducing poverty, inequality and their consequences. It is therefore important to recognize the expansion of public expenditures on social sectors

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<sup>22</sup> It is likely that in some cases, as in that of Brazil, spending on social assistance programs are underestimated because a significant portion of public spending is administered by local governments. That could also happen in Argentina or Mexico.

<sup>23</sup> An inferior good is one whose consumption declines as a person's income increases, as opposed to a normal good, the consumption of which varies in the same direction as income.

between 1990 and 2001 in the 18 countries of the region for which statistical information is available. While increased social spending does not necessarily translate into a greater orientation of social policy toward improving the lot of lower-income groups, it does highlight the relative priority that the social sectors have been enjoying in the process of the allocation of public resources. Finally, inasmuch as public social spending is less concentrated than income in all countries in the region, it has the effect of diminishing inequality in the distribution of primary income.

2. Some indications suggest that the pattern of social spending on education and health in Latin America may be undergoing a significant, albeit slow and uneven, shift toward progressivity. Among such indications are increased social spending per inhabitant, sustained increases in the levels of primary and secondary school enrollment, greater access to health services, institutional improvements, and the political will of governments of the region to reallocate fiscal resources toward social spending as a percentage of total public spending in the 1990s. In this sense, while the statistics presented indicate that only five of the 11 countries under examination had progressive social expenditures at the beginning of the twenty-first century, the evidence suggests that *in comparison with* ten years before, the number of countries whose social spending is being disbursed more progressively (or less regressively) would seem to be significantly greater. This fact makes it possible to propose with some degree of optimism that if this trend continues, within a similar period in Latin America, one could see a consolidation of a strategy of progressive social spending, with its consequent potential impact on the living standards of lower-income groups and on levels of inequality.

This cautious optimism, however, must be qualified by the fact that only in five of the 11 countries for which we have updated information is social spending on education and health progressive, and that the pace of change seems to be very slow. In short, optimism must not be lost but at the same time it must be recognized that the region needs to decisively confront issues of fairness with a greater sense of urgency in order to keep to a minimum the time needed for positive changes to become evident.

3. The region's most important achievement in the late 1990s is undoubtedly the establishment of a progressive pattern of spending on primary education. This unquestionable achievement is evident in the ten countries for which statistical data is available. While, due to the scarcity of information, it can not be asserted with certainty that progressivity in spending on primary education is a phenomenon specific to the 1990s, the evidence on trends in social spending on education, greater fiscal priority on social sectors, higher rates of elementary school enrollment, and the (still insufficient) institutional improvements on the regional level seems to corroborate this thesis. On the other hand, Latin America's great challenge at the outset of the new century is to solve the problems of the orientation of social spending on, and access to, secondary education.
4. The establishment of a progressive pattern of public social spending on primary education in the region is not necessarily associated with greater levels of effectiveness

in providing the service, or in its quality. Furthermore, serious empirically-based questions arise regarding the quality of public education in Latin America in comparison with other regions. The deteriorating quality of public education creates a risk of turning it into an “inferior good” in society, while its expected economic yield gradually falls behind that offered by a certain type of private education, pulls the middle classes away from its coverage, and ends up being viewed as the only alternative for the very poor, thereby increasing their social marginalization.

5. The orientation of public spending on health displays a rather wide range of variability in the region. However, in the greater number of cases, and in the most accentuated cases, public spending on health is disbursed progressively. Unlike the case of primary education, the analysis based on related variables (increased spending per capita, greater coverage, and institutional improvements) does not lead to a clear presumption that the tilt toward progressivity of social spending on health represents a change vis-à-vis previous decades.
6. Regressivity in the allocation of public expenditures on social security is very marked. Information available for eight countries in the region on the orientation of spending on social protection by income quintiles shows that those outlays benefit high-income groups to a significantly greater extent. The regional commitment and political will to reduce poverty, inequality and exclusion in our societies require deeper study of the causes and consequences of these phenomena and the designing of alternative policies to make spending on social security less regressive. Given the enormous relative weight of social protection programs in public-sector social spending, ignoring the impact of its regressivity on government action in other social sectors undermines the commitment to reduce poverty and inequality.
7. Finally, it must be kept in mind that social policy has only a partial impact on the structural conditions of poverty and inequality. It is rather the interaction between economic policy and social policy that has deep and lasting effects. A comprehensive analysis of the social impact of the articulation of economic policy and social policy falls outside the scope of this study. Nonetheless, it must not be forgotten that social policy absorbs a very significant amount of available fiscal resources. If social policy does not make a decisive contribution to relieving poverty and reducing inequality, then it is unlikely that economic policy by itself will be able to do so. One of the most important lessons of the past decade is the inability of the market to resolve by itself the conditions of exclusion and extreme poverty of significant portions of the population in Latin America and the Caribbean. The direct action of the State plays an important role and a considerable portion of that action is embodied in social policy.

## Bibliography

- Adema, W. 2001. *Net Social Expenditure – 2<sup>nd</sup> Edition*. OECD Labour Market and Social Policy Occasional Papers N° 52. Paris: OECD Publishing.
- Altimir, O. 1979. *Dimensión de la Pobreza en América Latina*. Cuadernos de la CEPAL, N° 27. Santiago de Chile: Comisión Económica para América Latina y el Caribe (CEPAL).
- Bénabou, R. 1996. *Inequality and Growth*. Documento de Trabajo N° 5658. Cambridge: National Bureau of Economic Research.
- Burki, S. and G. Perry. 1998. *Beyond the Washington Consensus: Institutions Matter*. Washington, D.C.: World Bank.
- Comisión Económica para América Latina y el Caribe. 2001. *Panorama Social 2000-2001*. Santiago de Chile: Comisión Económica para América Latina y el Caribe (CEPAL).
- . 2003. *Panorama Social 2002-2003*. Santiago de Chile: Comisión Económica para América Latina y el Caribe (CEPAL).
- Engerman, S. and K. Sokoloff. 1997. “Factor Endowments, Institutions, and Differential Paths of Growth Among New World Economies”. In: Haber, S. *How Latin America Fell Behind*. Stanford: Stanford University Press.
- Feres, J.C., and A. León. 1991. *Magnitud de la Pobreza en América Latina en los Años Ochenta*. Estudios e Informes de la CEPAL, N° 81. Santiago de Chile: Comisión Económica para América Latina y el Caribe (CEPAL).
- Haggard, S. 1994. *Politics and Institutions in the World Bank’s East Asia*. In: Fishlow, A. *Miracle or Design? Lessons from the East Asian Experience*. Washington, D.C.: O.D.C.
- Kaufmann, D.; A. Kraay; y P. Zoido-Lobaton. 2002. *Governance Matters II: Updated Indicators for 2000/01*. World Bank Policy Research Department. Policy Research Working Paper N° 2772. Washington D.C.: World Bank
- La Porta, R., F. Lopez-de-Silanes, A. Shleifer, and R. Vishny. 1998. “Law and Finance”. *Journal of Political Economy*, 106, 6, December, pp. 1113-1155.
- Londoño, J.L. 1996. *Pobreza, Desigualdad y Formación de Capital Humano en América Latina, 1950-2025*. Washington, D.C.: World Bank.
- Mesa-Lago, C. 2004. *Las reformas de pensiones en América Latina y su impacto en los principios de la seguridad social*. Santiago de Chile, Chile: Comisión Económica para América Latina y el Caribe (CEPAL).



