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*A new incidence analysis of Brazilian social policies using
multiple data sources*

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A New Incidence Analysis of Brazilian Social Policies Using Multiple Data Sources¹

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Introduction

Brazil is a country where the poorest 50% earn around 10% of its aggregate labor income while the wealthiest 10% earn approximately 50% of total labor earnings³. The high degree of labor income inequality has kept a substantial part of the population below the poverty line, despite the relatively high per capita earnings observed. Consequently, the small share of total GDP appropriated by labor is as worrisome as the degree of labor earnings inequality found in Brazil. While most countries—with this data available—show that the share of total GDP appropriated by labor corresponds to $\frac{2}{3}$ of total GDP, in Brazil, this value is around 40%. Almost every study on Brazilian income distribution uses information solely on income, and in particular, on monthly labor earnings, so that the remaining 60% of income not appropriated by labor is neglected, contributing to our ignorance about the degree of Brazilian inequality.

The main task of this paper is to assess inequalities in terms of access to different social policies in the 1996-2002 period. This means using a larger variety of welfare sources. A related issue is to incorporate the effects of the provision of public goods and the so-called social services, either public or private, in the assessment of the welfare level of the income poor population.

A harder and more fundamental question not pursued here is the role played by capital accumulation on the income generating potential of the poor. This would help to direct the type of capital enhancing policies to implement. However, a decisive step in this direction is to study the relationship between social policies and income distribution outcomes. The incidence analysis will be structured under four headings:

Human capital (education and health)

Physical capital (housing credit)

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³ The share of richest 10% was 48%, while that of the poorest 50% poorest was 11% during the same year.

Public goods (infrastructure and public services)

Income Transfers (Minimum income, conditional cash transfers, pensions)

The two first categories are conceptually easier to quantify. One of the best examples of successful applied empirical work in Brazil⁴. According to this literature, there exists a strong link between education and distribution in Brazil: the variable completed years of schooling explains between 35% to 40% of observed wage differentials. On the other hand, the literature on the quality of education has been emerging within the Brazilian context.⁵. We will devote a substantial section to education and to its relation to income distribution. Access to health services, its prices and quality will be evaluated from the special supplements from PNAD in 1998 and 1981.

The access to basic public goods and services, like water, sewerage, electricity, communications, and public transportation are straightforward to measure using standard household surveys. Once again, the main contribution is to combine public and private aspects of the supply of these services.

The effects of private and public income transfers on poverty outcomes should not be restricted to its impacts on mean per capita income (or mean unsatisfied needs) but include as well its informal risk reduction function. Take the example of the family, the most basic unit of organization and coordination: the contribution of the poor family's cash remittances to household welfare is certainly greater than the expected increase per capita permanent income. This new source of income also helps to diversify risks of those that are close to their surviving constraint. By the same token, the main contribution of institutions, such as unemployment insurance and social security (especially the fully funded schemes), to social welfare is probably not only redistributive but also reduces individual risks.

The biggest contribution of this study is to open new data sources for the incidence analysis of the items mentioned above or to update the analysis for recent times. Following the long established tradition of household surveys, in this paper we used the following sources of microdata:

Pesquisa Nacional de Amostras a Domicilio - PNAD (an annual national household survey). This is an annual household survey performed in the third quarter that

⁴ The assessment of returns to education and its main determinants, the provision of education as a public good, the evasion of children from school, education and inequality, the influences of community variables, has been analyzed in detail by innumerable studies in Brazil (see, in particular, the work of Ricardo Barros in the references).

⁵ The exception may be the literature on land (Ganziroli (1990 and 1992) and Silva (1987) and housing (Prado e Pelin (1993) and Lucena (1985)).

interviews 100,000 households every year. It has been conducted by the Instituto Brasileiro de Geografia e Estatística - IBGE since 1967.

This survey has extensive information on personal and occupational characteristics of individuals. The PNAD has detailed information on the possession of durable goods and on housing conditions since its start. It underwent a major revision between 1990 and 1992 increasing the size of the questionnaire from 60 to 130 questions. The new questionnaire, available from 1992 onwards, has information on the value spent in rent and a series of new public services were included in the questionnaire.

Pesquisa de Orçamentos Familiares - POF: This consumer expenditure survey was performed only twice in 1987 and 1996 by the IBGE. It covers the eleven main Brazilian metropolitan regions. Besides information regarding personal and occupational characteristics of individuals, the survey has a very broad and disaggregated data on income sources, consumption expenditures and on the importance of public and private social services impact on households' budgets.

Pesquisa Mensal do Emprego - PME: This monthly employment survey is performed in the six main Brazilian metropolitan regions by the IBGE. It has covered an average of 40000 monthly households since 1980 until 2002. This survey also has detailed features on personal characteristics and labor earnings of all household members above ten years of age, allowing us to calculate social welfare measures based on labor earnings. We are innovative by presenting poverty evolution and per capita income distribution measures until 2002 (the last PNAD available is 2001), opening metropolitan areas into core and periphery.

Amostra dos Censos: We use the sample of Demographic Census for 1991 and 2000. One advantage is that the Census covers the whole country so other items captured by PNAD and PPV such as access to public services, housing among others are represented at the national level. The questions related to education including different levels (i.e. day care) and special types of education (i.e. adult literacy programs) are beneficial aspects. Finally, income categories—more modern than that of other household surveys—allow us to capture the incidence of the new generation of Brazilian compensatory policies (e.g., bolsa-escola, renda minima) and private income transfers.

Suplemento Especial sobre Saúde da PNAD: The PNAD Special Supplement on Health (for 1981 and 1998) allow us to analyze in detail the incidence of access of health services, the cost paid and the quality of services according to income distribution.

2. Data Strategy for Incidence Analysis

The task of reducing poverty in a context of economic crisis observed in Brazil during the last five years seems more imposing and challenging. In order to properly assess policies that have been implemented and the effect of those expecting to come into place, we must look at the efficiency of public social spending in all aspects of society. By doing such, we are then capable of determining whether or not public social spending has been well targeted and effective in achieving its goals. In undertaking this task, we will analyze consolidated social spending, having as main categories income deciles, per capita family income below half a minimum wage (or other program eligibility criteria) and regional dimensions. As the databases stemming from the household surveys are those belonging to larger samples and degrees of freedom, by working with income deciles we do not need to commit to a single specific poverty line. In reference to the project, we will provide an incidence analysis based on household surveys, in accordance to the subjects listed in Table 28, in page 88, of the Bank's Report No. 20475-BR, "Attacking Brazil's Poverty."

With respect to the subcategories of education, we will use data found in the Census. Through this data, we are capable of distinguishing between public and private education at all school levels, from day care centers to higher education. We will also complement this information with data derived from the PNAD. In the specific subcategory of Adult Education/Training, we will only be able to capture adult alphabetization programs.

In the following item, that of Universal Public Health Care, we will use POF/IBGE to attain the amount of private spending on health care according to income deciles. In order to obtain a deeper comprehension on this category, we shall also use the PNAD 98 Special Supplement on Health, which provides a richer variety of information. We will compare the data from the PNAD 98 Health Supplement with that of the PNAD 81, thus establishing a temporal analysis before and after the 1988 Constitution that among other things promoted the universalization of health services.

In the next category, we again use both household surveys to attain a better grasp and thus a deeper analysis. In the items related to Water and Sewer Connections, Urban Public Transport and Housing, we are capable of capturing the total amount spent according to income deciles through the POF. Access rates will be measured using PNAD.

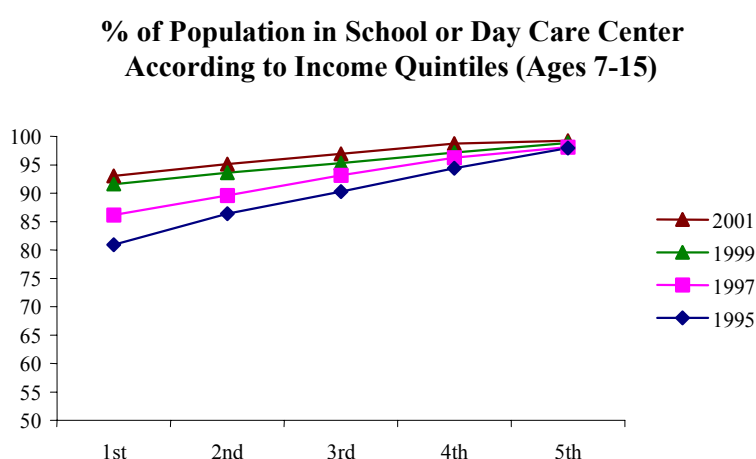
In the items pertaining to Pensions and Social Assistance Services, we hit an impasse, as although we are capable of identifying social security payments, we are unable of disentangling their origin, determining whether they were public or private. However, we are successful in determining the specific groups receiving these transfers. In particular, we are able to identify seniors (67 years of age or older) receiving BPC (LOAS), disabled individuals and children. As such, our strategy is to evaluate the amount of public transfers reaching each group, but not to discriminate the specific programs these transfers originate from.

We will present a detailed description of each household survey structure and its data used in the empirical exercises performed from an analytically based perspective. The overall goal of this project will be to gauge how progressive is the incidence of past policies and thus assess desirable changes in present and future policies.

3. Education

The following tables show the relationship between the distribution of income (according to quintiles) and education. By providing this relationship throughout a variety of years, we are able to capture the changes in education throughout time. We can see that as income grows, so does the probability of staying in school, without being held behind. Of all the years with data available, the year with the highest percentage of children, between the ages of seven and fifteen, in school was 2001. This is perceived as a result of Bolsa-Escola, the program within the Alvorada Project to increase attendance in schools, improving education. This concept is supported by the fact that we see a dramatic increase in the percentage of children from the lower quintiles of income distribution, more so than that of the wealthiest quintiles.

Figure 1



Source: CPS/FGV based on microdata from PNAD/IBGE.

The probability of children attending school or a day care center, if those children belong to the lower quintiles, shifted from 80.91% to 93.07% during the years of 1995 to 2001. There was then a convergence in the education system, as can be seen in Figure 1, since the gap between the wealthiest and poorest quintiles decreased intensely, from a divergence of seventeen percentage points to one of six percentage points. In Table 1, we see how the Bolsa-Escola program contributed to the increase in school attendance. Table 1 shows the incidence analysis of school attendance for children between the ages of seven and fifteen—the ages eligible for the Bolsa-Escola program. Other than age, income is also a criterion for eligibility to Bolsa-Escola, the

cut-off point being those with more than half a minimum wage household income per capita. From 1995 to 2001, the proportion of seven to fifteen year olds—belonging to families with less than half one minimum wage family income per capita—in school increased from 81.94% to 93.31%. The increase of the percentage of children in school shows the success of Bolsa-Escola and other education targeting programs.

We also observe that the average education of the household's head has also increased, specially in the poorer half of the population, as can be noticed from Figure 2. Figure 3 shows similar results for the spouse of the household head, however, as is noticed here, overall there is a greater variation between 1996 and 2001 in this category than in head's education level, captured consistently in the wealthiest half of the population.

Figure 2

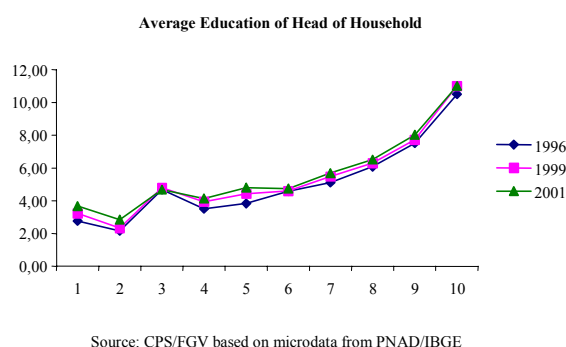
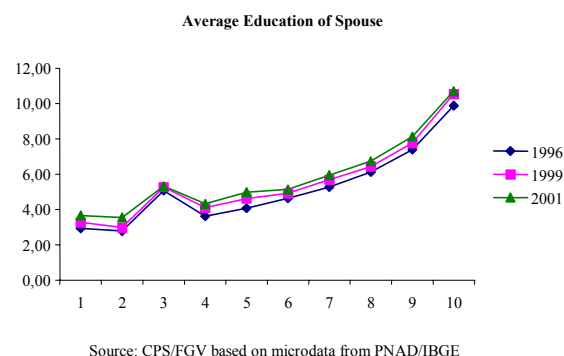


Figure 3

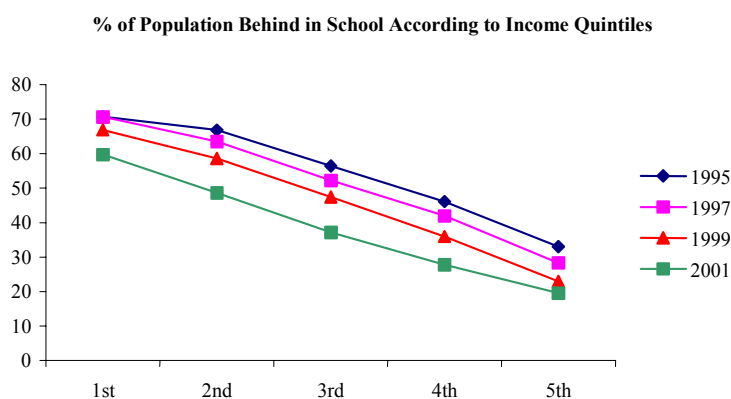


In accordance to Table 2, we observe that for almost every decile in all three years of sampling, the spouse's education was above that of the head. We also notice that the variation coefficients for the lower deciles of the population are always greater than those belonging to wealthier segments of the population. At times, the variation coefficient of the first decile was almost three times as much as that of the tenth decile.

In addition to the growth in numbers of population attending school, we also observe a decrease in the amount of children being left behind in school, an indicator of school quality. Again we use the sample of children between seven and fifteen, as these are the ones benefiting from Bolsa-Escola. As seen in Figure 4, there has been a significant decrease in the percentage of children repeating the academic year and thus being left behind. The most significant shift in the number of students behind in school occurred from 1999 to 2001. During this period, all but the top quintile experienced a significant fall in the repetition rate; it varied between seven and ten percentage points. When looking at the broad scenario of 1995 to 2001, we learn that the groups benefiting

the most from the investment in the quality of education were the top four income quintiles. In fact, the third quintile experienced a drop of almost twenty percentage points in the proportion of children behind in school, while the first and fifth quintiles experienced an eleven and a thirteen points drop, respectively.

