The Poverty Targeting of Social Spending in Brazil

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1. Introduction

A broad array of government policies and programs has the potential to help Brazil's urban poor. There is no shortage of options from which to choose. Resources are more limited than ideas. How should government funds and administrative capacity be allocated if Brazil wants to alleviate urban poverty effectively?

This paper examines the possibilities for reducing urban poverty through three important categories of government interventions: ensuring the urban poor's access to effective *education and health* services, ensuring their access to *urban services and infrastructure* such as clean water, sanitation, transport and housing, and ensuring the availability of an adequate *social safety net* to protect the consumption levels of vulnerable groups through pensions, unemployment insurance, nutrition programs, and guaranteed minimum income programs. Given time and space limitations, the analysis does not cover two admittedly critical aspects of any sustainable poverty reduction strategy: sound macroeconomic policies to support broad-based economic growth, and the indirect poverty impact achieved by fostering economic growth through prudent investments in human capital and economic infrastructure.

The comparison of policy interventions for poverty reduction is complicated by the lack of consensus on how to define poverty, as well as by the lack of consensus on the precise policy objective even given a shared definition of poverty. Should poverty be defined by low incomes, inadequate access to basic services, degree of social exclusion, or sub-standard outcomes such as shorter life expectancy and illiteracy? Even if a consensus can be reached regarding the precise definition of poverty, "poverty alleviation" still encompasses several policy objectives, some of which may conflict. Another question intrinsic in the development of poverty alleviation policies asks whether the priority is to maximize long-term, sustainable poverty reduction or to provide immediate poverty relief. Moreover, much debate exists as to whether it is more important to ensure that none of the poor are excluded from program benefits or whether policies should aim to minimize leakage of benefits to the non-poor. Each of these choices entail value judgments, and this paper will not argue in favor of pursuing one priority versus another. Instead this paper aims to describe the current and potential impact of government interventions on Brazil's urban poor, to clarify the implicit tradeoffs in favoring one intervention over another, and to illuminate the ramifications of certain policy and program design choices.

In the following sections, this paper examines the options for helping the urban poor through direct government interventions in the areas of education, health, water, sanitation, transport, housing, and social safety net programs. For each alternative intervention, the existing information is gathered and new evidence is presented in the following areas:

- Government expenditures.
- The *share* of Government subsidies or program benefits currently received by the urban poor. This is the intervention's "targeting".
- The *current* extent of program coverage and the urban poor's access to services. This is the program's "reach".
- The *potential* "reach" of the program among the urban poor, as well as the current and potential benefits of poverty reduction for the urban poor.
- Net spending, or benefits per poor household or poor individual reached.

The above obviously constitutes an ambitious agenda, one that this paper will only partially realize. First, it is not possible to answer all of the above questions for every intervention because in some cases there are no data. In other cases, data exist but have serious limitations. It should be emphasized that the data and the analysis presented in

this paper, particularly the estimates of program benefits, should be taken not as precise point estimates but as rough indications. Even where household survey data form the basis of the analysis, it must be remembered that the resulting numbers are estimates of the real situation, with margins of error on either side, and that the path to a "number" involved numerous methodological choices.[2]

While it is important to emphasize the limitations of the analysis, it is also important to highlight the recent improvements in the available information on Brazil's social programs and their impact on the poor. As described in the next subsection, new Brazilian data allow for more confident analysis than was possible even in the recent past. It is hoped that by bringing together the disparate strands of evidence that exist, a step will have been taken toward clarifying the trade-offs involved in emphasizing one program over another in an urban poverty strategy.

Methodology

This paper focuses on the analysis of spending incidence for the bottom quintile of the Brazilian population. The bottom quintile roughly corresponds to the poor as they were recently identified by applying a food-only poverty line of R$65 per capita per month to household income data from the 1996 PNAD household survey. This poverty line produces a national headcount poverty rate of 22.6% (Ferreira, Lanjouw, and Neri, 1998). A poverty line of R$130 per capita per month corresponds roughly to the bottom two quintiles and results in a national headcount poverty rate of 45.3%.

This paper uses data from the *Pesquisa Sobre Padrões de Vida* (PPV), a household survey similar to the Living Standard Measurement Survey supported in many countries by the World Bank, and conducted in 1996-97 by Brazil's national statistics agency, IBGE, to assess the poverty targeting of Government social spending in Brazil.

IBGE implemented the PPV or Survey on Living Standards in 1996 and 1997, with assistance from the World Bank. The aim of the PPV is to supplement the information already available through IBGE's annual household survey, the PNAD, in order to improve the data available for poverty monitoring and policy analysis in Brazil. The PNAD has a number of strengths. It utilizes a large sample and allows comparisons over time, due to continuity in the basic core of the questionnaire. The PNAD's core has a strong focus on income and employment issues, and also contains questions relating to education, housing ownership and conditions, migration, access to services, and ownership of durable goods. The survey also includes additional questions on special topics that vary from year to year. However, the PNAD provides little information on household expenditures and consumption patterns, health status and health service utilization, and transportation usage. Although it asks questions regarding household members' educational levels and school attendance, the PNAD does not distinguish between public and private school attendance; this makes it an inadequate source of information on the distribution of public education subsidies.

The PPV was designed to fill some of the data gaps left by the PNAD. It provides a much more detailed picture of household expenditures and consumption, as well as utilization of various publicly subsidized services, particularly education, health, and transportation. The questionnaire is much longer, and requires multiple visits to each household. This richer information comes at a price. To keep survey expenses within reason, the sample size is much smaller and the survey only covers the two most populous of Brazil's five regions, the Northeast and Southeast. The Northeast and Southeast together account for 73% of Brazil's population and 80% of Brazil's poor. All results

[2] Some of the more significant and controversial of these are: 1) the choice of the poverty line, 2) the ways for which regional price differences are accounted, 3) the selection of household income or consumption as the welfare measure, and 4) the method used to adjust total household income/consumption to accurately reflect the living standards of people living in households of different sizes and compositions.

presented in this paper are based on the analysis of these two regions only.

The PPV is representative for ten spatial units (the metropolitan areas of São Paulo, Rio de Janeiro, Belo Horizonte, Salvador, Recife, and Fortaleza; the non-metropolitan urban Northeast; the non-metropolitan urban Southeast; the rural Northeast; and the rural Southeast). This paper reports three types of results: individual results by spatial unit, aggregate results for all urban units (excluding only rural Northeast and rural Southeast), and aggregate results for all units.

A comprehensive picture of government spending that includes outlays at both the national and subnational levels is essential to understanding equity and efficiency issues in Brazil's social sectors. Financing and administration of programs is, to varying degrees, decentralized. In many cases, the Constitution dictates the allocation of resources and assignment of expenditure and administrative responsibilities. The states and municipalities play major roles in the financing and provision of education, health, sanitation, housing and urban development, social assistance, nutrition, sanitation, and mass transport. The only program areas where the state and local governments have little involvement on both the financing and administration side are social security (pensions and retirement benefits) and labor (mostly unemployment benefits).

The IPEA Social Expenditure Study allows for such a comprehensive picture of government spending. When combined with the PPV data on households' consumption patterns, including consumption of publicly subsidized goods and services, the IPEA spending data provides a reasonable information base from which to assess the distribution of benefits resulting from government spending on various social programs. The IPEA study and the PPV together facilitate the analysis of poverty targeting issues.

Caveats

Unfortunately, the IPEA government spending data and the PPV household level data are for two different years, 1995 and 1996-97, respectively. The inaccuracies introduced by using the PPV household consumption data for 1996-97 and the IPEA spending data for 1995 are likely to be small in most cases, since there is no reason to believe *a priori* that the utilization of services by the various income and consumption groups changed significantly between the two surveys.

It is important to note that the picture drawn by the use of the PPV household survey data and IPEA spending data may not reflect the current policy environment, despite being fairly up-to-date. For example, the Brazilian government has enacted significant policy changes since 1995 in two of the most important spending categories, education and health.[3] Both policy changes are likely to substantially improve the poverty targeting achieved by these public expenditures.

In 1996 Brazil made major changes in education finance that should have the effect of directing a larger share of education resources toward the poor, since they increase the share of resources going to primary versus other levels of education and equalize per student spending across public primary schools (which has historically been highly unequal, with municipal schools in poor areas having much lower unit costs than state schools or municipal schools in relatively rich municipalities.) The year 1996 also brought equity improving reforms in the health sector. The Ministry of Health adopted a policy designed to ensure a minimum amount of spending on basic health care in every municipality, the *Piso Assistencial Básico*. This policy should help equalize the differences on basic public health care spending between poorer and wealthier municipalities. The *Piso Assistencial Básico* is expected to increase the poor's access to quality health care and improve the benefit incidence of health expen-

[3] See "Brazil: Social Spending in Selected States."

ditures for the poor. These policy reforms are discussed in the subsections below dealing with education and health. For now, it suffices to recognize that Brazil is in the process of enacting several important reforms that will most likely improve the poverty impact and targeting of public expenditures on health and education.

Finally, the PPV data and the IPEA data on spending have intrinsic limitations. The PPV data only cover the Northeast and Southeast. This means that the benefit incidence analysis and other information on the poor's access and utilization of various publicly provided services cannot be assumed to describe the situation in urban areas in the North, Centerwest, and South. Even within the Northeast and Southeast, the PPV's small sample size severely limits the ability to look at questions of targeting and access at the local level. At best, the data allow estimates for each of the metropolitan areas, the rural Northeast, the rural Southeast, the non-metropolitan urban areas of the Northeast, and the non-metropolitan urban areas of the Southeast. In cases where an event is relatively rare, such as the likelihood of a family member having received a vaccination in the 10 days prior to the survey, or the number of the poor attending higher education, the sample size poses even greater restrictions on the ability to make accurate estimates at a spatially disaggregated level. The IPEA data on social expenditures for 1995 are limited by incomplete coverage of spending at the municipal level.[4] The data are more extensive for the 186 municipalities which are either state capitals or belong to one of the metropolitan regions.

In summary, the sources of data available for the benefit incidence analysis presented in this paper have limitation. This discussion of caveats, however, should not obscure the fact that these new sources present a major advancement over previously available information. Even with the caveats, the PPV and IPEA data allow for a reasonably accurate analysis of poverty targeting in Brazil.

Organization of the Paper

Throughout the paper, the benefit incidence analysis only covers the Northeast and Southeast. For the purposes of this paper, the "national" income or consumption distribution refers to the combined population of the Northeast and Southeast regions.

A general discussion of urban poverty issues and social expenditures in Brazil follows in Section 2 of this report. Section 2 also presents data on the distribution of poverty throughout different regions and provides information regarding the distribution of total public expenditures among different consumption quintiles.

The incidence of spending (targeting) and the program coverage by consumption quintile (reach) are analyzed for most government social spending programs that can be adequately tracked with the data from the PPV. These programs include different levels of education, health care, nutrition programs, public transport, water and sanitation services, pensions, and unemployment insurance. Section 3 contains the analysis of the main programs of social spending and presents their coverage and targeting rates. Unless otherwise noted, consumption quintiles are constructed on the basis of the consumption distribution in the entire PPV.

Section 4 combines the analysis of program targeting with actual social spending data to generate a picture of the overall poverty targeting of social spending in Brazil. Combined with assumptions about the benefit-cost ratios of different programs, Section 4 presents an indicative ranking of the transfer effectiveness of social programs.

Remarks about implications and possible further work conclude this paper.

[4] Brazil had 4,974 municipalities in 1995, with obvious implications for the challenges of collecting detailed data on social spending by each municipal government.

2. Background: Urban Poverty and Social Expenditures in Brazil

Overview of Urban Poverty

Urban versus Rural Poverty.

Whether measured in terms of income, consumption, access to services, or social indicators (such as school enrollment rates, infant mortality rates, and average life expectancy at birth), poverty is more common and more severe among Brazil's rural population. Average living standards are particularly low in the rural Northeast, in part due to recurring droughts and the large share of the population that remains dependent on agriculture for subsistence. However, as Brazil's population has become increasingly urbanized, the magnitude of the urban poverty problem and the share of urban individuals in poverty have grown. According to recent estimates based on 1996 PNAD data, roughly half of the poor (52.5%) live in urban areas, mostly in smaller cities and towns outside the metropolitan regions.[5]

Spatial Dimension of Urban Poverty. There are at least two notable spatial aspects of urban poverty in Brazil. First, urban areas in the South, Centerwest, and Southeast tend to have a much lower prevalence of poverty compared to those in the North and Northeast. Second, within a given region, poverty tends to be more prevalent and more severe in medium and small cities than in large cities and metropolitan regions.[6] This disparity between smaller and larger cities is clearly present in the analysis of the 1996 PNAD recently completed for Brazil Urban Poverty Strategy Paper.[7] An analysis of PPV data for approximately the same period (1996-97) and using the same poverty line and methodology also produced results consistent with these findings, although the analysis is less disaggregated and only covers the

Figure 1 Poverty Headcount Ratio for NE and SE Urban Areas

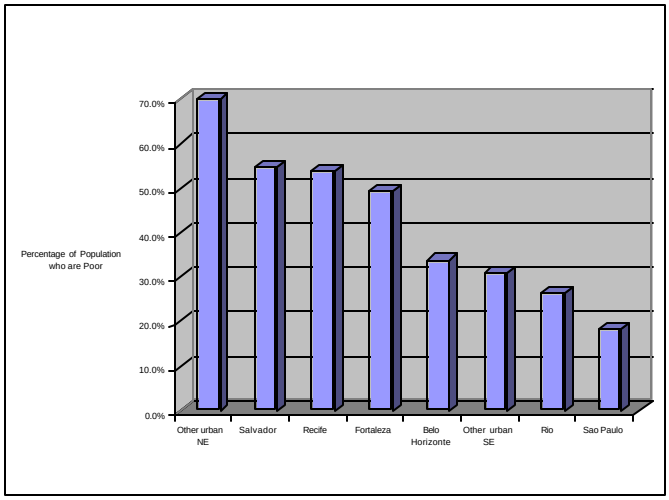
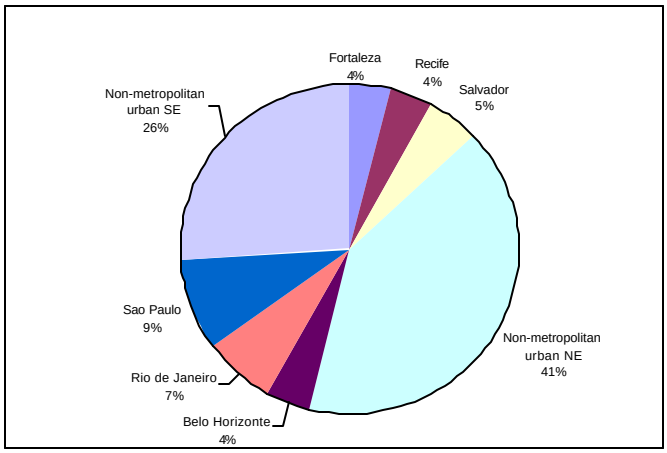


Figure 2 Composition of the Urban Poor



[5] See the complementary background paper prepared by Ferreira, Lanjouw and Neri: *The Urban Poor in Brazil in 1996 -- A New Poverty Profile Using PPV, PNAD and Census Data*.

[6] The poverty rankings of the *peripheral* areas of the metropolitan regions vary depending on the macro-region. In the North and Southeast, metropolitan peripheries have worse poverty indices than all but the small urban and rural areas. In the Northeast and South the peripheries have lower poverty rates than the medium sized cities.

[7] Ibid.

Northeast and Southeast. Figure 1 graphically represents the extent of the poverty problems faced by different urban communities in the Northeast and Southeast.

Geographical Distribution of the Poor.
Figure 2 shows the share of all urban poor living in the different geographical areas. Although most of Brazil's urban poor live in non-metropolitan areas, there is still a large number of poor that are concentrated in the metropolitan regions of the Northeast and Southeast. The huge populations of the metropolitan areas, particularly in São Paulo and Rio de Janeiro, dictate that a city can have a sizable urban poverty problem even if its poverty headcount ratio is low (see Figure 1 and Figure 2). For example, São Paulo has the lowest incidence of poverty of the six metropolitan regions, but at the same time, it has a greater number of poor than any other metropolitan area.

Figure 3 Composition of the National Consumption Quintiles

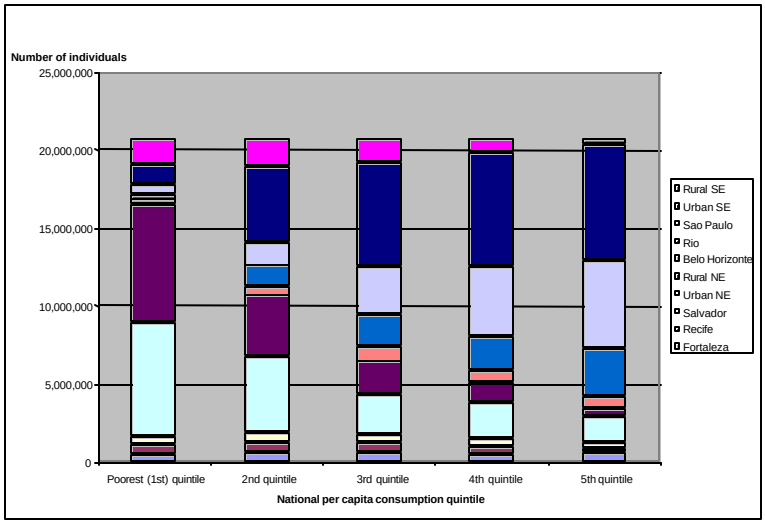


Figure 3 shows the geographical composition of each of the national consumption quintiles. The majority of the poorest 20% of the population live either in the rural Northeast or non-metropolitan urban Northeast. Very few individuals belonging to the poorest quintile reside in the Southeast. At the other end of the consumption distribution, the geographical make-up is very different. The majority of the wealthiest 20% of the population come from either the urban Southeast or the São Paulo metropolitan region. Very few of the individuals in the wealthiest quintile live in the Northeast.

From the geographical decomposition of the consumption quintiles, it is easy to analyze the implications of poverty targeting. Unless a social program reaches at least some individuals in the Northeast, it is not reaching the majority of the poor. Even considering just the urban poor and excluding the rural poor, the story remains the same: a social program must include the Northeast in order to have an impact on the majority of the urban poor.

Of course, it does not follow that a program is badly targeted if it only benefits residents of a wealthier region such as São Paulo. For example, a program serving only those São Paulo residents in the bottom 20% of the national consumption distribution is arguably well-targeted since all program beneficiaries fall below the poverty line. On the other hand, such a program would have a very limited impact on the national poverty problem since relatively few of the nation's poor reside in the São Paulo area.

