Chapter 8

THE DISTRIBUTIONAL AIMS OF FISCAL POLICY

Income distribution in the Latin American countries in the next century will depend heavily on government action. Governments will not be able to change the historical or geographical conditions that have influenced the region's high levels of inequality. Nor will they be able to suddenly alter the resource endowments that contribute to the inequalities of reward between productive factors and between skilled and unskilled labor. But with the appropriate policies, government can help modify the channels through which inequality is perpetuated. Government can help improve women's opportunities to participate in the work force, assure that children attend and remain in the educational system, lower the barriers to formal work, create conditions to make informal work productive, and improve the economic situation of the poor during unemployment and old age. In terms of macroeconomic policy, government has the power to mitigate the effects of external shocks and volatility on the economy by developing adequate fiscal or monetary policies.

In some instances, the actions that must be taken to attain these objectives do not entail major fiscal effort, but in others they do. As we have argued in the introduction to these policy chapters, for distributional reasons, spending aimed at basic needs that the market cannot supply and that the poor cannot pay for individually must be covered with public funds, including basic education and health care, and minimum pensions for the poor. Day care and various child health and education programs that support participation of women in the work force must also be financed with public funds. Moreover, although there must be private participation in providing infrastructure, investments in the delivery of water, sewerage and electricity to low-income households will continue to demand public funds.

By international standards, Latin American governments are small, and they only partially cover some of these areas of redistributive spending. That should not lead to the conclusion, however, that poor income distribution is a consequence of the small size of Latin American governments. There is no convincing international evidence that shows that larger governments lead to better income distribution. Moreover, in Latin America, even though governments are small, the expenditures that could have redistributive potential, such as those on education, health and social security, are not small. The main difficulty of governments in the realm of social spending is efficiency, not volume.

Moreover, one reason Latin American governments are small is that the design of tax policies has become so burdened with supposedly distributive considerations, and the upshot has been the sacrifice of vast amounts of tax resources that could be utilized on expenditures with greater potential for redistribution. The distributive impact of public spending has been measured by how the benefits are distributed. Under this traditional criterion, public social spending is moderately redistributive. But this is not the criterion by which the distributive impact ought to be judged. That impact depends on the *efficiency* with which resources are used and on their being *targeted* to basic social spending needs in those areas that will make it possible to remove the mechanisms that perpetuate inequality.

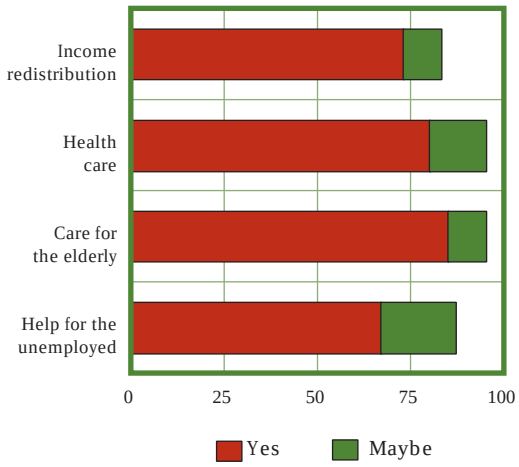
Expanding the size of government ought to be a way to accomplish basic social objectives, and that can only be justified if spending is done in an efficient and targeted way. Expanding government in a way that disregards these principles will quite surely be regressive, if only because the resources will be used to pay the salaries of public officials who typically have higher educational levels and greater opportunities for earning income than most people.

SIZE OF GOVERNMENT AND INCOME DISTRIBUTION

Improving income distribution is one of the functions that societies have entrusted to government around the world. In Latin American countries, a broad majority believes that the state ought to play a redistributive role. Public

opinion surveys show, for example, that at least four of five Latin Americans think that the government has a responsibility to "reduce the differences between the rich and the poor," and an even higher percentage thinks that the government ought to accept responsibility for "providing health care to the sick" as well as "a decent living standard of living" for old people and the unemployed (Figure 8.1).

Figure 8.1. Demand for Redistributive Public Policies
(Percent of people in favor)



Source: Latinobarómetro (1997).

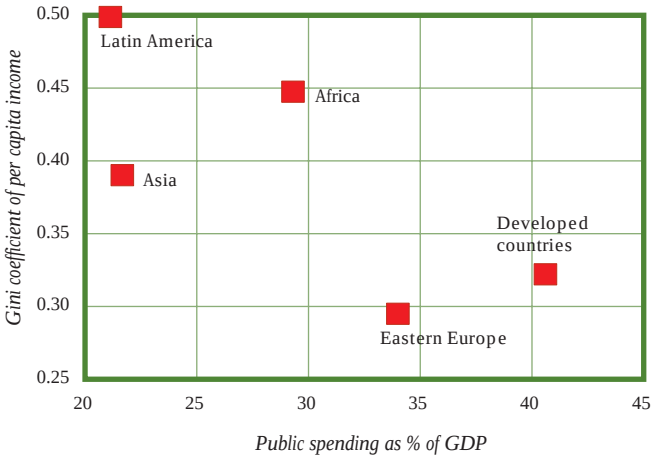
Government Spending Is Small in Latin America...

While in developed countries central government spending typically represents 40 percent of GDP, in Latin America that rate is around 20 percent. There is no simple criterion for pinpointing the size of spending, but international comparisons indicate that it tends to rise in proportion to the level of development (see Appendix Table 8.1a, regression 1). If this is accepted as a guideline, it can be said that the size of the Latin American state, measured by public spending as a percentage of GDP, is on average 9 points below the international norm for the level of development of its countries (regression 2). Although international patterns for the size of the state, like many other variables, are generally established in relation to the development level of countries, that does not seem to be its most important determinant. The proportion of the population over 65 and the degree of ethnic and linguistic fragmentation are two much more crucial factors (regressions 3 and 4). The first variable reflects claims for social safeguards, the cost of which tends to be quite high: for every percentage point rise in the aging population, public spending also rises by 1 percent. Although this relationship is affected by developed countries (where the ratio is even greater), it is not limited to such countries (regression 5). Ethnic and linguistic fragmentation, moreover, reflects the willingness of the society to show solidarity with group demands as expressed in public spending. The various groups making up a fragmented society may fear that their taxes are benefiting those with whom they do not identify, and such lower willingness to pay taxes limits the size of government. Taking into account these two variables, which together explain around half of the differences in size of governments around the world, Latin American governments are significantly smaller than would be suited to their demographic, social and political conditions (Appendix Table 8.1a, regressions 6 and 7). On average the variation from the worldwide pattern is around 8 percent of GDP.

...But Bigger Isn't Always Better

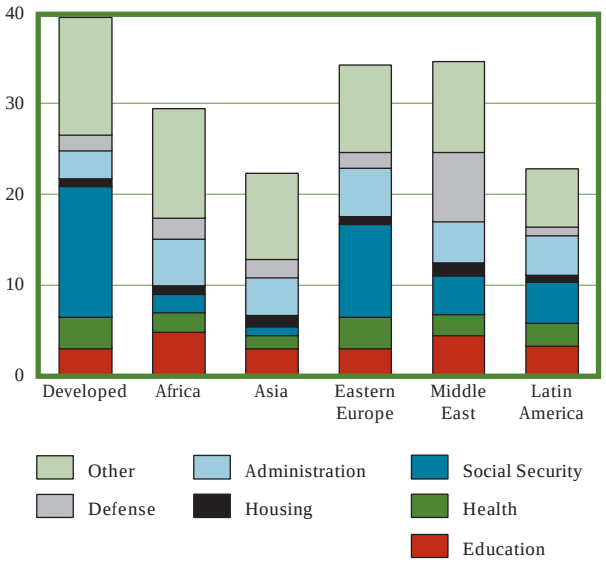
Developed countries, where government spending represents around 40 percent of GDP, have the best income distribution in the world. By contrast, Latin America, where income distribution is worst, is also the region where governments are smaller (Figure 8.2). These relationships could lead to the conclusion that the small size of Latin American government *causes* poor income distribution. That is not necessarily the case, for two reasons. The first is that there is no guarantee that better income distribution will result from larger government. The analysis of the determinants of income distribution on a world scale for Chapter 4 did not reveal that the size of government is not a major factor in explaining differences in income distribution between countries worldwide or in Latin America. Within the region, the economies with larger governments are not necessarily the most equitable. The most notable case is Brazil, where the size of the government resembles that of a developed country, yet the country's inequality is one of the worst in the region and the world. Likewise, some countries with levels of inequality that are moderate for the area, such as Argentina or Peru, have modest sized governments. It is true that Uruguay and Costa Rica, the countries with the best income distribution in the region, have rather extensive governments, and that in Guatemala, where income is very unequal, the size of the government is insufficient for performing the necessary redistributive tasks. However, no clear pattern for the entire region can be concluded from these cases.

Figure 8.2. Income Concentration and Government Size by Region



Source: Deininger and Squire (1996) and International Monetary Fund, Government Financial Statistics (1997).

Figure 8.3. Public Spending by Region
(Percent of GDP)



Source: International Monetary Fund, Government Financial Statistics (1997).

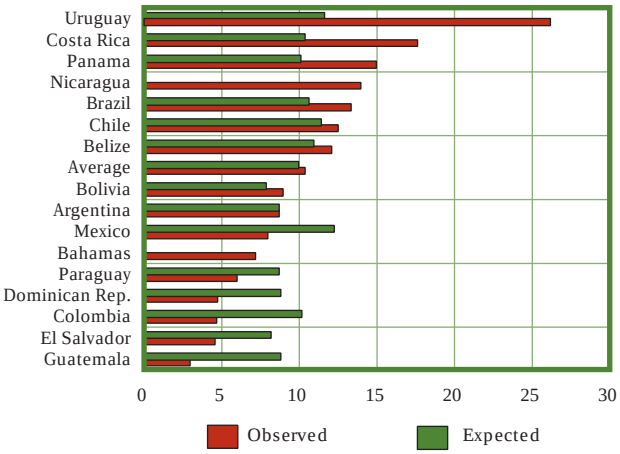
Latin American Social Spending

The second reason why it is difficult to argue that the small size of government causes poor income distribution is that public spending aimed at redistributive operations is not small in Latin America, contrary to widespread belief in the region. Redistributive expenditures, such as those on education, health and social security, represent on average over 10 percent of GDP in the typical Latin American country, practically the same as in countries in the Middle East and considerably above countries in Asia or Africa (Figure 8.3). Social spending is low in Latin America only in comparison to European patterns (both the developed countries and those in transition), and that is due to the huge weight of social security transfers in those countries. But if the close connection existing between such social spending and the percentage of the population over 65 (or the development level) is kept in mind, Latin America is not below the world standard in the area of social security expenditures, nor in social spending as a whole (Appendix Table 8.1b, regressions 8 to 11). In Uruguay, Costa Rica, Panama and Nicaragua, social spending is substantially greater than one might expect for the development levels of these countries, and on average throughout Latin America it is slightly above the world pattern (Figure 8.4). This does not suggest that one should ignore the fact that in some countries, such as Mexico, Colombia, Guatemala and the Dominican Republic, there are indeed glaring inadequacies in government social spending. The small size of government in Latin America is due above all to the modest size of economic expenditures such as investments in infrastructure and subsidies to productive sectors (grouped under the category of "other" in Figure 8.3). However, there are no grounds for claiming that the lack of a redistributive impact of governments in the region is because such expenditures are small.