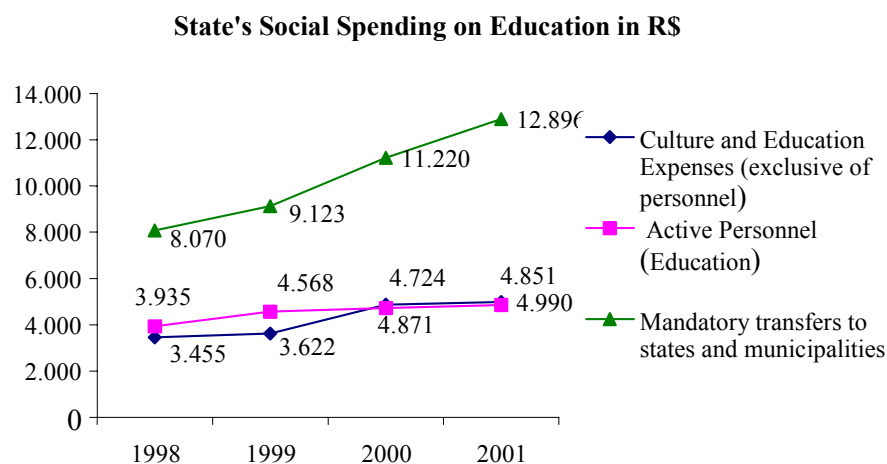
Figure 4



Source: CPS/FGV based on microdata from PNAD/IBGE.

In terms of expenses devoted to education, we find that over the course of the past four years, the government's social expenditure on education has increased in gross values.

Figure 5

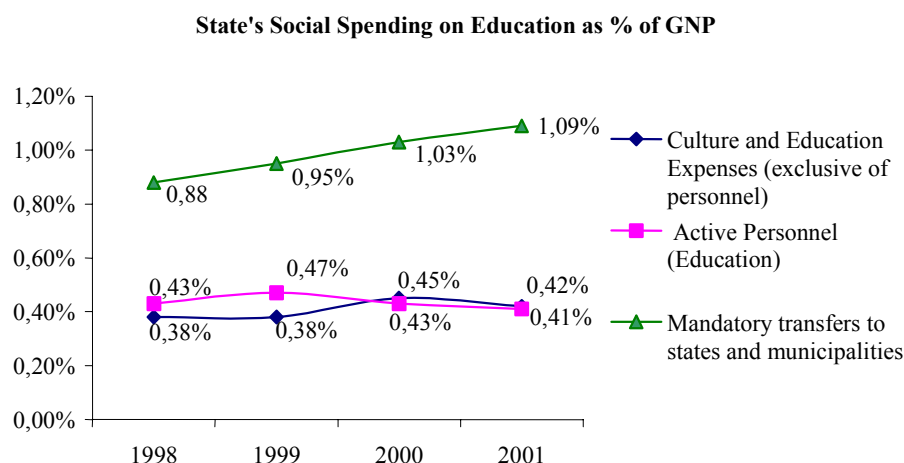


Sources: SIAFI, TEM/FAT, BACEN, MPAS, MF/SRF, MF/STN, BNDES
Elaboration: CPS/FGV

However, in terms of percentages of GNP, it has shown a movement without pattern. While mandatory transfers to states and municipalities (mainly FUNDEF) have increased in percentage of GNP, the percentage of GNP spent on active personnel in

education has decreased, although the gross value went from R\$3,935 million in 1998 to R\$4,851 million in 2001. A detailed disaggregated table of the components of these three educational expenses is found in Table 3.

Figure 6

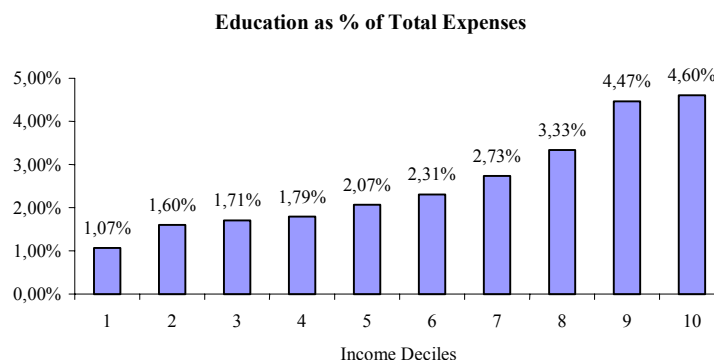


Sources: SIAFI, TEM/FAT, BACEN, MPAS, MF/SRF, MF/STN, BNDES

Elaboration: CPS/FGV

We are unable to tell whether private expenses in education have increased or decreased over the course of the last four years. Currently, the only data available providing this information is the 1995/1996 POF. By the time this paper is concluded, the new POF—currently at the field level—will have been concluded, although not released. For the sake of future reference, we provide the results from the 1995/1996 POF. In it, we find that as income grows, so does the proportion of education expenses in relation to total expenses.

Figure 7



Source: CPS/FGV based on microdata from Pesquisa de Orçamento Familiar 1995/1996 IBGE

Table 1

Incidence Analysis - School Attendance 2001
Brazil: Population Between 7-15 Years of Age

	Total Population	Attends School or Day Care Center (%)		
		Yes	No	Missing
Total Population	100	95.42	4.57	0.01
Household Income per Capita				
Up to Half a Minimum Wage	100	93.31	6.68	0.02
Above Half a Minimum Wage	100	97.24	2.75	0.01
Household Income per Capita 1999				
Up to Half a Minimum Wage	100	93.18	6.8	0.02
Above Half a Minimum Wage	100	96.93	3.06	0.01
Household Income per Capita Quintile				
1st	100	93.07	6.91	0.02
2nd	100	95.12	4.88	.
3rd	100	96.88	3.11	0.01
4th	100	98.71	1.29	.
5th	100	99.23	0.74	0.02
Head's Income Quintile*				
1st	100	93.3	6.67	0.03
2nd	100	95.02	4.98	.
3rd	100	97.01	2.99	.
4th	100	98.25	1.75	.
5th	100	99.26	0.72	0.02
Missing	100	93.99	5.99	0.01

Source: CPS based on microdate from PNAD 2001/IBGE.

* In families with more than one child, these variables were accounted for more than once, in accordance to the number of children.

Incidence Analysis - School Attendance 1997
Brazil: Population Between 7-15 Years Old

	Total Population	Attends School or Day Care Center (%)		
		Yes	No	Missing
Total Population	100	91.59	8.38	0.03
Household Income per Capita				
Up to Half a Minimum Wage	100	86.98	13.01	0.01
Above Half a Minimum Wage	100	94.46	5.5	0.04
Household Income per Capita 1999				
Up to Half a Minimum Wage	100	86.98	13	0.01
Above Half a Minimum Wage	100	94.52	5.44	0.04
Household Income per Capita Quintile				
1st	100	86.17	13.82	0.01
2nd	100	89.65	10.3	0.05
3rd	100	93.16	6.78	0.06
4th	100	96.28	3.7	0.02
5th	100	98.15	1.84	0.01
Head's Income Quintile*				
1st	100	86.24	13.75	0.01
2nd	100	88.04	11.91	0.05
3rd	100	92.56	7.42	0.01
4th	100	95.65	4.3	0.05
5th	100	98.25	1.73	0.02
Missing	100	90.05	9.9	0.05

Source: CPS based on microdate from PNAD 1997/IBGE.

* In families with more than one child, these variables were accounted for more than once, in accordance to the number of children.

Incidence Analysis - School Attendance 1999
Brazil: Population Between 7-15 Years of Age

	Total Population	Attends School or Day Care Center (%)		
		Yes	No	Missing
Total Population	100	94.6	5.37	0.03
Household Income per Capita				
Up to Half a Minimum Wage	100	92.04	7.92	0.03
Above Half a Minimum Wage	100	96.34	3.63	0.03
Household Income per Capita Quintile				
1st	100	91.58	8.38	0.04
2nd	100	93.58	6.39	0.03
3rd	100	95.32	4.66	0.02
4th	100	97.19	2.8	0.01
5th	100	98.8	1.15	0.05
Head's Income Quintile*				
1st	100	91.48	8.49	0.03
2nd	100	92.71	7.26	0.03
3rd	100	95.36	4.61	0.03
4th	100	97.44	2.55	0.01
5th	100	98.44	1.52	0.04
Missing	100	92.97	7	0.03

Source: CPS based on microdate from PNAD 1999/IBGE.

* In families with more than one child, these variables were accounted for more than once, in accordance to the number of children.

Incidence Analysis - School Attendance 1995
Brazil: Population Between 7-15 Years Old

	Total Population	Attends School or Day Care Center (%)		
		Yes	No	Missing
Total Population	100	88.49	11.49	0.02
Household Income per Capita				
Up to Half a Minimum Wage	100	81.94	18.06	0
Above Half a Minimum Wage	100	92.47	7.5	0.03
Household Income per Capita 1999				
Up to Half a Minimum Wage	100	82.02	17.97	0
Above Half a Minimum Wage	100	92.59	7.38	0.03
Household Income per Capita Quintile				
1st	100	80.91	19.09	.
2nd	100	86.39	13.6	0.01
3rd	100	90.29	9.64	0.07
4th	100	94.36	5.62	0.01
5th	100	97.93	2.05	0.02
Head's Income Quintile*				
1st	100	81.13	18.87	.
2nd	100	81.62	18.38	.
3rd	100	89.05	10.91	0.04
4th	100	94.04	5.91	0.05
5th	100	97.58	2.42	.
Missing	100	86.83	13.15	0.02

Source: CPS based on microdate from PNAD 1995/IBGE.

* In families with more than one child, these variables were accounted for more than once, in accordance to the number of children.

Table 2

Incidence Analysis - School Attendance 2001 Brazil: Population Between 7-15 Years of Age				
	Total Population	Attends School or Day Care Center		
		Yes	No	Missing
Total Population	29772522	28408605	1360176	3741
Household Income per Capita				
Up to Half a Minimum Wage	13776879	12854518	919785	2576
Above Half a Minimum Wage	15995643	15554087	440391	1165
Household Income per Capita 1999				
Up to Half a Minimum Wage	12006577	11187771	816230	2576
Above Half a Minimum Wage	17765945	17220834	543946	1165
Household Income per Capita Quintile				
1st	11391868	10602580	786712	2576
2nd	7291329	6935741	355588	
3rd	4897043	4744388	152089	566
4th	3628216	3581471	46745	
5th	2564066	2544425	19042	599
Head's Income Quintile*				
1st	8656200	8076597	577239	2364
2nd	4731972	4496526	235446	
3rd	4409479	4277652	131827	
4th	3235743	3179199	56544	
5th	3119550	3096577	22374	599
Missing	5619578	5282054	336746	778

Source: CPS based on microdate from PNAD 2001/IBGE.

* In families with more than one child, these variables were accounted for more than once, in accordance to the number of children.

Incidence Analysis - School Attendance 1997 Brazil: Population Between 7-15 Years Old				
	Total Population	Attends School or Day Care Center		
		Yes	No	Missing
Total Population	30480800	27916249	2555458	9093
Household Income per Capita				
Up to Half a Minimum Wage	11712583	10187222	1523701	1660
Above Half a Minimum Wage	18768217	17729027	1031757	7433
Household Income per Capita 1999				
Up to Half a Minimum Wage	11867128	10322456	1543012	1660
Above Half a Minimum Wage	18613672	17593793	1012446	7433
Household Income per Capita Quintile				
1st	8643919	7448179	1194701	1039
2nd	6925566	6208905	713408	3253
3rd	5640618	5254677	382387	3554
4th	5080555	4891687	188047	821
5th	4190142	4112801	76915	426
Head's Income Quintile*				
1st	5904442	5092179	811845	418
2nd	4845066	4265628	577146	2292
3rd	4882016	4519011	362448	557
4th	5064631	4844550	217781	2300
5th	4679794	4597968	80983	843
Missing	5104851	4596913	505255	2683

Source: CPS based on microdate from PNAD 1997/IBGE.

* In families with more than one child, these variables were accounted for more than once, in accordance to the number of children.

Incidence Analysis - School Attendance 1999 Brazil: Population Between 7-15 Years of Age				
	Total Population	Attends School or Day Care Center		
		Yes	No	Missing
Total Population	29647311	28045431	1593091	8789
Household Income per Capita				
Up to Half a Minimum Wage	12041772	11083662	954048	4062
Above Half a Minimum Wage	17605539	16961769	639043	4727
Household Income per Capita Quintile				
1st	8469848	7756728	709620	3500
2nd	6986825	6538479	446261	2085
3rd	5538766	5279599	258050	1117
4th	4811168	4676095	134820	253
5th	3840704	3794530	44340	1834
Head's Income Quintile*				
1st	5496988	5028791	466550	1647
2nd	4775405	4427327	346563	1515
3rd	4830207	4605898	222720	1589
4th	4946738	4819908	126316	514
5th	4394782	4326186	66762	1834
Missing	5203191	4837321	364180	1690

Source: CPS based on microdate from PNAD 1999/IBGE.

* In families with more than one child, these variables were accounted for more than once, in accordance to the number of children.

Incidence Analysis - School Attendance 1995 Brazil: Population Between 7-15 Years Old				
	Total Population	Attends School or Day Care Center		
		Yes	No	Missing
Total Population	31167155	27579150	3582071	5934
Household Income per Capita				
Up to Half a Minimum Wage	11786760	9657697	2128516	547
Above Half a Minimum Wage	19380395	17921453	1453555	5387
Household Income per Capita 1999				
Up to Half a Minimum Wage	12099328	9924133	2174648	547
Above Half a Minimum Wage	19067827	17655017	1407423	5387
Household Income per Capita Quintile				
1st	9211814	7453179	1758635	
2nd	6348545	5484419	863579	547
3rd	6044841	5458054	582759	4028
4th	5061503	4776210	284657	636
5th	4500452	4407288	92441	723
Head's Income Quintile*				
1st	5471243	4438865	1032378	
2nd	4138567	3377907	760660	
3rd	6487244	5776907	707848	2489
4th	5267130	4953349	311300	2481
5th	4837232	4720379	116853	
Missing	4965739	4311743	653032	964

Source: CPS based on microdate from PNAD 1995/IBGE.