A Federal Perspective on Social Spending

The distributional impact of most programs differs quite significantly between spatial units. In particular, in the wealthier spatial units, the incidence appears much more regressive than in the poorer units. One simple reason underlying this observation is that there are very few individuals in the wealthier units that are in the bottom quintile of the national consumption distribution. On the other hand, there are very few individuals in the poorer units that are in the top quintile of the national consumption distribution. In other words, there are simply

very few individuals in São Paulo that are poor by national comparison. In the rural Northeast, there are very few individuals that are wealthy by national comparison, so every program is by definition well-targeted.

Figure 4 Incidence of Public Primary Education, National Quintiles

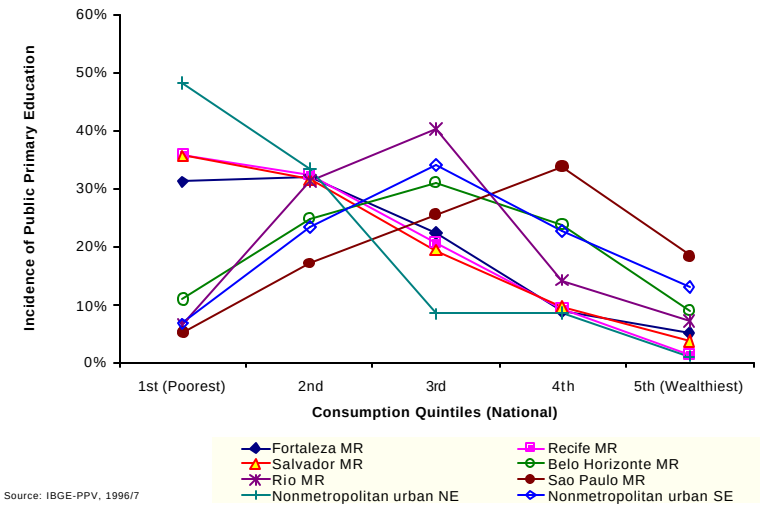
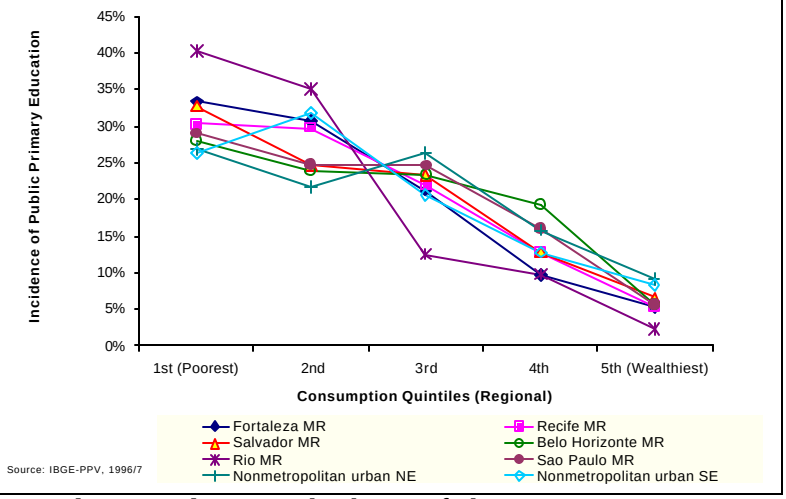


Figure 5 Incidence of Public Primary Education, Local Quintiles



Incidence analysis on the basis of the national distribution is useful for national policy making. Since there are so many more poor individuals in the Northeast, targeting of social spending would indeed improve if resources were shifted from the wealthier to the poorer parts of the country. There is, however, another equally valid point of view. From the perspective of a local policy maker who decides on the allocation of local revenues, the choice is not to spend in different parts of the country but on different programs within the same region. From this perspective, it is instructive to compare the incidence of spending across spatial units based on the distribution of that respective spatial unit. In other words, incidence analysis based on regional consumption quintiles may provide a helpful gauge for adjusting regional poverty alleviation measures.

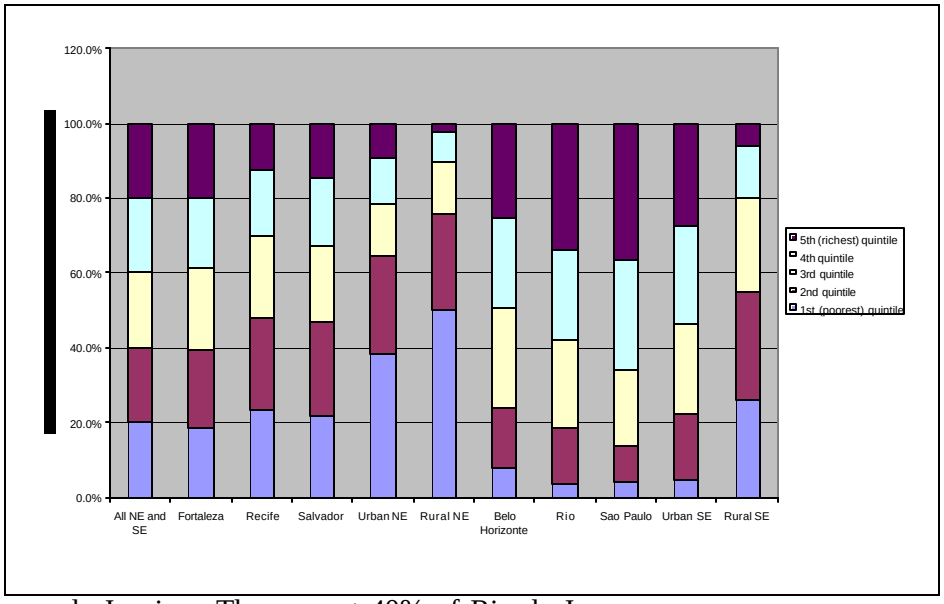
Figure 4 and Figure 5 compare the incidence of primary education spending using both regional and national quintiles. Figure 4 clearly shows how spending on primary education in the Northeast is well focused on the bottom quintile of the national consumption distribution while spending in the Southeast is focused on the middle of the national consumption distribution. Figure 5 shows a very different picture with amazing similarity across all spatial units. Figure 5 shows that in all units, a roughly equal share of primary school students comes from the bottom quintile of the local income distribution. Even for other types of social services, it is apparent that locally constructed quintiles (representing different consumption levels) show similar behavior for different spatial units.

Figure 6 illustrates the importance of the distinction between regional and national programs in the Brazilian context, where inter-regional income inequality is large. Nearly 40% of the individuals living in the urban Northeast have incomes that place them in the poorest 20% of the *national* income distribution. By contrast, less than 4% of the individuals in Rio de Janeiro have incomes placing them in the poorest

20% of the *national* distribution. This inter-regional income inequality affects the evaluation of regional and national program targeting.

A *national* program cannot be considered well-targeted if 100% of its benefits accrue to the poorest 40% of the population of Rio de Janeiro. The poorest 40% of Rio de Janeiro's population are primarily members of the second and third *national* income quintiles. Thus, such a program would not be well-targeted toward Brazil's poorest individuals in the bottom 20% of the *national* income distribution.

Figure 6 Composition of the National Consumption Quintiles



From a local perspective, however, the evaluation of poverty targeting changes significantly. If 100% of the benefits of a program funded by *Rio de Janeiro* accrue to the poorest 40% of *Rio de Janeiro*'s population, then the program is arguably well-targeted. Since the local government concerns itself with the local population, a program that affects the relatively poor in the locality can be well-targeted even if such a program does not affect many individuals that are poor in the national context.

Overview of Public Social Spending in Brazil

Government Interventions and Urban Poverty. Government efforts to reduce poverty and assist the poor have tended to focus on the urban poor in Brazil. This finding is hardly surprising, given the visibility and sheer number of Brazil's urban poor, not to mention the social problems associated with urban poverty. The greater density of the poor population in urban areas also facilitates effective government intervention. Moreover, the concentration of wealth and administrative capacity in urban areas endows urban governments with more resources to implement social programs for the poor residing in their jurisdiction. Over the last 10 years, tremendous strides have been made in improving the access of poor urban households to health care, basic education, and clean water.[8] Access to these services has also improved greatly among the rural poor. However, the rural poor still tend to lag behind their urban counterparts in their access to services because of their initially lower "starting point" and in some cases because of a greater rate of improvement in urban areas.

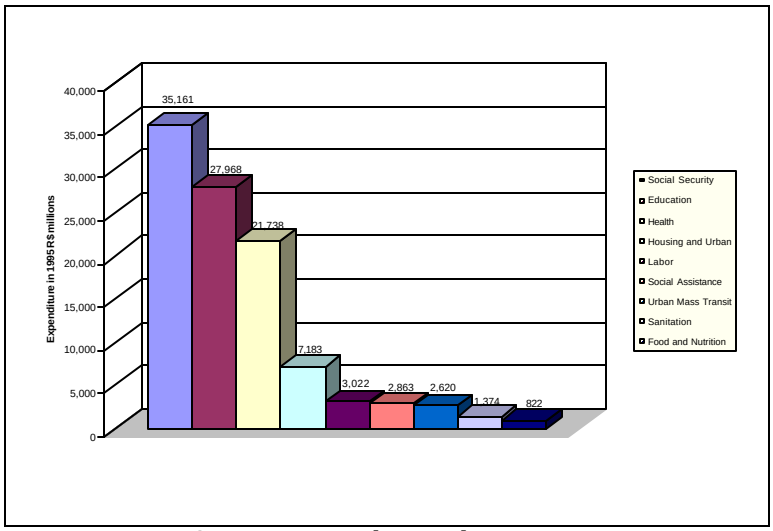
[8] See, among others, "Melhoria em Indicadores de Saúde Associados a Pobreza no Brasil dos Anos 90" (October 1997) prepared by researchers affiliated with the University of São Paulo (Monteiro, D'Aquino Benicio, and Martins). This paper documents the changes which occurred between the 1986 and 1996 PNDS (Demographic and Health Survey).

Social Expenditures in Brazil: Level and Composition.

When considered in aggregate, Brazil's social expenditures do not seem inadequate. Public social spending in Brazil among municipal, state, and federal governments amounted to 20.9% of GDP in 1995.[9]

In Latin America, only Costa Rica, Panama, and Argentina spent similarly high but slightly lower shares of GDP on social programs. As Figure 7 shows, however, social security accounts for the majority of social spending in Brazil. This finding does not imply that Brazil spends an inadequate share of its GDP on non-pension social programs such as health, education, and housing. Brazil's expenditure levels on health, education, and housing are 3.4%, 4.3%, and 1.1% of GDP, respectively. These levels are comparable to those in other Latin American countries.

Figure 7 Public Expenditures in 1995 by Program Area



In Brazil, education and health are the most significant categories of social spending for which benefits are not explicitly linked to contributions. Together, these two areas account for more expenditures than all other social programs combined (excluding social security). The significance of this finding is that the degree to which health and education benefits are targeted to the poor drives the degree of poverty targeting achieved by the entire set of social programs. In other words, given current spending patterns, efforts to better target benefits from housing, labor, social assistance, sanitation, public transport, and nutrition programs will have a relatively small impact on the total benefit incidence compared to the better targeting of health and education. Directing health and education subsidies to the poor is the key to achieving redistribution through public social spending in Brazil.

Intergovernmental transfers comprise a significant share of social expenditures. Thus, there can be a large gap between the amount of resources that a level of government administers and the amount of resources it directly finances. Figure 8 and Figure 9 present the relative importance of federal, state, and local governments in social spending for different program areas.

The information regarding the share of resources originating and administered by the different levels of government is important for developing an urban poverty strategy for at least three reasons.

First, the dominant level of government in the administration of program resources can affect the practicality of finely targeting program benefits. For example, means testing requires a certain level of administrative capacity. Poorer municipalities can be ill equipped for designing and implementing means tests. Usually, state and federal governments have a greater administrative capacity and a greater ability to design and implement means tests.

Second, the relative importance of each level of government in disbursing program funds provides a guideline for determining where the primary decisions affecting a program are made. For example, housing

[9] See IPEA, 1998. "Gastos Sociais das Três Esferas de Governo – 1995"

Figure 8 Share of Resources Originating from Federal, State, and Municipal Governments, by Program Area, 1995

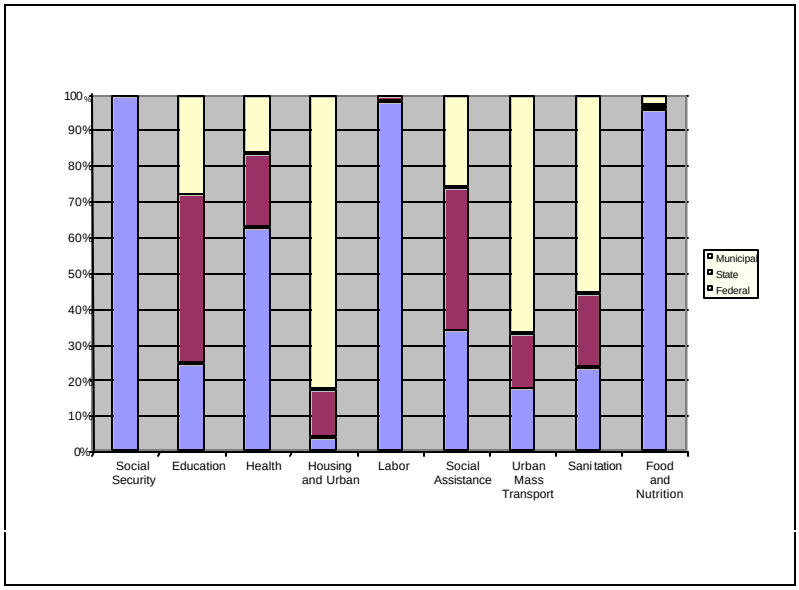
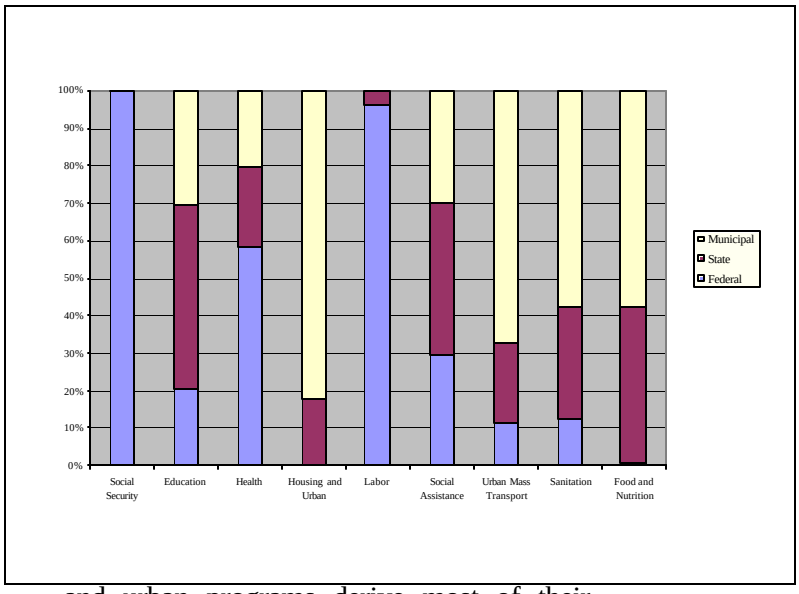


Figure 9 Share of Resources Administered by Federal, State, and Municipal Governments, by Program Area, 1995



and urban programs derive most of their funds from municipal treasuries. Thus, an attempt to alter the targeting of housing and urban programs would require an appeal to municipal authorities. On the other hand, labor programs derive the majority of their funding from the federal government. Thus, an attempt to alter the targeting of labor programs requires an appeal to federal authorities.

Third, the source of program financing may change the way targeting issues are viewed. In program areas where the municipal or state governments provide the majority of resources, such as urban transport, housing, and sanitation, the more relevant question is probably how the benefits are distributed across the *local* income or consumption distribution. If local resources are financing the programs, policy makers are likely to be interested in how well-targeted these expenditures are to the relatively poor within their own jurisdiction. On the other hand, in program areas where federal money is dominant, such as nutrition and health, perhaps it is more useful to adopt a national perspective and ask how well resources are targeted to the poorer groups within the *national* population.[10]

In considering specific areas of social spending, such as education, health, and urban services, it is important to remember the source and administration of funds. The source and administration of funds will serve as a guide, indicating the levels of government where effort should be exerted to produce the most efficacious changes in poverty reduction strategies.

[10] A problem common to nearly all benefit incidence analyses is that the distribution of program benefits is considered in isolation from the incidence of the taxes used to finance the program. Therefore, the picture that a benefit incidence analysis can provide of distributive aspects of public spending is highly imperfect and partial.

3. Specific Areas of Social Spending

This section analyzes selected social program on two dimensions. The coverage by consumption quintile shows the share of the population (or a subgroup of the population) in each quintile that receives a given service. The share of the uncovered poor population (for the purpose of this paper assumed to be equal to the first quintile) has sometimes been referred to as the error of exclusion where poor individuals are excluded from the program. However, incomplete coverage over a specific population can only be interpreted as exclusion if the entire population is supposed to receive the benefit.[11]

The targeting ratio refers to the share of program participants from the first quintile. The share of participants from the other four quintiles has been referred to as the error of inclusion where non-poor individuals are included in the program.

Each program has particular characteristics that complicate the analysis of both coverage and targeting. The extent to which these complications have or have not been appropriately addressed through the chosen methodology is briefly discussed in the context of each program.

The applied methodology has some limitations that apply across most programs. In particular, the methodology assumes that the quality of the service received is the same for individuals from all quintiles (if conclusions are drawn in terms of benefit incidence), or that spending on beneficiaries from all quintiles is the same (if conclusions are drawn in terms of spending incidence). Almost universally, these assumptions are violated in that the poor receive less valuable or less costly services. For example, the spending and quality of schools and health care in poor areas is typically lower and water services to poor areas are often intermittent. This difference in service between poorer and wealthier classes introduces a systematic bias in the estimates that follow. The incidence of services to the poor should therefore be interpreted as a lower bound.

Again, it is important to remember that significant policy changes have occurred after the date of the PPV survey, especially in the areas of health and education funding. This analysis obviously reflects none of the changes that have occurred after 1996-97, many of which are likely to have been positive in terms of their impact on the distribution of program incidence.

[11] In this paper coverage often refers to the entire population even though the target group of the program is much smaller. The target group for unemployment insurance, for example, is the group of all unemployed rather than the entire population, and low coverage among the population does not necessarily indicate exclusion.

Education

Education System Overview

Brazil spent R$27.9 billion on public education in 1995, an amount equivalent to 4.3% of GDP. State governments, which have responsibilities for the provision of secondary education under the Constitution, both provide and manage a larger share of the country's educational resources than either the federal or municipal governments (see Figure 10 and Figure 11). State governments bear the primary responsibility for funding and managing education resources, followed by municipal governments and the federal government.