INTERFERENCE OF DISTRIBUTIVE AIMS IN TAX POLICY

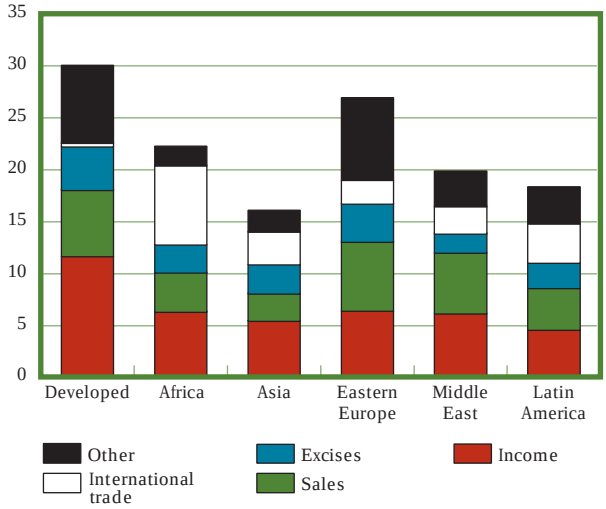
Paradoxical as it may seem, the small size of the typical Latin American government is largely due to the design of tax policy that has been unduly contaminated by supposedly redistributive considerations. Income taxes become progressive through rates that rise with taxes and various exemptions and deductions. In order to prevent consumption taxes from disproportionately burdening the poor, in many countries the main items of popular consumption are exempted. As a result of such distributive concerns, the application of taxes in Latin America has tended to be progressive, thereby sacrificing large amounts of revenue, which paradoxically has operated to the benefit of higher-income groups and has severely limited the possibility of carrying out redistribution through spending.

Figure 8.4. Observed vs. Expected Social Spending by Worldwide Standards
(Percent of GDP)



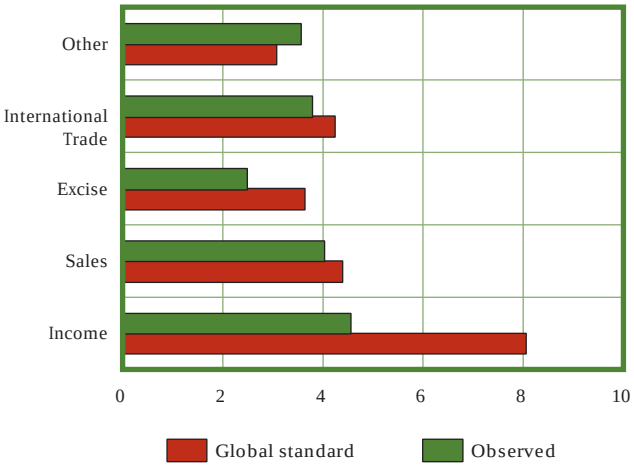
Note: Social spending regression (as % of GDP) as a function of per capita income.
Source: Social spending, IMF, Government Financial Statistics (1997); per capita income, World Bank (1993a).

Figure 8.5. Tax Sources
(Percent of GDP)



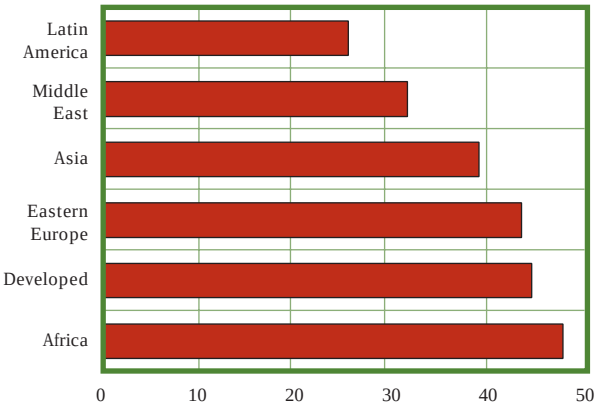
Source: International Monetary Fund, Government Financial Statistics (1997).

Figure 8.6. Latin America's Observed and Expected Tax Revenue by Global Standards
(Percent of GDP)



Note: Income tax regressions (as % of GDP) as a function of per capita income.
Source: Income tax, International Monetary Fund, Government Financial Statistics (1997); per capita income, World Bank (1993a).

Figure 8.7. Maximum Marginal Income Tax Rates
(In percent)



Source: Price Waterhouse, Individual Taxes: A Worldwide Summary (1997), and The Heritage Foundation.

Latin America Collects Little in Taxes, Especially More Progressive Taxes

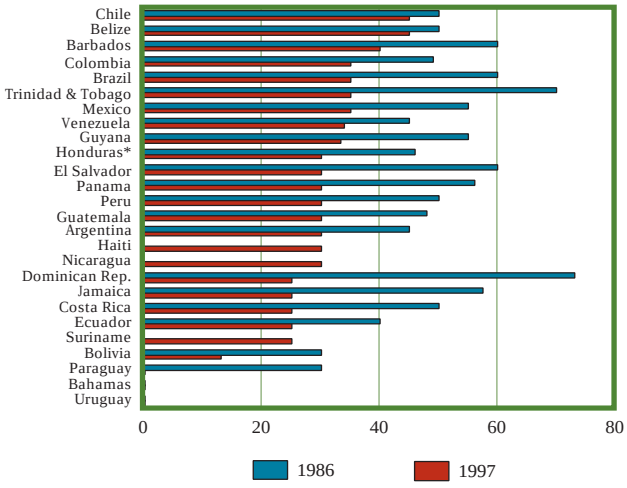
The counterpart to the small size of the public sector in Latin America is low tax collection. For the development level of the countries, average tax burdens ought to be 24 percent of GDP, not 18 percent as they are currently (Appendix Table 8.1b, regressions 12 and 13). The primary deficiency in tax collection is for taxes on income and property, which on average amount to only 4.5 percent of GDP; in keeping with the development level of the countries, those taxes ought to generate 8 percent (Appendix Table 8.1c, Figures 8.5 and 8.6 and regressions 14 and 15). Revenue from specific taxes imposed on such products as gasoline and alcoholic beverages is also significantly less than might be expected. On average, these taxes produce 2.5 percent of GDP, a point less than the world norm (Appendix Table 8.1c, regression 16). Even with the spread of the value added tax (VAT) as a tool for taxing consumption in Latin America, revenue from taxes of this type is slightly (though not significantly) less than what might be expected (Appendix Table 8.1c, regression 17).

Income Tax: Victim of Redistributive Intentions

Income tax rates in Latin America are currently the lowest in the world, but this was not so a decade ago. Until then, maximum tax rates on individuals were 40 percent or more in practically all countries in the region, and in 10 countries they were at least 50 percent. These levels have been cut to an average that stands currently at around 25 percent and is less than that of any other region. In developed countries, maximum tax rates are on average over 40 percent, and in Asian countries they are slightly below that figure. In Latin America, only Barbados, Belize, Chile (and Honduras until 1997) have maximum tax rates on individuals of 40 percent or over (Figures 8.7 and 8.8). The trend in business taxes has been similar. Maximum marginal rates of over 40 percent, which were common a decade ago, have practically disappeared. The average of maximum tax rates on businesses in Latin America is currently around 27 percent, substantially lower than averages of all the other groups of countries, with the exception of Eastern Europe (Figures 8.9 and 8.10).

Although taxes were cut to make the tax system more effective, that goal is far from achieved. Current productivity levels of the income tax, which is defined as the ratio of tax rates and revenue collected as a percentage of GDP, are around 15 percent in Latin America. This is tantamount to saying that (maximum) tax rates of 25 to 30 percent generate revenues of 3.7 to 4.5 percent of GDP. Although this is higher productivity than a decade ago, it is still low and it is lower than international norms for the development levels of the countries of the region (Appendix Table 8.1c, regression 18).

Figure 8.8. Maximum Individual Tax Rates, 1997 vs. 1986
(In percent)



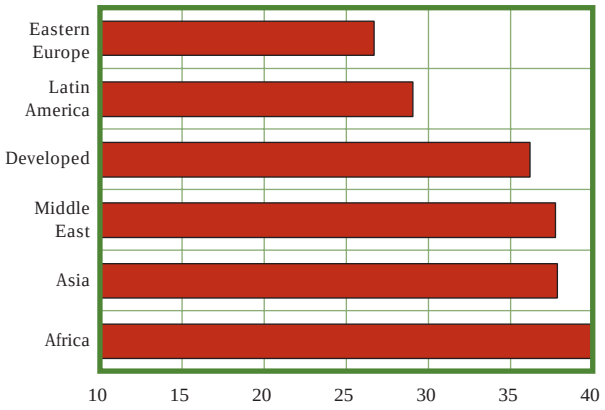
** Refers to 1998 instead of 1997.*
Source: Price Waterhouse, Individual Taxes: A Worldwide Summary (1997).

Low collection rates for income and other taxes in Latin America reflect the limited institutional capacity of public administration to enforce the law. Although it is difficult to demonstrate empirically, countries that have tried to improve their administrative capacity have shown this to be true. For example, Peru's program to modernize its tax administration system was decisive in boosting collections from 5 percent of GDP at the beginning of the decade to 14 percent today. However, it is important to remember that the troublesome tax systems typical to Latin America demand an administrative prowess that is difficult to come by in the region.

Paradoxically, the blame for the complicated design and ineffectiveness of tax systems may lie in an excess of redistributive considerations. Even after all the tax reforms of the past decade, where other criteria have been given preference, the countries with greatest income inequality have maintained the highest income tax rates (Figure 8.11). Redistributive aims are explicit in the tax codes. In the case of the personal income tax, the following characteristics are aimed at redistribution (Table 8.1):

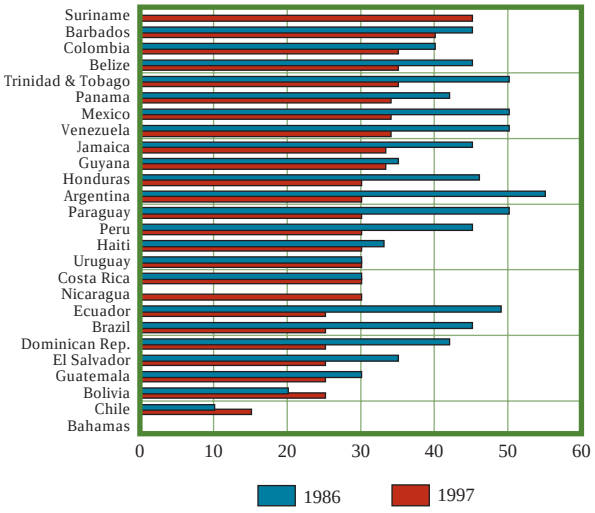
- Minimum incomes below which no tax is collected;
- Tax rates rising by income level;

Figure 8.9. Corporate Tax Rates
(In percent)



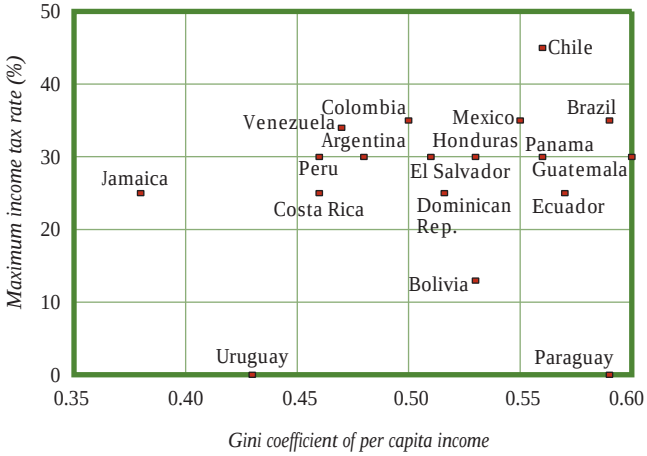
Source: Price Waterhouse, Corporate Taxes: A Worldwide Summary (1997), and The Heritage Foundation.