* In families with more than one child, these variables were accounted for more than once, in accordance to the number of children.

Table 3

Incidence Analysis - Academic Delay 2001
Brazil: Population Between 7-15 Years Attending School

	Total Population	Population Behind in School (%)	
		Yes	No
Total Population	100	45.58	54.42
Household Income per Capita			
Up to Half a Minimum Wage	100	58.38	41.62
Above Half a Minimum Wage	100	35	65
Household Income per Capita 1999			
Up to Half a Minimum Wage	100	59.4	40.6
Above Half a Minimum Wage	100	36.6	63.4
Household Income per Capita Quintile			
1st	100	59.67	40.33
2nd	100	48.61	51.39
3rd	100	37.09	62.91
4th	100	27.76	72.24
5th	100	19.54	80.46
Head's Income Quintile*			
1st	100	59.13	40.87
2nd	100	49.49	50.51
3rd	100	39.43	60.57
4th	100	30.15	69.85
5th	100	22.15	77.85
Neglected	100	49.52	50.48

Source: CPS based on microdate from PNAD 2000/IBGE.

* In families with more than one child, these variables were accounted for more than once, in accordance to the number of children.

Incidence Analysis - Academic Delay 1997
Brazil: Population Between 7-15 Years Old Attending School

	Total Population	Population Behind in School (%)	
		Yes	No
Total Population	100	54.32	45.68
Household Income per Capita			
Up to Half a Minimum Wage	100	69.48	30.52
Above Half a Minimum Wage	100	45.61	54.39
Household Income per Capita 1999			
Up to Half a Minimum Wage	100	69.44	30.56
Above Half a Minimum Wage	100	45.46	54.54
Household Income per Capita Quintile			
1st	100	70.67	29.33
2nd	100	63.47	36.53
3rd	100	52.24	47.76
4th	100	41.91	58.09
5th	100	28.33	71.67
Head's Income Quintile*			
1st	100	67.85	32.15
2nd	100	67.42	32.58
3rd	100	54.97	45.03
4th	100	44.94	55.06
5th	100	30.38	69.62
Missing	100	60.4	39.6

Source: CPS based on microdate from PNAD 1997/IBGE.

* In families with more than one child, these variables were accounted for more than once, in accordance to the number of children.

Incidence Analysis - Academic Delay 1999
Brazil: Population Between 7-15 Years Old Attending School

	Total Population	Population Behind in School (%)	
		Yes	No
Total Population	100	50.18	49.82
Household Income per Capita			
Up to Half a Minimum Wage	100	65.16	34.84
Above Half a Minimum Wage	100	40.4	59.6
Household Income per Capita Quintile			
1st	100	66.86	33.14
2nd	100	58.64	41.36
3rd	100	47.39	52.61
4th	100	35.94	64.06
5th	100	22.98	77.02
Head's Income Quintile*			
1st	100	64.33	35.67
2nd	100	62.49	37.51
3rd	100	51.03	48.97
4th	100	40.24	59.76
5th	100	25.92	74.08
Missing	100	55.01	44.99

Source: CPS based on microdate from PNAD 1999/IBGE.

* In families with more than one child, these variables were accounted for more than once, in accordance to the number of children.

Incidence Analysis - Academic Delay 1995
Brazil: Population Between 7-15 Years of Age

	Total Population	Population Behind in School (%)	
		Yes	No
Total Population	100	56.79	43.21
Household Income per Capita			
Up to Half a Minimum Wage	100	70.13	29.87
Above Half a Minimum Wage	100	49.6	50.4
Household Income per Capita 1999			
Up to Half a Minimum Wage	100	70.21	29.79
Above Half a Minimum Wage	100	49.24	50.76
Household Income per Capita Quintile			
1st	100	70.6	29.4
2nd	100	66.77	33.23
3rd	100	56.42	43.58
4th	100	46.12	53.88
5th	100	33	67
Head's Income Quintile*			
1st	100	69.01	30.99
2nd	100	69.74	30.26
3rd	100	60.33	39.67
4th	100	48.17	51.83
5th	100	35.04	64.96
Missing	100	63.01	36.99

Source: CPS based on microdate from PNAD 1995/IBGE.

* In families with more than one child, these variables were accounted for more than once, in accordance to the number of children.

Table 4

Incidence Analysis - Academic Delay 2001			
Brazil: Population Between 7-15 Years Attending School			
	Total Population	Population Behind in School	
		Yes	No
Total Population	28408605	12948635	15459970
Household Income per Capita			
Up to Half a Minimum Wage	12854518	7504993	5349525
Above Half a Minimum Wage	15554087	5443642	10110445
Household Income per Capita 1999			
Up to Half a Minimum Wage	11187771	6645462	4542309
Above Half a Minimum Wage	17220834	6303173	10917661
Household Income per Capita Quintile			
1st	10602580	6326160	4276420
2nd	6935741	3371668	3564073
3rd	4744388	1759550	2984838
4th	3581471	994177	2587294
5th	2544425	497080	2047345
Head's Income Quintile*			
1st	8076597	4776060	3300537
2nd	4496526	2225315	2271211
3rd	4277652	1686827	2590825
4th	3179199	958520	2220679
5th	3096577	686030	2410547
Missing	5282054	2615883	2666171

Source: CPS based on microdate from PNAD 2000/IBGE.

* In families with more than one child, these variables were accounted for more than once, in accordance to the number of children.

Incidence Analysis - Academic Delay 1997			
Brazil: Population Between 7-15 Years Old Attending School			
	Total Population	Population Behind in School (%)	
		Yes	No
Total Population	27916249	15164927	12751322
Household Income per Capita			
Up to Half a Minimum Wage	10187222	7078189	3109033
Above Half a Minimum Wage	17729027	8086738	9642289
Household Income per Capita 1999			
Up to Half a Minimum Wage	10322456	7167611	3154845
Above Half a Minimum Wage	17593793	7997316	9596477
Household Income per Capita Quintile			
1st	7448179	5263720	2184459
2nd	6208905	3940952	2267953
3rd	5254677	2745235	2509442
4th	4891687	2049906	2841781
5th	4112801	1165114	2947687
Head's Income Quintile*			
1st	5092179	3454945	1637234
2nd	4265628	2875721	1389907
3rd	4519011	2484113	2034898
4th	4844550	2177165	2667385
5th	4597968	1396650	3201318
Missing	4596913	2776333	1820580

Source: CPS based on microdate from PNAD 1997/IBGE.

* In families with more than one child, these variables were accounted for more than once, in accordance to the number of children.

Incidence Analysis - Academic Delay 1999			
Brazil: Population Between 7-15 Years Old Attending School			
	Total Population	Population Behind in School (%)	
		Yes	No
Total Population	28045431	14074522	13970909
Household Income per Capita	11083662	7221684	3861978
Up to Half a Minimum Wage			
Above Half a Minimum Wage	16961769	6852838	10108931
Household Income per Capita Quintile	7756728	5186407	2570321
1st			
2nd	6538479	3833864	2704615
3rd	5279599	2502012	2777587
4th	4676095	1680369	2995726
5th	3794530	871870	2922660
Head's Income Quintile*	5028791	3235196	1793595
1st			
2nd	4427327	2766787	1660540
3rd	4605898	2350438	2255460
4th	4819908	1939618	2880290
5th	4326186	1121407	3204779
Missing	4837321	2661076	2176245

Source: CPS based on microdate from PNAD 1999/IBGE.

* In families with more than one child, these variables were accounted for more than once, in accordance to the number of children.

Incidence Analysis - Academic Delay 1995			
Brazil: Population Between 7-15 Years of Age			
	Total Population	Population Behind in School	
		Yes	No
Total Population	27579150	15661158	11917992
Household Income per Capita			
Up to Half a Minimum Wage	9657697	6772909	2884788
Above Half a Minimum Wage	17921453	8888249	9033204
Household Income per Capita 1999			
Up to Half a Minimum Wage	9924133	6967843	2956290
Above Half a Minimum Wage	17655017	8693315	8961702
Household Income per Capita Quintile			
1st	7453179	5262249	2190930
2nd	5484419	3662128	1822291
3rd	5458054	3079442	2378612
4th	4776210	2203002	2573208
5th	4407288	1454337	2952951
Head's Income Quintile*			
1st	4438865	3063186	1375679
2nd	3377907	2355900	1022007
3rd	5776907	3485187	2291720
4th	4953349	2385952	2567397
5th	4720379	1653997	3066382
Missing	4311743	2716936	1594807

Source: CPS based on microdate from PNAD 1995/IBGE.

* In families with more than one child, these variables were accounted for more than once, in accordance to the number of children.

Table 5
Access to Assets in Brazil According to Income Deciles
Education - 2001

	Average Education of Head of Household	Average Education of Spouse	Variation Coefficient of Head's Education	Variation Coefficient of Spouse's Education
1	3.68	3.67	1.06286	0.99918
2	2.84	3.55	1.16646	0.981035
3	4.67	5.31	0.93991	0.837498
4	4.13	4.32	0.80713	0.73271
5	4.80	4.98	0.72362	0.668531
6	4.74	5.14	0.77194	0.699975
7	5.68	5.95	0.65977	0.615229
8	6.52	6.74	0.60574	0.567204
9	8.02	8.14	0.52377	0.503188
10	11.01	10.71	0.4003	0.390601

Source: CPS/FGV based on microdata from PNAD/IBGE

Access to Assets in Brazil According to Income Deciles
Education - 1999

	Average Education of Head of Household	Average Education of Spouse	Variation Coefficient of Head's Education	Variation Coefficient of Spouse's Education
1	3.23	3.27	1.15213	1.07245
2	2.31	2.97	1.31476	1.08288
3	4.78	5.27	0.9317	0.82757
4	3.94	4.10	0.82374	0.75904
5	4.43	4.62	0.75398	0.69548
6	4.59	4.92	0.75694	0.70119
7	5.49	5.69	0.66064	0.62505
8	6.29	6.44	0.61574	0.58664
9	7.73	7.77	0.54435	0.52238
10	11.00	10.54	0.41483	0.40682

Source: CPS/FGV based on microdata from PNAD/IBGE

Access to Assets in Brazil According to Income Deciles
Education - 1996

	Average Education of Head of Household	Average Education of Spouse	Variation Coefficient of Head's Education	Variation Coefficient of Spouse's Education
1	2.77	2.94	0	0
2	2.15	2.77	1.241791	1.117886
3	4.67	5.07	1.347859	1.147263
4	3.52	3.62	0.9517895	0.871014
5	3.83	4.07	0.8743075	0.8212577
6	4.58	4.64	0.8448476	0.7766761
7	5.11	5.27	0.7456347	0.7196494
8	6.08	6.13	0.7030052	0.6653471
9	7.52	7.40	0.6410354	0.6152014
10	10.51	9.89	0.5668743	0.5511174

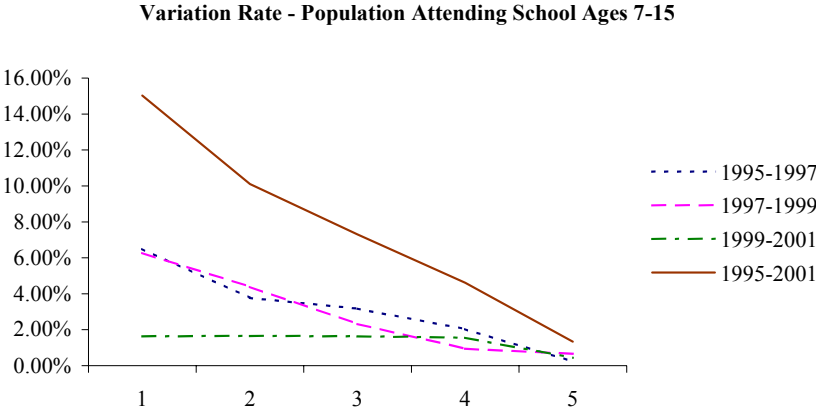
Source: CPS/FGV based on microdata from PNAD/IBGE

Table 6

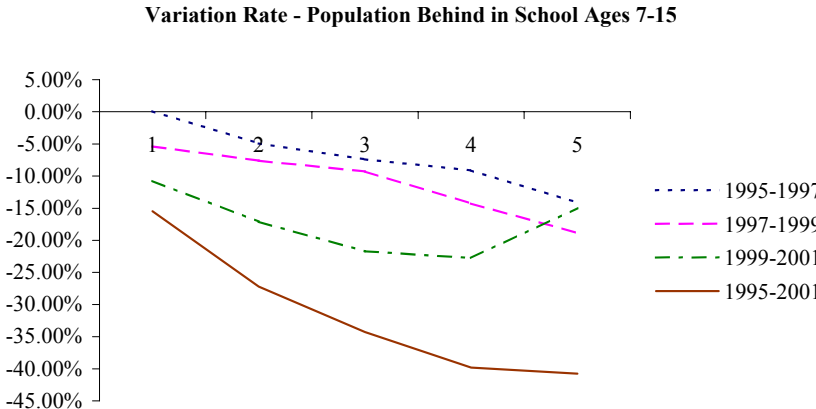
The State's Social Spending
R\$ million and % GNP