Figure 10 Share of Public Education Resources Managed at the Federal, State, and Local Levels

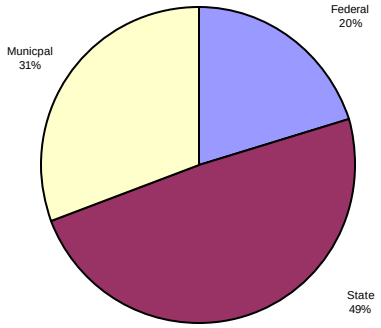
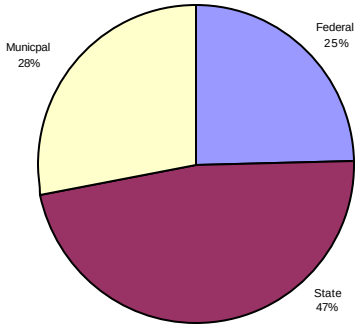


Figure 11 Share of Public Education Resources Originating at the Federal, State, and Local Levels



The share of the poor in the public student population varies greatly depending on the type of facility and the level of education provided. As Figure 12 shows, the share of poor students enrolled in public basic education (crèches, kindergartens, and primary schools) is above 50%. The share of the poor in more advanced public education declines significantly. The share of the poor in public secondary schools is approximately 25% and the share of the poor in university education is 0%.

Figure 12 Share of the Poor in Public Student Population, Urban Brazil, by Type of Facility

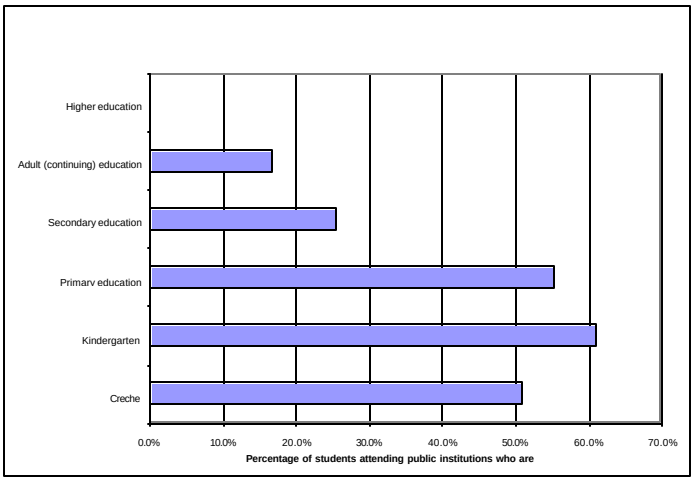


Figure 13 summarizes the incidence findings for different education levels in urban areas, highlighting the progressive nature of basic education levels (daycare, kindergarten and primary education). The benefit incidence of secondary and adult education is concentrated in the third, fourth, and fifth quintiles. Spending on higher education is extremely regressive, with the vast majority of students

Figure 13 Incidence of Public Education by Level, Urban

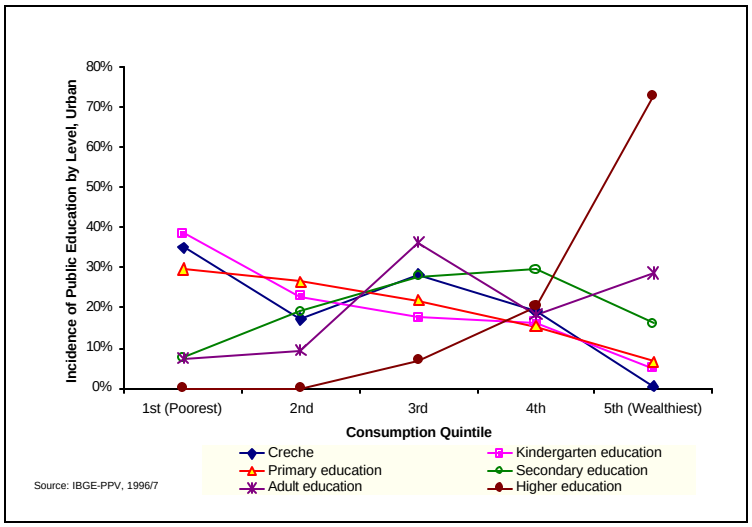
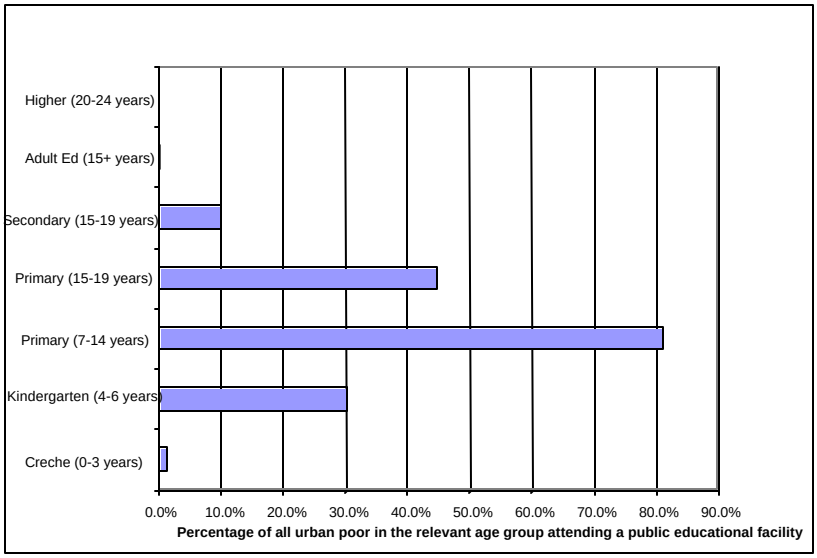


Figure 14 Reach of Public Education Among the Urban Poor



enrolled in public university education coming from the wealthiest quintile. The PPV survey did not find any individuals from the first and second quintiles that were enrolled in public universities.

The reach of public education among the poor also varies significantly according to the type of facility and level of education offered. As Figure 14 shows, a relatively small percentage poor children with 0-3 years of age attend public crèches. Only 31% of poor children with 4-6 years of age attend public kindergartens. The reach of public primary education for poor children with 7-14 years of age is significantly higher, with approximately 81% of poor children in this age group attending public primary schools.

The reach of public primary education is also high for poor individuals with 15-19 years of age, with 45% of the poor individuals in this age group still attending public primary school. Secondary school enrollment among the poor drops significantly and is only 10% for poor individuals with 15-19 years of age. Likewise, very few of the poor are enrolled in public adult and university education.

Crèches

Coverage with daycare centers (crèches) for very young children (0-3 years) is very low and increases with consumption. Coverage reaches more than five percent only for the top quintile. Public services dominate for the first four quintiles but are negligible for the top quintile. Public

Figure 15 Crèche Attendance, 0 to 3 Years, Urban

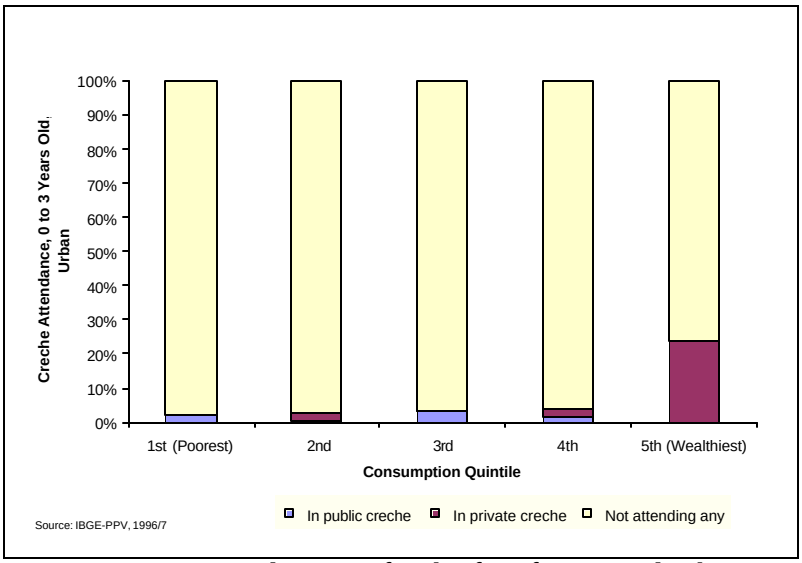


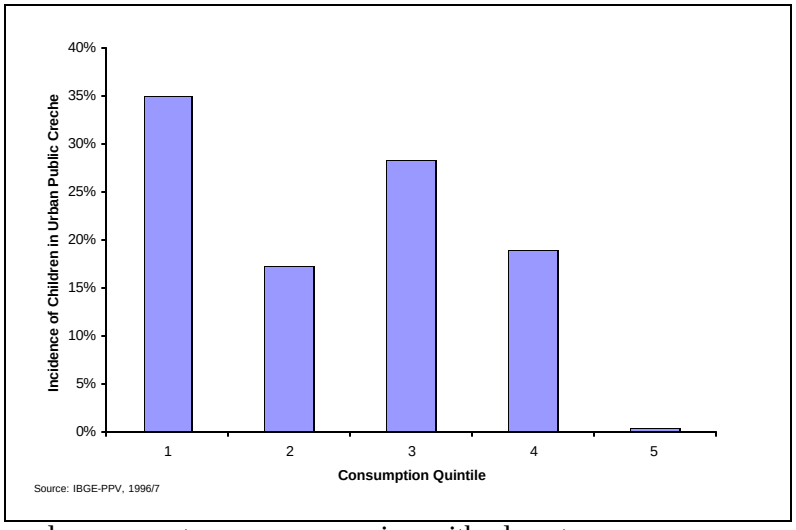
Table 2

Distribution of Public Creche Attendees		
	All NE and SE	All urban NE and SE
Consumption quintile	per capita household consumption	per capita household consumption
1	23.8%	35.1%
2	32.6%	17.2%
3	14.3%	28.3%
4	22.6%	19.0%
5	6.8%	0.4%
Total	100.0%	100.0%

Table 1

Creche Attendance, 0 to 3 Year Olds, by Consumption Quintile					
	Per capita household consumption quintile				
	1st	2nd	3rd	4th	5th
All NE and SE					
In public creche	0.8%	2.3%	1.5%	2.7%	0.0%
In private creche	0.6%	1.4%	0.5%	1.4%	19.7%
Not attending any	99.2%	96.4%	98.0%	95.9%	80.3%
All urban					
In public creche	2.1%	0.6%	3.1%	1.5%	0.0%
In private creche	0.1%	1.9%	0.3%	2.7%	23.9%
Not attending any	97.8%	97.5%	96.6%	95.9%	76.1%

Figure 16 Incidence of Children in Urban Public Crèche



daycare centers are progressive with almost one-quarter of all enrolled children (in urban and rural areas) coming from the bottom quintile. Table 2 and Table 1 provide more specific information regarding overall crèche attendance and the distribution of public crèche attendance across the different consumption quintiles. Figure 15 and Figure 16 offer this same information in graphical form.

Kindergarten

Kindergarten coverage for children with 4-6 years of age extends from 30% for the first quintile to 70% for the top quintile. Public services cover a share of 26-30% of children in the first four quintiles, while private services increase with consumption from 3% in the lowest to 49% in the highest quintile. Public kindergartens are highly progressive with 42% of the enrolled coming from the poorest quintile. Table 3 and Table 4 provide more specific information regarding overall kindergarten attendance and the distribution of public kindergarten attendance across the different consumption groups. Figure 17 and Figure 18 offer this same information in graphical form.

Primary Education

Primary school coverage (for grades 1 through 8) among rural and urban children ages 7-14 is 69% for the lowest quintile and reaches 93% for the top quintile. Urban primary education coverage is higher for all quintiles. Private primary schools are negligible for the poorest quintile but reach over 50% for the wealthiest quintile. As a result, public primary school services are progressive with 26% of the enrollment coming from the bottom quintile. Table 5 and Table 6 provide more specific information re-

Figure 17 Kindergarten Attendance, Urban 4-6 Year Olds

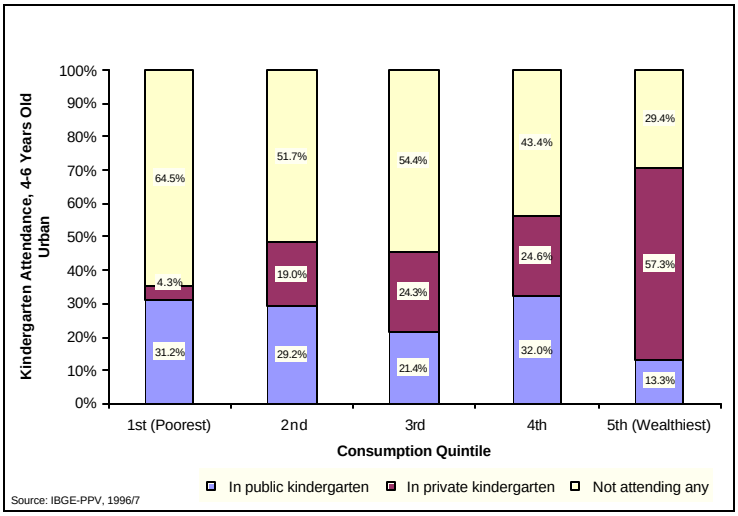


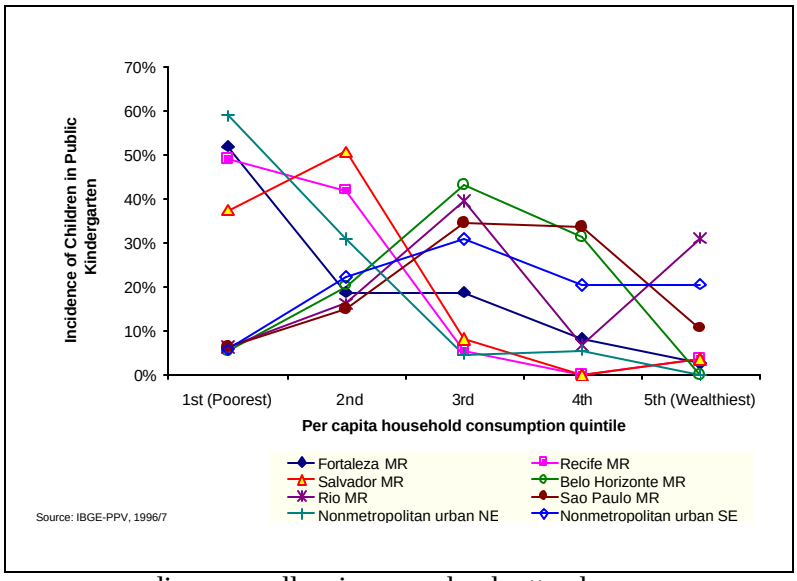
Table 3

Kindergarten Attendance, 4 to 6 Year Olds, by Income Quintile					
	Per capita household consumption quintile				
	1st	2nd	3rd	4th	5th
All NE and SE					
In public kindergarten	26.5%	29.8%	28.7%	27.2%	20.6%
In private kindergarten	3.0%	12.3%	18.6%	25.6%	49.1%
Not attending any	70.5%	58.0%	52.7%	47.2%	30.3%
All urban					
In public kindergarten	31.2%	29.2%	21.4%	32.0%	13.3%
In private kindergarten	4.3%	19.0%	24.3%	24.6%	57.3%
Not attending any	64.5%	51.7%	54.4%	43.4%	29.4%

Table 4

Distribution of Public Kindergarten Students		
	All NE and SE	**All urban NE and SE**
Consumption decile	per capita household consumption	per capita household consumption
1	27.7%	23.3%
2	14.2%	15.2%
3	12.5%	12.7%
4	11.1%	10.0%
5	7.6%	9.9%
6	8.6%	7.6%
7	6.1%	8.9%
8	5.6%	7.4%
9	5.6%	4.9%
10	0.8%	0.1%
Total	100.0%	100.0%

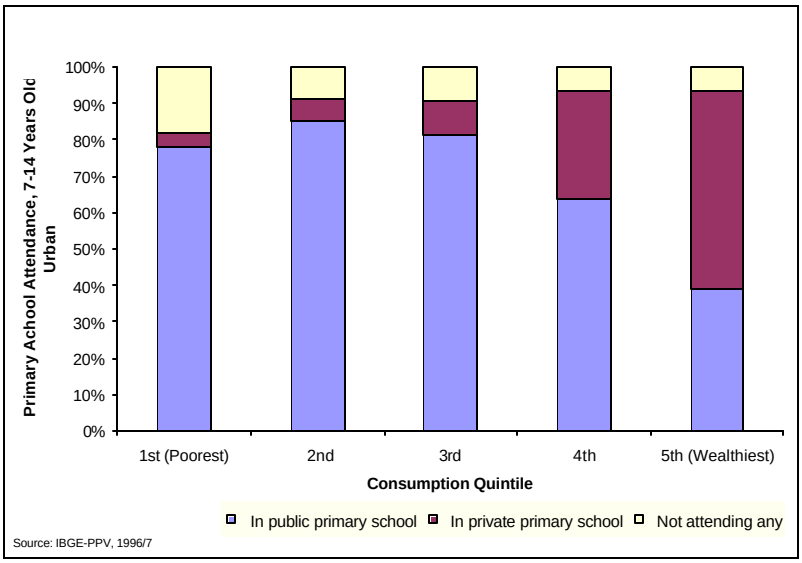
Figure 18 Incidence of Children in Public Kindergarten



garding overall primary school attendance and the distribution of public primary school attendance across the different consumption quintiles. Figure 19 offers this information in graphical form.

Among the reasons for not attending primary school, the urban poor most often cite financial difficulties. Lack of interest and lack of vacancy in schools were other dominant reasons for non-attendance. Among the urban non-poor, financial difficulties rarely present a reason for non-attendance. Lack of interest and lack of vacancy in schools were cited roughly as much by the non-poor and poor alike as reasons for non-attendance. Figure 20 and Figure 21 provide more information regarding the reasons for not attending primary education.