Figure 8.10. Maximum Corporate Tax, 1997 vs. 1986
(In percent)



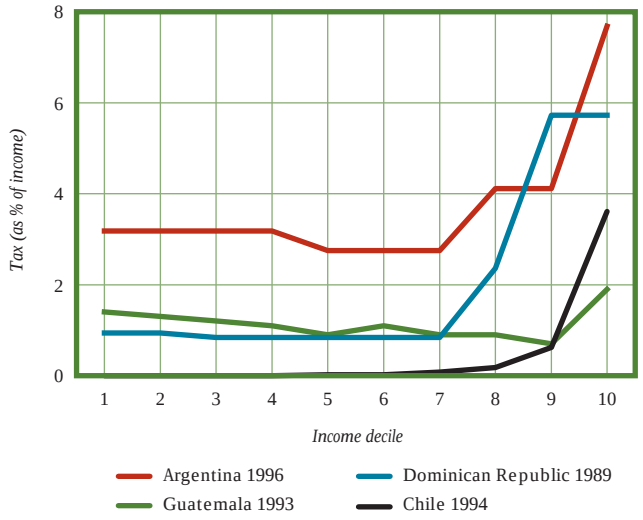
Source: Price Waterhouse, Corporate Taxes: A Worldwide Summary (1997).

Figure 8.11. Income Concentration and Maximum Income Tax Rates



Source: Price Waterhouse, Corporate Taxes: A Worldwide Summary (1997), IDB calculations based on recent household surveys, and Deininger and Squire (1996).

Figure 8.12. Income Tax Incidence



Source: Argentina: Centro de Estudios Bonaerense (1997); Chile: Engel, Geltovic and Raddatz (1997); Guatemala: Bahl, Martínez-Vásquez and Wallace (1996); Dominican Republic: Santana and Rathe (1992).

• Marginal maximum tax rates applied only to high-income levels;

• Various deductions for the number of dependent children and for basic expenditures on education, health and housing;

• Lower rates on income from labor or other types of income.

As a result of these distributive considerations, income taxes fall quite disproportionately on high-income groups. The two highest income deciles pay taxes that as a proportion of their incomes are several times higher than those of all previous deciles, which are usually exempt. (Nevertheless, in Figure 8.12, where the impact of the tax on income is shown, the lowest deciles in some countries are seen to be taxed because in these cases it has been assumed that a portion of business taxes has been transferred to prices of consumption goods.)

Even at the highest decile, in no case is the tax burden over 8 percent of income, although the theoreti-

Table 8.1. Redistributive Features of the Personal Income Tax

	Minimum income taxable (times per capita income)	Increasing marginal tax rate? (%)	Maximum rate applicable from (times per capita income)	Differential treatment according to income source?	Other deductions (dependents, education, health, housing)?
Argentina	1.6	6-33	19.4	No	Yes
Bahamas*					
Barbados	0.31	25-40	1.76	No	Yes
Bolivia		13		No	No
Brazil	3.46	15-25	6.91	No	Yes
Chile	0.15	5-45	1.91	No	No
Colombia	1.45	0-35	23.53	No	Yes
Costa Rica	1.28	10-25	11.96	Yes	Yes
Ecuador	9.13	10-25	45.65	No	No
El Salvador	2.0	10-30	18.18	No	Yes
Guatemala	11.83	15-30	32.75	No	Yes
Guyana		33.33		Yes	No
Honduras	5.9	10-30	118.7	No	Yes
Jamaica	1.38	0-25		No	No
Mexico	0.11	3-35	7.17	No	Yes
Nicaragua	9.33	7-30	42.0	Yes	No
Panama	1.14	4-30	15.15	No	Yes
Paraguay*					
Peru		15-30	24.17	No	Yes
Trinidad & Tobago	1.94	28-35		No	
Uruguay*					
Venezuela		6-34	6.82	Yes	Yes

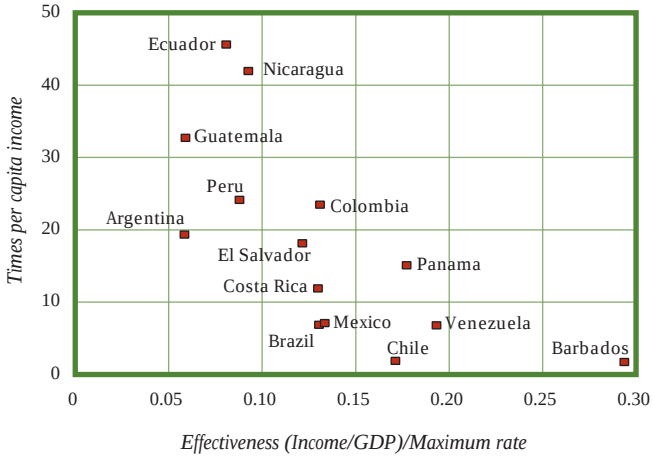
* Countries with no personal income tax.
Source: IDB calculations based on Price Waterhouse, *Individual Taxes: A Worldwide Summary* (1997).

cal tax rates are far higher. That means that even in the upper deciles, the productivity of the income tax is quite modest. Low efficiency is largely a result of evasion due to deficiencies in tax administration and in the design of the systems themselves. In effect, the low effectiveness of taxes is largely the result of manipulation of supposedly redistributive purposes, which in practice have served to lower the tax burdens of upper-income groups.

For example, the minimum levels of taxable income, which in principle are aimed at excluding the poorest, tend to be set at high levels due to pressures from the middle and upper classes. In Brazil, the minimum taxable income is over three times per capita income; in Honduras it is approximately six times; and in Ecuador, Nicaragua and Guatemala it is close to 10 times per capita income (Table 8.1). Likewise, although maximum income tax rates in Latin America are currently the lowest in the world, in many cases they apply only to extremely high incomes. For example, Ecuador has a maximum tax rate of only 25 percent, which begins to apply only to incomes equivalent to 45 times per capita income. Guatemala and Peru have maximum rates of 30 percent that apply to incomes starting at 32 and 24 times per capita income, respectively. Before its 1998 tax reform, Honduras was simply beyond comparison: the maximum rates only applied to incomes representing over 100 times the average income. As can be seen in Figure 8.13 (which excludes this extreme case) the effectiveness of income tax is severely limited by these excessive attempts at progressiveness.

Thus it is clear that the attempt to make the income tax progressive has meant a very serious sacrifice in collection. To the extent that public expenditures are much more redistributive than any tax could be, the ultimate impact on income distribution may have been the very opposite of what was intended. Flaws in revenue collection have also led governments to be increasingly dependent on indirect taxes, especially the VAT.

Figure 8.13. Income Tax Effectiveness and Maximum Income Tax Rate



Source: Calculations based on Price Waterhouse, Corporate Taxes: A Worldwide Summary (1997) and International Monetary Fund, Government Financial Statistics (1997).

The VAT: The Dilemma between Effectiveness and Progressiveness

Until a decade ago, many countries tried to compensate for poor income tax revenue collection with high taxes on foreign trade, but since 1985, out of a concern for efficiency, average duties have been reduced from 42 percent to around 14 percent. The proportion of taxes on foreign trade within tax collection as a whole fell on average from 30 percent in the early 1980s to 16.6 percent in 1995.

In the absence of this resource, the value-added tax has become a central part of tax systems in Latin America. Twenty-one countries in the region now have the VAT, and two more are in the process of implementing it. The spread of the VAT reflects not only the aim to increase tax revenues, but also to improve neutrality and avoid the distortions of other forms of levies (such as taxes on foreign trade or sales). As it exists in most countries, the VAT is a consumption tax. The fiscal burden results from the difference between the taxes collected on sales, minus those paid in purchases. Thus the tax paid at successive states of production and distribution is a partial payment on the total tax that ultimately falls on the sale price to the consumer.[1]

In principle, a single-rate VAT for all consumption goods is a regressive tax because higher-income groups presumably have higher rates of saving. This characteristic may be reinforced by the practical impossibility of observing and taxing the consumption of some goods that are not traded on the market and that weigh significantly in the consumption of the upper classes (for example, the use of owner-occupied dwellings).

In Argentina (after the 1996 reform) or in Chile, where the VAT has flat rates and few exceptions, it is indeed true that its application is regressive. In Argentina, the weight of the tax drops from 9 percent of the income of the first four deciles to around 7 percent of the ninth and less than 4 percent of the richest decile. In Chile, the three lowest income deciles bear a weight that as a percentage of their income is four points higher than on the two highest deciles (Figure 8.14). The regressivity of the VAT can be avoided only at the cost of making it substantially less effective. In Guatemala and Colombia (or as was the practice in Argentina before the reform), the VAT excludes some of the main articles in the basic consumption basket. In the Colombian case, the theoretical VAT rates would entail a slightly "regressive" structure, where the lowest deciles would pay 2 percentage points more of their income than the highest groups (Figure 8.15). This regressive impact is eliminated through exemptions, but the overall productivity of the tax falls to less than half.

The Cost of Progressive Rates with Low Revenue Collection

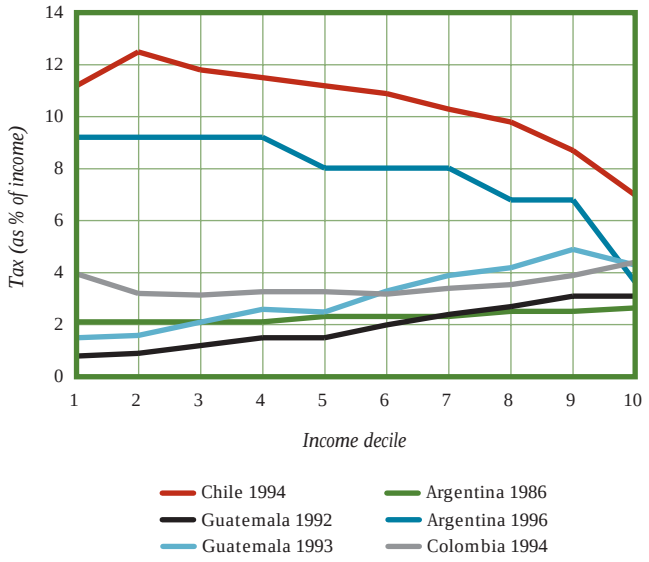
Due to excessive distributional considerations in the design of the income tax, and to the difficulties of administration and control that severely limit the effectiveness of this tax, the only way to substantially raise the total tax load is through a broadly based VAT with few exceptions. This leads to the regressive impact that can be seen in the Chilean and Argentine systems. Hence, countries face the alternative of having either a tax system that is pitifully small but progressive like Guatemala's, or a system that is more effective in its revenue collection capability but regressive (Figure 8.16).

In the past, that choice could be avoided through taxes on foreign trade. Such was the case, for example, of the Dominican Republic, where in 1989 such taxes contributed around a half of tax revenue and entailed a tax load of close to 7 percent of the income of all groups of families. But this option entails high efficiency and productivity costs, which has prompted almost all countries to abandon it.

What position then should be taken toward the choice between either greater tax effectiveness or having an entire tax system that is more progressive? Can sacri-

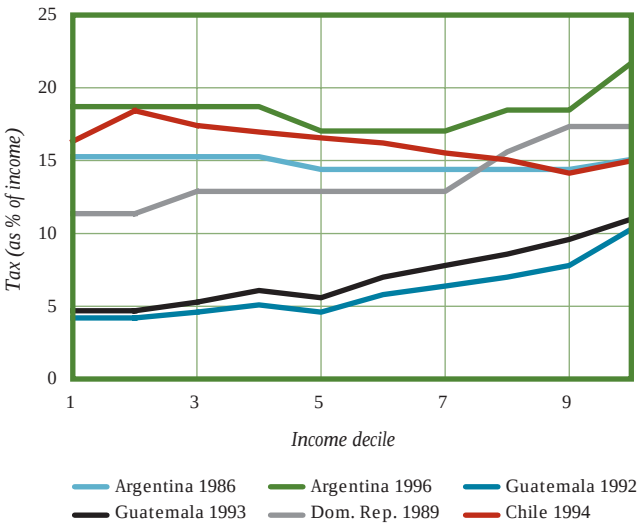
[1] A more detailed description of the VAT structures is found in IDB (1996), Part Two, Chapter 3.