	1998		1999		2000		2001	
	R\$ M	% PIB	R\$ M	% PIB	R\$ M	% PIB	R\$ M	% PIB
8) Culture and Education Expenses (exclusive of personnel)	3,455	0.38	3,622	0.38	4,871	0.45	4,990	0.42
Information Technology	4	0	2	0	31	0	67	0.01
Social Communication	7	0	6	0	9	0	11	0
Student Financing	182	0.02	298	0.03	968	0.09	513	0.04
Secondary Education and Professional Training	147	0.02	205	0.02	445	0.04	809	0.07
Professional Training	146	0.02	200	0.02	240	0.02	289	0.02
Secondary Education	0	0	5	0	205	0.02	521	0.04
Children Education	18	0	-	-	14	0	135	0.01
Young Adults and Adults Education – Literacy and Supplement	35	0	30	0	41	0	284	0.02
Primary Education	1,674	0.18	1,452	0.15	1,670	0.15	1,187	0.1
Human Resources	-	-	-	-	6	0	15	0
Distance Learning	11	0	10	0	10	0	13	0
Textbooks, Publishing, Library and School Transportation	457	0.05	299	0.03	548	0.05	658	0.06
Acquisition of Spaces in Private Education	23	0	7	0	8	0	15	0
Other Basic Learning Activities	758	0.08	449	0.05	511	0.05	486	0.04
Transfers to States and Municipalities (State Complement to FUNDEF)	425	0.05	685	0.07	587	0.05	476	0.04
Special Education	22	0	24	0	32	0	21	0
Higher Learning	1,284	0.14	1,503	0.16	1,504	0.14	1,773	0.15
Undergraduate	596	0.07	727	0.08	972	0.09	1,247	0.11
Graduate	38	0	73	0.01	40	0	40	0
Distance Learning	-	-	-	-	0	0	3	0
Scholarships	588	0.06	635	0.07	411	0.04	399	0.03
Medical Training and Health Education	58	0.01	60	0.01	70	0.01	75	0.01
College Extension	6	0	7	0	10	0	9	0
Research in Education	-	-	-	-	6	0	5	0
Culture – Diffusion and Patrimony	81	0.01	102	0.01	151	0.01	184	0.02
9) Active Personnel (Education)	3,935	0.43	4,568	0.47	4,724	0.43	4,851	0.41
10) Mandatory transfers to states and municipalities	8,070	0.88	9,123	0.95	11,220	1.03	12,896	1.09
15% of FPE/FPM/IPI Exp./Lei Compl. 87 – Part of FUNDEF	4,039	0.44	4,655	0.48	5,241	0.48	6,000	0.51
10% of FPE/FPM/IPI Exp./Lei Compl. 87 – not a part of FUNDEF	2,693	0.29	3,103	0.32	3,494	0.32	4,000	0.34
25% of other transfers	51	0.01	110	0.01	760	0.07	893	0.08
Quota Part of Education Wage	1,286	0.14	1,255	0.13	1,725	0.16	2,004	0.17

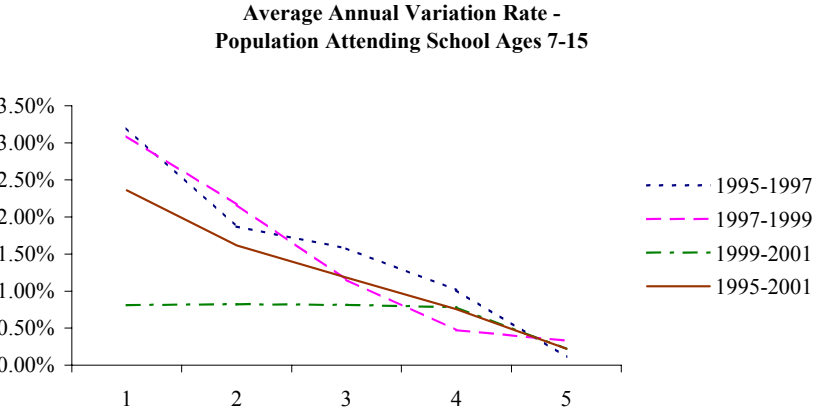
Figure 8a



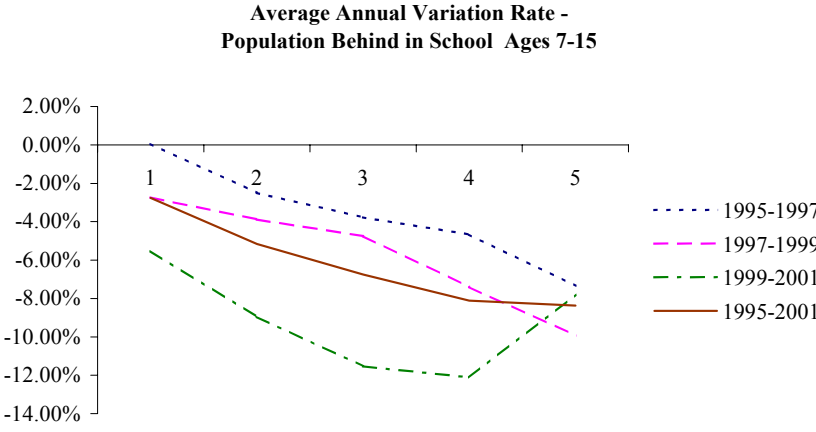
Source: CPS based on microdate from PNAD/IBGE.



Source: CPS based on microdate from PNAD/IBGE.



Source: CPS based on microdate from PNAD/IBGE.



Source: CPS based on microdate from PNAD/IBGE.

Figure 8b**Variation Rate - Population Attending School**

	1995-1997	1997-1999	1999-2001	1995-2001
1	6.50%	6.28%	1.63%	15.03%
2	3.77%	4.38%	1.65%	10.11%
3	3.18%	2.32%	1.64%	7.30%
4	2.03%	0.95%	1.56%	4.61%
5	0.22%	0.66%	0.44%	1.33%

Average Annual Variation Rate - Population Attending School

	1995-1997	1997-1999	1999-2001	1995-2001
1	3.20%	3.09%	0.81%	2.36%
2	1.87%	2.17%	0.82%	1.62%
3	1.58%	1.15%	0.81%	1.18%
4	1.01%	0.47%	0.78%	0.75%
5	0.11%	0.33%	0.22%	0.22%

Variation Rate - Population Behind in School

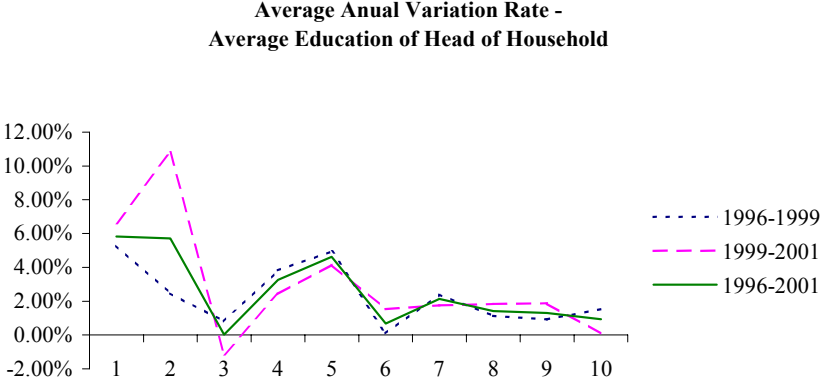
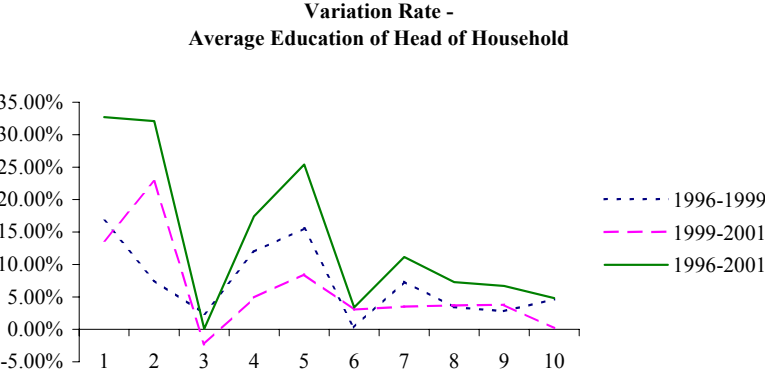
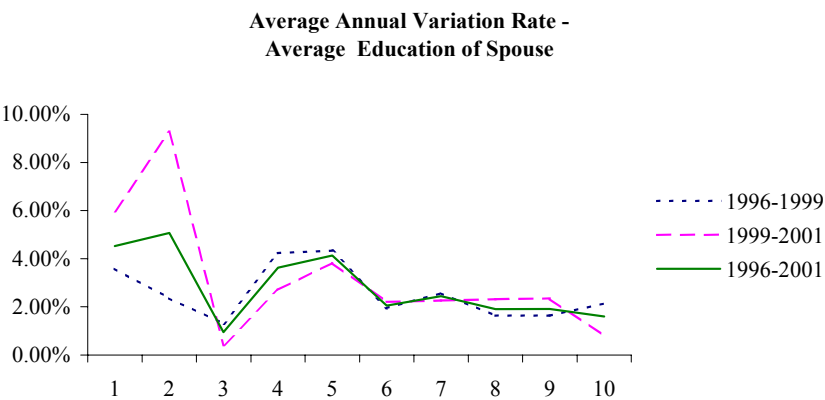
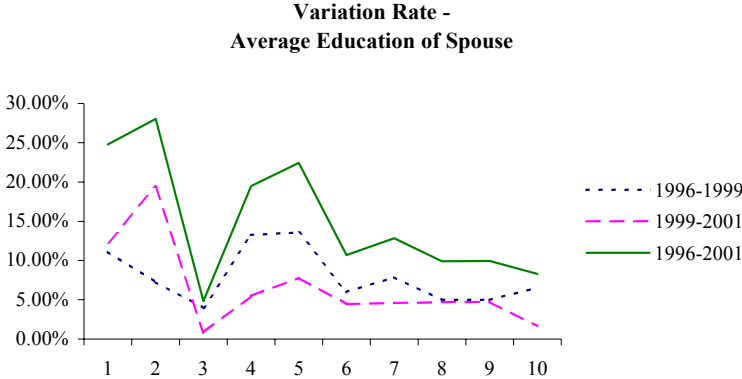
	1995-1997	1997-1999	1999-2001	1995-2001
1	0.10%	-5.39%	-10.75%	-15.48%
2	-4.94%	-7.61%	-17.10%	-27.20%
3	-7.41%	-9.28%	-21.73%	-34.26%
4	-9.13%	-14.24%	-22.76%	-39.81%
5	-14.15%	-18.88%	-14.97%	-40.79%

Average Annual Variation Rate - Population Behind in School

	1995-1997	1997-1999	1999-2001	1995-2001
1	0.05%	-2.73%	-5.53%	-2.76%
2	-2.50%	-3.88%	-8.95%	-5.15%
3	-3.78%	-4.76%	-11.53%	-6.75%
4	-4.67%	-7.40%	-12.11%	-8.11%
5	-7.35%	-9.94%	-7.79%	-8.36%

Source: CPS based on microdate from PNAD/IBGE.

Figure 9



4. Health

The following two tables show health related concerns according to income deciles. Table 1 shows that only 24.45% of the Brazilian population has access to health insurance plans; of these, 25% are entitled to medical care, as they are public servants. This percentage (of 24.5%) leaves 75% of the population with no health care plan whatsoever, and are thus excluded from the medical system. As expected, the proportion of people with health insurance increases as we move towards the wealthiest income groups. This growth remains constant, and increases dramatically as we approach the wealthiest 10%. In fact, even when compared to percentile group beneath it, the wealthiest decile shows a large discrepancy, having 72.8% of its population with medical insurance, whereas the following percentile group has 49.98% with health insurance.

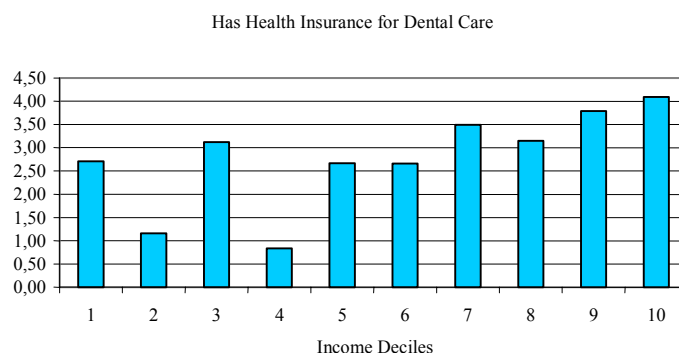
Table 1
Incidence Analysis of Public and Private Health Services - Brazil
Access rates (%) According to Income Deciles - Health Assets

	Total	1	2	3	4	5	6	7	8	9	10
Is Entitled to Health Insurance Plan	24,45	2,84	4,44	17,05	6,85	12,18	17,59	25,83	35,12	49,98	72,80
Medical Care for the Public Worker	25,01	27,10	58,01	40,29	32,92	25,61	23,54	24,48	23,50	23,40	20,87
Health Insurance Value Up to 50 Reais	48,04	39,70	80,46	44,11	79,49	78,17	78,42	68,74	62,41	51,22	27,18
Health Insurance Includes Complementary Exams	96,35	97,38	92,98	93,22	93,93	93,27	93,46	95,10	96,25	96,97	98,03
Health Insurance Includes Hospitalization	93,64	94,13	91,28	94,48	85,00	86,74	87,12	89,98	91,69	93,98	97,44
Sought Health Insurance in the Last Two Weeks	12,99	8,63	10,51	12,21	11,87	12,25	13,59	13,54	13,94	15,17	18,19
Sought Medical Care for Routine or Precautionary Check-up	4,36	3,95	3,49	3,78	4,40	4,53	4,14	4,61	5,02	4,52	4,63
Has Health Insurance Plan Specifically for Dental Care	3,52	2,71	1,16	3,12	0,84	2,66	2,66	3,49	3,15	3,79	4,09
Went to the Dentist Over the Last Two Years	51,76	28,43	35,77	46,51	41,92	46,74	49,22	57,01	61,28	69,42	81,41

Prepared by CPS/FGV based on microdata from PNAD/IBGE 98 Supplement

As expected, the extremes of the deciles division show the most dramatic difference. We see a significant gap between the two extremes of income distribution, as the wealthiest 20% is 18 times more likely to have a health insurance plan than the poorest 20%. However, in terms of a health insurance plan specifically for dental care, we do not see such disparities. What can be stated regarding dental care health plan is that overall, it is not common to Brazilians, although it is most popular in the wealthiest segments of the population.