Organización de las Naciones Unidas (ONU). 2005. *Objetivos de Desarrollo del Milenio: Una mirada desde América Latina y el Caribe*. Santiago de Chile: Comisión Económica para América Latina y el Caribe (CEPAL).

Rey de Marulanda, N. 2005. *Situación Económica y Social en América Latina*. Washington, D.C.: Banco Interamericano de Desarrollo (BID); Instituto Interamericano para el Desarrollo Social.

Tanzi, V. 1974. *Redistributing Income Through The Budget In Latin America*. Quarterly Review. Banca Nazionale del Lavoro. pp. 65-87.

World Bank. 1994. *Averting the Old Age Crisis, Policies to protect the Old and Promote Growth*. Oxford: Oxford University Press.

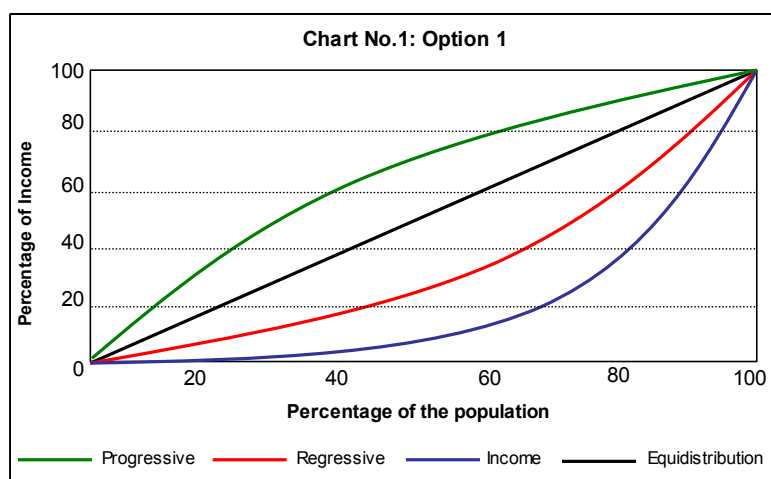
World Bank. 1995. *Priorities and Strategies for Education*. Washington, D.C.: World Bank .

## Box 1: Definition and Usages of Progressivity of Social Spending

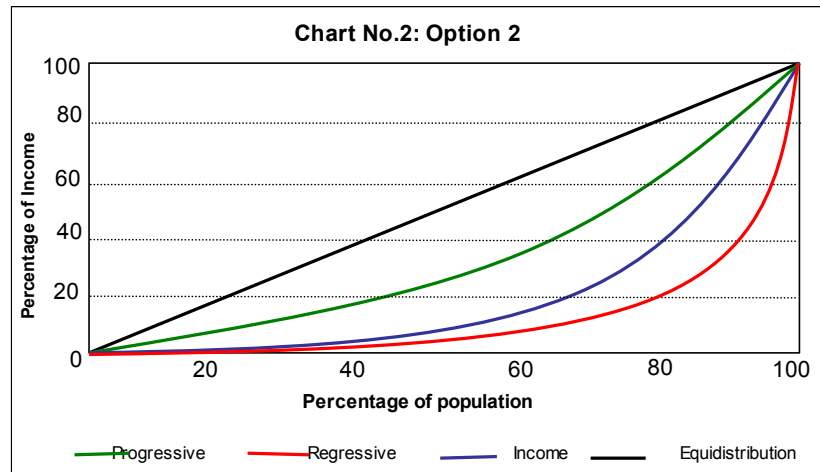
There is no consensus in political and academic circles as regards the definition of *progressivity* or *regressivity* in the allocation of public spending. There are two main interpretations: The first considers spending as progressive (regressive) when it is distributed more than proportionately to lower (higher) income or consumption-level social groups. The second interpretation considers spending progressive (regressive) when the proportion of resources allocated to lower (higher) income groups exceeds their share vis-à-vis income distribution.

The difference between the two interpretations is substantial. Under the first interpretation, spending is considered progressive when the absolute amount *per capita* distributed to low-income individuals is greater than the amount allocated to the richer groups. That is, when poor population groups (whether quintiles or deciles) receive a proportion of spending greater than their population weight, regardless of their contribution in total revenues.

Here is an example. Let us consider a social policy that allocates 15% of social spending on education to the poorest 40% of the population, a group that for its part generates only 10% of the country's total income. Under the first interpretation (chart 1), that spending is regressive, because the poorest 40% receive only 15% of total spending on education. Under the second interpretation (chart 2), the similar spending pattern is considered progressive because the group generating 10% of the national income receives a larger proportion of social spending on education, namely 15%.



In other words, while the first interpretation defines social spending as progressive or regressive by using as a reference the line of equidistribution (or equalitarian distribution, 45°), the second uses the income-distribution curve (or Lorenz curve). Hence, it is commonly said that the first interpretation measures *absolute* progressivity, while the second measures *relative* progressivity (vis-à-vis income).



For purposes of this study we have opted for the first interpretation, which defines social spending as progressive when it is allocated more than proportionately to low-income groups. There were several reasons for making this selection. Conclusions from analysis of the orientation of social spending based on the second interpretation – which proposes that the progressivity of social spending is dependent upon income distribution – may send mixed signals to public policy makers. For example, if two countries distribute social spending using the same pattern along socioeconomic groups, the country with the worse income distribution paradoxically comes out as the more progressive in terms of the allocation of spending; and the country with the better income distribution comes out as the more regressive.<sup>24</sup> Furthermore, if a country keeps constant the pattern of disbursement of social spending by income groups in a particular period, but during that time income distribution worsens, then the concentration coefficients calculated on the basis of the second interpretation would lead to the conclusion that social spending became more progressive in that country.