Figure 8.14. VAT Incidence



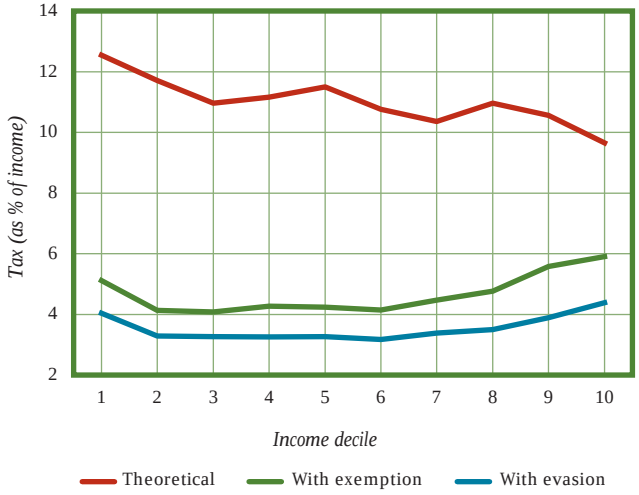
Source: Argentina: Centro de Estudios Bonaerense, (1997); Chile: Engel, Galetovic and Raddatz (1997); Colombia: Steiner and Soto (1998); Guatemala: Bahl, Martínez-Vásquez and Wallace (1996).

Figure 8.16. Tax System Incidence



Source: Argentina: Centro de Estudios Bonaerense (1997); Chile: Engel, Galetovic and Raddatz (1997); Dominican Republic: Santana and Rathe (1992); Guatemala: Bahl, Martínez-Vásquez and Wallace (1996).

Figure 8.15: Theoretical and Effective Incidence of the VAT: Colombia, 1994



Source: Steiner and Soto (1998).

ficing a major proportion of revenue be justified to prevent tax burdens from affecting low-income groups disproportionately? The answer to these questions depends on the potential distributional impact of additional tax resources. Analyses of the distributional impact of taxes often ignore this important consideration, implicitly assuming that the use made of tax resources benefits each individual in accordance with his or her share in the total revenue of the society. Such is rarely the case. Wherever the use of fiscal resources provides benefits that are better distributed than the tax burden, the final distribution that emerges after taxes and government spending will be better than it was at the outset (Box 8.1).

Obviously it does not suffice that a tax and expenditure system be redistributive for it to be socially acceptable or desirable, especially if it produces losses of efficiency that harm the general welfare. However, the redistributive potential of a tax and expenditure system tends to be greater when tax distortions are minimized and spending efficiency is maximized. Instead of a conflict between redistribution and efficiency, in practice there is complementarity.

The more significant social expenditures, such as basic education or health care, benefit poor individuals more than the wealthy. These expenditures are progressive in absolute terms (that is, per capita, and hence they are more progressive with regard to income), since poor individuals receive more basic education services or more public health care than the rich. Therefore, even if they are financed with a tax that is regressive (relative to income), the redistributive impact can be significant. For example, for each 1 percent of GDP collected via the Chilean VAT, which is regressive (relative to income), there can be a redistributive impact (measured solely by the amount of spending) equal to a 0.4 point drop in the Gini index, simply assuming that spending is distributed in

Box 8.1. The Distributive Impact of Taxes and Government Spending

In popular terminology, a tax is considered "regressive" if it falls disproportionately on low-income groups. This means that the distribution curve of taxes is located above the original income distribution curve (Figure 1). Usually, only a tax that falls more heavily on wealthier groups—meaning that taxes are more unequal than incomes—is regarded as progressive.

With regard to spending, the terms "progressive" and "regressive" refer, respectively, to situations in which the per capita benefits are greater or less for poor than for wealthy individuals (Figure 2).

This colloquial use of the terms is imprecise, because the basis of comparison is not the same in each case: whereas distribution of taxes is compared to the income distribution curve, the distribution of benefits from spending is compared to the diagonal line, that is, the one of equal distribution.

This lack of precision explains an apparent contradiction: a "regressive" (with regard to income distribution) tax that is used to finance "regressive" (per capita) government spending, can nevertheless *improve* income distribution. Suppose that a tax takes 15 percent of the income of the poorer half of the population and only 10 percent of the richer half, whose income is four times greater than that of the poor; suppose, moreover, that the government uses these funds to provide education subsidies in proportions of 5 and 6, respectively, to the poor and the rich. Such a fiscal policy *improves* income distribution, as can be seen in the following calculations:

	Initial Income	Minus Taxes	Plus Subsidies	Final Income
Poor	20	15%=3	5	22
Rich	80	10%=8	6	78
Total	100	11	11	100

The explanation of this paradox lies simply in the fact that the distribution of spending is less unequal than income distribution. That is all that is required for the combination of taxes and expenditures (of the same amount) to improve income distribution; or to use the usual terms, what suffices for the tax to be more "progressive" than the spending, both being measured in relation to initial income, or both in absolute terms individually.

In the strictest form, the change in the Gini, ΔG, equals the difference between the inequality ratio of expenditures by income level Gg (quasi-Gini of expenditures), minus the inequality ratio of taxes by income levels Gt (quasi-Gini of taxes), multiplied by the amount of the operation as a proportion of the sum of incomes of all individuals, v:

$$G_1 - G_0 = \Delta G = (Gg - Gt)\, v$$

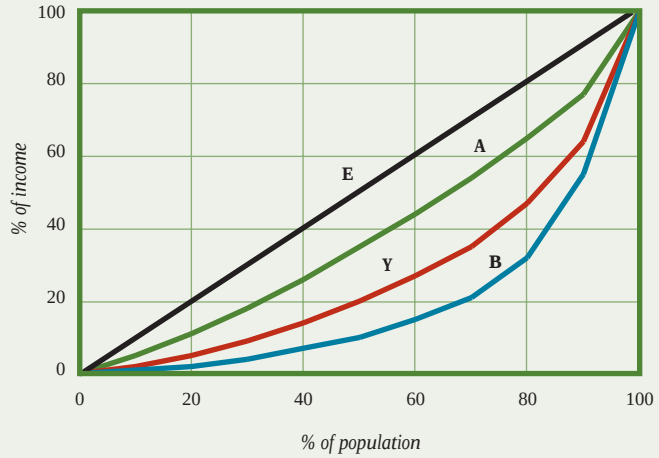
If the tax falls on all incomes at rate v, and therefore the distribution of the tax is the same original tax distribution, G_0, and if the distribution of spending is completely equal (and therefore Gg is zero), the initial Gini will fall exactly by the tax rate, v.[1]

Therefore, an expenditure whose impact is "equal" (the same amount per person) and is financed with a tax that falls "equally" (that is applied to all incomes equally) has a powerful redistributive effect.

Conventional analyses of impact assume that the benefit that individuals derive from government spending corresponds to the sum of spending that they receive through education, health care and other social spending. This is a useful approximation, but it is deceptive, because the benefit derived from very modest spending, such as vaccinations, may be much greater than that of a very large expenditure, such as a sports stadium, that reaches the same group of poor individuals. Moreover, many benefits of government spending may take much longer to emerge, even if they are quite large, such as greater income-generating potential resulting from education. Finally, many expenditures can have indirect effects on distribution that are difficult to trace and quantify. This can happen, for example, because government spending, taxes, or mechanisms used to finance the deficit cause real interest rates to rise, raise the relative salaries of more highly qualified workers, generate rents for higher-income groups, or cause inflation.

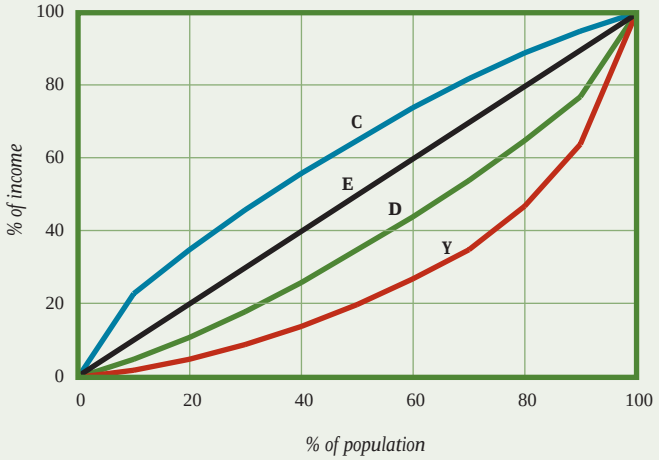
[1] This equation is exact only when income and spending are the same. See Kakwani (1977) and Vélez (1996), Chapter 3.

Figure 1. Progressive and Regressive Taxes



E: Equidistribution diagonal
A: Regressive tax distribution (in relative terms)
Y: Income distribution
B: Progressive tax distribution (in relative terms)

Figure 2. Progressive and Regressive Public Spending



C: Progressive Spending Distribution (in per capita terms)
E: Equidistribution diagonal
D: Regressive spending (in per capita terms)
Y: Income distribution

equal amounts throughout the population. Obviously, if expenditures are distributed in a more targeted way toward the poor, as in fact happens in Chile, the effect on income inequality would be even greater.

Figure 8.17 presents the hypothetical impact that income and VAT taxes of different countries have on the Gini indices, given the way they are applied and assuming in all cases that benefits are distributed equally (in absolute terms) among all individuals and are the same as the amounts of expenditures. Income taxes produce a greater distributive impact: in Chile, each 1 percent of GDP in revenues can lower the income Gini more than 0.8 percentage points; in the Dominican Republic it is lowered by 0.7 points, and in Argentina by 0.6. The distributive potential of the VAT is lower in all cases, but it is positive in any case: the effect is between 0.4 and 0.6 points in Guatemala, Colombia and the Dominican Republic, and between 0.3 and 0.4 in Chile and Argentina.

Nevertheless, the impact on income distribution depends not only on how progressive the tax is but also on the amount collected. Argentina substantially increased the VAT's distribution potential with the 1996 reform, because whereas in the previous situation it was more progressive (the quasi-Gini[2] of revenue collected was 0.53), collection was very low. With actual sums collected in mind, the redistributive potential of the VAT (always under the assumption that spending is distributed equally) went from a 1.2 drop of the Gini prior to the reform to almost 2 points subsequently (Figure 8.18). The Argentine tax reform also affected the income tax, which became slightly more progressive (from 0.56 to 0.63). But the greatest distributive effect (which went from 2.2 to 3.2 points of a potential reduction of the Gini) was due to a 25-percent increase in revenue collection. Chile is an equally illustrative case: the strongly progressive impact on income has a very limited potential impact on income distribution because it would potentially lower the Gini by 1.2 points, while the VAT, as regressive as it might be in the usual meaning given to this term, has a much greater distribution effect, lowering the Gini by around 3.5 points.

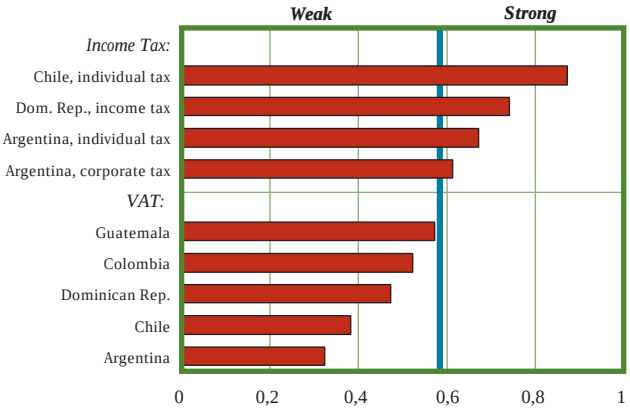
In short, within the ranges between which the distributive impact of taxes move, the redistributive potential of the tax system depends not only on how progressive it is, but also on the revenue raised by taxes. The margin for improving the progressivity ratio of the entire tax system is quite limited, since efforts at progressivity on any particular base entail major sacrifices of revenues

[2] It is called "quasi-Gini" because it is the Gini of the tax paid, but calculated on the basis of the ordering of family incomes.

collected, which must be compensated with other taxes. Hence, the progressivity of all systems tends to be similar. In the five countries appearing in Figure 8.19, the lowest quasi-Gini of the distribution of tax burdens is that of Chile (0.44) and the highest that of Guatemala (0.58). Within these cases, we have included the Philippines as an example of a country from another region with an index of distribution of tax loads that falls right in the middle of the narrow margin in which those of Latin American countries move. However, in that country the tax system generates a potential reduction of the Gini by over 13 points, merely from better collection. Between the cases studied in the region, the Argentine tax system generates a potential reduction of some 10 points, and that of Guatemala only 5 points.