Figure 1



Source: CPS/FGV based on microdata from PNAD/IBGE Supplement 1998

In relation to the services provided by the health insurance plans, they increase in breadth relative to income. With the exception of the lowest income group, the inclusion of complementary exams within health insurance increases concomitantly with income. The inclusion of hospitalization, on the other hand, does not show a constant pattern throughout the deciles.

Table 2

Monthly Fee Value (% of income group who already have health insurance plan)

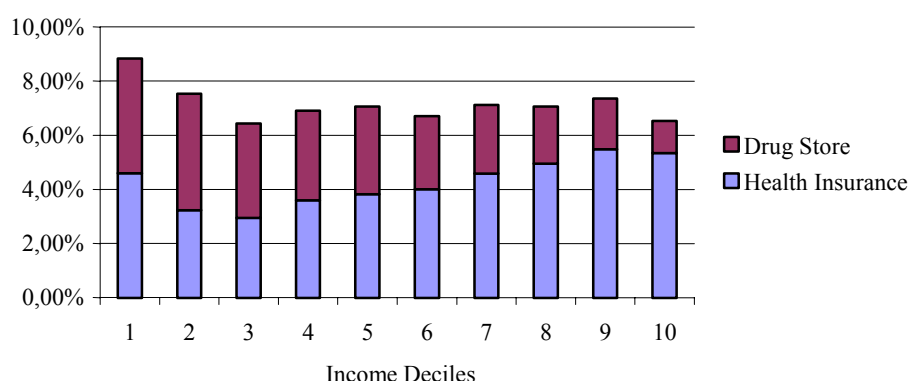
	1	2	3	4	5	6	7	8	9	10	Total
Up to 50 Reais	43.1	74.6	39	85.6	78.2	74.6	61.7	53.8	42.3	20.7	44
From 50 to 100 Reais	24.2	21.1	16.9	26.6	10.5	16.7	15.6	22	25	27.4	25.2
From 100 to 200 Reais	21	20.5	6.5	19.7	5.2	4.7	7.7	11.7	15.3	20.2	30.4
From 200 to 300 Reais	7.1	8.1	0.6	8.7	1.2	0.3	1.0	2.1	3.2	5.4	12.1
From 300 to 500 Reais	3.5	7.8	0	3.8	1.3	0.4	0.2	0.6	0.9	2.2	6.6
Above 500 Reais	1.1	3.3	0	0.9	0	0	0	0.1	0	0.3	2.5

Source: CPS/FGV based on Micro-data from the PNAD98/IBGE Special Supplement

With relation to the monthly value paid to the health insurance plans, we see that almost half of the population (44%) pays up to R\$50.00, while only 2.5% pay a monthly fee of over R\$500.00. It is observed that the first and second deciles show the largest relative proportion of individuals paying the highest monthly fees (more than R\$200.00), which supports the concept that the lowest end of the income groups are those spending the most with health expenses. This idea is reinforced by Figure 2, which shows that the first decile also spends more with drug store needs, relative to the household expenditures.

Figure 2

Health Related Expenses as % of Total Expenditure



Source: CPS/FGV based on microdata from Pesquisa de Orçamento Familiar 1995/1996 IBGE

The next table provides us with a clearer picture of where the health-related needs lie. Interviewees were asked to comment on their morbidity rates, including their own judgment upon their health conditions. This question could be answered in three ways: “normal” and “irregular.” These two were then divided into subcategories, these being “good” or “excellent.”

Table 3
Incidence Analysis of Health Problems - Brazil
Morbidity rates (%) According to Income Deciles

	Total	1	2	3	4	5	6	7	8	9	10
Considers Own Health Condition Good or Excellent	79,11	80,90	74,74	75,11	76,75	78,22	75,38	79,39	80,56	82,94	87,08
Has Been In Bed in the Past Two Weeks	3,94	3,95	4,39	4,61	4,62	4,05	4,41	3,47	3,52	3,27	3,10
Has Back Pains	17,41	15,46	20,98	19,23	15,46	16,20	18,56	17,23	16,97	17,30	16,80
Has Arthritis or Rheumatism	8,16	6,89	11,26	10,06	7,97	7,01	9,68	7,66	7,56	7,12	6,43
Has Cancer	0,22	0,09	0,14	0,17	0,20	0,21	0,24	0,21	0,28	0,31	0,38
Has Diabetes	1,97	0,63	1,23	1,71	1,58	1,73	2,57	2,25	2,71	2,61	2,72
Has Bronchitis or Asthma	4,85	3,05	3,11	4,63	5,96	5,75	6,00	5,36	5,24	4,85	4,59
Has Hypertension	10,57	5,93	10,06	10,75	9,49	9,52	12,90	11,59	11,91	11,87	11,73
Has Heart Disease	3,89	1,62	3,03	3,68	3,89	3,62	5,34	4,60	4,42	4,36	4,42
Has Chronic Renal Failure	2,51	2,10	2,45	2,42	2,98	2,66	3,17	2,58	2,55	2,34	1,82
Has Depression	4,96	3,07	4,42	5,00	4,90	4,85	5,82	5,31	5,50	5,46	5,32
Has Tuberculosis	0,09	0,13	0,12	0,10	0,14	0,06	0,11	0,08	0,07	0,05	0,05
Has Tendinitis or Tenosynovitis	1,83	0,93	1,27	1,51	1,38	1,44	1,85	1,74	2,07	2,67	3,48
Has Cirrhosis	0,15	0,08	0,13	0,16	0,19	0,17	0,14	0,15	0,14	0,15	0,15

Prepared by CPS/FGV based on microdata from PNAD/IBGE 98 Supplement

It is worth mentioning that the PNAD requests the individual to determine his/hers own health conditions. Although this has some validity, it is not the best method to determine whether an individual’s medical needs are being supplied, as medical professionals are the ones suited for this task. A person may believe his/her health condition is great, while perhaps being unaware of a disease he/she might have. Also, when analyzing one’s health conditions, the interviewee also takes into consideration stress, vitality, anxiety, etc. For this reason, the hypothesis of observing the results in an adjusted well-being scale is not strongly supported, as each individual self-evaluates himself based on categories relative to that individual. Nonetheless, this question, in conjunction to those related to specific health issues, provide approximate indicators for the Brazilian population’s health related needs.

When looking at the government’s expenditure with health related issues, we observe that the proportion of GNP devoted to health has increased over the years between 1998 and 2001, as Table 4 shows. There has been a doubling of the percentage of GNP devoted to mandatory transfers to states and municipalities, and the value of these transfers have more than doubled. In plain health expenditures, excluding personnel, we find that there has been a 16.43% increase in the proportion of GNP spent on these. However, in terms of active personnel, we notice that the values increased in terms of gross value, but decreased relative to GNP.

Table 4

The State's Social Spending
R\$ million and % GNP

	1998		1999		2000		2001	
	R\$ M	% PIB	R\$ M	% PIB	R\$ M	% PIB	R\$ M	% PIB
11) Health Expenditures (excluding personnel)	12,781	1.4	15,231	1.58	17,617	1.62	19,356	1.63
General Administration	163	0.02	161	0.02	184	0.02	246	0.02
Human Resources	7	0	15	0	128	0.01	110	0.01
Information Technology	6	0	11	0	73	0.01	122	0.01
Social Communication and Health Education	42	0	19	0	37	0	32	0
PAB - Fixed – Basic Attention	189	0.02	1,774	0.18	1,726	0.16	1,790	0.15
Food and Nutrition	61	0.01	141	0.01	152	0.01	169	0.01
Sanitary Watch	49	0.01	132	0.01	155	0.01	147	0.01
Epidemic Watch	434	0.05	702	0.07	586	0.05	757	0.06
DST	52	0.01	107	0.01	666	0.06	621	0.05
SUS	10,734	1.17	10,482	1.09	12,378	1.14	13,370	1.13
Medications and Bacinics	712	0.08	1,198	0.12	644	0.06	785	0.07
Family Health and Community Agents (Saúde da Família Program)	226	0.02	346	0.04	663	0.06	976	0.08
Women's Health	38	0	47	0	9	0	9	0
Blood and Hemoderivatives	16	0	35	0	142	0.01	145	0.01
Research and Events	51	0.01	61	0.01	73	0.01	78	0.01
10) Mandatory transfers to states and municipalities (health)	-	-	-	-	2,190	0.2	4,920	0.42
FPE/FPM/IPI Exp.	-	-	-	-	2,181	0.2	4,903	0.41
ITR	-	-	-	-	9	0	17	0
12) Active Personnel (Health)	2,249	0.25	2,501	0.26	3,006	0.28	2,628	0.22

Source: SIAFI, TEM/FAT, BACEN, MPAS, MF/SRF, MF/STN, BNDES

Elaboration: MF/SFE E Sec.Executiva

In this case, access to a health insurance plan was perceived as an asset, as it allows for different treatment among those who have it and those who do not. We not only notice inequalities among those with health insurance plans and those without, but we also observe a wide gap among those with health insurance, relative to their income levels. While the poorer deciles spend more of their income (proportion wise) in health related expenses, they have a more limited access to complementary services within their health plans. It was affirmed that easily identified diseases (those not requiring medical examinations) are more common in the lowest income deciles, while those diseases requiring medical examinations are more commonly found in the wealthier deciles.

As for the consumption of health services, it was clearly noticed that inequality favored the most privileged. To support this claim, we look at the numbers relating to the questions of whether the individual sought medical care recently, for precautionary or regular check-ups, and whether the individual went to the dentist in the past two years. Those with higher income levels were more likely to confirm these two questions, so that these increased monotonically with income. This fact validate that the

access to assets, in this case health insurance, tends to lead to a greater demand for health services, as the marginal cost of health service becomes null once the individual has a health plan.

The analysis of income distribution according to health measures allowed us to determine a profile for the access, needs and services, all health-related. Overall, it was affirmed that poorer individuals have worse access to assets such as health insurance, they get sick more often, and they consume less health services, contributing to the worsening of the income inequality effect. In this sense, the reinforcement of asset portfolios (health, human and physical capital) is poverty-fighting policies, with the tendency of leading to improved health and thus a greater income.

5. Sanitation

When considering the sustainable development of a population's health, it is necessary to take into consideration the importance of a proper sanitation system. The Brazilian experience with water treatment and sewerage has been improving over the course of the past few years. The following figures and tables show that the access to proper sanitation has ameliorated in the past five years. However, we still see a significant gap between deciles. As can be more clearly understood through Figures 1 and 2, discrimination is still present between those with access to sanitation treatment

Figure 1

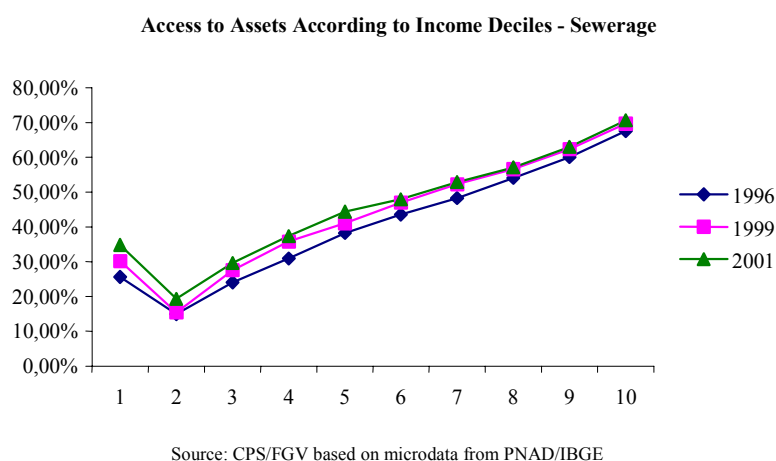
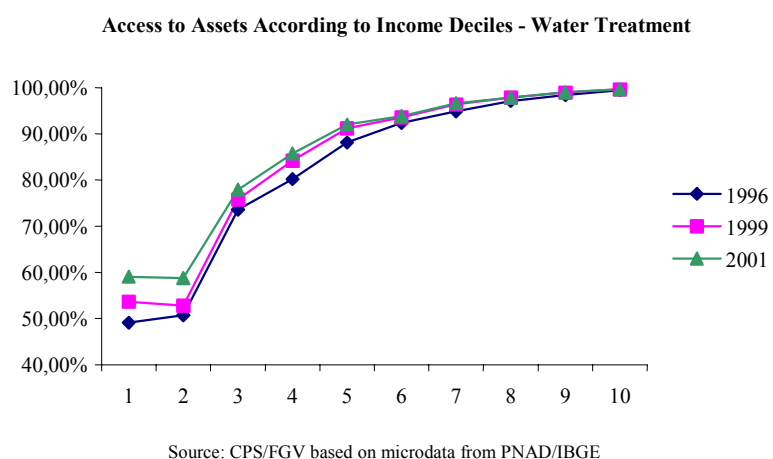


Figure 2



and those without, in accordance to their income levels.

In relation to water treatment, we observe—in Figure 2—that there is a trend towards convergence until the last deciles, starting from the third income level. However, there is a significant cleavage of almost twenty percentage points between the

second and third deciles. In Figure 1, we still observe a gap between the lower and higher deciles, but of a different nature, while in water treatment the observed trend is one of convergence, in relation to sewerage, the tendency is one of monotone growth (with the exception of the movement between the first and second deciles).