Figure 19 Primary School Attendance, Urban 7-14 Year Olds



As previously mentioned, the benefit incidence varies between national and local consumption quintiles. Figure 4 and Figure 5 show the distribution among public primary school students across the national and local consumption quintiles (see Page 10). From the national perspective, public primary enrollment appears highly regressive for Southeastern urban areas and highly progressive for Northeastern urban areas. When analyzed from the regional perspective, public primary education appears highly progressive for both Southeastern and Northeastern urban areas. The reason for this difference is that there are relatively few poor (in the national context) in the Southeast and there are relatively many poor (in the national context) in the Northeast. Consequently, a program such as education will tend to benefit more

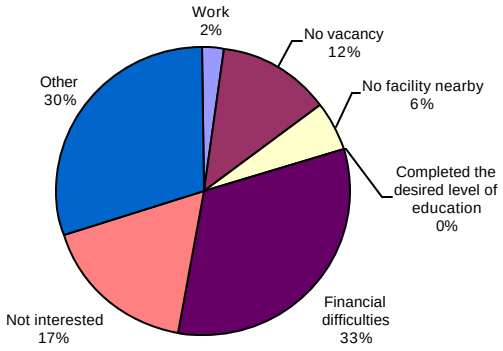
Table 5

Primary School Attendance, 7 to 14 Year Olds, by Consumption Quintile					
Analysis is based on per capita household consumption					
	Per capita household consumption quintile				
	1st	2nd	3rd	4th	5th
All NE and SE					
In public primary school	68.3%	81.6%	84.6%	71.6%	41.5%
In private primary school	0.5%	5.5%	6.2%	21.5%	51.1%
Not attending any	31.2%	12.9%	9.3%	6.9%	7.4%
All urban					
In public primary school	78.2%	85.3%	81.6%	64.0%	38.7%
In private primary school	3.7%	6.1%	9.1%	29.7%	54.5%
Not attending any	18.1%	8.6%	9.3%	6.3%	6.8%

Table 6

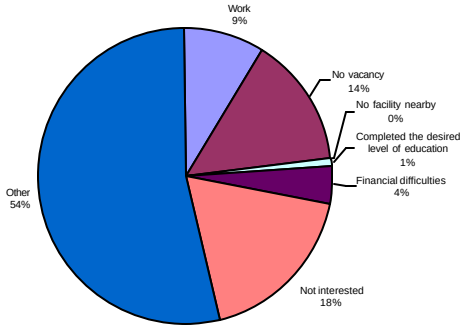
Distribution of Public Primary School Students		
	All NE and SE	**All urban NE and SE**
Consumption decile	per capita household consumption	per capita household consumption
1	13.2%	15.0%
2	12.8%	14.6%
3	13.3%	13.1%
4	13.3%	13.4%
5	13.5%	12.9%
6	9.9%	8.9%
7	9.6%	9.2%
8	6.9%	6.1%
9	5.5%	5.1%
10	2.1%	1.6%
Total	100.0%	100.0%

Figure 20 Reasons for Not Attending Primary School, Urban Poor, 7-14 Years Old



Source: IBGE-PPV, 1996/7

Figure 21 Reasons for Not Attending Primary School, Urban Non-Poor, 7-14 Years Old

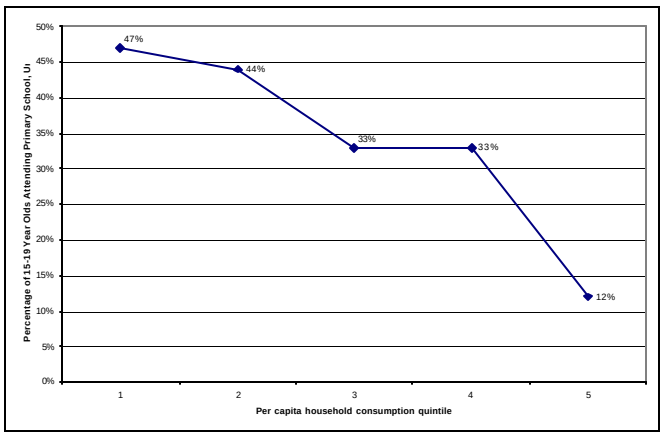


Source: IBGE-PPV, 1996/7

of the poor in the Northeast simply because there is a higher concentration of poor in the Northeast.

Primary school attendance is also high for individuals with 15-19 years of age from the first and second quintiles. As shown in Figure 23, 47% of poor individuals with 15-19 years of age still attend primary school. From the second quintile, 44% of individuals in this age group attend primary

Figure 23 Percentage of 15-19 Year Olds Attending Primary School, Urban Brazil



school. Primary school attendance among 15-19 year-olds declines with increasing consumption, and is only 12% for the wealthiest quintile.

Secondary Education

Attendance at the secondary level (for grades 9 through 12) of children with 15-19 years of age drops drastically compared to primary school attendance. Attendance is only 5% for the bottom quintile but reaches 50% for the top quintile. Almost all services in the first three quintiles are public. Private services dominate for the wealthiest quintile. The benefit incidence of public secondary education is highly concentrated in the third and fourth quintiles. The first quintile receives only 7.5% of the service. Table 7 and Table 8 provide more specific information regarding overall secondary school attendance and the distribution of public secondary school attendance across the different consumption quintiles. Figure 24 offers this

Table 7

Secondary School Attendance, 15 to 19 Year Olds, by Consumption Quintile					
	Per capita household consumption quintile				
	1st	2nd	3rd	4th	5th
All NE and SE					
In public secondary school	5.1%	9.8%	20.6%	27.7%	22.4%
In private secondary school	0.2%	0.0%	3.1%	10.0%	28.0%
Not attending any	94.7%	90.2%	76.3%	62.3%	49.6%
All urban					
In public secondary school	5.8%	15.8%	26.5%	30.0%	21.2%
In private secondary school	0.0%	2.6%	4.6%	11.0%	31.5%
Not attending any	94.2%	81.6%	68.9%	59.0%	47.3%

Table 8

Distribution of Public Secondary School Students		
	All NE and SE	All urban NE and SE
Consumption decile	per capita household consumption	per capita household consumption
1	1.5%	2.1%
2	5.9%	5.6%
3	4.3%	7.8%
4	7.8%	11.2%
5	11.3%	13.6%
6	16.7%	14.2%
7	17.8%	18.2%
8	15.5%	11.4%
9	13.8%	12.8%
10	5.4%	3.2%
Total	99.9%	100.0%

Figure 24 Secondary School Attendance, Urban 15-19 Year Olds

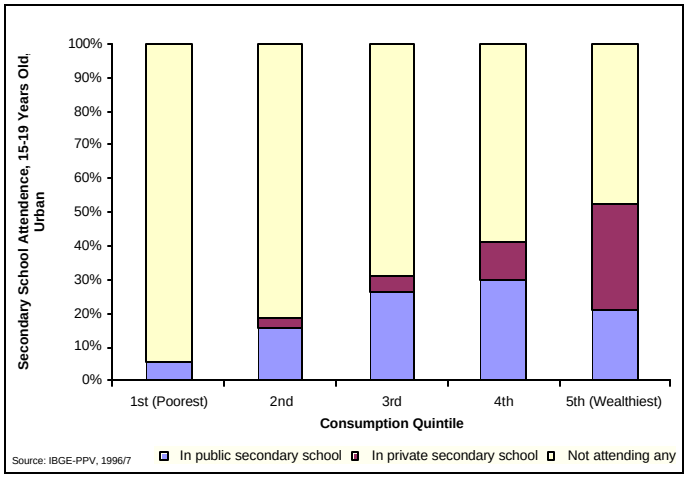


Figure 25 Reason for Not Attending School, Urban Poor 15-17 Years Old

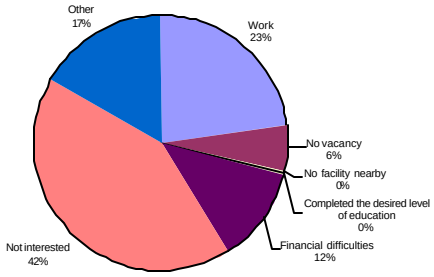
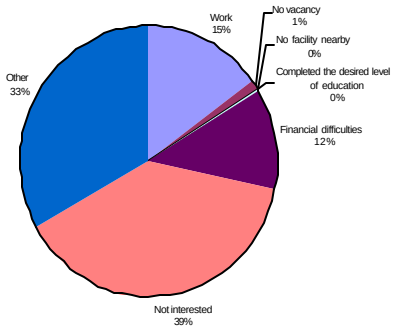


Figure 26 Reasons for Not Attending School, Urban Non-Poor 15-17 Years Old



information in graphical form.

Lack of interest is the primary reason for not attending school among the urban poor with 15-17 years of age. Work and financial difficulties are other dominant reasons for non-attendance. Among the urban non-poor, lack of interest is also the primary reason for non-attendance. While work is also a dominant reason, it is less of an inhibitor for the urban non-poor than for the urban poor. Financial difficulties is cited as much by the urban non-poor as the urban poor as a reason for non-attendance. Figure 25 and Figure 26 provide more information on non-attendance among the urban poor and non-poor with 15-17 years of age.

Figure 27 and Figure 28 show the share of

Figure 27 Share of Public Secondary Students Belonging to Each Consumption Group (Regional Quintiles)

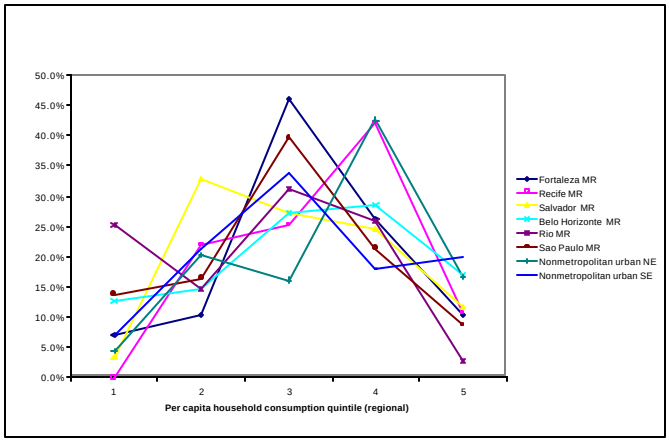
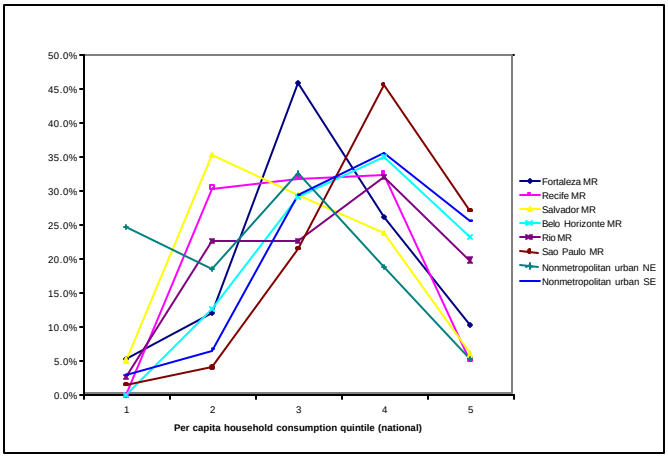
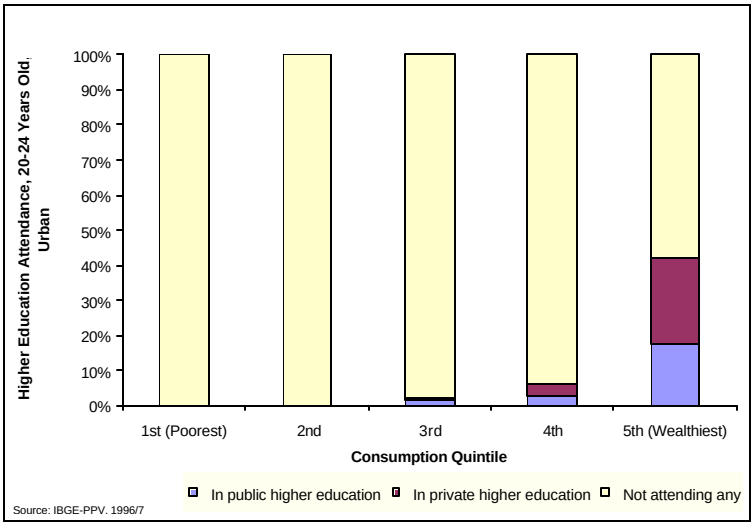


Figure 28 Share of Public Secondary School Students Belonging to Each Consumption Group (National Quintiles)



public secondary school students belonging to each consumption group in terms of both

Figure 29 Higher Education Attendance, Urban 20-24 Year Olds



regional and national quintiles. It is apparent from these figures that public secondary education is not well-targeted to the poorest 20% of the population neither in terms of national nor regional quintiles. In terms of national quintiles, the poorest 20% of the population receives less than 10% of the public secondary education benefit for all urban areas except the non-metropolitan urban Northeast. Even in terms of regional quintiles, the poorest 20% of the population still receives less than 15% of the public secondary education benefit, again for all urban areas except the non-metropolitan urban Northeast. In fact, the non-metropolitan urban Northeast is the only region where the poorest quintile receives more than 20% of the secondary education benefit, but this is primarily due to the concentration of poor individuals in the area.

Higher Education

Higher education attendance among the 20-24 age group is negligible for the first three quintiles. In fact, the PPV sample does not include a single student of higher education from the first quintile. Coverage is 5% in the fourth and 33% in the fifth quintile. The incidence of university service is extremely regressive with 22% of the services provided to the fourth and 76% to the fifth quintile. Table 9 and Table 10 provide more specific information regarding overall university attendance and the distribution of public university attendance across the different consumption quintiles. Figure 29 and Figure 30 offer this same information in graphical form.

Figure 30 Incidence of Higher Education, Urban

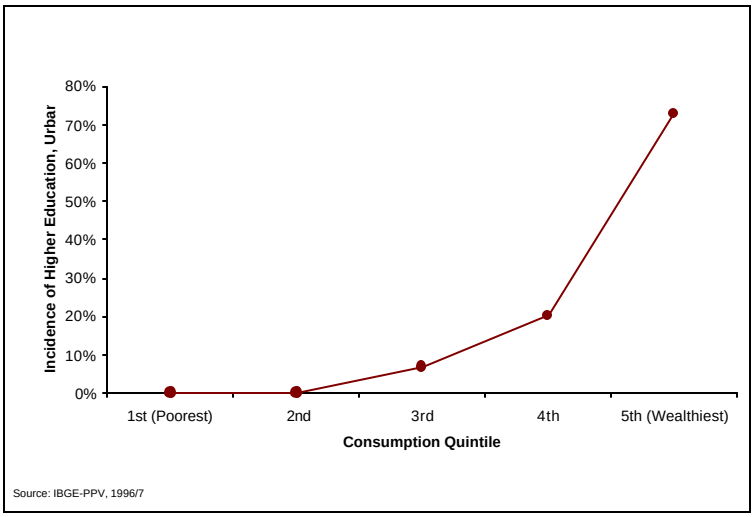


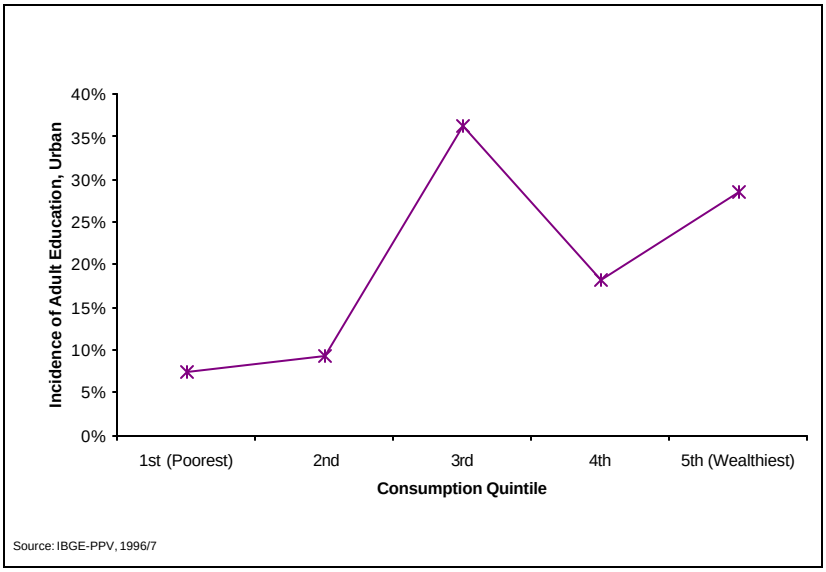
Table 9

Higher Education Attendance, 20 to 24 Year Olds, by Consumption Quintile					
	Per capita consumption quintile				
	1st	2nd	3rd	4th	5th
All NE and SE					
In public higher education	0.0%	0.0%	0.5%	3.2%	13.6%
In private higher education	0.0%	0.1%	0.0%	2.1%	19.3%
Not attending any	100.0%	99.9%	99.5%	94.6%	67.1%
All urban					
In public higher education	0.0%	0.0%	1.7%	2.9%	17.4%
In private higher education	0.0%	0.1%	0.6%	3.3%	24.8%
Not attending any	100.0%	99.9%	97.8%	93.8%	57.8%

Table 10

Distribution of Students in Public Higher Education		
	All NE and SE	**All urban**
Consumption quintile	per capita household consumption	per capita household consumption
1	0.0%	0.0%
2	0.0%	0.0%
3	2.5%	6.9%
4	21.8%	20.3%
5	75.7%	72.9%
Total	100.0%	100.0%

Figure 31 Incidence of Adult Education, Urban



Adult and Professional Education

The coverage of adult and professional education among individuals 15 years and older is less than 1% for all quintiles with public services dominating throughout. Given the low frequency of adult education in the sample, results on distributional incidence should be viewed with caution. The analysis shows only 5% incidence in the bottom quintile and a concentration of incidence in the third to fifth quintiles. Table 11 and Table 12 provide more specific information regarding overall adult education attendance and the distribution of public adult education attendance across the different consumption quintiles. Figure 31 offers this information in graphical form.

Table 11

Adult Education Attendance, Ages 15 and Older, by Consumption Quintile					
	Per capita household consumption quintile				
	1st	2nd	3rd	4th	5th
All NE and SE					
In public adult ed classes	0.1%	0.3%	0.6%	0.4%	0.5%
In private adult ed classes	0.0%	0.0%	0.4%	0.1%	0.2%
Not attending any	99.9%	99.7%	99.0%	99.5%	99.4%
All urban					
In public adult ed classes	0.2%	0.2%	0.8%	0.4%	0.6%
In private adult ed classes	0.0%	0.2%	0.3%	0.2%	0.2%
Not attending any	99.8%	99.6%	98.9%	99.4%	99.2%

Table 12

Distribution of Public Adult Education Students		
	All NE and SE	**All urban**
Consumption quintile	per capita household consumption	per capita household consumption
1	4.5%	7.4%
2	15.0%	9.4%
3	30.1%	36.3%
4	22.5%	18.3%
5	27.9%	28.7%
Total	100.0%	100.0%

Health Care

Health Care System Overview[12]

Brazil spent roughly R$21.7 billion, corresponding to 3.4% of GDP on health care in 1995. Public outlays on health accounted for 16% of all social spending.

The current structure of Brazil's public health system has its roots in the Constitution of 1988, and the basic implementing legislation for the health sector approved in 1990. Known as the *Sistema Unico de Saude* (SUS), the Brazilian health system has several features that make it unique in Latin America.

First, it is the only Latin American system with a substantial separation of finance and provision, where finance is largely public while provision is predominantly private. What is still more striking is the large share of private provision that is for-profit and publicly financed.

Second, Brazil is the only country in Latin America to have completely eliminated the traditional separation between the Ministry of Health and the Social Security System. Coverage under one public system is universal, and public money can be used to finance any type of provider.