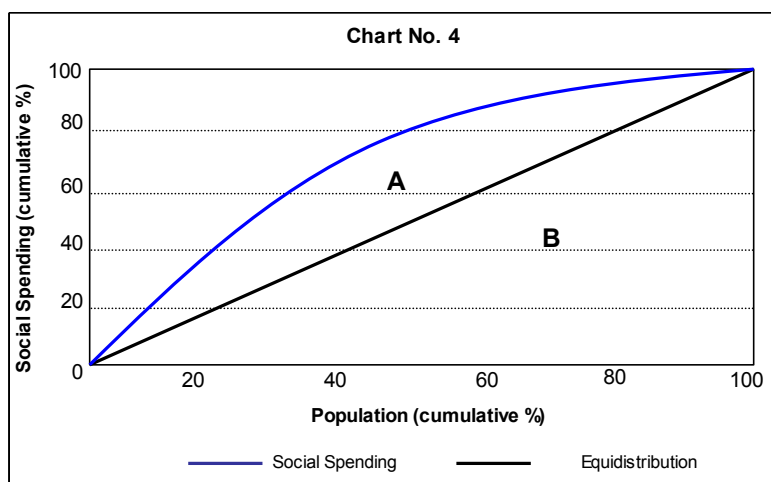
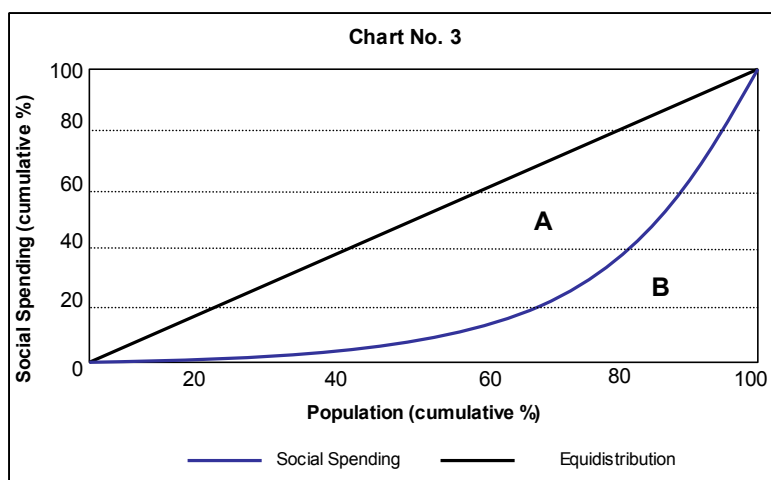
This study also proposes that the evaluation of the State's action through social spending in providing basic services ought to be independent of the contribution of each socioeconomic group to the national income and, rather, be guided by the principle of fairness.

<sup>24</sup> Box 2 describes the indices or coefficients used to measure the progressivity or regressivity of social spending.

## Box 2: Coefficients of Concentration and Progressivity

Evaluating the progressivity of social spending entails calculating what proportions of social spending are allocated to the poorer groups and which to the richer population groups. One of the most used indicators for that purpose is the **concentration or quasi-Gini coefficient**, whose values vary between  $-1$  and  $1$ , and which measures the tilt or degree of the orientation of social spending.

Figures 3 and 4 help us understand the nature of the concentration coefficient. The horizontal axis represents the cumulative percentage of persons or households arranged in ascending order by their income or consumption level; the vertical axis measures the cumulative percentage of social spending. The pattern of distribution of social spending (for example, quintiles or deciles) is represented by the Social Spending Concentration Curve. Thus, the concentration or quasi-Gini Coefficient of social spending is defined as the ratio of the area located between the straight line of equidistribution of social spending ( $A$ ), and the area beneath the straight the 45-degree line ( $A + B$ ).



In other words, the quasi-Gini (QG) is equivalent to  $A/(A+B)$ . When  $B$  equals 0 (that is,  $QG=1$ ), spending distribution is completely skewed toward higher-income groups. Thus, the

greater the deviation of the Social Spending Concentration Curve *below* the 45 degree line, the greater the orientation of social spending toward the richest groups in the population, i.e., social spending is more regressive.

If the concentration curve is located *above* the 45-degree line (that is, when social spending is *progressive*) – as shown by Figure 4-, technically the area between the two is negative ( $QG = -A/(A+B)$ ). A quasi-Gini equal to  $-1$  means that the orientation of spending entirely favors the poorest population groups. On the other hand, the orientation of social spending is *neutral*, or *perfectly equalitarian*, when the Social Spending Concentration Curve coincides with the equidistribution line ( $QG=0$ ). In short, the quasi-Gini varies between  $-1$  and  $1$ , shows negative values when spending is progressive, and positive values when spending is regressive.

The formula used to obtain the concentration or quasi-Gini coefficient is:

$$G = 1 - \sum_{i=0}^N (\delta Y_{i-1} + \delta Y_i) * (\delta X_{i-1} - \delta X_i)$$

where  $\sigma X$  and  $\sigma Y$  are the cumulative percentages of  $X$  (population) and  $Y$  (social spending), respectively.  $N$  is the number of percentiles used to divide the population (for example, quintiles or deciles).

### **Progressivity Relative to Income Distribution**

While calculation of the progressivity (or regressivity) of social spending is based solely on the concentration curve, the measurement of the progressivity of spending *relative to income distribution* also includes the Income Distribution curve (or Lorenz curve), resulting in the Relative Progressivity Coefficient or Kakwani Index. That index equals the difference between the Social Spending Concentration curve and the income Gini coefficient. Thus, in order to calculate the *relative* progressivity of social spending, income distribution has to be used as a point of reference. The Kakwani index, whose values range between  $-2$  and  $1$ , is negative when spending is progressive *in relation to* income distribution, and positive when spending is regressive *with respect to* income distribution.

For example, if a country has a Gini coefficient of  $0.51$  and a Social Spending Concentration Coefficient of  $0.21$ , the Kakwani index equals  $-0.30$ . Under that scenario, social spending is regressive according to the concentration coefficient, but progressive *in relation to income distribution*.

**TABLE 1:**  
**LATIN AMERICA: DISTRIBUTION OF SOCIAL SPENDING BY INCOME QUINTILES**

Country	I (Poorest)	II	III	IV	V (Richest)	Total (%)	Quasi Ginis <sup>1,2</sup>	Kakwani Index <sup>3</sup>
<b>Argentina 1998</b>								
Education	21	20	21	20	18	100	-0.02	-0.54
Health	30	23	20	17	10	100	-0.19	-0.70
Social Security	10	14	20	27	30	100	0.21	-0.30
Soc.Spending w/out Social Security	24	21	21	19	16	100	-0.07	-0.58
Soc.Spending w/ Social Security	19	18	20	22	21	100	0.03	-0.48
<i>Income distribution<sup>b,d</sup></i>	3	7	11	18	61	100	0.51	
<b>Bolivia 2002</b>								
Education	17	17	21	22	23	100	0.07	-0.37
Primary	25	25	23	18	10	100	-0.15	-0.59
Secondary	15	18	24	24	19	100	0.06	-0.38
Tertiary	3	5	17	30	45	100	0.44	0.00
Health	11	15	14	25	35	100	0.23	-0.21
Social Security	10	13	14	24	39	100	0.28	-0.17
Soc.Spending w/out Social Security	15	17	19	23	26	100	0.12	-0.32
Soc.Spending w/ Social Security	13	16	17	23	30	100	0.17	-0.27
<i>Income distribution<sup>a,c</sup></i>	4	9	14	20	53	100	0.44	
<b>Brazil 1997</b>								
Education	17	18	18	19	27	100	0.09	-0.47
Primary	26	27	23	17	8	100	-0.19	-0.75
Secondary	7	12	28	33	19	100	0.18	-0.38
Tertiary	0	1	3	22	76	100	0.68	0.12
Health	16	20	22	23	19	100	0.04	-0.52
Social Security	7	8	15	19	51	100	0.40	-0.16
Soc.Spending w/out Social Security	17	19	20	21	23	100	0.06	-0.50
Soc.Spending w/ Social Security	11	12	17	20	40	100	0.27	-0.29
<i>Income distribution<sup>a,d</sup></i>	2	5	10	17	66	100	0.56	
<b>Chile 2003</b>								
Education	35	27	19	13	6	100	-0.29	-0.76
Health	30	23	20	17	9	100	-0.19	-0.66
Soc.Spending w/out Social Security	33	26	19	15	7	100	-0.26	-0.72
<i>Income distribution<sup>b,c</sup></i>	4	8	12	19	57	100	0.47	

## LATIN AMERICA: DISTRIBUTION OF SOCIAL SPENDING BY INCOME QUINTILES

(continue...)