Under such conditions, the aim of tax policy should not be to make collection as progressive as possible in order to enhance its redistributive effect. It is much more feasible and effective to moderate the degree of theoretical progressivity insofar as doing so makes it possible to raise revenue collection, thereby raising the fiscal resources available for financing expenditures that can modify income distribution. That requires simplifying income tax systems, reducing exemptions and differential treatments by types of income that facilitate evasion, and lowering the levels of personal income at which the tax begins to be collected and to which maximum tax rates apply. In the area of the business tax, the adjustment that many systems in the region most need is to eliminate differences in the fiscal treatment between some sectors and others. Finally, the region has progressed a great deal in implementing the VAT, but in many countries the effectiveness of this tax is severely limited by exemptions that seek to avoid regressivity. In lower-income countries, incorporating some basic consumer goods, such as unprocessed foods, will continue to be limited by the few possibilities for administration and supervision, and in such cases it would be a mistake to seek to make the VAT universal. But there is no justification for leaving outside the tax base other items of mass consumption, such as processed foods, beverages or clothing, which are primarily consumed by middle- and upper-income groups anyway.

Figure 8.17. Hypothetical Impact of 1 percent of GDP Tax Revenue on the Gini coefficient



Source: See Figures 8.12 and 8.14.

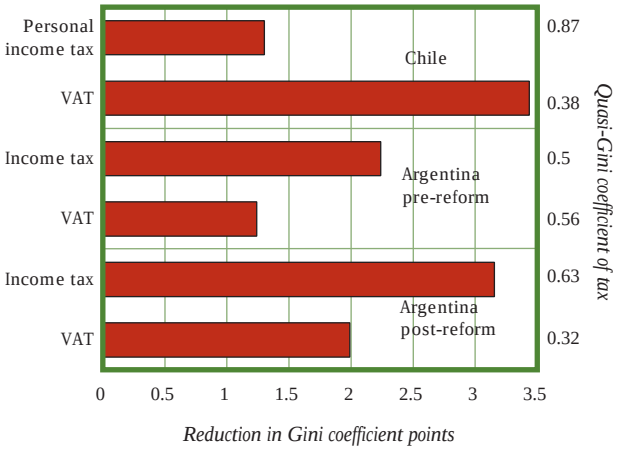
SOCIAL SPENDING: MODERATELY PROGRESSIVE, PLAINLY INEFFICIENT

Distribution of social spending is much more progressive than is generally believed. As a general rule, social expenditures taken together are distributed in an approximately equal way among the various income groups. This relatively flat distribution pattern of the benefits of social spending is not necessarily true of each of its components, however. Typically, while basic spending on education and health benefits the poor disproportionately, advanced education and subsidies on prices and fees reach upper-income groups to a greater extent.

The redistributive impact of social spending does not depend solely on the volume of spending received by each income group. It is far more important that such spending be efficient and focused on those services that can have an influence on the factors that perpetuate inequality. This means that governments must improve the efficiency of the systems that provide education, health care and social security, more effectively reorienting them toward attaining results. Too often governments make the mistake of thinking that to reach "a higher level of health" or "a better education" they need only build more hospitals and schools.

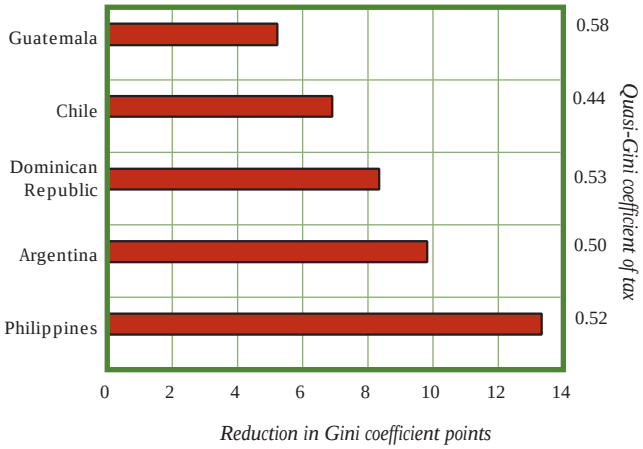
Figure 8.20 presents the distribution of total social spending by income quintiles. Of the seven countries for which information is available, Chile stands out as the one where the lowest income groups receive a greater proportion of spending than the percentage of the total population that they represent: the poorest quintile of households receives over 35 percent of total social spending, while the richest quintile receives under 10 percent. Distribution is moderately progressive in Colombia, where the poorest quintile of the population receives almost 25 percent of social spending, while the wealthiest quintile receives less than 15 percent. In most of the other countries, spending seems to be distributed among the various population groups in a proportion more or less equal

Figure 8.18. Redistributive Potential of the VAT and Income Tax



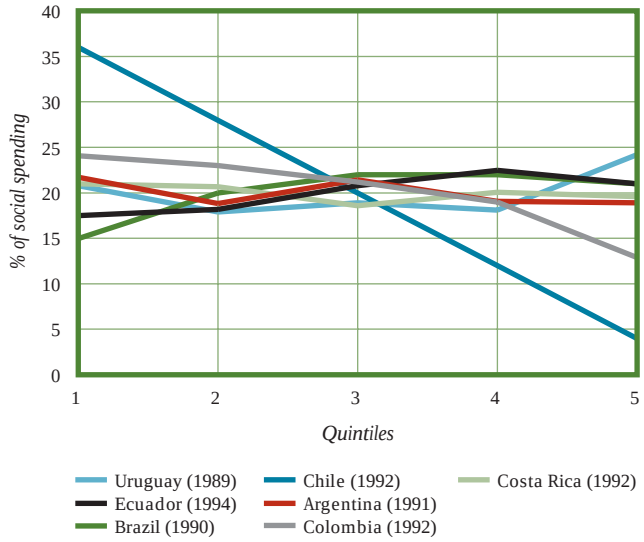
Source: See Figures 8.12 and 8.14. The redistributive potential is defined as the quasi-Gini coefficient of the tax times its revenue as a percentage of GDP.

Figure 8.19. Redistributive Potential of Tax Systems



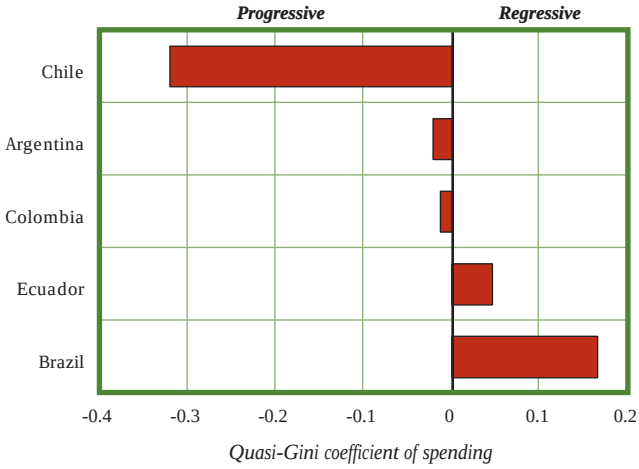
Source: See Figures 8.12 and 8.14. For the Philippines, see Devarajan and Hossain (1995).The redistributive potential is defined as the quasi-Gini coefficient of taxes times their revenues as a percentage of GDP.

Figure 8.20. Distribution of Social Spending by Quintiles



Source: World Bank (1993, 1995, 1996, 1997a and 1997b), Vélez (1996) and FIEL (1995).

Figure 8.21. Progressiveness of Public Spending



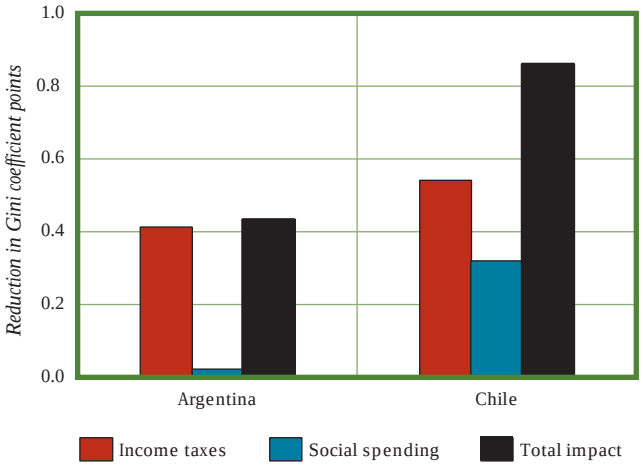
Source: Calculations based on World Bank (1993, 1995, 1996 and 1997a). Public spending progressiveness is defined as the Gini coefficient of the benefits of social spending by income levels.

to the percentage of the population that they represent, with the exception of Brazil, where distribution is somewhat regressive: the poorest quintile receives only 15 percent while the wealthiest quintile receives around 22 percent. Another way of demonstrating these results is to calculate the inequality ratio of social spending by the income levels of the beneficiaries (or quasi-Gini of social spending). When each group of households receives a proportional share of spending, this indicator equals zero, and when spending is progressive the index is negative.[3] Figure 8.21 confirms that social spending in Chile is remarkably progressive, while in other countries it is neutral or slightly regressive.

When these spending structures are combined with tax systems whose weight is roughly proportional to income, they actually produce a net redistributive effect

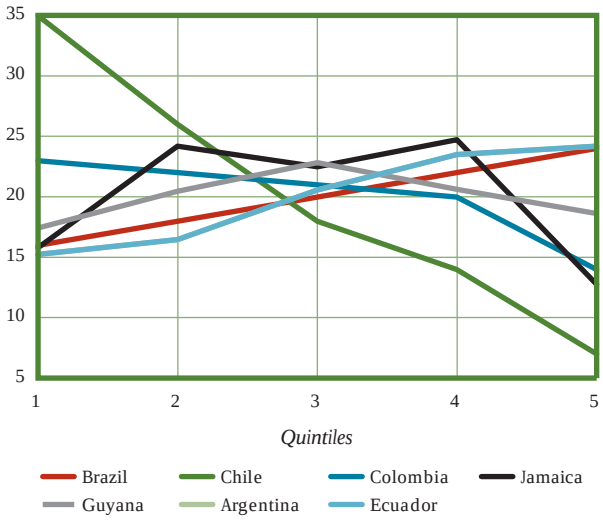
[3] According to Box 1.1 in Chapter 1, the Gini index equals the proportion of the zone located *beneath* the 45-degree line and the distribution curve. With regard to social spending, the area located beneath the curve is regressive (with a positive Gini index) and a distribution curve located above the 45-degree line is progressive (with a negative Gini index).

Figure 8.22. Redistributive Impact of Taxes and Public Spending



Source: See Figures 8.21 and 8.18.

Figure 8.23. Distribution of Educational Spending
(Percent of total)



Source: World Bank (1993, 1995, 1996, 1997a) and FIEL (1995).

favoring lower-income groups. Taking a typical country as an example, the quintile of households with the lowest incomes may receive only 5 percent of national income and pay approximately 5 percent of taxes, but they receive a volume of public spending in services equaling 20 percent of total social spending. Hence, the difference between the quasi-Gini of social spending and the quasi-Gini of the taxes that finance it represents the potential impact of an increase in social spending above the Gini index that measures income inequality (Box 8.1). In the two Latin American countries for which complete information is available, if an additional 1 percent of GDP were to be collected in accordance with current tax distribution, and it were spent in accordance with current social spending, the Gini index would fall between 0.4 and 0.8 points. In fact, the net redistributive impact of taxes and spending in Chile is much greater than in Argentina, even though Argentina's tax burden is relatively regressive because its social spending is progressive (Figure 8.22). Analytical studies carried out by the ILO and ECLAC corroborate these conclusions in the sense that the fiscal policy of the region has a redistributive effect that favors lower-income groups.[4]

Unfortunately, the redistributive impact of fiscal policies is small in relation to the high levels of income inequality found in the region. Even in the case of Chile, although social spending seems to be progressive and reaches a relatively high level (more than five times that of Argentina), the redistributive impact of this policy only enables it to counteract the Gini coefficient of income distribution by 3.4 points. In Argentina, the impact is extremely moderate according to estimates: just 0.5 points. Even if it were possible to efficiently spend a greater volume of resources, Chile would have to raise taxes and the spending level by over 8 percent of GDP—while maintaining current distribution structures—to overcome the difference of around 10 points found in income inequality in comparison with other regions of the world. In other words, the net impact of redistributive policies based on taxes and spending can be positive, but its potential effects are limited.