Third, along with the separation between finance and provision, there is also a separation by level of government, with financing being handled mostly at the federal level but public provision being almost entirely a municipal responsibility. Both state and federal governments are responsible for offering the technical and financial support that municipalities need to assure provision of health care services. Thus, a large share of funding occurs as inter-governmental transfers, either directly to a state or municipal government or as purchases of services provided by those governments' public facilities.

The Poor's Access to Health Care

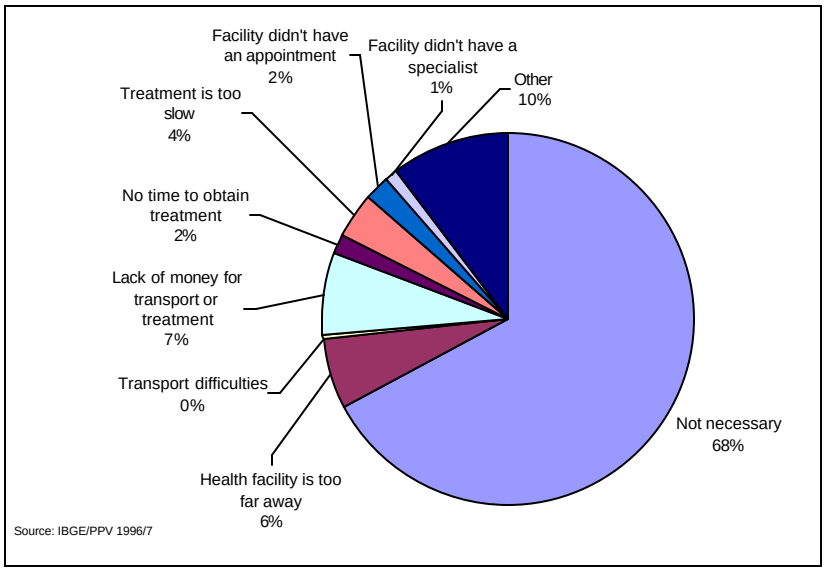
The PPV provides new insight into the question of whether Brazil is achieving its goal of universal access to health care, especially for the poor. According to the PPV, Brazil's poor are less likely than the non-poor to use health services. The gap in health service utilization varies depending on the geographic area, but consistently favors the non-poor. If it were true that the poor are less sensitive to health problems than the rich, one explanation for the poor's lower usage of health care could be that they are less likely to perceive the existence of a health problem requiring medical attention. That is, the poor's lower usage of health services does not result from less access, but from their lower demand for care. The evidence does not support this supposition. First, Brazil's poor are more likely than the non-poor to identify themselves as having a health problem for which they did not obtain treatment. Second, while the majority in both groups give "not necessary" as the reason they did not get medical attention despite having a health problem, this explains a much smaller share of the poor's failure to seek care. 80% of the non-poor who did not get treatment felt that it was not necessary. Only 68% of the poor without treatment felt that they did not need treatment. To summarize, lower use of health services by Brazil's poor cannot be explained by differences in perceptions regarding the need for medical attention.

What limits access to health care? As Figure 33 shows, poor individuals who did not obtain treatment even though they thought it was needed most often cited a lack of money for transport or treatment. They were five times more likely than the non-poor to give financial difficulties as the reason for not seeking medical care. As shown in Figure 31, the non-poor were more likely than the poor to state that treatment takes too long as the reason for their not

[12] The description of the Brazilian health system draws extensively from *Brazil: Social Spending in Selected States*, World Bank Report No. Br-17763, specifically, from chapter 3 on health, which was written by Philip Musgrove.

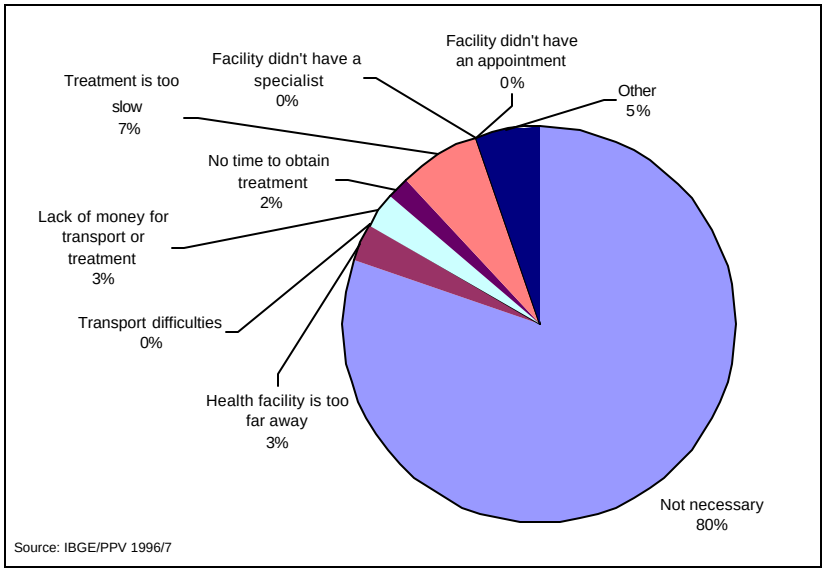
seeking care; in fact, it was their second most common explanation. They rarely mentioned lack of money as the constraint. Distance to the health facility was one of the most frequently cited obstacles to obtaining treatment for poor and non-poor alike, although it was clearly a bigger problem for the poor. When rural areas are excluded, the share of the poor with an untreated health problem is smaller; and the proportion of the non-treated who say treatment was unnecessary is larger. The reasons "lack of money for transport or treatment" and "distance to the health facility" are less of an obstacle for the urban poor than for those in rural areas, though these two obstacles are still the most common explanations for not obtaining care only after the reason that medical care was not necessary.

Figure 33 Reasons for Not Seeking Medical Care, Urban Poor



An interesting question is whether the transport costs or the medical costs present more of an obstacle to the poor in their attempt to obtain medical care. Unfortunately, the PPV does not distinguish between these two types of costs. However, the survey does provide some indirect evidence that travel costs are the greater constraint. First, the distance to the health facility was one of the most frequently given reasons for not seeking medical attention. Second, the vast majority of patients, whether poor or non-poor, do not pay for medical treatment in any of the publicly subsidized health facilities (public hospitals and health posts, and private hospitals and clinics with SUS agreements). For urban areas covered by the PPV, less than 2% of the poor who received medical care in a public or privately operated SUS facility reported paying anything for their treatment. The non-poor were only slightly more likely to pay for care in these health facilities. Less than 10% of the non-poor treated in private facilities paid anything for their care; even fewer patients in publicly operated health facilities incurred out-of-pocket expenses. Because the government typically pays for health costs, it is reasonable to assume that transportation costs comprise the largest part of the financial constraint that prevents the poor from seeking medical attention.

Figure 31 Reasons for Not Seeking Medical Care, Urban Non-Poor



Basic Health Care and Prenatal Care

The PPV also provides information on several specific types of medical treatment of particular relevance to the poor. Aside from measuring the poverty targeting of health care programs, it is important to evaluate the types of services received by the poor. Early intervention with prenatal programs deserves special mention in this analysis because of the tremendous impact such care can render on the health outcomes of both mother and child in impoverished areas.

Prenatal Care

Subsidies to prenatal care are better targeted to the urban poor than health care overall. According to the PPV, roughly 46% of patients receiving prenatal care in public health facilities are poor. As in the case of health care in the aggregate, the share of poor in the client population varies tremendously by type of facility. Nearly two-thirds of prenatal visits to public health posts and health centers are by poor women; at the other extreme, over three-fourths of all visits to private SUS clinics and hospitals are made by the non-poor.

Public health facilities are critical to the urban poor's access to prenatal care. In urban areas, the public hospital and health post system delivers nearly 95% of all prenatal care received by poor women. The non-poor are much less dependent on the public system, as they obtain approximately one-third of their prenatal care in private (non-SUS) clinics. Nevertheless, the vast majority of all women, poor and non-poor alike, are obtaining their prenatal care through publicly subsidized heath services. Only the wealthiest 20% of women currently receiving prenatal care are more likely to go to a private clinic than one of the publicly subsidized options.

Figure 33 Where Health Care is Obtained, by Consumption Quintile, Urban Brazil

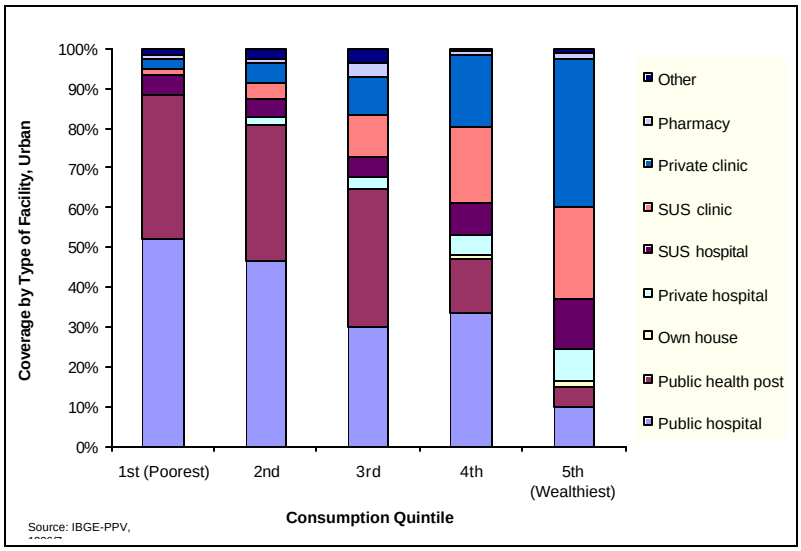


Table 13

Where Health Care is Obtained, by Consumption Quintile					
All NE and SE					
	Per capita consumption quintile				
Service Location	1st	2nd	3rd	4th	5th
Public hospital	47.5%	47.8%	40.9%	32.8%	12.2%
Public health post	34.6%	38.2%	35.6%	18.8%	6.7%
Own house	1.5%	0.4%	0.1%	0.6%	1.5%
Private hospital	0.0%	1.0%	2.5%	3.1%	8.7%
SUS hospital	3.9%	3.6%	3.1%	8.2%	11.5%
SUS clinic	1.7%	1.9%	6.1%	15.7%	23.4%
Private clinic	1.8%	4.4%	4.6%	16.6%	33.9%
Pharmacy	3.9%	1.9%	3.4%	2.6%	1.1%
Other	5.0%	0.8%	3.8%	1.6%	1.1%
Total	100.0%	100.0%	100.0%	100.0%	100.0%

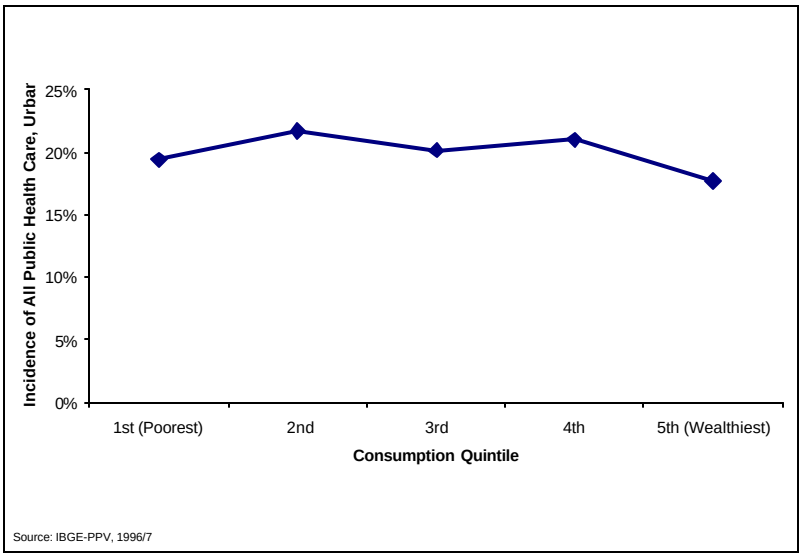
Table 14

Where Health Care is Obtained, by Consumption Quintile					
All urban					
	Per capita consumption quintile				
Service Location	1st	2nd	3rd	4th	5th
Public hospital	52.0%	46.6%	30.1%	33.4%	9.6%
Public health post	36.3%	34.1%	34.5%	13.4%	5.2%
Own house	0.0%	0.0%	0.0%	1.3%	1.3%
Private hospital	0.0%	2.0%	2.8%	4.9%	8.2%
SUS hospital	4.9%	4.9%	5.4%	7.9%	12.5%
SUS clinic	1.7%	4.0%	10.3%	19.3%	23.3%
Private clinic	2.1%	4.9%	9.6%	18.0%	37.3%
Pharmacy	1.4%	1.0%	3.7%	0.9%	1.2%
Other	1.5%	2.5%	3.5%	0.9%	1.4%
Total	100.0%	100.0%	100.0%	100.0%	100.0%

Targeting: The Incidence of Health Subsidies

Data of health facility usage from the PPV show that the poor almost exclusively rely on public health care whereas there is significant participation of private health care provision in the higher quintiles (see Figure 33, Table 13, and Table 14). At the same time, there is significant usage of pub-

Figure 34 Incidence of Overall Public Health Care, Urban



lic facilities, and in particular of private but publicly funded facilities (SUS hospitals and clinics) among the better-off.

The incidence of health spending based on this simplified analysis needs to be treated with great caution. Clearly, medical services and their costs differ greatly by facility, and presumably by consumption group of the patient. Ignoring these complications, overall usage of publicly funded health care appears to be almost flat across consumption groups. In other words, the poor receive a share of public health services approximately proportional to their population share. Given the high income elasticity of health service demand (health service demand typically rises more than proportional with income), this should not be simplistically interpreted as a negative finding without further analysis. Table 15 and Figure 34 provide further information on the incidence of overall public health care and health service demand.

A very diverse picture of the incidence of health spending emerges once data is disaggregated by type of facility (see Figure 35, Table 16, and Table 17). The share of poor among the patients served by public hospitals and health posts on the one hand, and privately run SUS hospitals and clinics on the other, differs greatly. Public hospitals and health posts are rarely used by the top quintile, and usage share by the poor exceeds their share of the population. On the other hand, usage of SUS hospitals and clinics (private facilities publicly funded through SUS) by the top quintile is over 40% of total usage but is almost negligible at the bottom of the distribution.[13]

This difference in utilization patterns has major implications for the degree of poverty targeting accomplished by public subsidies to health care in public versus privately run facilities. Almost no one pays for health services received in hospitals and clinics belonging to the SUS system. It is reasonable to assume that the unit cost of serving the poor is not higher than that for serving the non-poor (and may well be lower). Therefore, conservatively, at least 80% of

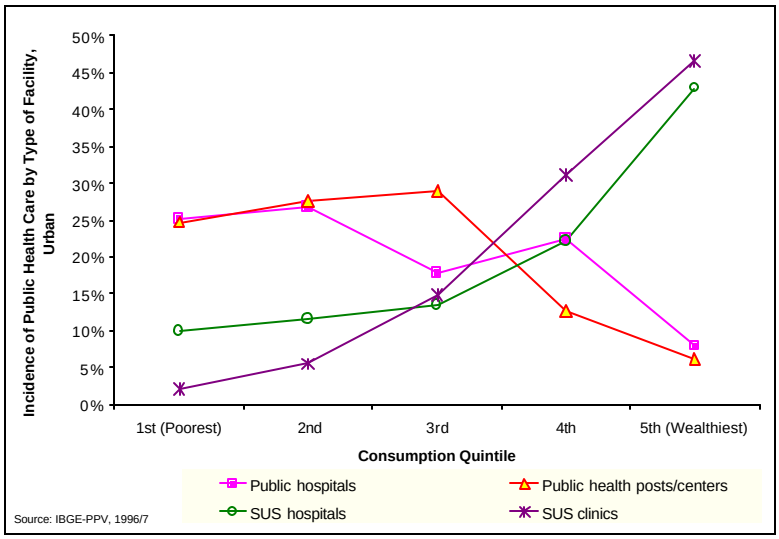
Table 15

Percent of the Population Utilizing Health Services in the 30 Days prior to the Survey, by Consumption Quintile
(regional distributions)

	Per capita consumption quintile				
Locale	1st	2nd	3rd	4th	5th
All NE and SE	9.4%	10.8%	13.1%	15.6%	17.6%
All urban	10.7%	12.8%	13.1%	14.9%	18.4%

[13] SUS hospitals and clinics, as discussed in this report, refer to the items *hospitais conveniados* and *clinicas conveniados* in the PPV questionnaire. The guide to the questionnaire explains that these terms refer to *convênios* with the public health system. These facilities are thus publicly funded. If the questionnaire was applied without due reference to the guide, the question might have been misunderstood by respondents as referring to private *convênios* as well. In this case, the above analysis could overstate the regressiveness of public spending for SUS hospitals and clinics. Piola and Nunes (2000) have undertaken similar analysis of the incidence of health spending. In addition to some other methodological differences, they have excluded *hospitais conveniados* and *clinicas conveniados* from the publicly funded facilities. As a result, they find more progressive overall public health spending with 22.9%, 23.5%, 22.5%, 18.7%, and 12.5% of federal public health spending accruing to the first through fifth income quintile, respectively.

Figure 35 Incidence of Public Health Care by Type of Facility



the public subsidies to health services in privately run hospitals, and 90% of those in private clinics, are captured by the top three quintiles. By comparison, subsidies to public hospitals and health posts are rather well-targeted, with approximately half of the subsidies reaching the bottom two quintiles.

Table 16

Percent of Patients in Different Facilities, by Consumption Quintile					
All NE and SE					
Per capita consumption quintile	All Public Care	Public Hospitals	SUS Hospitals	Public Health Post	SUS Clinic
1	16.3%	20.1%	8.3%	20.2%	2.1%
2	19.5%	23.2%	8.8%	25.5%	2.7%
3	22.2%	24.1%	9.0%	28.9%	10.3%
4	23.3%	23.0%	28.6%	18.2%	31.7%
5	18.6%	9.6%	45.3%	7.2%	53.2%
All	100.0%	100.0%	100.0%	100.0%	100.0%

Table 17

Percent of Patients in Different Facilities, by Consumption Quintile					
All urban					
Per capita consumption quintile	All Public Care	Public Hospitals	SUS Hospitals	Public Health Post	SUS Clinic
1	19.4%	25.1%	9.9%	24.7%	2.0%
2	21.7%	26.7%	11.6%	27.6%	5.5%
3	20.2%	17.8%	13.4%	28.9%	14.8%
4	21.0%	22.4%	22.1%	12.7%	31.2%
5	17.7%	7.9%	42.9%	6.1%	46.5%
All	100.0%	100.0%	100.0%	100.0%	100.0%

Moreover, private facilities in the SUS system play a minor role in improving the poor's access to health care. Over 84% of the health care received by the urban poor occurs in public hospitals and health centers; privately run hospitals and clinics with SUS agreements provided only 8% of the urban poor's health services. On the other hand, private facilities do increase the *non-poor's* access to publicly subsidized health care. According to the PPV results, more than 25% of the medical treatment for the urban non-poor occurred in private SUS facilities. Usage of publicly-funded private health care facilities therefore appears to be highly regressive. In the case of hospitals, these facilities account for more than half of SUS spending.