Table 1

Access to Assets in Brazil According to Income Deciles

Public Services

Horizontal Composition

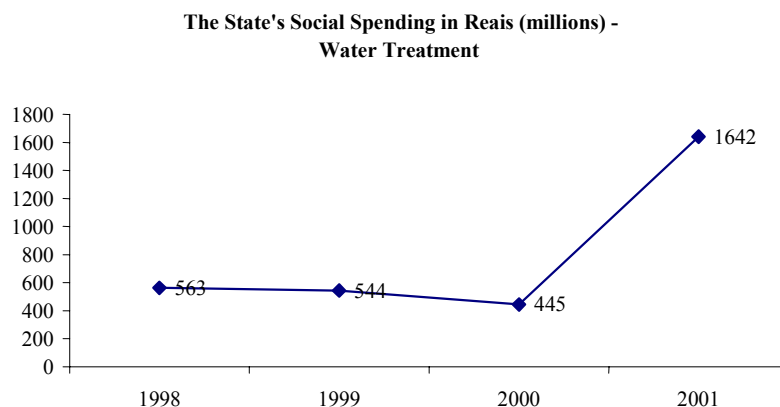
	1996		1999		2001	
	Sewerage	Running Water	Sewerage	Running Water	Sewerage	Running Water
1	25.58%	49.07%	30.20%	53.64%	34.80%	59.05%
2	14.89%	50.69%	15.40%	52.77%	19.32%	58.78%
3	24.05%	73.59%	27.58%	75.77%	29.59%	77.96%
4	30.91%	80.21%	35.83%	84.17%	37.38%	85.76%
5	38.22%	88.16%	41.00%	91.24%	44.34%	92.02%
6	43.54%	92.37%	46.96%	93.56%	47.96%	93.86%
7	48.30%	94.82%	52.25%	96.36%	52.84%	96.63%
8	54.05%	97.10%	56.62%	97.87%	57.10%	97.86%
9	60.01%	98.40%	62.32%	98.95%	63.00%	99.03%
10	67.52%	99.42%	69.68%	99.65%	70.65%	99.65%

Source: CPS/FGV based on microdata from PNAD/IBGE

In comparison to those of water treatment, the access rates of sewerage are disappointing. While the wealthiest half of the population has an access rate to running water above 90%, not even the wealthiest decile has that much access to sewerage, having had an access rate of only 70.65% in 2001, while the poorest decile had one of 34.8%. It is important to note that although sewerage still is poorly spread, it has increased almost ten percentage points for the poorest decile from 1996 to 2001. This growth has not been as significant for the other deciles, varying between three and six percentage points for the remaining deciles.

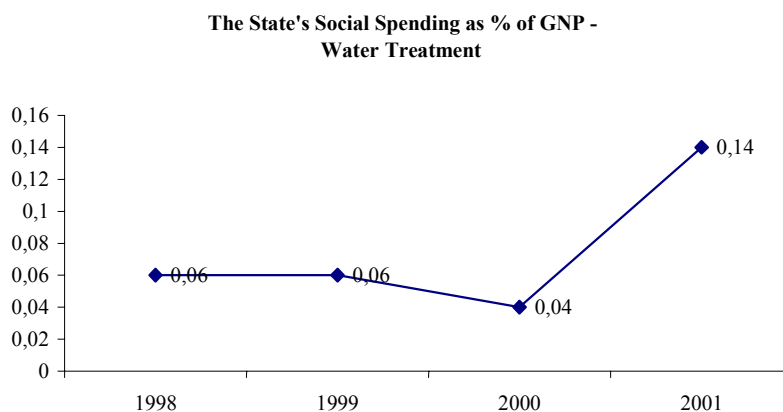
In relation to water treatment, the change between the five years has been more impressive and more accurately targeted. While the increase of access rate to sewerage of the poorest decile was three times that of wealthiest, the poorest gained over forty times as much than the tenth decile from the government's investment in water treatment. As can be seen from Figures Z and B, the government's investment in water treatment has increased over the past four years, not only in size but also as a proportion of GNP.

Figure 3



Sources: SIAFI, TEM/FAT, BACEN, MPAS,MF/SRF, MF/STN, BNDES.
Elaboration: CPS/FGV

Figure 4

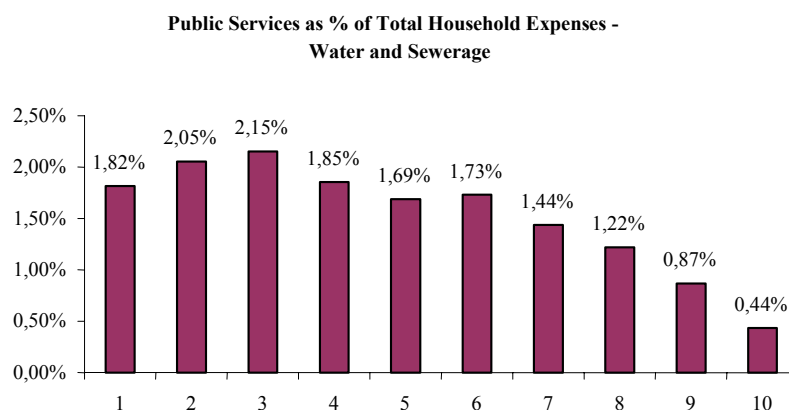


Sources: SIAFI, TEM/FAT, BACEN, MPAS,MF/SRF, MF/STN, BNDES.
Elaboration: CPS/FGV

Nonetheless, further progress is still necessary for the improvement and popularization of the distribution and reach of sewage treatment. This is especially true in the case of the poorest percentiles of the population. As shown by the POF 1995/1996 in Figure 5, household expenses with water and sewerage increase in the bottom deciles of the population, until reaching a saturation point in the fourth decile, where then the proportion of household expenditure on water treatment and sewerage starts to decrease monotonically. This can be explained by the fact that the lower deciles of the population have a much more limited access to both public services, relative to

the richer deciles, as show in Table 2. This then makes the cost of both services more overbearing, and thus they consume a greater proportion of their incomes. The wealthier

Figure 5

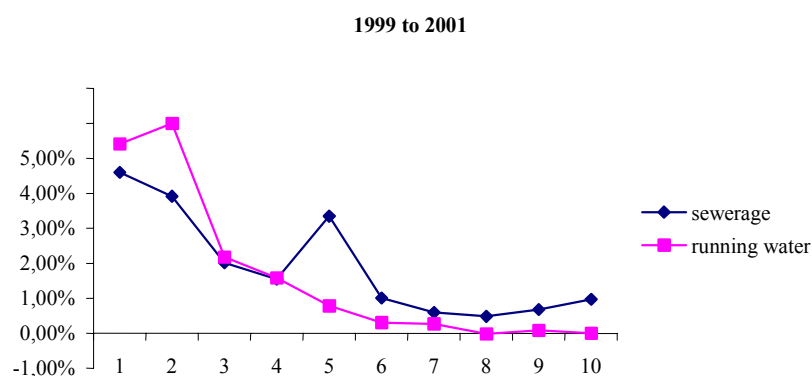


Source: CPS/FGV based on microdata from Pesquisa de Orçamento Familiar 1995/1996 IBGE

deciles, on the other hand, have better access to water treatment and sewerage (access increasing with income), such that the cost imposed on them is not as overbearing.

When plotting the gains and losses in access to running water and sewerage in Brazil between the years of 1999 and 2001, we see that the income deciles benefiting the most from the government's .08% increase in spending in water treatment were those in the bottom half. Between 1999 and 2001, the lowest decile experienced a 4.6 percentage points increase in the access to sewerage and a 5.41 percentage points increase in the access to running water. Concomitantly, the wealthiest decile experienced a 0.97 percentage points increase in the access to sewerage, while access to running water remained the same from 1999 to 2001.

Figure 6



Source: CPS/FGV based on microdata from PNAD/IBGE

Overall, we see that although the situation of sanitation in Brazil has improved, nonetheless, it is still lacking. Policies increasing the access to running water and sewerage have been properly targeted, as the lower deciles have been the ones benefiting the most from the government's investment in water treatment, which has tripled in gross value from 1999 to 2001.

Table 2

Access to Assets in Brazil According to Income Deciles

Public Services

Vertical Composition

	1996		1999		2001	
	Sewerage	Running Water	Sewerage	Running Water	Sewerage	Running Water
1	6.38%	6.05%	6.91%	6.36%	7.63%	6.87%
2	3.68%	6.19%	3.54%	6.29%	4.22%	6.82%
3	5.82%	8.79%	6.26%	8.93%	6.55%	9.16%
4	7.59%	9.73%	8.20%	9.99%	8.09%	9.85%
5	10.15%	11.57%	9.36%	10.80%	9.76%	10.75%
6	9.92%	10.39%	10.72%	11.08%	10.44%	10.85%
7	11.81%	11.46%	12.10%	11.57%	11.63%	11.29%
8	13.48%	11.96%	12.76%	11.44%	12.43%	11.31%
9	14.56%	11.79%	14.24%	11.72%	13.84%	11.55%
10	16.61%	12.08%	15.92%	11.81%	15.40%	11.53%

Source: CPS/FGV based on microdata from PNAD/IBGE

Table 3

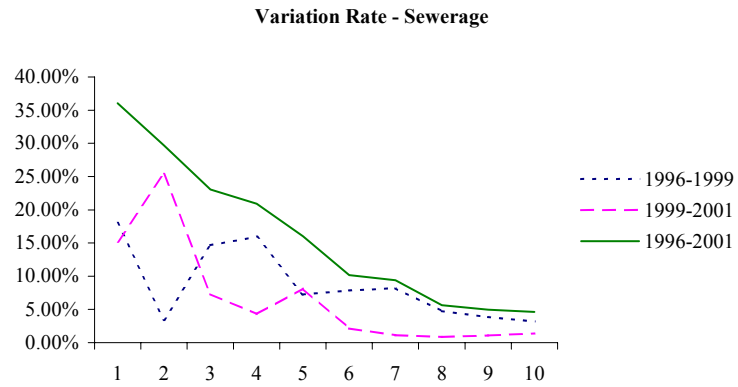
Access to Assets in Brazil According to Income Deciles

Public Services

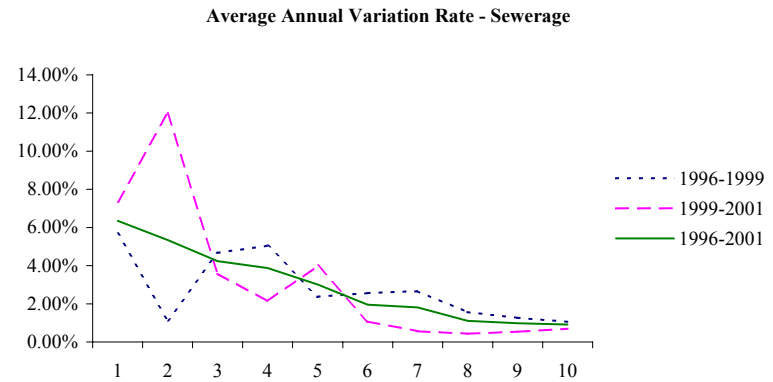
	1996		1999		2001	
	Sewerage	Running Water	Sewerage	Running Water	Sewerage	Running Water
1	6748011	12945470	8147040	14471006	9942309	16869642
2	3892438	13251648	4176036	14309856	5505712	16753145
3	6150626	18818328	7388100	20299191	8540744	22499400
4	8030516	20842184	9670650	22716433	10542766	24187641
5	10738529	24769615	11038479	24565584	12720081	26396828
6	10490597	22254301	12650680	25203570	13612394	26639016
7	12496233	24530429	14274262	26324155	15157358	27716492
8	14260378	25617393	15053550	26022784	16207814	27776876
9	15397238	25248781	16795352	26665855	18044208	28365578
10	17566339	25865711	18776060	26852045	20074246	28315641

Source: CPS/FGV based on microdata from PNAD/IBGE

Figure 7

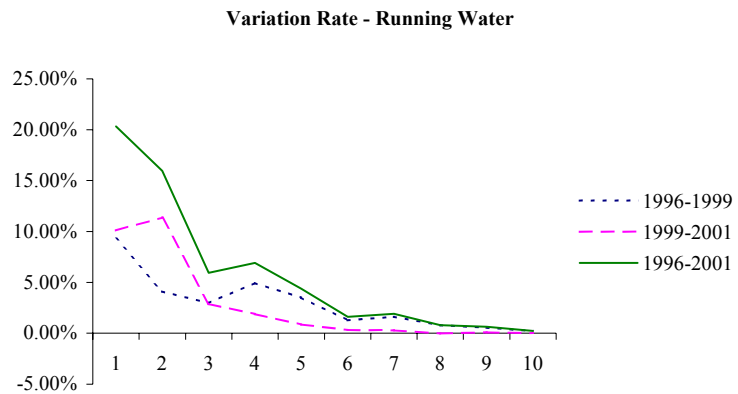


Source: CPS/FGV based on microdata from PNAD/IBGE

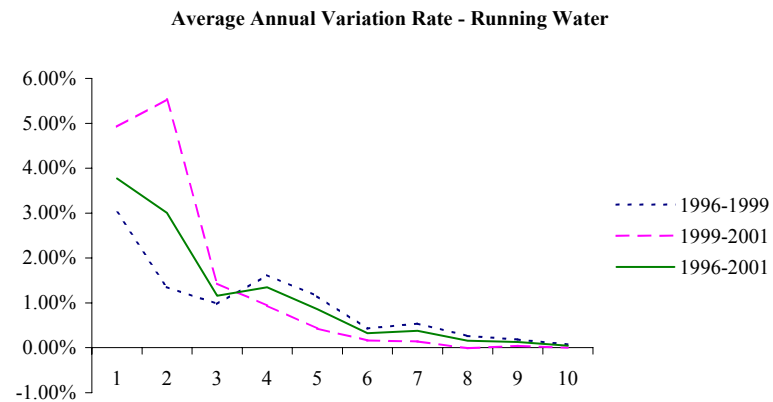


Source: CPS/FGV based on microdata from PNAD/IBGE

Figure 8



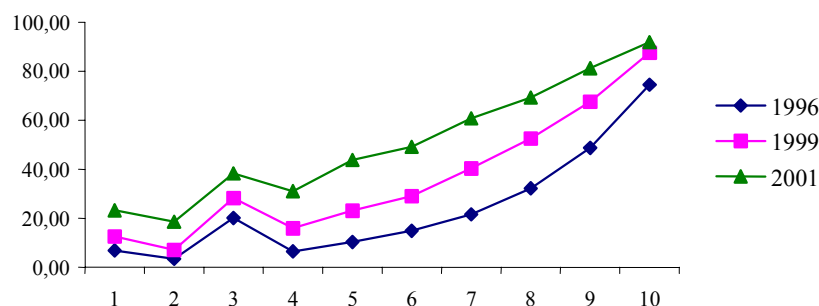
Source: CPS/FGV based on microdata from PNAD/IBGE