Country	I (Poorest)	II	III	IV	V (Richest)	Total (%)	Quasi Ginis <sup>1,2</sup>	Kakwani Index <sup>3</sup>
<b>Colombia 2003</b>								
Education	24	23	20	19	14	100	-0.09	-0.62
Primary	37	28	19	12	4	100	-0.32	-0.85
Secondary	24	27	23	19	8	100	-0.16	-0.69
Tertiary	3	8	17	31	42	100	0.40	-0.13
Health	18	19	19	22	22	100	0.05	-0.48
Social Security	0	2	5	13	80	100	0.68	0.15
Soc.Spending w/out Social Security	21	20	19	21	19	100	-0.02	-0.54
Soc.Spending w/ Social Security	14	15	15	18	38	100	0.20	-0.32
<i>Income distribution<sup>b,d</sup></i>	2	6	11	18	63	100	0.53	
<b>Costa Rica 2000</b>								
Education	21	20	19	21	19	100	-0.01	-0.44
Primary	32	25	19	15	10	100	-0.22	-0.65
Secondary	18	21	22	22	17	100	-0.01	-0.44
Tertiary	3	8	14	30	45	100	0.43	0.00
Health	29	25	20	15	11	100	-0.19	-0.62
Social Security	12	12	12	18	45	100	0.29	-0.14
Soc.Spending w/out Social Security	25	23	19	18	15	100	-0.09	-0.52
Soc.Spending w/ Social Security	21	19	17	18	25	100	0.03	-0.40
<i>Income distribution<sup>b,c</sup></i>	4	9	14	22	52	100	0.43	
<b>Ecuador 1999</b>								
Education	15	20	20	22	23	100	0.08	-0.41
Primary	35	26	20	13	6	100	-0.28	-0.77
Secondary	15	24	25	22	14	100	-0.02	-0.50
Tertiary	3	13	16	28	40	100	0.36	-0.13
Health	19	23	23	24	11	100	-0.06	-0.55
Social Security	4	7	21	22	46	100	0.40	-0.09
<i>Income distribution<sup>a,c</sup></i>	3	8	12	19	58	100	0.49	
<b>El Salvador, 2002</b>								
Education								
Primary	27	25	23	17	8	100	-0.18	-0.66
Secondary	11	20	26	25	18	100	0.08	-0.40
Health	26	23	21	18	12	100	-0.13	-0.61
<i>Income distribution<sup>b,d</sup></i>	3	8	13	21	56	100	0.48	

## LATIN AMERICA: DISTRIBUTION OF SOCIAL SPENDING BY INCOME QUINTILES

(continue...)

Country	I (Poorest)	II	III	IV	V (Richest)	Total (%)	Quasi Ginis <sup>1,2</sup>	Kakwani Index <sup>3</sup>
<b>Guatemala 2000</b>								
Education	17	21	21	21	21	100	0.03	-0.51
Primary	21	25	23	21	10	100	-0.10	-0.64
Secondary	3	12	23	31	32	100	0.30	-0.24
Tertiary	0	0	6	11	82	100	0.69	0.15
Health	17	18	23	25	17	100	0.03	-0.51
Social Security	1	3	5	15	76	100	0.65	0.11
Soc. Spending w/out Social Security	17	20	22	22	19	100	0.03	-0.51
Soc. Spending w/ Social Security	14	17	19	21	29	100	0.14	-0.40
<i>Income distribution</i> <sup>a, d</sup>	3	6	10	18	64	100	0.54	
<b>Honduras, 1998</b>								
Health	22	24	24	17	14	101	-0.10	-0.60
<i>Income distribution</i> <sup>b, d</sup>	3	7	12	20	59	100	0.50	
<b>Jamaica, 1997</b>								
Education								
Primary	31	27	21	15	6	100	-0.24	-0.78
Secondary	10	15	25	30	20	100	0.14	-0.40
<i>Income distribution</i> <sup>b, d</sup>	7	11	15	22	46	100	0.36	
<b>Mexico, 2002</b>								
Education	19	20	19	23	19	100	0.01	-0.48
Primary	30	26	20	16	8	100	-0.21	-0.70
Secondary	14	20	21	26	19	100	0.06	-0.42
Tertiary	1	7	15	33	44	100	0.45	-0.03
Health	15	18	21	23	22	100	0.08	-0.41
Social Security	3	11	17	28	42	100	0.38	-0.11
Soc. Spending w/out Social Security	18	19	20	23	20	100	0.03	-0.45
Soc. Spending w/ Social Security	16	19	19	23	23	100	0.07	-0.41
<i>Income distribution</i> <sup>a, d</sup>	3	7	12	19	58	100	0.49	
<b>Nicaragua, 1998</b>								
Education	11	14	20	21	35	100	0.22	-0.27
Health	18	23	22	19	18	100	-0.02	-0.51
Soc. Spending w/out Social Security	14	18	21	20	27	100	0.12	-0.38
<i>Income distribution</i> <sup>b, c</sup>	4	7	11	18	60	100	0.49	



## LATIN AMERICA: DISTRIBUTION OF SOCIAL SPENDING BY INCOME QUINTILES

(continue...)

Country	I (Poorest)	II	III	IV	V (Richest)	Total (%)	Quasi Ginis <sup>1,2</sup>	Kakwani Index <sup>3</sup>
<b>Paraguay, 1998</b>								
Education	21	20	20	20	19	100	-0.02	-0.51
Primary	30	26	21	15	8	100	-0.23	-0.72
Secondary	14	18	25	24	19	100	0.06	-0.43
Tertiary	2	5	8	29	56	100	0.53	0.04
<i>Income distribution</i> <sup>b,d</sup>	3	9	15	22	52	100	0.44	
<b>Peru, 2000</b>								
Education	16	18	19	21	26	100	0.10	-0.31
Health	14	16	18	24	28	100	0.14	-0.27
Soc.Spending w/out Social Security	15	17	18	22	27	100	0.11	-0.30
<i>Income distribution</i> <sup>a,c</sup>	4	9	15	22	50	100	0.41	
<b>Dominican Republic, 1998</b>								
Education								
Primary	25	26	24	16	9	100	-0.17	-0.60
Secondary	14	19	25	26	16	100	0.04	-0.39
Tertiary	2	13	18	28	39	100	0.36	-0.08
<i>Income distribution</i> <sup>b,c</sup>	5	9	13	20	53	100	0.43	
<b>Uruguay 1998</b>								
Education	28	23	19	16	15	100	-0.13	-0.54
Health	24	20	20	18	18	100	-0.06	-0.47
Social Security	3	7	15	24	52	100	0.46	0.05
Soc.Spending w/out Social Security	26	21	20	18	16	100	-0.09	-0.50
Soc.Spending w/ Social Security	12	13	17	21	37	100	0.23	-0.18
<i>Income distribution</i> <sup>b,d</sup>	5	9	14	22	50	100	0.41	

a/ The population of this country was divided into quintiles based on consumption levels.

b/ The population of this country was divided into quintiles based on income levels.

c/ In these countries, the basic unit of analysis was households.

d/ In these countries, the basic unit of analysis was persons.