Piso de Assistência Básica (PAB)

The new *Piso de Assistência Básica* (PAB) establishes a transfer of R$10-12 per person per year for primary health care, which would be withdrawn from the most recent 25% increase in SUS tariffs. This program would leave slightly less federal funding available for hospitals and more complex ambulatory procedures. In 1998, the Ministry of Health further defined the basic procedures to be included in the health care package funded by PAB and established the values for each of the health procedures covered by the PAB system. The purpose of PAB is to increase the extent and availability of basic public health care to the poor at the expense of reducing provision of more complex and costly services (usually delivered in SUS hospitals and clinics).

Benefits for the Poor

There is no doubt that the Government's efforts to provide free health care for the poor has had a positive impact. As an example, Table 18 provides evidence of the great reduction in infant mortality in Brazil.

Table 18

Infant Mortality	1980	1985	1990	1997
Brazil	85.64	66.59	47.81	36.70
North	83.61	63.30	44.59	35.60
Northeast	120.46	95.27	74.30	59.05
Southeast	64.44	47.96	33.57	25.23
South	57.70	41.18	27.36	22.55
Centerwest	66.44	44.15	31.19	25.39

Source: Simões (1997).

Nutrition Programs

Programs for the distribution of free milk achieve highest coverage among the second quintile with almost 15% receiving milk. The incidence is heavily concentrated in the first (29%) and second (33%) quintiles (see Table 19, Table 20, and Figure 36). In 1994, a new milk distribution program (*Milk is Health*) was created with a design intended to avoid critical shortcomings in targeting, monitoring and evaluation of previous programs. The program is targeted at children (from six months to two years) and pregnant women under nutritional risk. The target population is selected in health centers. The program is decentralized, and federal resources from the Ministry of Health are transferred to each municipality on the basis of population size and estimates of child malnutrition. The number of municipalities participating in the program is increasing (587 in 1996; 999 in 1997), however, fluctuations in resources from year to year (R$ 139.6 million in 1995, R$ 29.2 million in 1996, R$ 98.2 million in 1997) and interruptions in the transfer of resources have been a major problem.

Free school meal programs reach about 60% of students from the first

Figure 37 Coverage with Regular School Lunches

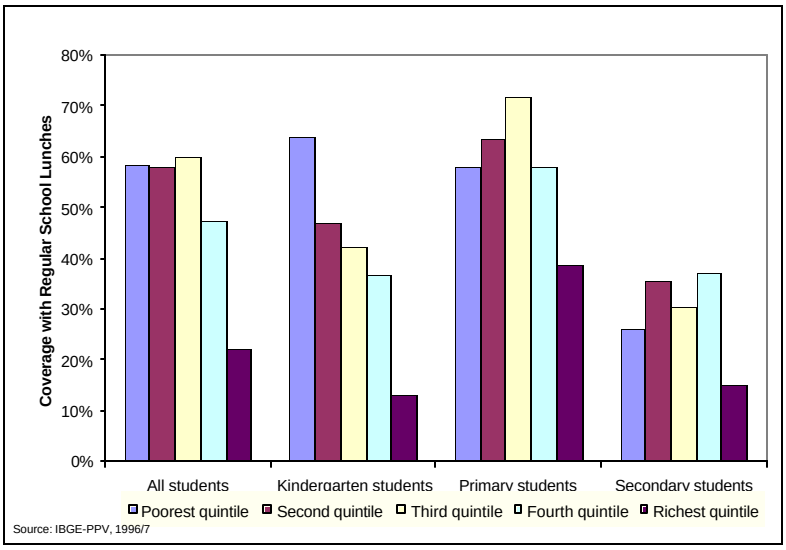


Figure 36 Incidence of Milk Distribution Programs

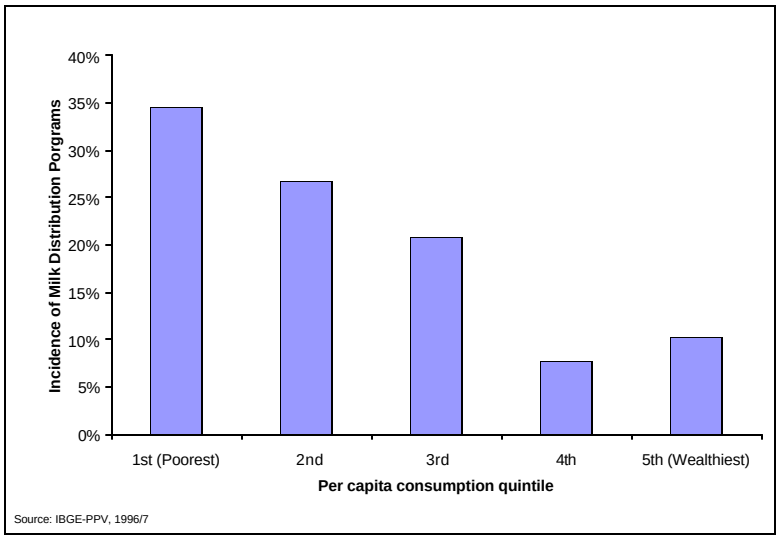


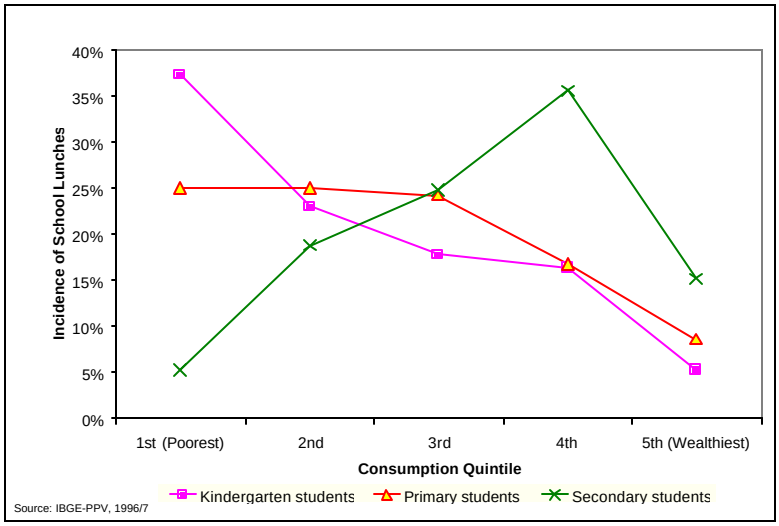
Table 19

Share of Population Receiving Donated Milk Belonging to Each Consumption Expenditure Quintile		
Per capita consumption quintile	All NE and SE	All urban
1st	29.3%	34.5%
2nd	32.8%	26.8%
3rd	18.2%	20.8%
4th	13.2%	7.7%
5th	6.5%	10.2%
Total	100.0%	100.0%

Table 20

Percentage in Quintile Living in Households that Received Donated Milk					
Per capita consumption quintile	1st	2nd	3rd	4th	5th
All NE and SE	13.0%	14.5%	8.0%	5.9%	2.9%
All urban	9.2%	7.2%	5.5%	2.0%	2.7%

Figure 38 Incidence of School Lunches



three quintiles (see Table 21 and Figure 37). The incidence is closely related to the income distribution of children in public schools at different levels. The incidence for free feeding at kindergartens is highly progressive, with more than 35% of the benefit accruing to the first quintile. At primary schools, the incidence is also progressive, with approximately 25% of the benefit accruing to each of the bottom three quintiles. At secondary schools, however, only 5% of meals accrues to the first quintile while 36% accrues to the fourth quintile (see Table 22 and Figure 38).

Table 21

Percentage of students within consumption group with access to regular school lunches, urban only

Per capita consumption quintile	1	2	3	4	5
All students	58%	58%	60%	47%	22%
Kindergarten students	64%	47%	42%	37%	13%
Primary	58%	64%	72%	58%	39%
Secondary	26%	35%	31%	37%	15%

Table 22

Distribution of students in schools that provide regular school lunches, urban only

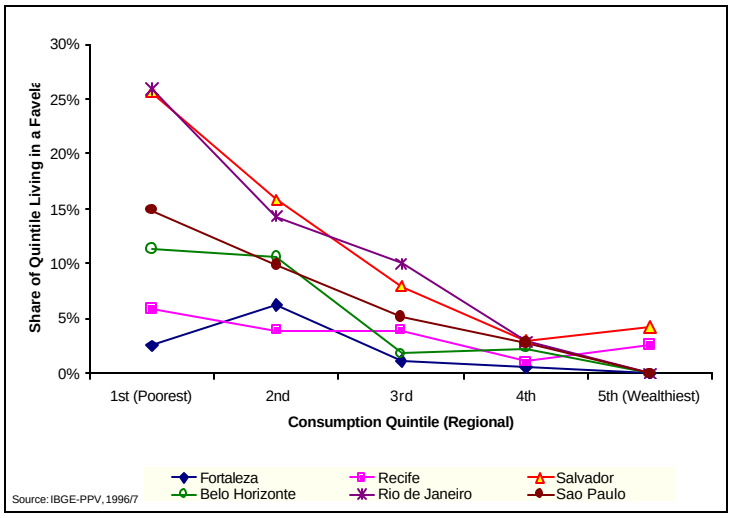
Per capita consumption quintile	All students	Kindergarten	Primary	Secondary
1	25%	37%	25%	5%
2	24%	23%	25%	19%
3	24%	18%	24%	25%
4	18%	16%	17%	36%
5	9%	5%	9%	15%
All	100%	100%	100%	100%

Urban Services

Housing

The urban poor are typically concentrated in two types of informal areas: *favelas* and illegal land subdivisions. Table 23 indicates the large number of *favela* homes in Brazil's major cities. The share of *favela* homes ranges from only 0.1% in Porto Alegre to over 40% in Recife. The Northern cities generally have a higher share of *favela* homes than the Southern cities (however, the local definition of *favela* varies). While

Figure 39 Share of Quintile Living in Favela



favelas are often understood as low-income neighborhoods, their residents are in fact quite heterogeneous. As Figure 39 and Table 24 show, the non-poor compose a substantial share of *favela* residents exceeding 50% in some cities. The share of the population that lives in *favelas* is 11% for the lowest quintile and declines to less than one percent for the top quintile (see Table 25). Even in urban areas, 86% of the poor do not live in *favelas.* About 34% of favela residents are from the first quintile. Whether these incidence figures are appropriate for the estimation of the incidence of public spending depends on whether publicly funded programs are in fact directed at the neighborhoods that are characterized as *favelas* by the PPV respondents.

Many of the other urban poor live in the second type of informal area, illegal land subdivisions (*loteamentos clandestinos).* In many cities, illegal subdivisions house the more recent and poorer migrants. Illegal subdivisions result from illegal commercial operations in the periphery of a city or a metropolitan region. Illegal land subdivisions are spatially more organized than *favelas*. Their physical layout is somewhat similar to the formal areas of the city, often with clear street patterns and lot arrangements but without planned open spaces for public facilities such as schools and health centers. However, these lots are not serviced unless the Government later decides to provide basic services.

The types of housing tenure in urban Brazil exhibit a peculiar pattern across household incomes (see Figure 40). As the PPV survey data indicate, those who own a house but not land (typically in informal areas) and those who live in ceded properties have the lowest average incomes. The majority of Brazil's urban households, with the next higher level of mean income,

Table 23

Number of Favela Homes in Brazilian City, 1990	Number of Homes (in thousands)	Number of Favela Homes (in thousands)	Favela as % of total Homes
São Paulo	3,668	213	5.8
Rio de Janeiro	2,409	236	9.8
Belo Horizonte	517	52	10
Salvador	470	17	3.7
Brasilia	422	0	0.1
Porto Alegre	386	25	6.5
Fortaleza	384	51	13.3
Curitiba	328	22	6.7
Recife	311	131	42.2
Belem	257	39	15.1
Goiania	251	4	1.6
Campinas	221	39	15.1
Manaus	218	10	4.7
Santos	159	11	7.1
São Luis	151	6	3.9
All above 15 cities	10,152	1,005	9.9

Source: Adapted from Gilbert (1996, Table 4.8).

Table 24

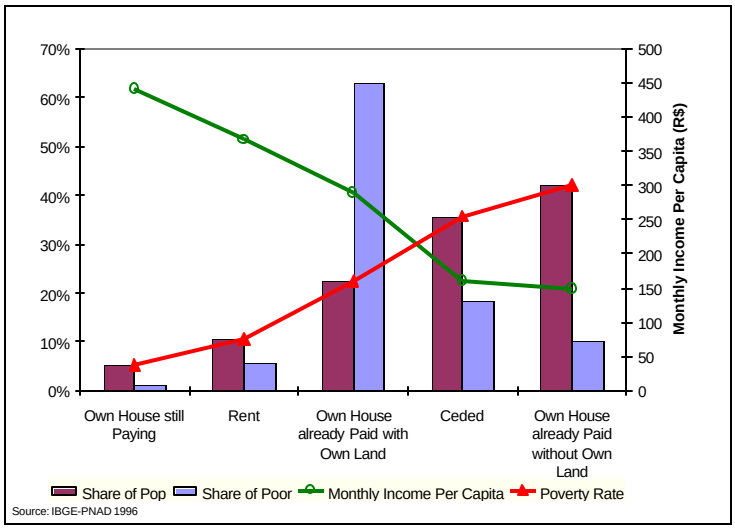
Distribution of favela residents across the consumption quitiles		
Consumption quintile	All NE and SE	All urban
1	34.4%	44.4%
2	26.7%	24.2%
3	16.8%	16.8%
4	17.9%	12.2%
5	4.2%	2.3%
All	100.0%	99.9%

Table 25

Percent of the consumption quintile living in favelas, by region					
	Consumption quintile				
	1st	2nd	3rd	4th	5th
All NE and SE	11.1%	6.7%	3.7%	3.5%	0.7%
All urban	13.6%	5.8%	3.5%	2.4%	0.4%

own the house and the land on which the house stands and have no outstanding loan for the house. The number of households who rent accounts for only a small share (12%) of all households, and their average incomes are relatively higher. The highest average income is found in the group of

Figure 40 Housing Tenure and Poverty Rate, Urban Brazil



households who are still paying for their homes (or in other words, those who have been able to secure financing for their house).

Both the poor and non-poor households in most cities have over 65% home ownership (although without title in many cases). Less than 25% of the households live in rented homes. The only significant difference is that more poor households live in ceded and invaded property than non-poor households.

Transport

The share of commuters who use public transport declines with consumption level. Figure 41, Table 26, and Table 27 show the incidence of different modes of transport. Most of the poorest do not make regular commuting trips because they do not have regular jobs. When they make trips, they are often unable to afford the cost of transportation requiring some form of payment and must instead walk to their destination. Where the poor have little choice of modes other than walking, they have to spend time and personal energy that could otherwise be used for more productive activities.

As depicted in Figure 42, public transport is predominantly used by the second to fourth quintiles (population groups that have a stable job but are not among the better-off and able to afford automobiles). In fact, the incidence of public transport for the first quintile is only 9%, reaching a high of 28% for the fourth quintile. Not surprisingly, the use of individual automobiles is highly concentrated in the top two quintiles. While most public transport in-

Figure 41 Incidence by Mode of Transport, Urban Commuters

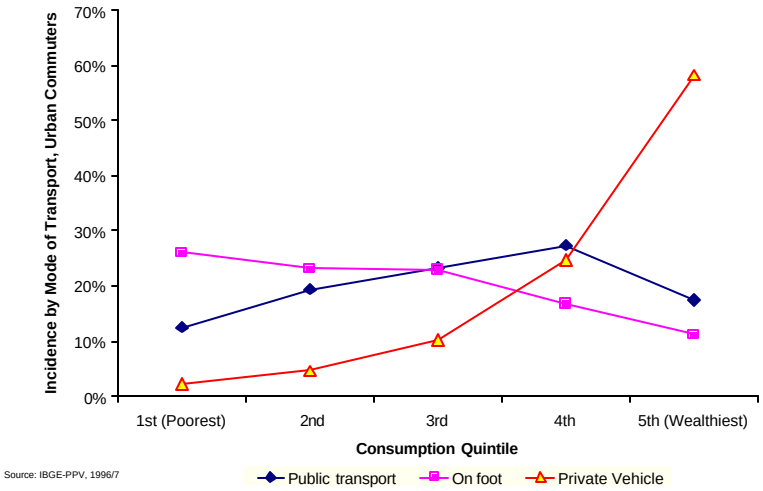


Table 26

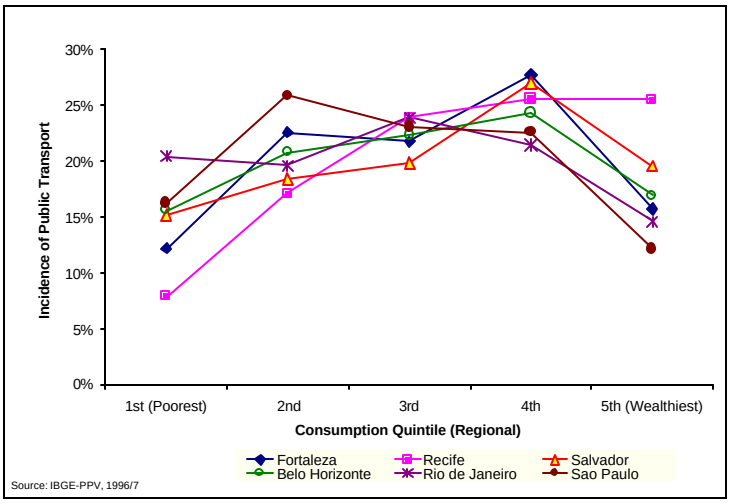
Share of workers in each consumption quintile using various modes of transportation to commute					
All NE and SE					
Transport Mode	1st	2nd	3rd	4th	5th
Public transport	17%	15%	15%	12%	10%
By foot	53%	48%	34%	32%	23%
Private vehicle	2%	2%	7%	17%	35%
Other	6%	6%	4%	6%	3%
None (work where reside)	23%	29%	40%	33%	29%
Total	100%	100%	100%	100%	100%

Table 27

Share of workers in each consumption quintile using various transportation to commute					
All urban					
Transport Mode	1st	2nd	3rd	4th	5th
Public transport	23%	20%	18%	15%	12%
By foot	48%	39%	26%	23%	14%
Private vehicle	2%	3%	9%	21%	42%
Other	7%	6%	4%	5%	2%
None (work where reside)	19%	32%	43%	36%	29%
Total	100%	100%	100%	100%	100%

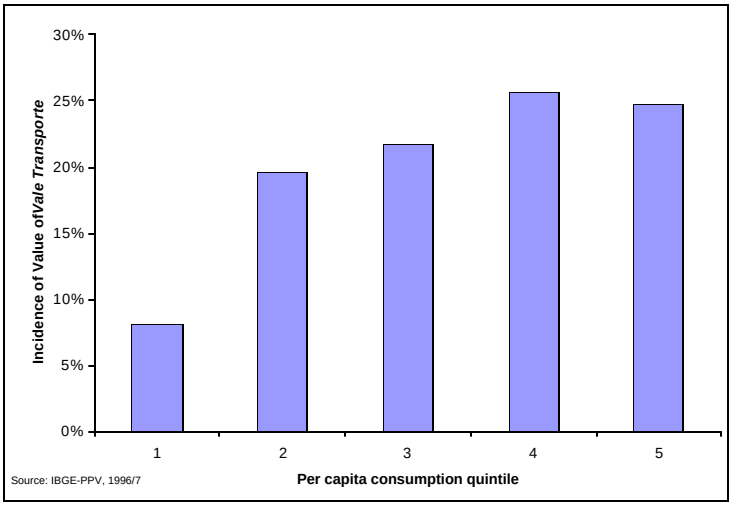
vestments in busways, suburban trains, and metros are not as well-targeted as many other social investments, their targeting is very favorable in comparison with investments geared toward individual automobile users, almost all of which come from the top two quintiles.