The empirical results on how social spending is applied are not enough to quantify its impact on inequality. The redistributive impact of social spending depends both on how it falls and on its efficiency. Two countries that present the same distribution of spending can register different redistributive impacts; indeed, the greater redistributive impact will be registered in the country whose social spending is more effective. A more efficient health care system can provide low-income groups essential preventive medical services for their current income levels, thereby lowering the number of days lost because of illness or having to deal with sick children. A more efficient education system can provide lower-income groups with training and knowledge that will affect their income-earning capabilities in the future. In fact, even in a country where social spending is essentially progressive, the impact can be regressive if the quality of public services is poor, especially services provided to

[4] See Lecaillon, et al. (1984). ECLAC has done several studies on the distribution of social spending. See ECLAC (1997a and 1997b) and Jiménez and Ruedi (1998).

Table 8.2. Spending on Education: Impact and Results

	Argentina	Brazil	Chile	Colombia	Ecuador
Income Inequality (Gini)	**0.46**	**0.57**	**0.55**	**0.56**	**0.54**
Impact of spending	0.01	0.08	-0.27	-0.08	0.10
Spending (% of income of households)	1.75	3.75	3.54	1.99	2.44
Net impact	0.008	0.018	0.029	0.013	0.011
Spending per student (in 1990 dollars)					
Primary	421	526	619	297	186
Secondary	562	621	557	495	341
Higher	796	5,258	1,795	1,782	589
Schooling (average years)					
At age 24	10.5	6.8	11	8.1	8.9
Of the population between 25-65	9.9	5.6	9.2	6.6	7.5

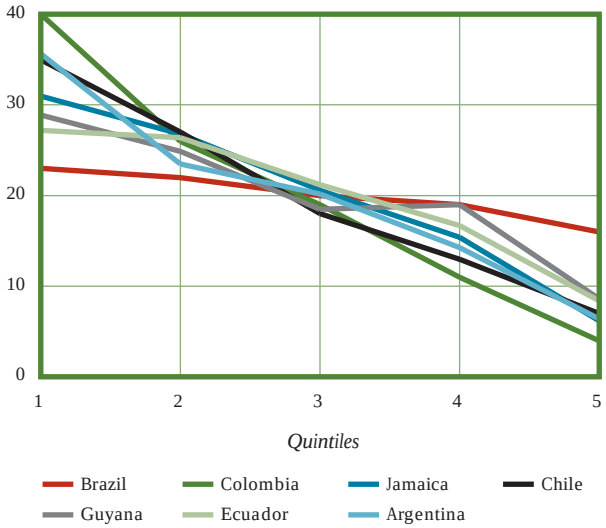
Source: World Bank (1993, 1995, 1996, 1997a) and FIEL (1995).

lower-income groups. The primary means by which the government deals with inequality need not be in determining who spending reaches but in how efficient that spending is. This issue is analyzed in greater detail by considering three major categories of public spending: education, health, and subsidies for public utilities.

Spending on Education Is Generally Progressive

Total spending is made up of a number of items, each of which presents a different distribution structure. One of the main components of social spending is education, and as can be seen in Table 8.2, the structure in this instance is similar to that of total spending, as might be expected. However, this component presents some more striking tendencies. In Ecuador and Brazil, the structure is more clearly regressive, while in Colombia, spending on education seems to go in a slightly progressive direction (Figure 8.23). At a greater degree of detail, it can be seen that spending on basic education[5] is clearly progressive in all countries, although to different extents. In Chile, the poorest quintile of households still receives around 35 percent of public spending on primary education, but Colombia spends around 40 percent on this group and Argentina also devotes approximately 35 percent to them (Figure 8.24).[6] Total spending on education is less progressive in most countries, particularly because of the proportion of spending on higher education, which is largely regressive. Spending on higher education clearly benefits the wealthy disproportionately, but this benefit continues to be less than that represented by their share in national income (Figure 8.25). The fact that net spending on education is progressive reflects the predominance of spending on the primary level within total spending on education.

Figure 8.24. Distribution of Spending on Elementary Education
(In percent)

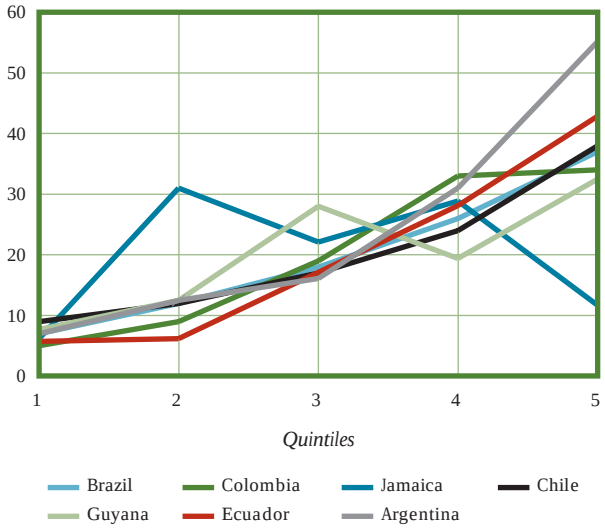


Source: World Bank (1993, 1995, 1996, 1997a) and FIEL (1995).

[5] Basic education includes levels of primary education, generally first to sixth grade, although sometimes up to the ninth grade is included.

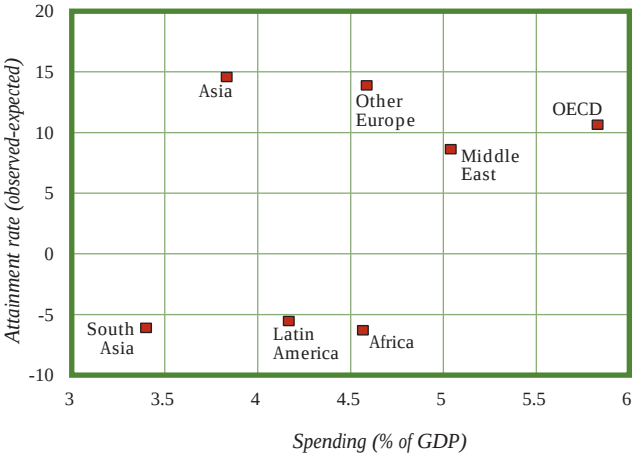
[6] The progressivity indicators used here are spending per quintile of households, not individuals. It could be argued that such indicators exaggerate the degree of progressivity insofar as the poorest quintile of households generally makes up over 20 percent of the population, since on average poorer families are larger. Although that could have some effect on the results, the net result is relatively small, given the demographic profile in Latin America. In most countries the ratio between the size of the poorest families and that of the wealthiest is less than 1.2. In comparison with other regions in the developing world, particularly Africa, most children in Latin America tend to be enrolled in the first grade of school. This relatively complete coverage at the primary level means that the bias between rural and urban zones, which is so pronounced in Africa, is much less relevant for explaining the impact of spending on education in Latin America.

Figure 8.25. Distribution of Spending on Higher Education
(In percent)



Source: World Bank (1993, 1995, 1996, 1997a) and FIEL (1995).

Figure 8.26. Spending and Fourth Grade Attainment



Note: The expected attainment rate is estimated as a function of per capita GDP and public spending on education as a percentage of GDP.
Source: Calculation of 95 countries based on UNESCO (1997) data.

Subsidies to higher education benefit well-off families disproportionately. Children from such families are more likely to finish secondary studies, they have a higher level of training and a greater tendency to finish advanced study, and they have access to savings or credit, and hence are better prepared to handle the opportunity costs represented by attending the university. One way to make spending on education more progressive would be to encourage the creation of private universities, charge enrollment fees at government universities to cover at least some of the costs, and offer scholarships to students on the basis of their economic situation. All these policies, in combination, would make it possible to increase the supply of university education, mobilize further financial resources, and reorient public spending toward the students who most need it. As things are now, the better-off families, who can handle paying all or some of the costs of a university education, end up absorbing public resources that otherwise could be used to grant a scholarship to a student without resources. Moreover, such sums represent a particularly high proportion of spending on education in countries like Venezuela, Costa Rica and Brazil.[7]

As is the case with total data on social spending, the redistributive impact of spending on education, even though it might be quite progressive, remains relatively limited. Chile and Argentina represent the extreme cases in this regard. In Argentina, spending on education is distributed approximately in a proportional per capita manner, that is, the poorest quintile of households receives around 20 percent of funds devoted to this item. This level of spending represents approximately 1.7 percent of household income, and hence counteracts by less than a point the country's 0.46 income distribution inequality. In Chile, spending is much more progressive: the poorest quintile receives approximately 35 percent of spending on education. Moreover, Chile devotes almost twice as much funding to this item. Even so, the net result is a reduction of less than three percentage points of the 0.55 inequality in income distribution (Table 8.2).

Progressivity Is Not as Important as a Good Education

The most important effect of spending on education is not measured by the amount of money that each income group receives but by the level and quality of education. Spending on education may be quite heavy, but if teachers do not show up for class or schools do not operate reliably, it will not provide the benefits that it should, and of course it will not have any impact on trends in income inequality.

Judging by the information available, there is only a limited correlation between the results of education and how progressive spending is on this item. Countries as

[7] Birdsall and James (1993) offer a perspective on the issue of spending on university education.

different as Brazil, Ecuador and Argentina have in common the fact that spending on education is slightly regressive, but the average levels of school achievement fall along a range of values extending from 5.6 years to around 10. Disparities of this nature indicate that the different education systems provide a very different service to their respective populations, regardless of how spending is apportioned. Moreover, education systems in Latin America are generally mediocre. Compared internationally, the rate of completion of fourth grade in Latin America ought to be 83 percent, with the level of national income and the percentage of GDP spent on education taken into account. But in a sample of 19 countries, the average is only 72 percent—a divergence from other regions in the world with similar spending levels, such as Asia and Eastern Europe (Figure 8.26). Spending on education will only be effective in reducing inequality if it translates more effectively into higher levels of learning and school achievement. That statement is valid regardless of how progressive spending might be in this area.

Spending on Health Is Also Progressive

Another major component of social spending is health care services. Public spending on this category in Latin America is 4 percent of GDP on average, ranging from 1.8 percent in Haiti and 2.5 percent in Honduras to over 5 percent in Argentina and Costa Rica. Except for Guyana, the distribution of public spending on health is generally progressive. Chile consistently devotes a larger amount of resources to poor households, while in Jamaica, Honduras and Ecuador, distribution seems to favor the second and third quintiles (Figure 8.27). The progressive nature of Chile's health care system may be attributable to the fact that it explicitly offers the wealthy the chance to opt for private sector services, thereby enabling public resources to be devoted to the less favored strata. At the other extreme of the spectrum are Ecuador and Brazil. The weakness of the redistributive impact in Ecuador is a result of the small amount and low quality of private sector services; hence, the wealthy insist that they be provided good services and have privileged access to the public sector. In Brazil, the private sector is huge, but the mechanism for reimbursement of expenses—which provides coverage to rich and poor alike—is based on services provided and hence disproportionately favors the wealthy, who call on the system more often and use the more expensive services.