1/ The quasi Gini or concentration coefficient measures the orientation of social spending. Its values range between -1 and 1. A coefficient that adopts negative values is associated with a progressive social spending, while a coefficient with positive values is associated with a regressive social spending (see Box 1).

2/ The concentration coefficient for income distribution is equal to the Gini coefficient.

3/ The Kakwani index or Relative Concentration Coefficient measures the orientation of social spending with respect to income distribution. Its values range between -2 and 1, becoming negative when social spending is progressive and positive when the social spending is regressive.

TABLE 2

## LATIN AMERICA: SPENDING ON SOCIAL ASSISTANCE PROGRAMS

Country	I (Poorest)	II	III	IV	V (Richest)	Total	Quasi- Gini <sup>1</sup>	Kakwani Index <sup>2</sup>	% of Social Spending <sup>3</sup>
Argentina 1998 <sup>a/</sup>	54	25	11	6	3	100	-0.48	-0.99	15.0%
Brazil 1997 <sup>b/</sup>	29	25	22	16	8	100	-0.20	-0.76	2.2%
Chile 2003 <sup>c/</sup>	48	26	16	8	2	100	-0.43	-0.83	19.6%
Colombia 2003 <sup>d/</sup>	29	25	20	18	9	100	-0.18	-0.71	15.7%
Costa Rica 2000 <sup>e/</sup>	38	25	16	14	8	100	-0.29	-0.72	6.8%
Ecuador 1999 <sup>f/</sup>	28	26	25	18	4	100	-0.22	-0.71	23.7%
Guatemala 2000 <sup>g/</sup>	16	24	26	20	13	100	-0.04	-0.58	12.8%
Mexico 2002 <sup>h/</sup>	49	22	11	11	7	100	-0.37	-0.86	6.3%
Peru 2000 <sup>i/</sup>	29	26	23	16	7	100	-0.21	-0.67	32.3%
Uruguay 1998 <sup>j/</sup>	29	21	17	20	12	100	-0.14	-0.55	16.5%
<i>Unweighted average</i>	<i>35</i>	<i>24</i>	<i>19</i>	<i>15</i>	<i>7</i>	<i>100</i>	<i>-0.26</i>	<i>-0.74</i>	<i>15.1%</i>

a/ includes promotion and public social assistance

b/ includes child services, school lunches, and maternal nutrition.

c/ includes monetary subsidies for pension assistance, one time family allowance, potable water consumption, and unemployment.

d/ includes care for children under 7, school food programs and training.

e/ includes programs to support the poorest population, including the disabled, rural families, indigenous persons, the elderly, among others.

f/ includes solidarity bonus, school food, free food and child care programs

g/ includes school food programs, school textbooks and supplies, scholarships, cash transfers, and PRONADE programs

h/ includes the Oportunidades and Procampo programs

i/ includes school breakfast, glass of milk, dinning halls, mothers clubs, school uniforms and supplies programs

j/ includes early child development, food and cash transfer programs

1/ The quasi Gini or concentration coefficient measures the orientation of social spending. Its values range between -1 and 1. A coefficient that adopts negative values is associated with a progressive social spending, while a coefficient with positive values is associated with a regressive social spending (see Box 1).

2/ The Kakwani Index or Relative Concentration Coefficient measures the orientation of social spending with respect to income distribution. Its values range between -2 and 1, becoming negative when social spending is progressive and positive when the social spending is regressive.