Figure 42 Incidence of Public Transport by Quintile



The transport voucher provided by employers (*Vale Transporte*) is tied to formal employment. Because the poor are typically employed only informally, transport voucher coverage among the first quintile is very low (7%) and the benefit incidence for the first quintile is even lower (6%). In fact, 25% of the transport voucher value accrues to the wealthiest quintile while only 8% of the value accrues to the poor (see Figure 43, Table 28, and Table 29).

Figure 43 Value Incidence of *Vale Transporte*, Urban Brazil



Water and Sanitation

The coverage of water and sanitation services increases strongly with consumption levels. Coverage with safe water ranges from 36% for the first decile to 96% for the wealthiest decile (see Table 30). Figure 44 shows the

Table 29

Distribution of the value of Vale Transporte received by workers across the consumption		
	Per capita consumption quintile	
	All NE and SE	All urban
1st	5.6%	8.1%
2nd	14.7%	19.7%
3rd	22.5%	21.7%
4th	26.4%	25.7%
5th	30.8%	24.8%
All	100.0%	100.0%

Table 28

Workers' access to Vale Transporte by consumption quintile.					
	Per capita consumption quintile				
	1st	2nd	3rd	4th	5th
All NE and SE	7.2%	13.0%	18.0%	19.0%	15.8%
All urban	13.1%	21.7%	19.6%	21.8%	14.4%

percentage of homes in each quintile that do not have access to safe water.

Table 30

Percentage living in households with access to safe water, by national consumption quintiles					
	Per capita expenditure quintile				
	1st	2nd	3rd	4th	5th
All NE and SE	36.1%	59.4%	77.9%	88.6%	95.8%
All urban	66.1%	81.6%	93.4%	95.1%	98.3%

Figure 44 Share of Quintiles living Without Access to Safe Water

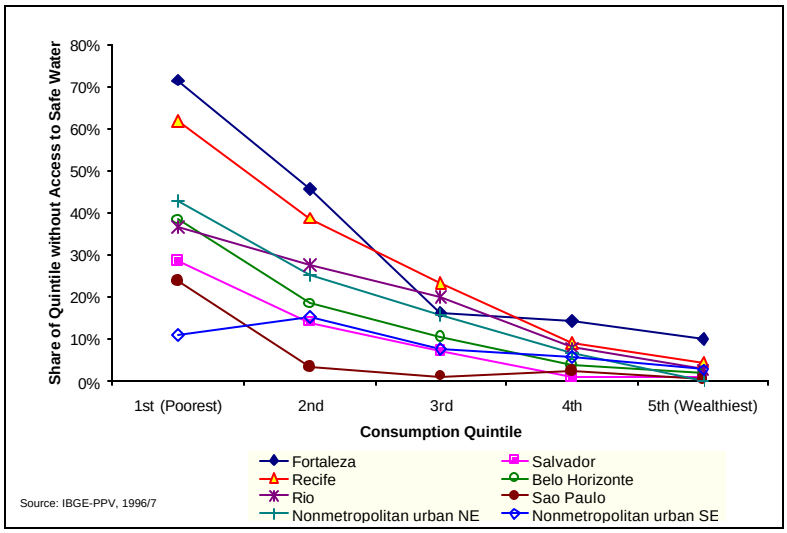


Figure 45 Coverage with Sewage Network

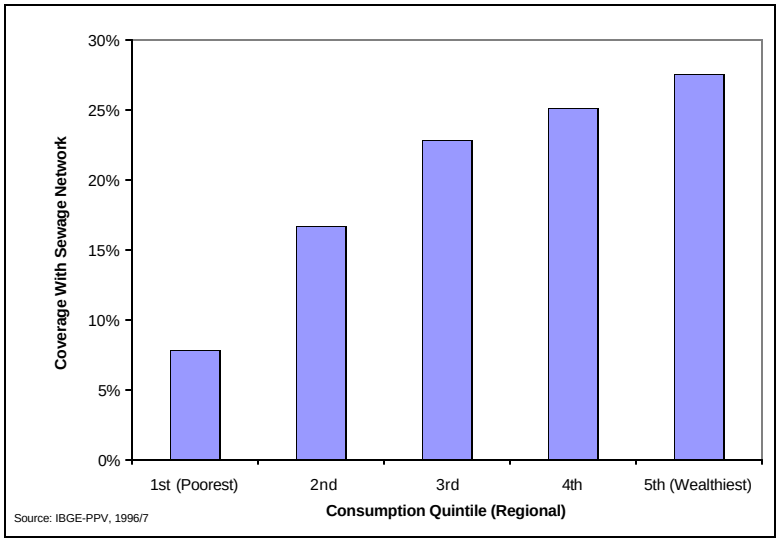


Table 31

Type of sanitation, by consumption group						
Per capita consumption quintile		1st	2nd	3rd	4th	5th
Public sewer		10.5%	35.1%	57.2%	72.6%	84.1%
Concrete cesspit		5.0%	14.1%	14.0%	10.6%	8.3%
Cesspool		26.6%	27.3%	18.1%	11.6%	5.9%
Ditch		5.6%	4.1%	3.7%	2.5%	0.1%
Other		7.8%	5.6%	2.6%	1.3%	1.5%
None		44.5%	13.9%	4.5%	1.3%	0.1%
All		100.0%	100.0%	100.0%	100.0%	100.0%

Public sewer connections reach from 11% for the first quintile to 84% for the top quintile. Figure 45 depicts the coverage of the sewer network, and Table 31 shows the percentage of households in each quintile that do not have access to any sanitation service. 45% of the poor live without any kind of sanitation service; only 0.1% of the wealthiest quintile live in the same condition. The incidence of services is regressive with 12% of water services accruing to the bottom quintile and 26% to the top quintile (see Table 32). The differences are higher for sewage network connection of which only 4% reaches the poor and 32% reaches the wealthiest 20% of the population, in terms of national quintiles (see Table 33).

It is important to note that the incidence of service connection corresponds to the incidence of current Government spending only if public spending covers a fixed amount of the current costs of services provided. If public spending is mostly on the investment costs for new connections, the incidence of spending can be significantly different from the incidence of current connections, which would then reflect the result of aggregate spending over the past. An approach for determining the incidence of incremental spending that would be appropriate in this case was recently proposed by Lanjouw and Ravallion (1998).

Table 32

Incidence of access to water network	
Consumption Quitile	All NE and SE
1	12.0%
2	17.0%
3	21.3%
4	24.0%
5	25.8%
All	100.0%

Table 33

NE AND SE COMBINED Incidence of the population by type of sanitation used						
	Dwelling connected to public sewer	**Concrete cesspit**	**Cesspool**	**Ditch**	**Other**	**None**
Per capita consumption quintile						
1st	4.0%	9.7%	29.7%	35.2%	41.4%	69.3%
2nd	13.5%	27.1%	30.4%	25.5%	29.9%	21.6%
3rd	22.0%	26.8%	20.2%	23.0%	13.9%	7.0%
4th	28.0%	20.4%	13.0%	15.7%	7.1%	2.0%
5th	32.4%	16.0%	6.6%	0.5%	7.7%	0.1%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Transfer Programs

The PPV allows for the analysis of two cash transfer programs: unemployment insurance and pensions. Since transfer payments from

Figure 46 Incidence of Unemployment Insurance Benefits

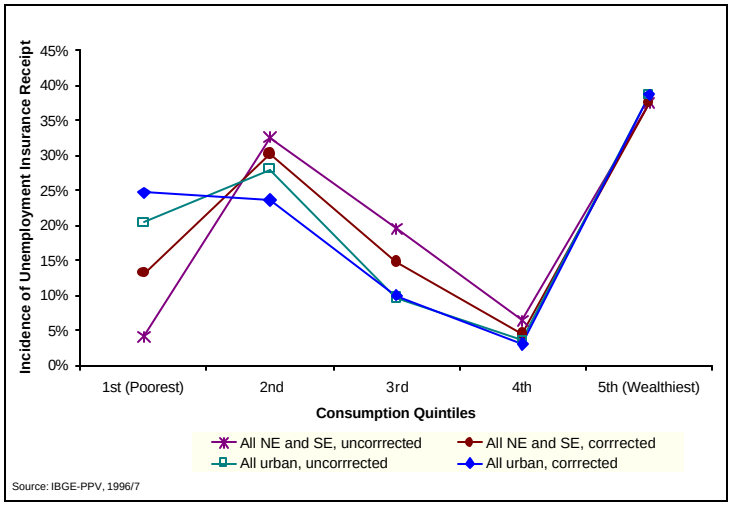
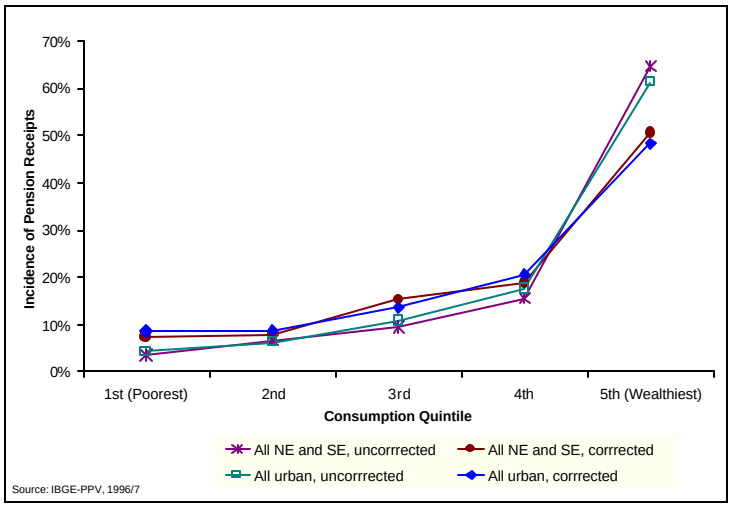


Figure 47 Incidence of Pension Receipts



these two programs can constitute a large proportion of household income, one important issue in the analysis of the incidence of transfer programs is the treatment of transfer payments in the construction of consumption quintiles. Two alternative approaches are followed in this paper. First, consumption quintiles are based on actual observed consumption (uncorrected quintiles). This approach does not consider that the consumption of beneficiaries would likely have been less if they had not received the transfer benefit. Incidence analysis following this approach may make a program look regressive exactly because it succeeds in lifting individuals out of poverty. To overcome this problem, corrected consumption quintiles were constructed by replacing actual consumption of beneficiary households with what consumption would have been in the absence of the transfer program. Consumption in the absence of a transfer program was calculated by estimating the coefficient that transforms income to consumption for different types of households and applying this coefficient to the reduction in income resulting from the elimination of transfer payments

The coverage of unemployment insurance is less than one percent for all quintiles with highest coverage in the second quintile (see Table 34). The incidence of the benefit amount is concentrated in the second and fifth quintiles with the first quintile receiving only 4% (uncorrected) or 13% (corrected) of the benefit (see Table 35 and Figure 46). While the concentration of benefits in the second quintile appears plausible (few workers in the first quintile are formal and thus eligible), the concentration in the fifth quintile deserves more detailed analysis. Although this anomaly could indi-

Table 34

Proportion of population in consumption quintile receiving unemployment insurance					
	Consumption Expenditure Quintile				
	1st	2nd	3rd	4th	5th
All NE and SE, uncorrected	0.1%	0.7%	0.4%	0.1%	0.4%
All NE and SE, corrected	0.3%	0.6%	0.3%	0.1%	0.4%
All urban, uncorrected	0.6%	0.7%	0.2%	0.1%	0.5%
All urban, corrected	0.7%	0.6%	0.2%	0.1%	0.5%

Table 35

Distribution of Unemployment Insurance, by Per Capita Household Consumption Quintile								
	Recipients				Amounts			
	All NE and SE		All Urban		All NE and SE		All Urban	
Consumption Expenditure Quintile	Uncorr	Corr	Uncorr	Corr	Uncorr	Corr	Uncorr	Corr
1st	6.9%	17.9%	28.4%	33.4%	4.1%	13.1%	20.3%	24.7%
2nd	40.3%	33.3%	32.1%	27.1%	32.5%	30.1%	28.0%	23.6%
3rd	21.8%	18.5%	9.6%	10.2%	19.5%	14.8%	9.6%	10.0%
4th	6.5%	5.9%	4.5%	3.9%	6.4%	4.5%	3.4%	3.1%
5th	24.4%	24.4%	25.4%	25.4%	37.5%	37.5%	38.6%	38.7%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

cate problems in the benefit administration, it could also be an artifact of the very low frequency of unemployment insurance recipients within the PPV sample.

The coverage of the population with pension benefits rises from 8% in the first (corrected) quintile to 16% for the wealthiest quintile (see Table 36). As expected for a program whose benefit levels are based on previous salaries, the incidence of the benefit is highly regressive with more than 50% of the benefit accruing to the wealthiest quintile and only 7% reaching the poorest quintile (see Table 37 and Figure 47).

Table 36

Proportion of population in consumption quintile receiving pensions					
	Consumption Expenditure Quintile				
	1st	2nd	3rd	4th	5th
All NE and SE, uncorrected	7.0%	10.5%	12.7%	13.9%	17.9%
All NE and SE, corrected	9.9%	11.0%	12.6%	13.4%	15.7%
All urban, uncorrected	8.2%	10.4%	13.4%	15.0%	18.3%
All urban, corrected	11.0%	11.4%	13.6%	13.8%	15.9%

Table 37

Distribution of Pensions, by Per Capita Household Consumption Quintile								
	Recipients				Amounts			
	All NE and SE		All Urban		All NE and SE		All Urban	
Consumption Expenditure Quintile	Uncorr	Corr	Uncorr	Corr	Uncorr	Corr	Uncorr	Corr
1st	9.7%	13.6%	11.7%	15.9%	3.6%	7.4%	4.3%	8.7%
2nd	16.0%	16.8%	14.9%	16.2%	6.7%	7.9%	6.2%	8.8%
3rd	19.8%	19.6%	19.8%	20.0%	9.5%	15.3%	10.8%	13.5%
4th	22.7%	22.4%	23.6%	21.8%	15.6%	18.8%	17.5%	20.7%
5th	31.8%	27.7%	30.0%	26.1%	64.7%	50.5%	61.2%	48.3%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

4. Poverty Incidence of Social Spending

This section attempts to combine the incidence data from the PPV with actual social spending data for Brazil. While the program incidence analysis and the classification of social spending are independently reliable pieces of analysis, the combination of the two introduces a series of concerns and requires several quite strong assumptions. As a result, the following analysis should be viewed as highly tentative. It should provide stimulation for further more detailed investigation along the lines proposed rather than be taken as a definitive judgment about the incidence of social spending in Brazil.

Social spending data is taken from a series of studies undertaken by IPEA (Fernandes) and refer to consolidated spending in 1995, with some updating to reflect more recent information.

Table 38: Summary of Consolidated Social Spending, 1995 with Updates

	Effective Targeting to bottom 20%*	Benefit-Cost Ratio	Total Budget Spending (R$bn/a)	Budget Spending per Total benefit to Poor	Budget Spending per Current Benefit to Poor	Total benefits to poor in cash (R$bn/a)	Total benefits to poor in kind (R$bn/a)
Benchmarks							
General Investment	3%	1.0		33.3	208.3		
Uniform Transfer Payment	20%	0.8		6.3	6.3		
Education							
Creche	24%	1.0		4.2	26.3		0.00
Kindergarten	42%	1.0	1.1	2.4	14.9		0.45
Basic Education	26%	1.0	11.6	3.8	24.0		3.00
Secondary Education	7%	1.0	1.7	13.5	84.5		0.13
University Education	0%	1.0	5.1				0.00
Adult Education/Training	5%	1.0	0.4	22.2	138.9		0.02
Health Care							
Universal Public Health Care	16%	1.0	21.8	6.1	38.3		3.55
Urban Investments							
Water Connection	12%	1.0	1.4	8.3	52.1		0.16
Sewer Connection	4%	1.0		25.0	156.3		0.00
Urban Public Transport	9%	1.0	2.6	11.1	69.4		0.24
Housing (Carta de Credito)	*2%*	1.0	7.2	50.0	312.5		0.14
Favela Upgrading	34%	1.0		2.9	18.2		0.00
Other Social Investments							
Microcredit Programs	*20%*	1.0		5.0	31.3		0.00
Land Reform	*70%*	1.0	2.0	1.4	8.9		1.40
Pension and Related Programs							
Pensions	7%	0.9	67.6	15.0	15.0	4.50	
BPC (LOAS)	*70%*	0.9	1.2	1.6	1.6	0.76	
Social Assistance Services							
Old Age Services	*50%*	0.8	0.0	2.5	2.5		0.01
Disabled Services	*50%*	0.8	0.1	2.5	2.5		0.02
Child Services (Kindergarten)	42%	0.8	0.2	3.0	3.0		0.07
Subnational Social Assistance Progra	*70%*	0.8	1.9	1.8	1.8		1.06
Other Transfer Programs							
Child Labor Eradication	*80%*	0.8	0.1	1.6	1.6	0.04	
Minimum Income Programs (subnatio	*70%*	0.8	0.0	1.8	1.8	0.01	
Nutrition Programs							
Food Baskets (PRODEA)	*80%*	0.8	0.2	1.6	1.6		0.10
School Lunches	25%	0.8	0.7	5.0	5.0		0.14
Maternal Nutrition (Milk Programs)	29%	0.8	0.1	4.3	4.3		0.03
Labor Programs							
Unemployment Insurance	13%	0.8	3.0	9.5	9.5	0.32	
Severance Payments (FGTS)**	*13%*	0.8		9.6	9.6		
Abono Salarial	*13%*	0.8	0.6	9.6	9.6	0.06	
Others							
Drought Workfare (in drought years)	*70%*	0.9	1.2	1.6	1.6	0.76	
Summary/Total	13%		131.8			6.44	10.53