Source: CPS/FGV based on microdata from PNAD/IBGE

Figure 3

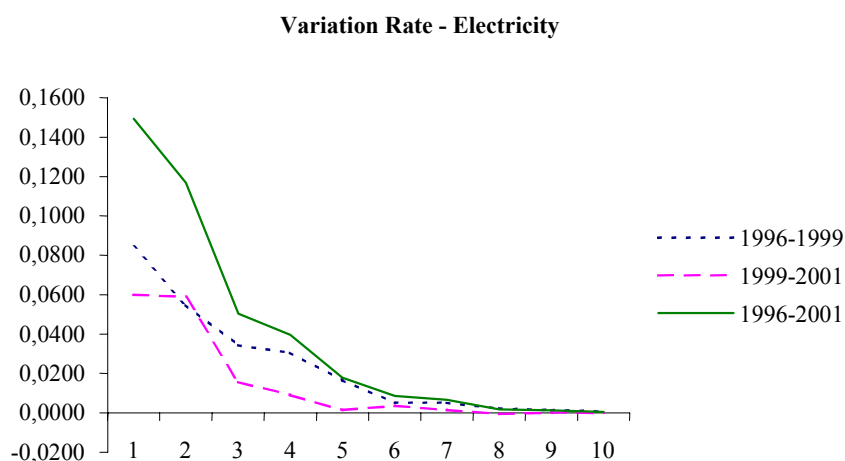
Access to Assets in Brazil According to Income Deciles - Telephone (%)



Source: CPS/FGV based on microdata from PNAD/IBGE

Of all these services, electricity is the one demonstrating the most egalitarian distribution, as there has occurred an impressive shift towards convergence. An important criticism though, is that while there is an egalitarian distribution throughout most deciles, the first and second income deciles still lag behind. They have experienced an increase in access rate since 1996, starting at the access rate of 74.2% and 77.8% respectively, and in 2001 reaching rates such as 85.27% and 86.89%, respectively. Meanwhile, from the fifth decile onwards, a significant shift has not occurred, as these deciles already started at high levels of access rates, the lowest one being 96.27% for the fifth decile. To show the improvement of the distribution of electricity, we observe that in 1996, the difference between the two extremes of the income groups was of 25.69 percentage points, whereas in 2001 this difference already shrunk to 14.67 points, showing a reduction of almost half. The time period with the greatest amount of change was from 1996 to 1999. For the first few deciles, we continue to observe increases in access rates until 2001, but from the fourth decile onwards the shifts were less than the order of one percent. The shifts between periods are clearly observed by the variation rates plotted in Figure 5. Through this graph, it becomes obvious that the deciles gaining the most throughout the years of 1996 to 2001 were the bottom five deciles, specially the two poorest ones.

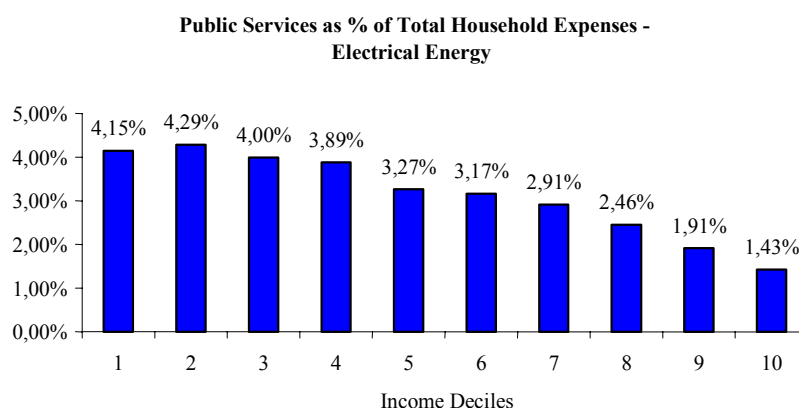
Figure 4



Source: CPS/FGV based on microdata from PNAD/IBGE

When looking at the amount of expenses that electricity consumes, we learn that these (in proportion to total expenses) decrease in accordance to income growth. As such, the lower income groups use up more of their income to obtain electrical energy than the wealthier groups. While the tenth decile spends 1.43% of total expenses on electrical energy, the first decile spends 4.15%. This information is obtained from the Pesquisa de Orçamento Familiar 1995/1996. Although this is interesting information, it is useless for comparison, as that is the only period for which the POF is available. We provide this information since the POF is currently at the field level, with the plan of completion in July and the results being released three months thereafter.

Figure 5

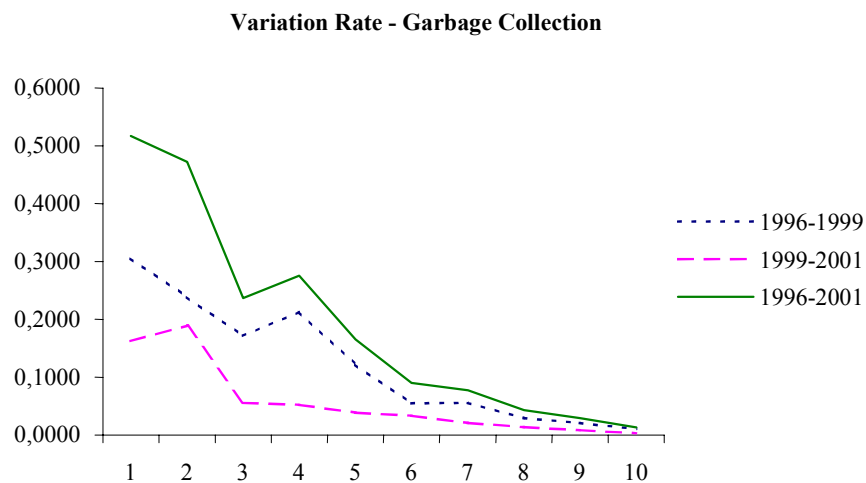


Source: CPS/FGV based on microdata from Pesquisa de Orçamento Familiar 1995/1996 IBGE

The service with the second most egalitarian distribution is garbage collection, as can be seen from Figure 2. It also shows some convergence, but in a much milder manner than electricity. The period with the largest amount of shifts was 1996-1999. In total, during that period access to garbage collection improved by almost twice the amount in the 1999-2001 period. In the 1996-1999 period, the curve shifted upwards, in an attempt to improve the situation of the lower ends of the income spectrum. At this time, the bottom half of the income groups increased their access rates to garbage collection between eight and fifteen percentage points—a notable move. However, the movement towards equity had not yet been fully started, as the difference between income levels was still striking, as the preoccupation was raising the extremely low access rates of half of the population. In 1996, only the highest income deciles had access rates above ninety percent, and more than half had access rates of less than seventy percent, with the two poorest deciles with access rates below forty percent. In 1999, only one decile was below fifty percent, and just barely, with 47.51%.

Between 1999 and 2001, on the other hand, there was already a movement towards convergence, instead of a mere upwards shift of the curve. The increases in this period focused mainly on the first and second deciles. All other deciles experienced an improvement somewhere between four and 0.3 percentage points. This allowed for amelioration in the distribution of the service. However, there is still great disparity among the deciles, especially when comparing the top five deciles to the bottom ones. Starting from the third decile in 2001, we observe that there is a movement towards stabilization, especially of the upper deciles, which have remained almost constant in the 1999-2001 period (relative to the lower deciles). Still, the difference between the third decile and the first two deciles is striking. While in 2001, the third income group had an access rate of 72.62%, the bottom two had rates of 56.51% and 59.47% (for the second and first, respectively). Notice that the first decile had an access rate greater than that of the second decile in 2001. This is mainly due to the fact that individuals with no income (such as those between employment opportunities) are included in the first decile, even if they already have attained higher living standards than the actual poor. When looking at the variation rate for the periods discussed, we confirm that the major shifts occurred in the first three-year period being analyzed. As with electricity, improvements concentrated on the bottom half of the income decile division, especially in the 1996-1999 period. In the second three-year period, the variation rate was lower than one-tenth for all deciles, except the poorest two.

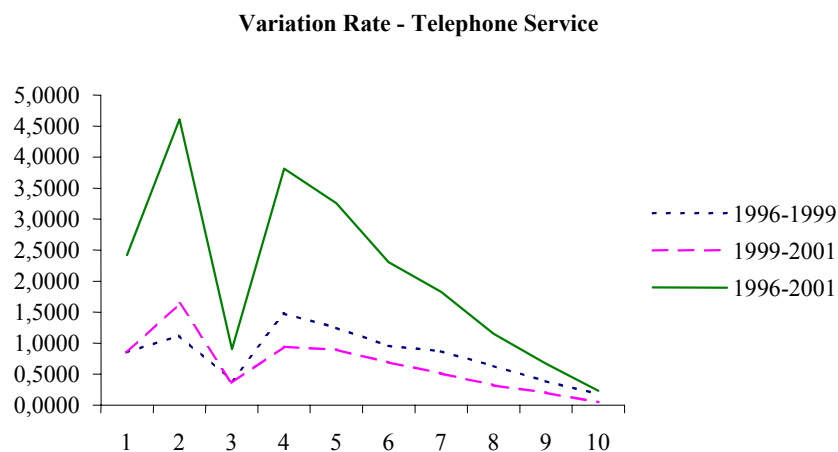
Figure 6



Source: CPS/FGV based on microdata from PNAD/IBGE

The last service being analyzed in this section is the telephone service. No longer of public domain, it has increased in distribution, although in an extremely unequal manner. The service is now much more widely held by individuals, as can be noticed from Figure 3, but there is still great disparity in the access rates according to income deciles. In 1996, 6.8% of the population in the poorest decile had access to a telephone. In comparison, in the tenth decile, 74.52% had access to the same service.

Figure 7



Source: CPS/FGV based on microdata from PNAD/IBGE

In the period of 1996 to 1999, the access rates for the last half of the deciles showed great increase, varying between thirteen and twenty percentage points.

Meanwhile, in the bottom half, the biggest increase was of 9.51 points in that period. In the following period, 1999 to 2001, again those with the better increase were those in the top half of the income distribution. However, at this time, the increases were more equitably distributed. The top decile, for example, showed the smallest increase, of only 4.30 points. The fifth, sixth and seventh deciles showed the greatest increase in the period, varying between 19.99 and 20.68 points. The first and second deciles each experienced an increase greater than ten points, but nonetheless, their changes were the third and fourth smallest ones. Overall, the seventh decile was the one that benefited the most, practically tripling its access rate. Unlike the other two services, where the bottom two deciles experienced the most positive change, in the case of telephone, these same deciles were the ones least favored, and there is still great disparity between all deciles in relation to telephone access rates.

As for electricity, we also have the data provided by the POF with respect to the percentage of total household expenses consumed by telephone service, seen in Figure 8. As opposed to electrical energy, telephone expenses behave as a luxury good, with expenses increasing proportional to income growth. Like expenses with electricity, where the difference between the two extremes of the income distribution spectrum is of a magnitude of almost three times, the difference between the two extremes is also of almost thrice. We express here the same concern as above for utilizing the POF, as currently it cannot be used for comparison, but merely for personal interest.

Figure 8

Public Services as % of Total Household Expenses -

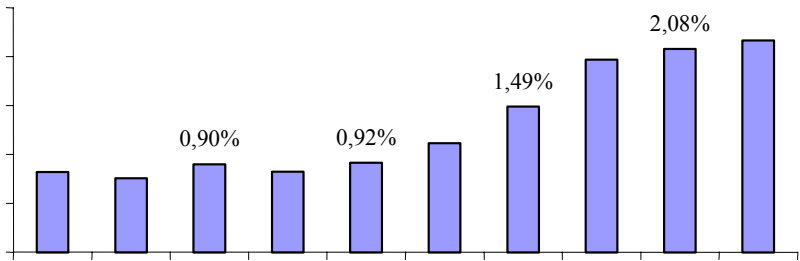


Table 1**Access to Assets in Brazil According to Income Deciles****Public Services - 2001****Horizontal Composition (%)**

	Electricity	Garbage Collection	Telephone
1	85.27	59.47	23.25
2	86.89	56.50	18.49
3	93.04	72.62	38.30
4	96.51	78.91	30.97
5	98.00	85.07	43.82
6	98.54	86.96	49.11
7	99.30	90.93	60.80
8	99.52	93.32	69.29
9	99.80	95.70	81.21
10	99.94	97.24	91.86

Source: CPS/FGV based on microdata from PNAD/IBGE

Access to Assets in Brazil According to Income Deciles**Public Services - 1999****Horizontal Composition (%)**

	Electricity	Garbage Collection	Telephone
1	80.44	51.16	12.60
2	82.07	47.51	7.01
3	91.61	68.79	28.21
4	95.65	75.03	15.94
5	97.87	81.90	23.13
6	98.19	84.14	29.11
7	99.16	89.08	40.28
8	99.57	92.08	52.50
9	99.79	94.91	67.57
10	99.95	96.96	87.56

Source: CPS/FGV based on microdata from PNAD/IBGE

Access to Assets in Brazil According to Income Deciles**Public Services - 1996****Horizontal Composition (%)**

	Electricity	Garbage Collection	Telephone
1	74.20	39.20	6.80
2	77.80	38.37	3.30
3	88.58	58.73	20.12
4	92.82	61.87	6.43
5	96.27	73.02	10.29
6	97.69	79.77	14.87
7	98.65	84.40	21.51
8	99.35	89.45	32.18
9	99.67	92.99	48.69
10	99.89	95.97	74.52

Source: CPS/FGV based on microdata from PNAD/IBGE

Table 2
Access to Assets in Brazil According to Income Deciles
Public Services - 2001
Vertical Composition

	Electricity	Garbage Collection	Telephone
1	8.92	7.29	4.59
2	9.07	6.91	3.64
3	9.84	9.00	7.64
4	9.97	9.55	6.04
5	10.30	10.47	8.69
6	10.24	10.59	9.63
7	10.43	11.19	12.06
8	10.35	11.37	13.59
9	10.47	11.76	16.08
10	10.40	11.86	18.04