3/ Education and Health

Figure N° 1  
AGGREGATE SOCIAL SPENDING

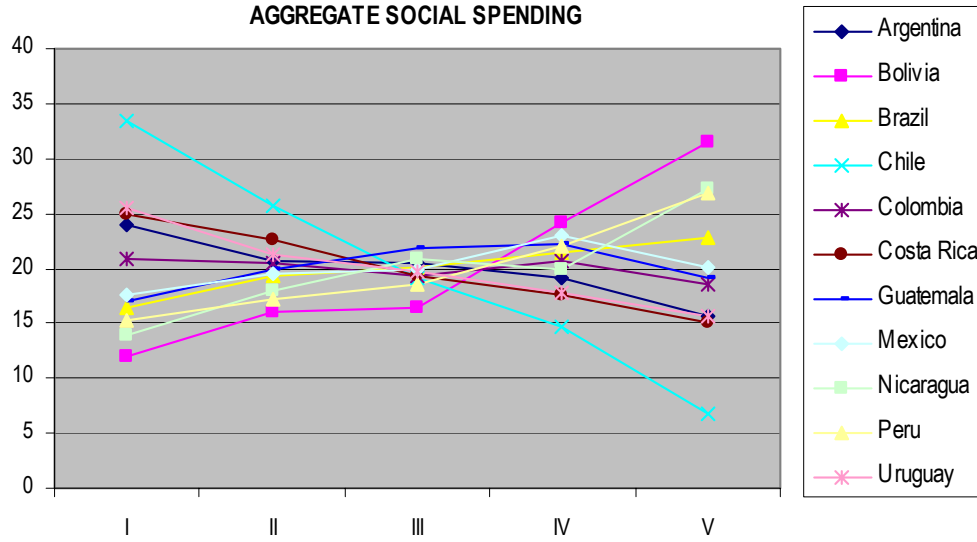


Figure N° 2  
SOCIAL SPENDING CONCENTRATION COEFFICIENT

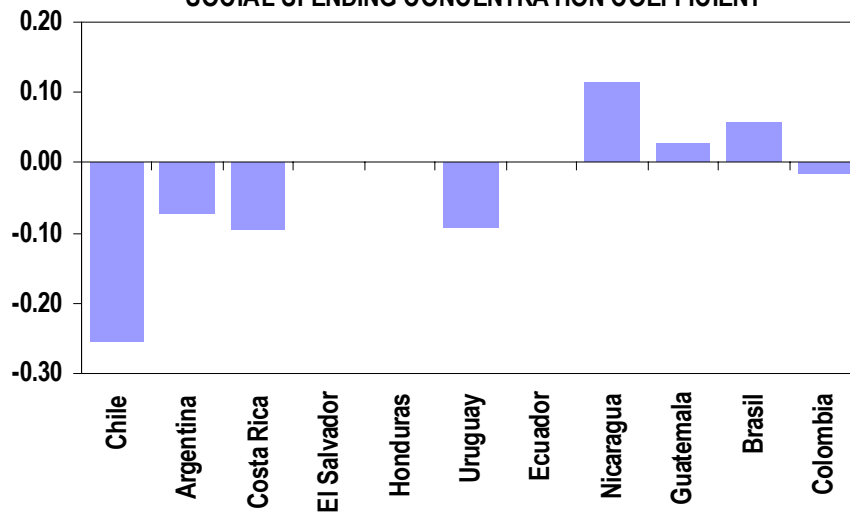


Figure N° 3

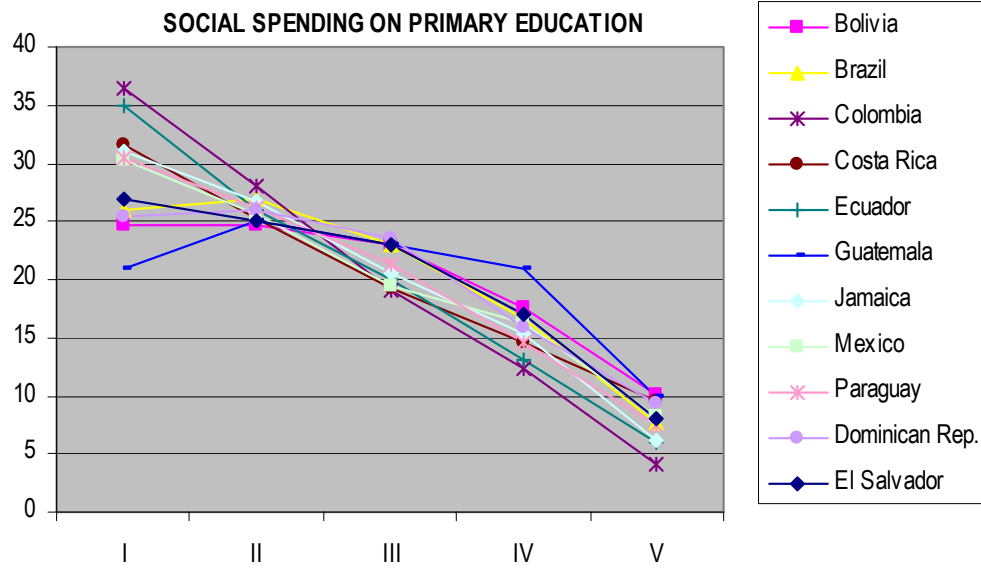
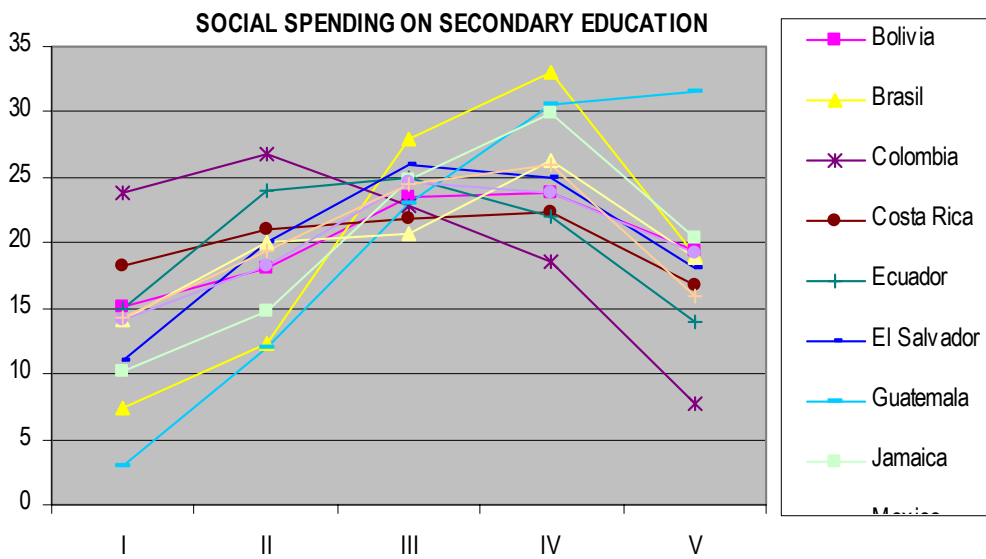
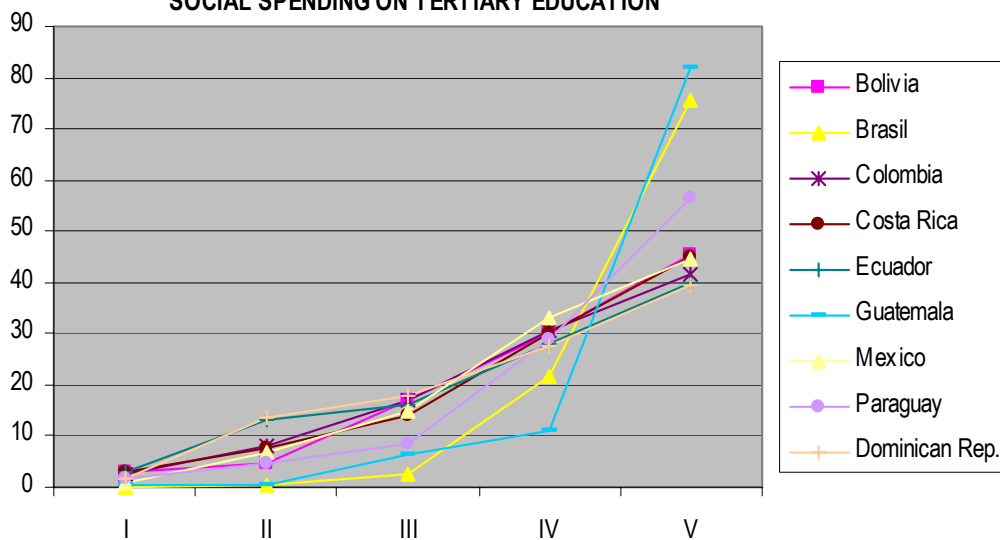