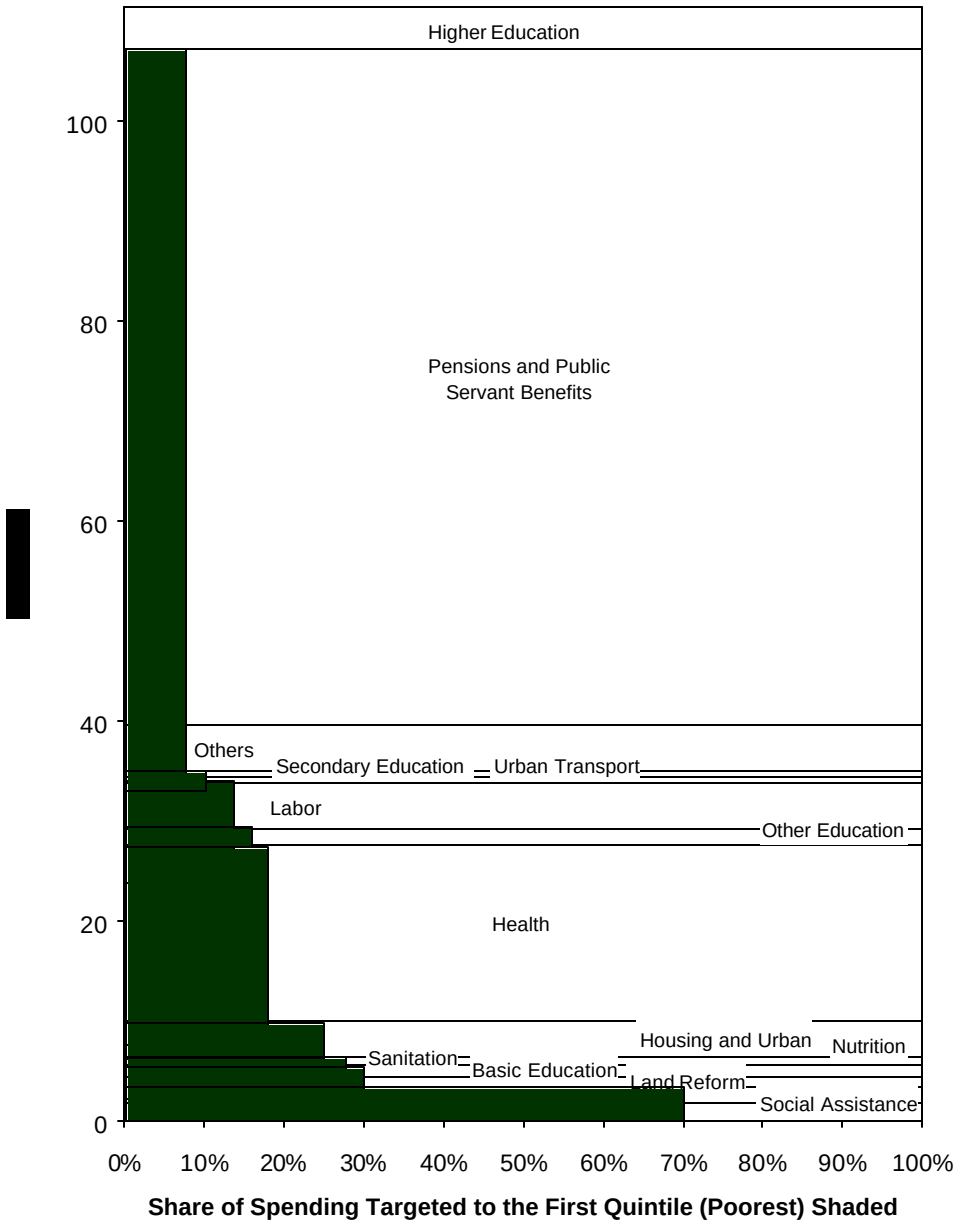
* Targeting numbers in *italics*, are staff estimates, not based on household surveys

** No budgetary spending

Sources: IPEA, Fernandez et.al., World Bank staff estimates, includes updates to reflect more recent program changes.

In order to arrive at crude estimates of benefit incidence, it is assumed that investment programs generally have a benefit-cost ratio of one, while different transfer programs have a benefit-cost ratio of 0.8 or 0.9 reflecting different levels of administrative costs. In addition, programs are classified into those that provide in-kind benefits such as health care, water, and sanitation, and those that provide or lead to benefits predominantly in cash, which includes transfer programs but also in kind services such as education whose benefit is a stream of increased cash income. Finally, immediate benefits (from transfer programs) are separated from those that accrue as a benefit stream over an extended period of time

Figure 48: Structure and Targeting of Federal Social Spending, 1997



(such as education and other investments).

For social spending items that cannot be directly related to the analysis of the PPV, assumptions on targeting are made based on comparability with other programs. These assumptions introduce additional uncertainty in the aggregate estimates.

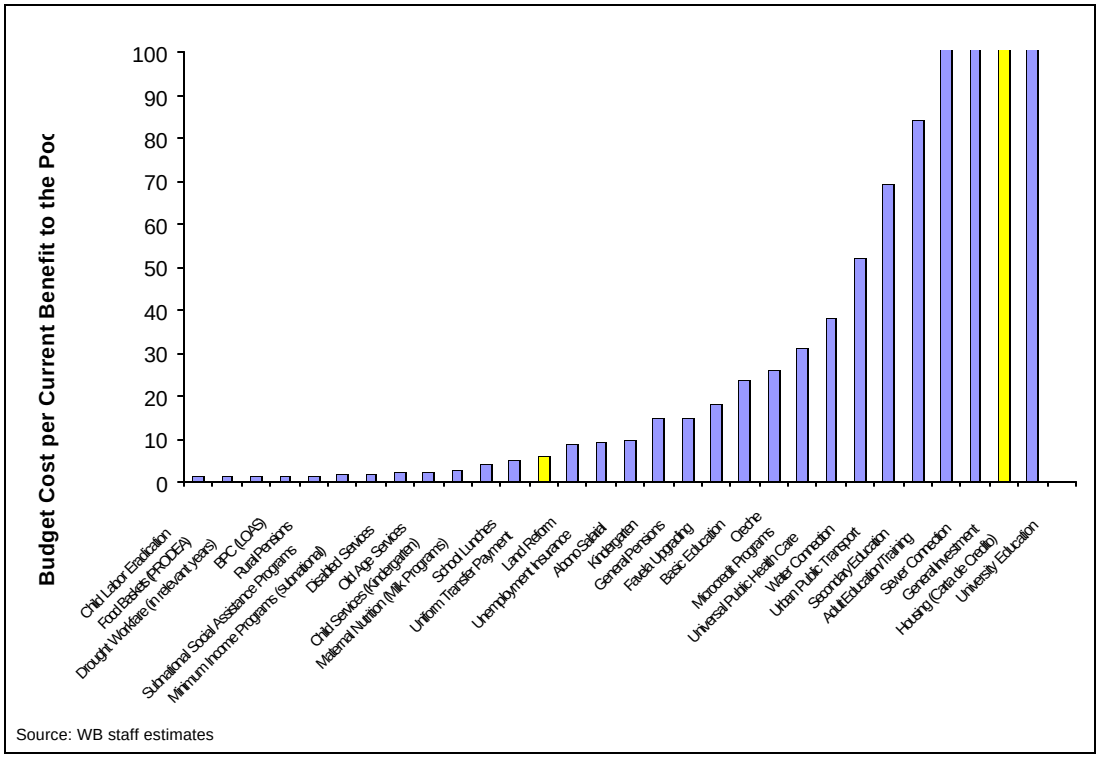
Table 38 summarizes the main items of consolidated social spending in Brazil in 1995. The overview shows social spending of approximately R$132 billion, of which R$ 68 billion refer to social security and public service benefits. Of this spending, R$17 billion or 13% accrue to the first quintile. These benefits to the poor can be divided into cash (R$6.5 billion) and in-kind benefits (R$10.5 billion). Benefits include those accruing immediately (transfer programs) or over the lifetime of beneficiaries (education). Excluding social security and related items, social spending amounts to R$64 billion, of which about R$12.5 billion (or 19.5%) accrues to the first quintile.

Figure 48 shows the structure and targeting of Federal social spending in 1997. The chart excludes subnational spending, which is significant especially for education and health care. The full box of the chart represents the size of federal social spending (R$111 billion). Each horizontal slice represents a different category of spending, ordered by the targeting ratio (share of spending accruing to the bottom quintile). For each slice, the shaded area shows the share of spending in a particular category that accrues to the bottom quintile of the population. The total shaded area in the chart therefore represents the share of total federal social spending that accrues to the bottom quintile.

Table 38 includes two indicators of targeting effectiveness for each program. The first indicator is the budgetary cost per current benefit to the poor. The second indicator is the budgetary cost of total transfers to the poor. The latter indicator is calculated as the inverse of the benefit cost ratio times the targeting ratio. For the comparison of budgetary cost per current transfer, the benefit cost ratio is replaced by the ratio of current benefits to costs (benefits accruing within one year). As a reference, Table 38 also includes two benchmarks that are hypothetical and do not refer to actual social programs. The first benchmark is general productive investment in the economy generating a market rate of return and assuming a distribution of returns proportional to Brazil's income distribution. The second benchmark is a hypothetical universal transfer program that would distribute an equal cash amount to every Brazilian (poor or non-poor) at an administrative cost of 20%.

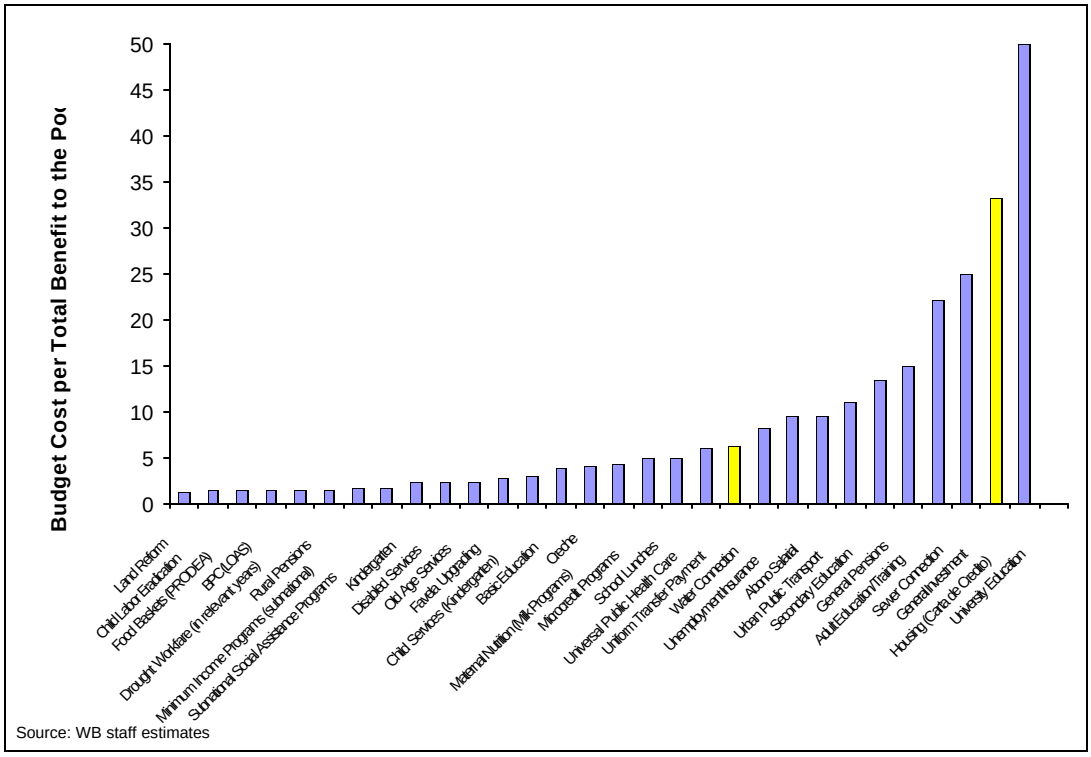
Figure 49 and Figure 50 show a ranking of social programs by their cost effectiveness in transferring either a current or a total amount of resources to the bottom quintile. Theoretically, the ranking of Figure 50 should guide resource allocation if the only objective of all these programs was long-term poverty reduction. If the objective was immediate transfer to the poor (in case of an emergency situation), the ranking of Figure 49 should guide resource allocation.

Figure 49 Budget Cost Per Current Benefit to the Poor



Source: WB staff estimates

Figure 50 Budget Cost Per Total Benefit to the Poor



Source: WB staff estimates

Figure 51 graphically compares programs along three dimensions: each bubble represents one spending program; the size of each bubble is proportional to annual per household spending (annualized in the case of investment programs) showing the relative importance of the program to beneficiaries; the horizontal position of the bubble shows the level of targeting of the program to the bottom quintile; the vertical position of the bubble shows the reach (coverage) of the program among the bottom quintile. Programs in the lower left corner are poorly targeted and do not reach many of the poor. The largest of these are pensions, unemployment insurance, sewage provision, and secondary education. Programs in the bottom right corner are those well-targeted but only reaching a small share of the poor (typically social assistance programs). Programs near the top left are universal programs, especially water and public health. Public pre-primary and primary education is better targeted but reach differs by level. For reference, the impact of distributionally-neutral, annual growth of 4% is shown in the top left corner.

The analysis presented in Figure 49, Figure 50, and Figure 51 is instructive and permits the quantitative comparison of a wide range of very diverse social programs. However, several limitations need to be considered before drawing simplistic and premature policy conclusions from this analysis. These limitations imply that the analysis cannot be used as a direct guide to resource allocation but as a departure point for further in-depth analysis.

a) The analysis ranks program by their effectiveness to transfer resources to the poor. However, many of the analyzed programs have additional objectives that need to be considered in a more comprehensive evaluation. For example, programs such as social security and unemployment insurance have an insurance function independent of their social objectives. Many investment programs also have a growth objective.

b) For several programs, non-monetary benefits for the poor are difficult to measure. Therefore, the assumed benefit-cost ratio may well underestimate benefits of several programs.

c) Targeting typically refers to average spending in the recent past. New and additional spending may, however, have a different incidence. For example, the average targeting of sewage investments in the past has been very regressive. However, as coverage of the better-off population increases, additional investment may be better targeted.

Despite the important limitations, the analysis suggests some interesting conjectures:

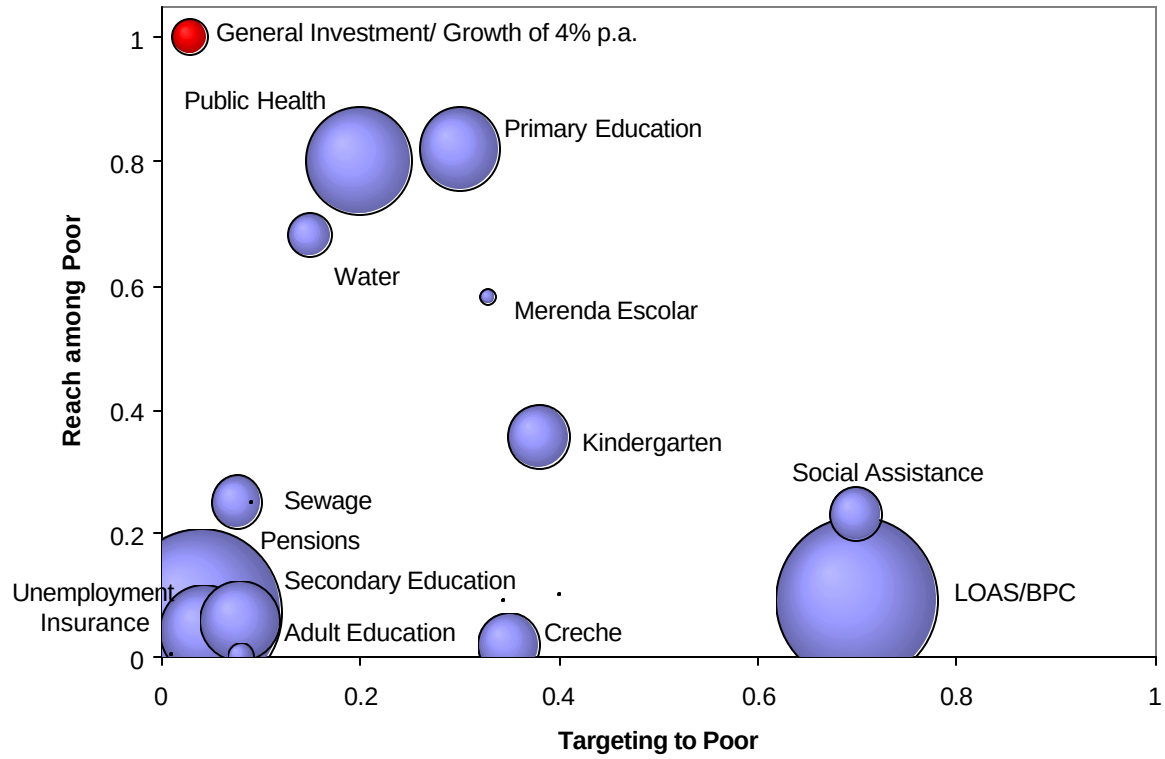
a) As to be expected, social investments (education, urban services) rank poorly in their effectiveness to transfer resources in the short term. Counting all benefits through, some of these investments have benefits that exceed those of some transfer programs. Prioritization depends on whether the objective is short-term relief or medium to long term poverty reduction.

b) Many programs are less cost-effective in transferring total benefits to the poor than a hypothetical uniform transfer payment (many urban investments, secondary, adult, and higher education, social security, and unemployment insurance, among others). Since these programs do not withstand a simple cost-effectiveness test from a pure poverty reduction perspective, they should be justified on grounds not captured in this analysis.

c) Figure 51 suggests a trade-off between targeting and reach among

the poor. The more complete the reach to the poor, the more difficult it is to control leakage. This is the challenge faced in up-scaling small and well-targeted social development programs. The challenge is to either reallocate funds from programs with inadequate reach and targeting to programs further away from the top left corner, or to re-design existing programs such that they move toward the top right corner, representing better targeting and wider reach among the poor.

Figure 51 Reach and Targeting of Social Programs



Source: WB staff estimates

5. Conclusions

This paper summarizes the coverage and targeting of selected social spending programs in Brazil and compares the relative effectiveness of different programs in transferring resources to the poor.

The main conclusions of this paper are that only a relatively small share (13%) of social spending (including pensions) reaches the poor and that many programs are less effective than a hypothetical uniform transfer program to all Brazilians (poor or non-poor) in allocating resources to the poor.

In highlighting programs that are not well-targeted toward the poor, this paper attempts to provide suggestions regarding a possible reallocation of spending between and within program areas that would improve social targeting and help alleviate poverty.

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