Spending on health is excessively concentrated on hospital and curative services, which, important as they are, constitute a glaring example of ineffective use of public funds.[8] Too much of public spending on health in Latin America goes to treatment services, and relatively less to more cost-effective prevention programs. Building hospitals and clinics and hiring the staff needed for their operation—physicians, nurses and administrators—is relatively attractive for politicians and voters, while services that can really have an impact on inequality but are less visible or less prestigious are continually deprived of needed funding. Programs such as public hygiene campaigns, infant development programs, prenatal testing, infant care or family planning are relatively cheap and have a much greater impact on health conditions, especially among the poor, who tend to know less about how to care for their health and have fewer resources for doing so.

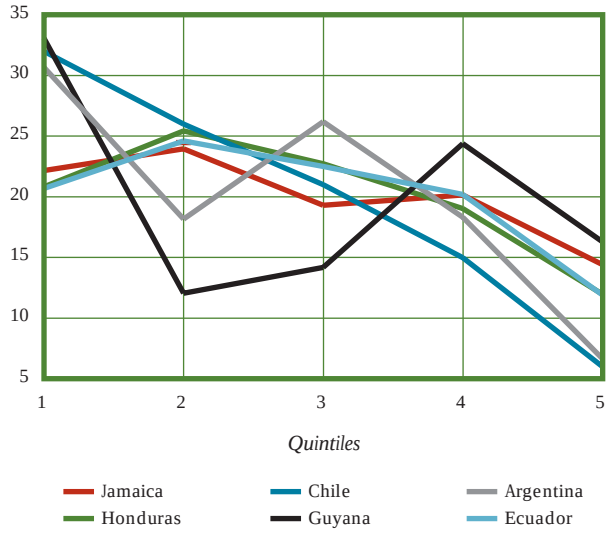
Inefficiency in allocating and using resources also has an important effect on public health. A regression for 19 countries in Latin America, controlling for the level of national income, showed that the statistical relationship between spending on health and infant mortality rates is insignificant. The results indicate that increasing by 1 percent the proportion of GDP spent on health lowers infant mortality by less than 0.1 deaths per 1,000 live births. In a region where infant mortality rates remain on average at over 45 per 1,000 live births, government resources for this purpose are going to have to be used much more effectively if the health of the population is to be improved. Many studies on different public health systems show how the inefficiency and misallocation of resources prevent those systems from improving health conditions.

Where there *is* funding for health care services such as prevention and treatment, the resources are generally used inefficiently. The number of physicians per persons treated tends to be quite high, and administrative expenses are often excessive. Services and staff are concentrated in the major urban centers. In many countries, the physicians on the public payroll do not fulfill the number of consultation hours specified in their contract, and instead they refer patients to their private offices. Maintenance of equipment and installations is often deficient, and it is not at all unusual that essential materials and medications are lacking when and where they are most needed.[9]

As happens in education, wealthier families who are able to pay for medical insurance tend to use the costly services of public hospitals as a backup. If they were to pay for private medical insurance, public funds would be

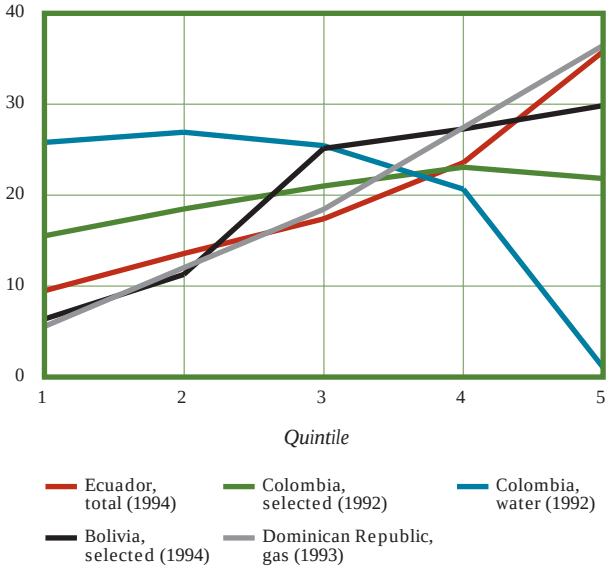
[8] See World Bank (1993a) and Fundación Mexicana para la Salud (1997).
[9] For a more detailed analysis of inefficiency in health systems, see IDB (1996).

Figure 8.27. Distribution of Spending on Health
(In percent)



Source: World Bank (1993, 1995, 1996, 1997a) and FIEL (1995).

Figure 8.28. Distribution of Subsidies of Utility Prices and Rates



Source: World Bank (1993, 1995, 1996) and FIEL (1995).

available to subsidize or pay for insurance policies of lower-income groups. The contrast noted between the reforms of the health care system in Brazil and Chile in the 1980s is a clear example of the different approaches. Under the 1988 Brazilian Constitution, the state must provide obligatory and free health care service that is unlimited in nature and universal in coverage. The starting point was the assumption that it would be possible simply to extend social security services to those who were not covered. However, under the new "Unified Health System," the wealthy continued to receive services that were paid at the expense of the public treasury and to which they continued to have privileged access. Consequently, between 1987 and 1996, health care spending in Brazil became even more regressive. Despite the policy of free and universal medical care, the poor ended up paying disproportionately larger sums in order to have access to the services they needed, whether in medicines, private consultations or transportation.[10] This is merely a dramatic example of something that is common to many health systems where middle-class groups have greater access to public health services, and use them more, because they have more weight in political matters.[11]

By contrast, the reform of the health care system in Chile in the 1980s—which sought to raise efficiency rather than promote equality—has often been criticized as regressive. The reform enabled citizens to opt out of being covered by the public health system (FONASA) and apply the withholdings of the payroll tax to financing the premiums offered by private sector insurance plans (ISAPREs). At the same time, however, the government extended coverage of FONASA to make it universal. The net impact of these changes has been the creation of one of the most progressive social spending structures in Latin America and possibly the world. Services provided by the Chilean public health system are actually more progressive than those of the United Kingdom or Hungary, "because of the fact that public spending on health coexists with private spending and that the beneficiaries of the former are disproportionately poor households."[12] More recent studies have confirmed the progressive nature of spending on health in Chile, calculating that "leakage" to wealthy households is less than 2.5 percent of the total public subsidy to the health sector.[13]

Subsidizing Public Utility Charges: Not the Best Use of Public Resources

Subsidies of public utility charges and other costs are not a topic generally included in discussions on social spending, but in fact they represent a major loss of budget resources, often justified on grounds of redistribution. Paradoxically, charging "social" fees for public utili-

[10] Medici (1998).
[11] See other examples and an analysis of the political economy of these regressive results in Birdsall and Hecht (1995).
[12] Milanovic (1995).
[13] Bitrán (1998).

ties and other goods is the only area of economic policy that turns out to be regressive from any standpoint. Except in rare circumstances, the upper and middle classes in Latin America consume more of these goods and services than the poor, and therefore benefit disproportionately from public subsidies. For example, in Bolivia in 1994, the wealthiest quintile of households reaped 30 percent of electricity subsidies while the poorest quintile received less than 10 percent (Figure 8.28). In Ecuador, the combination of subsidies on prices and rates provides the richest quintile of households with over 35 percent of total subsidies, while the poorest quintile receives only 10 percent. Such subsidies represent a significant percentage of national income in most countries, amounting to 1 percent of GDP on average for the region. These resource transfers do not heighten disparities in consumption simply because they are distributed less unequally than income. However, action by government in this area can become more progressive by covering the cost of sale to the public. Such a policy would free up resources for direct income transfers or subsidizing the prices that the poor sectors pay. For example, Colombia applies moderately effective methods for targeting water bill subsidies. In Chile, all public utilities are billed at their normal sale price, but a household survey and a study of ability to pay is used to subsidize the water and electricity bill of lower-income households.[14]

Summary: Social Spending

Social spending is not as regressive in Latin America as might often be expected. Especially in the areas of health and education, public spending seems to be on the whole proportional to the number of people making up a specific income group. Combined with tax systems that are proportional to income, public policies in general do redistribute toward the poor. Expenditures on health and education may be two of the more progressive components of total public spending because they are so visible and because they can be more easily connected with the number of people who receive a service (students, patients). By contrast, subsidies for utilities and even other components of public spending, such as defense or subsidies for industrial and farm prices, are less visible and more regressive in their impact. But spending on education and health systems, even though generally equitable, tends to be inefficient. Schooling levels and results in the area of health could be much better, given income and spending levels in the region. The upshot is that children do not attend school for as many years as they should nor receive the preventive health care services that they need, thereby affecting other factors that maintain the high levels of inequality existing in Latin America.

PUBLIC SECTOR EMPLOYMENT: A POTENTIALLY REGRESSIVE ASPECT OF PUBLIC SPENDING

Although the combined impact of taxes and public spending may be progressive, government actions—such as excessive public sector employment—may bring about other distributive effects that go in the opposite direction. In some countries, public sector employment can be a very important channel through which fiscal policy indirectly influences income distribution. In the past, when many countries in the region experienced high fiscal deficits, inflation was another significant channel of indirect redistribution that operated against lower-income groups.[15]

Some take the view that government has the social obligation to provide large-scale employment opportunities, which should have a healthy redistributive effect. Or, put differently, they believe that the cutbacks in public employment effected in many countries since the 1980s have contributed to their income distribution problems. Examining the nature of most public sector employment shows these theories to be wrong.

Public sector employment represents a significant proportion of total employment. In Bolivia, Panama and Uruguay, at least one of every five employed persons is a public sector employee. In countries where the share in public employment is lower, at least 7 percent of those employed work for the public sector (Figure 8.29).

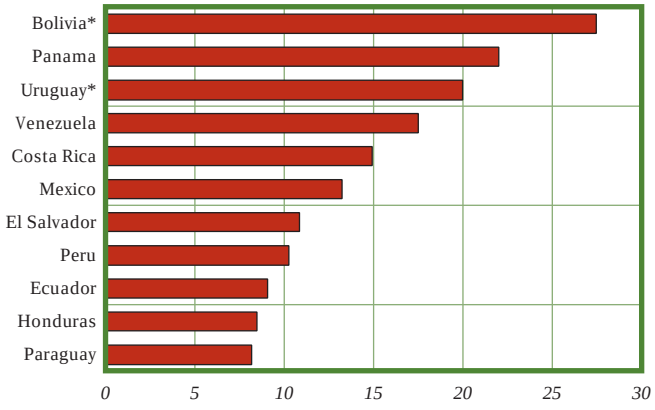
Public sector activities employ workers with high educational levels. A public sector worker typically has completed high school, while those who work in the rest of the economy have an average of six or seven years of schooling. The differences in educational levels between public and private sector workers are over five years in Ecuador, Paraguay, Mexico, El Salvador and Honduras (Figure 8.30).

Because public sector employees have more education than other workers, they belong on average to higher-income strata. This means that the way in which spending on government employees is distributed among the population is more unequal than income distribu-

[14] Vélez (1996) provides an analysis of the case of Colombia; Morandé and Doña (1997) study targeted subsidies to water rates in Chile.

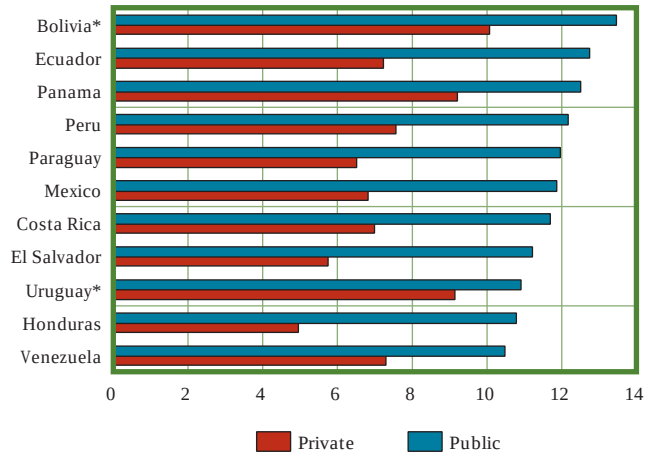
[15] See estimates of the impact of the inflation tax for Argentina in Chisari and Romero (1997) and for Mexico in Gil Díaz (1987) and Reyes (1988).