Figure N° 4



**Figure N° 5**  
**SOCIAL SPENDING ON TERTIARY EDUCATION**



**Figure N° 6**  
**SOCIAL SPENDING ON HEALTH**

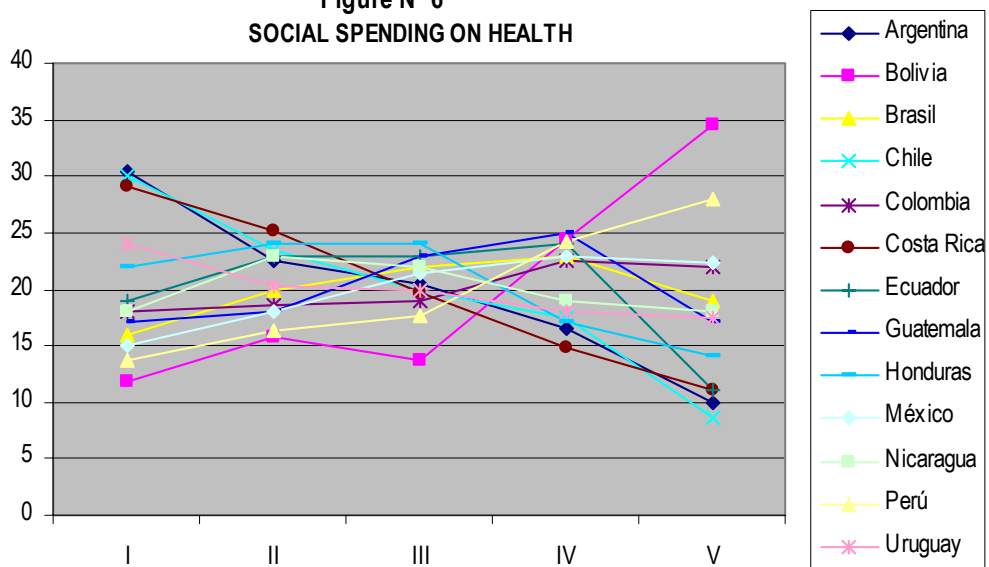


Figure N° 7

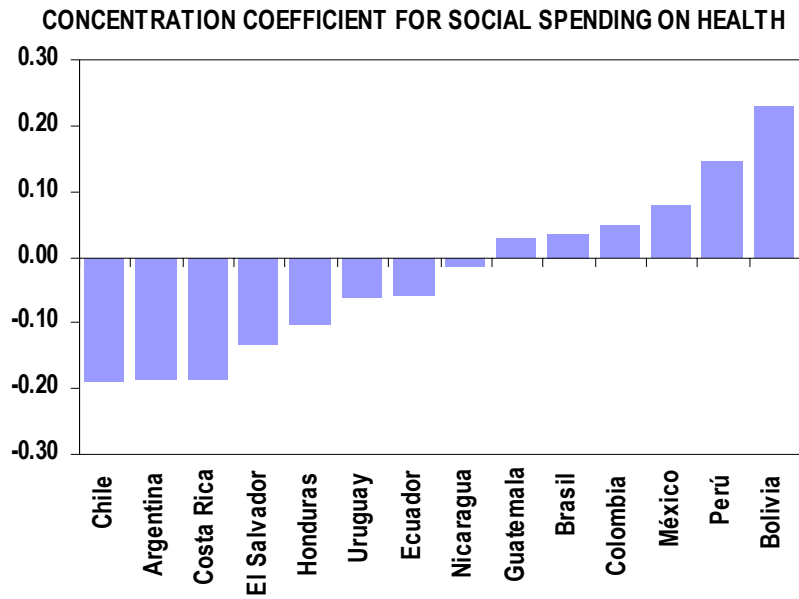


Figure N° 8a

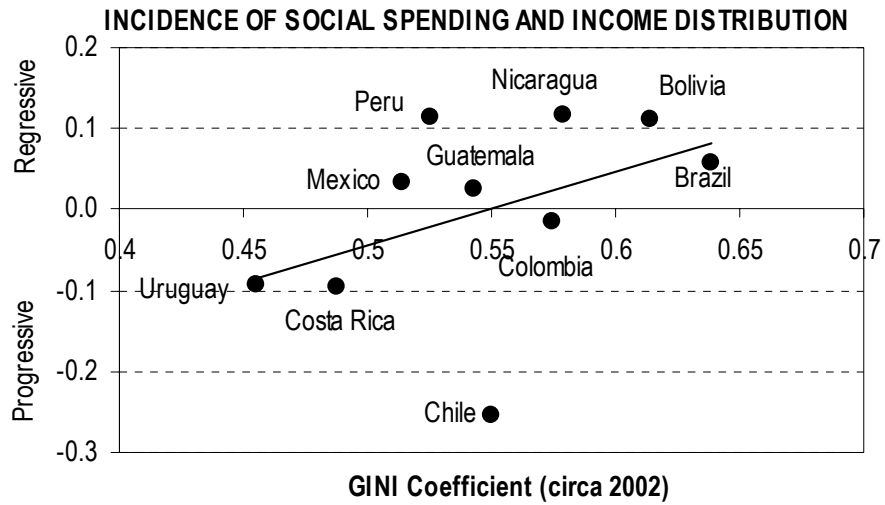


Figure N° 8b

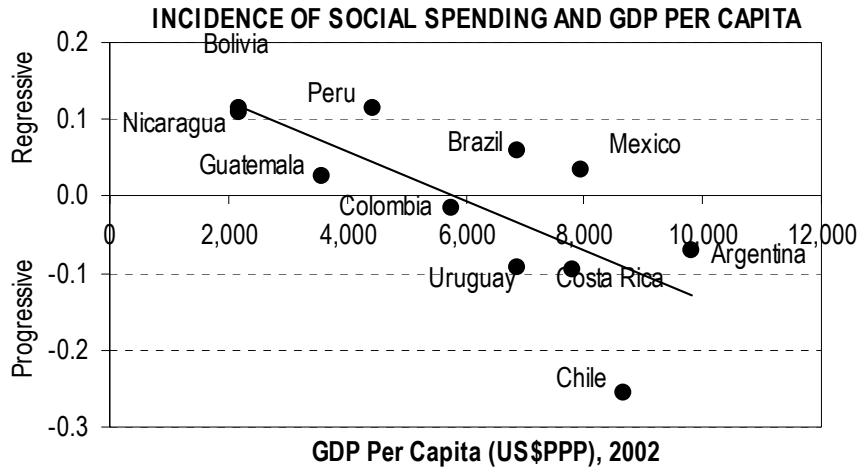


Figure N° 8c

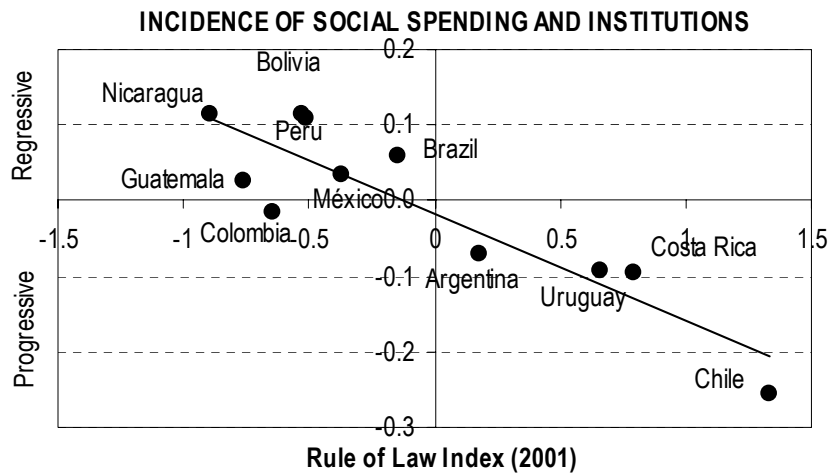
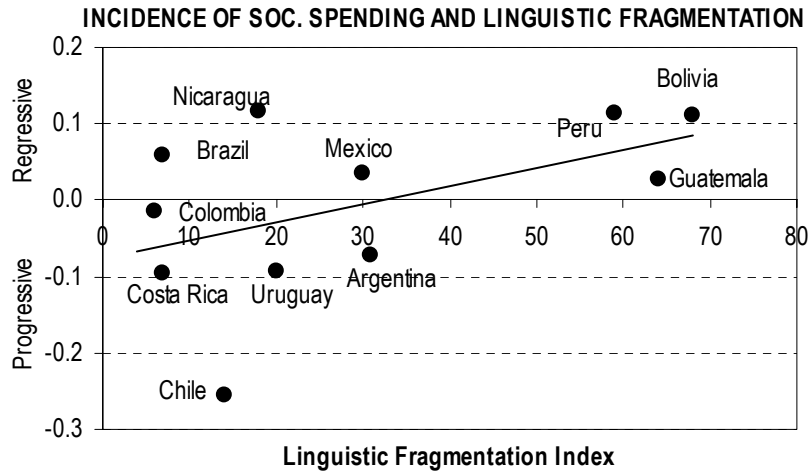


Figure N° 8d



**ANNEX 1**  
**STATISTICAL BIBLIOGRAPHY ON SOCIAL SPENDING IN LATIN AMERICA**

Author	Title	Number	Publisher/City	Year
<b>ARGENTINA</b> Ministry of Economy	The Distributive Impact of Social Policy in Argentina: Analysis based on the national survey of household expenses	Working Document No. GP/12	Secretariat of Economic Policy, Buenos Aires	2002
<b>BOLIVIA</b> Fernando Cossio Muñoz	Distributive Incidence of Fiscal Policy in Bolivia	Document prepared for the CAN, IDB, and DFID.	La Paz	2005
<b>BRAZIL</b> World Bank World Bank Carlos Eduardo Vélez and Vivien Foster	Brazil Inequality and Economic Development Attacking Brazil's Poverty Public Social Expenditure in Brazil: An International Comparison	Report No. 24487 - BR. Vols. I and II	WB WB WB	2003 2001 1999
<b>CHILE</b> MIDEPLAN	Volume 1: Poverty, Income Distribution, and Distributive Impact of Social Spending	Series CASEN 2003		2004
<b>COLOMBIA</b> Francisco Lasso and Natalia Milán	Incidence of Public Social Spending on Income Distribution and Poverty Reduction	Mission for the Design of a Strategy for Poverty and Inequality Reduction	Bogotá	2004
<b>COSTA RICA</b> Juan Diego Trejos	Social Investment Equity in 2000	Eighth Report on the State of the Nation in Sustainable Human Development	UNDP	2002
<b>ECUADOR</b> Rob Vos, Juan Ponce, Mauricio León, José Cuesta, and Wladimir Brobovich	Who benefits from social spending in Ecuador? Challenges for improving the equity and efficiency of social spending		The Hague Institute of Social Studies; Quito	2002
<b>EL SALVADOR</b> Andrew Mason and Omar Arias	Poverty Reduction in El Salvador	Presentation of the World Bank's Poverty Study	WB	2004
<b>GUATEMALA</b> World Bank	Guatemala: Poverty Assessment Report		WB	2001
<b>HONDURAS</b> World Bank	Honduras: Public Expenditure Management for Poverty Reduction and Fiscal Sustainability	Report No. 22070	WB	2001