Figure 8.29. Share of Public Employment in Total Employment
(Percent of total employment)



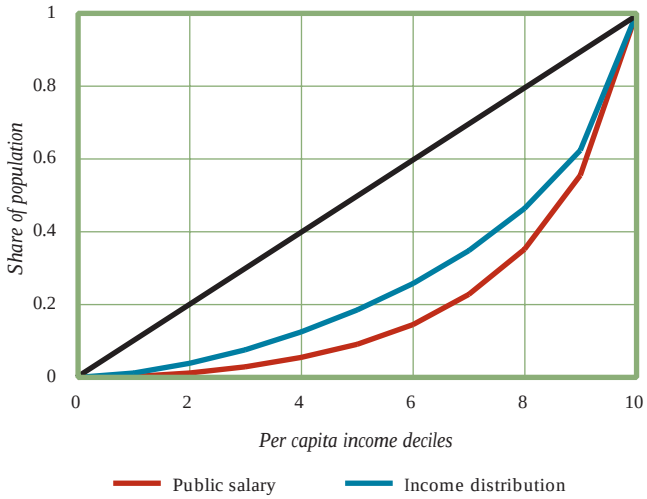
** Countries with urban data only.*
Source: IDB calculations based on recent household surveys.

Figure 8.30. Education of Private and Public Employees
(Years of schooling)



** Countries with urban data only.*
Source: IDB calculations based on recent household surveys.

Figure 8.31. Distribution of Public Salaries by Income Deciles



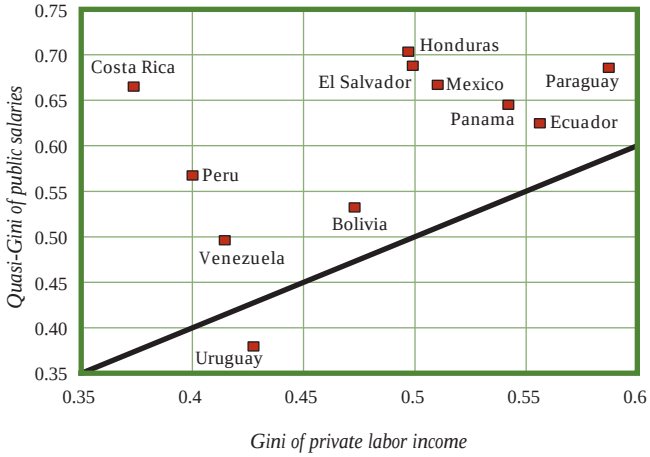
Source: IDB calculations based on recent household surveys.

tion, as represented in the Lorenz curves in Figure 8.31 for simple averages of the 11 countries considered. More precisely, the quasi-Gini index of distribution of spending on employment among the population is on average 0.61, substantially higher than the Gini of per capita income distribution, which on average for these same countries is 0.51. It should be noted that this does not imply that distribution of government salaries between public employees is more unequal than total income distribution. Indeed, there is much greater equality between incomes of public employees than between incomes of private workers. This simply means that public sector salaries go disproportionately to individuals who belong to the upper-income strata.

The regressive distribution of spending on public sector employees is perhaps clearer if it is compared with that of income from private labor. Only in Uruguay is public sector spending on pay and salaries distributed among the entire population in a way that is more equitable than private labor incomes (Figure 8.32). In other countries, the quasi-Gini of the distribution of public sector employee spending among the entire population is greater than that of incomes from private labor. The differences are over 15 points in Costa Rica, El Salvador, Honduras, Mexico and Peru. Not surprisingly, in several countries there are also major differences between educational levels of workers in both sectors, as was noted earlier. With differences of distribution of this magnitude, public spending can increase overall income inequality quite considerably. Indeed, with a 15 point difference in Gini coefficients, if spending on public sector salaries represents 15 percent of total family incomes, the Gini would drop by 2.2 percentage points, a figure sufficient to cancel out the combined distributive effect of taxes and social spending.

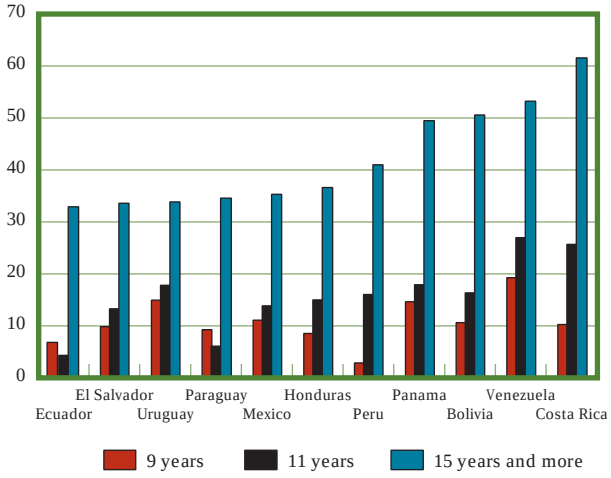
The overall regressive effect of public spending on salaries is nevertheless even greater than these calculations suggest. The reason is that given the importance of the public sector and demand for workers with high educational levels, public employment must have a notable effect on relative wages. At schooling levels of up to nine years, public sector employment represents relatively modest proportions of total spending. But typically, two of every 10 workers who have 11 years of schooling work in the public sector, and of those who have studied in the university, four of every 10 are public employees. In Bo-

Figure 8.32. Distribution of Public Salaries and Private Labor Income



Source: IDB calculations based on recent household surveys.

Figure 8.33. Public Employment by Years of Schooling
(Percent of public employees/total)



Source: IDB calculations based on recent household surveys.

livia, Venezuela and Costa Rica, over half of the workers with 15 or more years of education are public sector employees (Figure 8.33).

Pressure on pay for more highly trained workers does not necessarily depend on public sector salaries being higher than those in the private sector for workers with the same level of education and experience. (On this point the evidence obtained from household surveys does not display any clear pattern except for the highest income decile, where private sector work offers greater income opportunities than the public sector.) The government need only reduce the (relative) supply of highly trained workers available to the private sector and the result will be a rise in their relative salaries.

As is the case with other aspects of government action previously examined, the real effects of the regressive nature of spending on public sector employment may be less important for overall income distribution than the efficiency with which such spending is made. One way to attract productive, highly trained staff to the public sector is to offer salaries that are competitive with those of the private sector. If the public sector attracts such professionals and employs them efficiently, it may have a very effective way of providing high-quality public services. However, if pay in the public sector is not higher than that offered by the market, or if the people hired are used unproductively, such spending will have a negative impact on lower-income groups, who are more dependent on public services. An extreme case is the Dominican Republic: the Dominican Social Security Institute (IDSS) employs over 15 administrators per 1,000 members, while in prepaid private medical insurance plans this proportion is one for each 1,000 members. Something similar happens with physicians, who are the most highly trained employees and who cost the most money: the IDSS has 4.8 physicians per 1,000 members, while in private companies the ratio is one physician per 1,000 members.[16] In short, properly rewarding the delivery of good service can largely serve greater equity in public sector services, but generously rewarding poor service is a highly regressive practice.

In itself, creating public service employment does not fulfill any redistributive purpose. The creation of public sector employment as an objective in itself, far from providing social protection, contributes indirectly to making fiscal policies regressive in Latin America. It not only redistributes incomes to upper-income strata, but it also raises the relative pay of more highly educated workers, accentuating the differences between rich and poor. If such employees are used efficiently, it can be a progressive channel for government activity, but otherwise, it will be highly regressive.

CONCLUSIONS

The fiscal policies applied in Latin America on the whole seem to be progressive. The countries of the region tax different income groups in proportion to their income level and devote a large amount of funding to social ser-

[16] See Santana (1998).

vices, normally in proportion to the percentage that their population represents. Hence, the net effect is that public spending on the poor is much higher as a proportion of household income than spending on rich sectors. Of the various components of social spending, spending on university education and subsidies in the prices of public utilities are the only ones that are clearly regressive. Moreover, Chile is the only country among those for which information is available that unquestionably devotes more resources per household to poor than to wealthy sectors.

But how progressively fiscal resources are collected and distributed is just one aspect of the distributive effect of fiscal policy, and perhaps not the most important one. More important is the effectiveness with which taxes are collected, lower-income groups are provided with adequate services, higher-income group resources are mobilized, well-focused safety nets are created, and economic policies stimulating redistributive growth without sacrificing productivity are adopted. A tax policy that is effective in collecting fiscal revenues, even when it is neutral or slightly regressive in terms of income, can be the most suitable way to mobilize the resources needed to correct income inequality through social spending and specific programs. Social service systems, even if they devote the same amount of resources per household, will only have a significant impact on poverty and inequality if they are effective in providing the health and education services that they are supposed to supply. Similarly, setting a price at below cost for electricity and drinking water represents a considerable waste of resources and is an inefficient approach to providing such services to lower-income groups. The most important conclusion is that to the extent that the services offered by the public sector are more efficient, they will be more useful than policies seeking to be directly redistributive in order to reduce inequities.

Appendix Table 8.1a. Econometric Results: Government Size

Dependent variable:	**Size of the government** *(% of GDP)*						
Regression number	1	2	3	4	5	6	7
Constant	-21.97 (-1.81)	-15.96 (-1.37)	32.20 (2.13)	22.39 (7.25)	19.74 (8.74)	28.58 (7.80)	32.74 (8.37)
Per capita income (log)	6.20 (4.27)	5.69 (4.12)	-2.16 (-1.03)				
Dummy for Latin America		-9.20 (-2.86)				-8.00 (-2.79)	-7.41 (-2.68)
Population older than 65 (%)			1.94 (4.89)	1.34 (5.36)	0.96 (2.87)	0.99 (3.72)	-0.09 (-0.18)
Population older than 65 (%) in developed countries					0.57 2.16		0.91 (2.42)
Index of ethno-linguistic fragmentation				-0.08 (-2.03)		-0.13 (-3.06)	-0.13 (-3.22)
Number of observations	61	61	61	59	68	59	59
Adjusted R^2	0.22	0.31	0.44	0.45	0.44	0.51	0.55

Appendix Table 8.1b. Econometric Results: Social Expenditure

Dependent variable:	**Social Security expenditure**		**Social expenditure**	
Regression number	8	9	10	11
Constant	-3.37 (-.79)	-34.61 (-5.36)	1.54 (0.88)	-33.91 (-4.27)
Population older than 65 (%)	1.29 (10.50)		1.38 (7.79)	
Per capita income (log)		5.02 (6.65)		5.63 6.06
Dummy for Latin America	1.22 (0.92)	-0.96 (-0.54)	1.61 (0.83)	-1.12 (-0.51)
Number of observations	55	54	55	54
Adjusted R^2	0.69	0.46	0.54	0.41

Appendix Table 8.1c. Econometric Results: Tax Revenues

Dependent variable:	**Total tax revenues**		**Income tax revenues**		**Excise tax revenues**	**Sale tax revenues**	**Compliance of income tax revenue**
Regression number	12	13	14	15	16	17	18
Constant	-22.25 (-2.67)	-14.10 (-1.12)	-10.69 (2.79)	-7.07 (-1.25)	0.02 (0.01)	-5.27 (-1.87)	-0.32 (-2.99)
Per capita income (log)	5.58 (5.66)	4.44 (2.71)	2.23 (4.91)	1.72 2.33	0.41 (2.10)	1.17 (3.49)	0.06 (4.84)
Dummy for Latin America	-6.38 (-2.72)	-5.31 (-2.00)	-3.44 (-3.24)	-2.97 (-2.48)	-1.15 (-2.61)	-0.35 (-0.46)	-0.03 (-1.35)
Dummy for developed countries		3.41 (0.87)		1.55 (0.87)			
Number of observations	69	69	67	67	61	61	47
Adjusted R^2	0.38	0.38	0.35	0.35	0.14	0.15	0.35

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