<b>JAMAICA</b> Aldrie Henry-Lee and Dillon Alleyne	Chapter: Jamaica. <i>In</i> : Ganuza, León and Sauma, eds. "Public Spending for Social Services in Latin America and the Caribbean. Analysis from the perspective of the 20/20 Initiative".		U.N., ECLAC	1999
<b>MEXICO</b> World Bank World Bank	Mexico: Public Expenditure Review Mexico. Poverty in Mexico: An Assessment of Conditions, Trends and Government Strategy	Report No. 27894 - MX Report No. 28612 - ME	WB WB	2004 2004
<b>NICARAGUA</b> World Bank	Nicaragua: Report on Poverty		WB	2001
<b>PARAGUAY</b> Marco Robles	Poverty and Public Spending on Education in Paraguay		IDB	2001
<b>PERU</b> Jonathan Haughton	An Assessment of Tax and Expenditure Incidence in Peru	Document prepared for the IDB, CAN, DFID	Boston, MA	2005
<b>DOMINICAN REPUBLIC</b> World Bank	Dominican Republic: Poverty Assessment. Poverty in a High- Growth Economy (1986-2000)	Report No. 21306 - DR	WB	2001
<b>URUGUAY</b> World Bank	Uruguay: Poverty Update 2003	Report No. 26223	WB	2003



**ANNEX 2**

<b>LATIN AMERICA: SPENDING ON SOCIAL ASSISTANCE PROGRAMS, BY INCOME QUINTILES</b>						
Country	I (Poorest)	II	III	IV	V (Richest)	Total
<b>Argentina, 1998</b>						
Social Promotion and Assistance	54	25	11	6	3	100
<b>Brazil, 1997</b>						
Child Services	29	25	22	16	8	100
School Breakfast and Lunch Programs	42	24	16	12	6	100
Maternal Nutrition	25	24	24	18	9	100
	29	33	18	13	7	100
<b>Chile, 2003</b>						
Monetary Subsidies	48	26	16	8	2	100
<b>Colombia, 2003</b>						
Care for Children under 7	29	25	20	18	9	100
School Food Programs	33	29	21	14	4	100
Training	37	29	19	12	3	100
	9	10	17	34	31	100
<b>Costa Rica, 2000</b>						
Support to Vulnerable Groups	38	25	16	14	8	100
<b>Ecuador, 1999</b>						
Solidarity Bonus	28	26	25	18	4	100
School Food Programs	27	28	25	16	4	100
Free Food Programs	38	15	12	33	2	100
Child Care	17	18	46	19	0	100
	16	37	20	19	7	99
<b>Guatemala, 2000</b>						
School Scholarships	16	24	26	20	13	100
School Food Program	9	4	23	16	48	100
School Supplies	16	25	27	20	11	100
	18	24	24	20	13	100
<b>Mexico, 2002</b>						
<i>Oportunidades</i>	49	22	11	11	7	100
Procampo	59	25	10	5	0	100
	33	16	13	20	18	100
<b>Perú, 2000</b>						
Social Subsidies	29	26	23	16	7	100
<b>Uruguay, 1998</b>						
Early Development	29	21	17	20	12	100
Food Programs	81	19	0	0	0	100
Cash Transfers	73	17	7	2	1	100
	20	22	20	23	15	100