Source: CPS/FGV based on microdata from PNAD/IBGE

Access to Assets in Brazil According to Income Deciles
Public Services - 1999
Vertical Composition

	Electricity	Garbage Collection	Telephone
1	8.53	6.55	3.47
2	8.74	6.12	1.94
3	9.64	8.75	7.71
4	10.14	9.61	4.39
5	10.35	10.47	6.36
6	10.39	10.76	8.00
7	10.64	11.56	11.23
8	10.40	11.62	14.24
9	10.57	12.14	18.58
10	10.58	12.41	24.08

Source: CPS/FGV based on microdata from PNAD/IBGE

Access to Assets in Brazil According to Income Deciles
Public Services - 1996
Vertical Composition

	Electricity	Garbage Collection	Telephone
1	8.14	5.58	2.90
2	8.46	5.41	1.39
3	9.42	8.10	8.31
4	10.03	8.67	2.70
5	11.24	11.06	4.67
6	9.78	10.36	5.79
7	10.61	11.77	8.99
8	10.90	12.72	13.72
9	10.63	12.87	20.19
10	10.80	13.46	31.33

Source: CPS/FGV based on microdata from PNAD/IBGE

Table 3

Access to Assets in Brazil According to Income Deciles
Public Services - 2001

	Electricity	Garbage Collection	Telephone
1	24360943	16989349	6641920
2	24767725	16103553	5269134
3	26853470	20959630	11052863
4	27218393	22256262	8734919
5	28111944	24401454	12568621
6	27964667	24678779	13936215
7	28484084	26081487	17441202
8	28248926	26488744	19667718
9	28585559	27410893	23259888
10	28398899	27630255	26103197

Source: CPS/FGV based on microdata from PNAD/IBGE

Access to Assets in Brazil According to Income Deciles
Public Services - 1999

	Electricity	Garbage Collection	Telephone
1	21704216	13804048	3400356
2	22253299	12883589	1900244
3	24542432	18428189	7558215
4	25813049	20248640	4302445
5	26350405	22050842	6228160
6	26450858	22667777	7842829
7	27089106	24336648	11003003
8	26474263	24481694	13958620
9	26892775	25577876	18209697
10	26933425	26126634	23595512

Source: CPS/FGV based on microdata from PNAD/IBGE

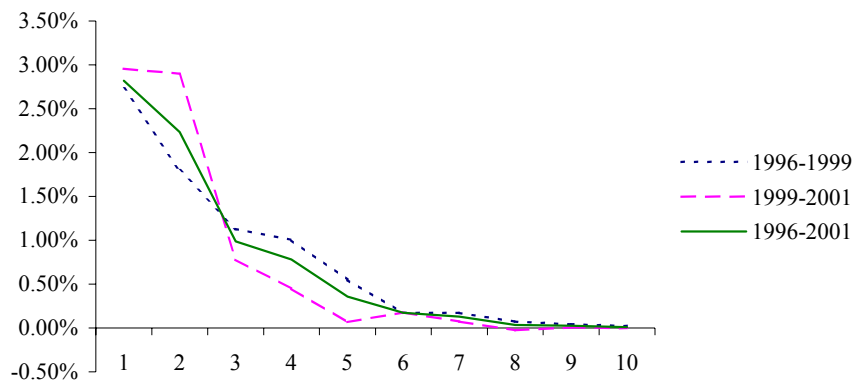
Access to Assets in Brazil According to Income Deciles
Public Services - 1996

	Electricity	Garbage Collection	Telephone
1	19572660	10339915	1794369
2	20339550	10031870	861936
3	22650835	15017532	5144360
4	24119352	16076883	1670805
5	27047910	20516741	2891910
6	23536563	19219229	3581756
7	25521507	21833225	5564891
8	26210465	23598890	8488477
9	25573625	23860369	12492888
10	25988254	24970183	19388096

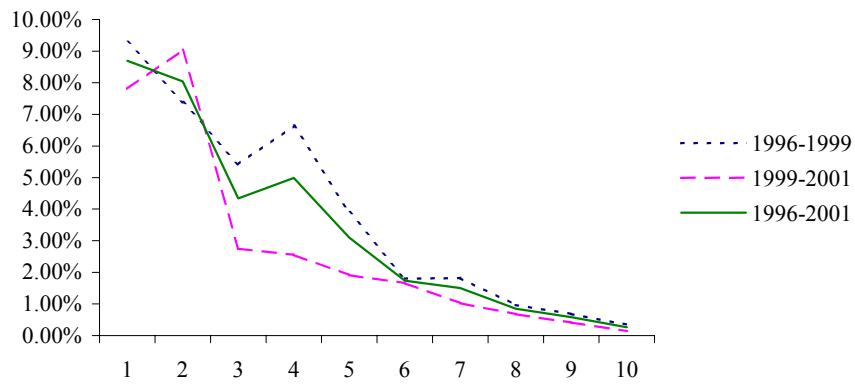
Source: CPS/FGV based on microdata from PNAD/IBGE

Figure 9

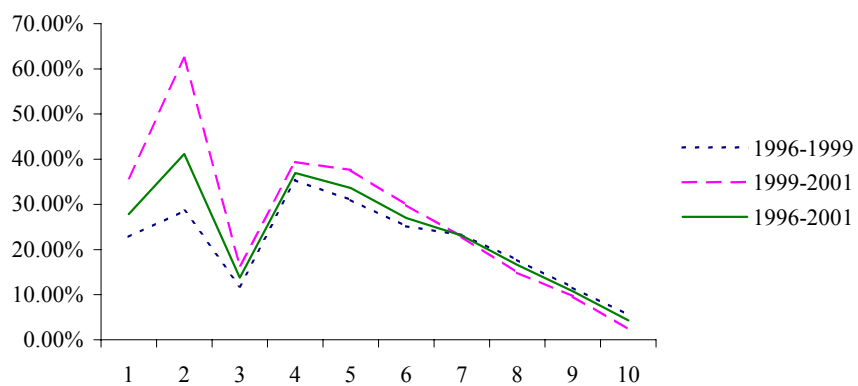
Average Annual Variation Rate - Electricity



Average Annual Variation Rate - Garbage Collection



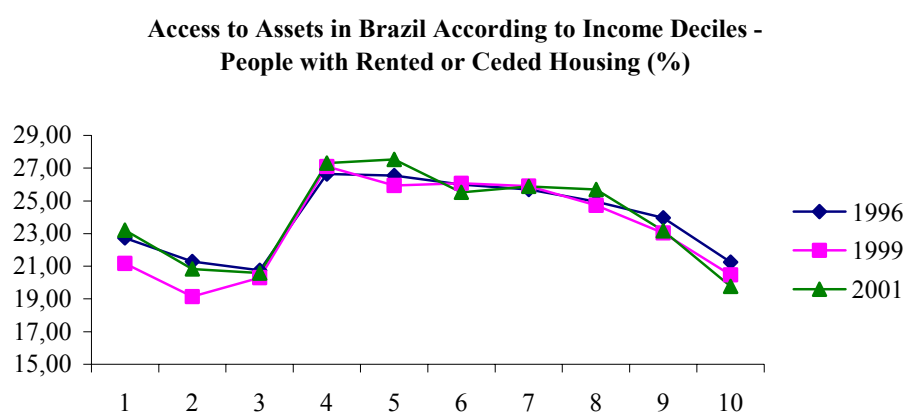
Average Annual Variation Rate - Telephone



7. Housing

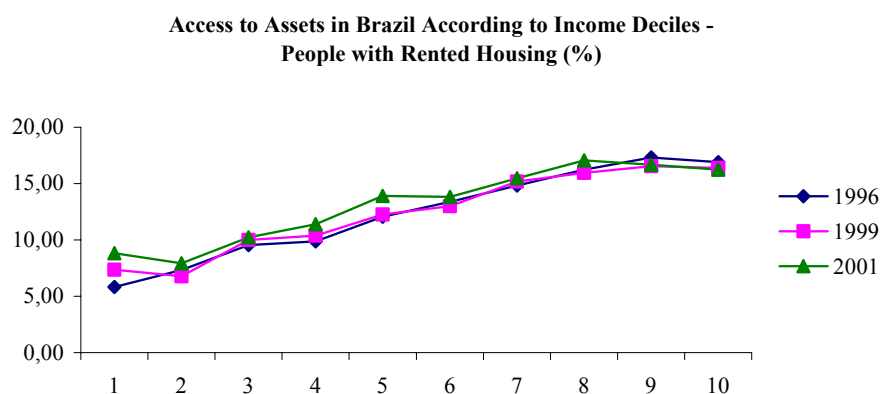
While the other assets being analyzed in this section seem to have a specific pattern, housing proves to vary drastically, in terms of the different methods of financing and income groups. For some methods of financing the household, there are not great disparities among the income group extremes, but the curve in between them resembles a parabola. For other methods of financing, such as renting, the curve becomes a smoothly drawn positively sloped line. We observe that among the poorest decile, there is a high percentage of individuals who have already paid for their own housing, and there is a small percentage of those who are still paying for housing. We observe through the PNAD that renting or paying for own housing (still paying) are seen as luxury forms of housing financing, as is shown through a comparison of the following four figures.

Figure 1



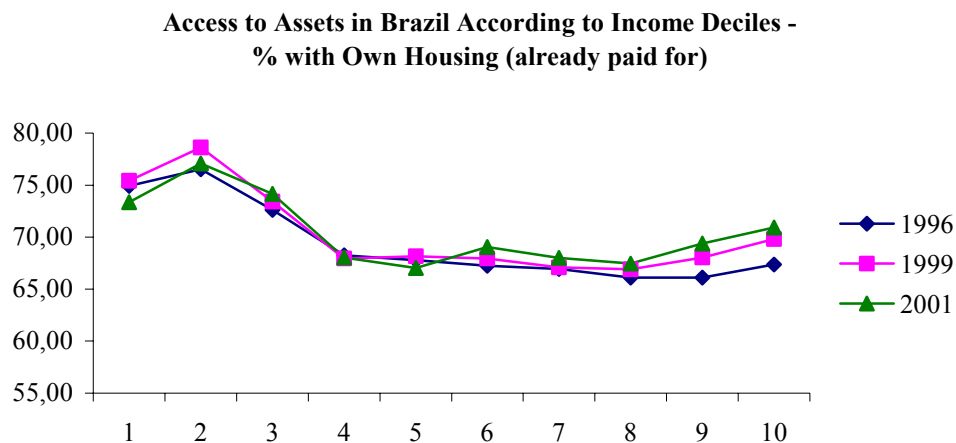
Source: CPS/FGV based on microdata from PNAD/IBGE

Figure 2



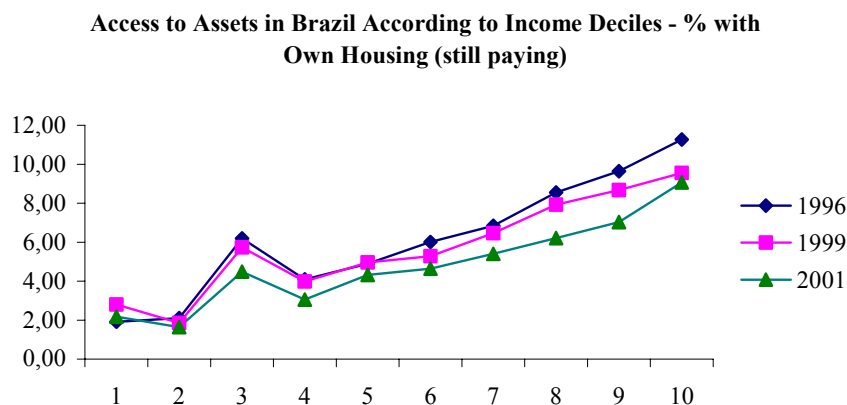
Source: CPS/FGV based on microdata from PNAD/IBGE

Figure 3



Source: CPS/FGV based on microdata from PNAD/IBGE

Figure 4



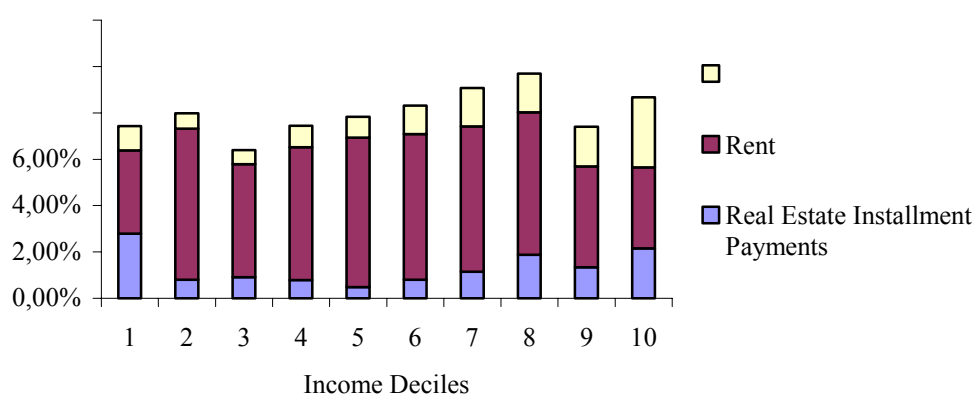
Source: CPS/FGV based on microdata from PNAD/IBGE

As these figures show, in many cases, the shifts among methods of household financing returned to their original positions, especially for the bottom deciles. In many cases, the curve for the year of 1999 lies between that for 1996 and 2001. It can thus be stated that, overall, the methods of financing remained stagnant, throughout the years. We do notice a difference in the method of paying for one's own household. For those still paying for their households, we see that only the first decile did not have its situation worsened. The availability of credit thus decreased throughout the period, limiting the ability for some to pay for their own housing. Those who suffered the most from this shock belonged to the middle class. While the wealthiest were protected

through high interest rates, the poorest had available to them social protection nets, leaving the middle class unguarded against crises.

We provide limited information regarding the individual's expenses devoted to housing, as these are only thoroughly provided by the 1995/96 POF, and as such, have no basis for comparison. Through the POF, we confirm that condominium fee is indeed a luxury good, as expected. Meanwhile, rent tends to consume practically the same proportion of each income groups' aggregated expenses.

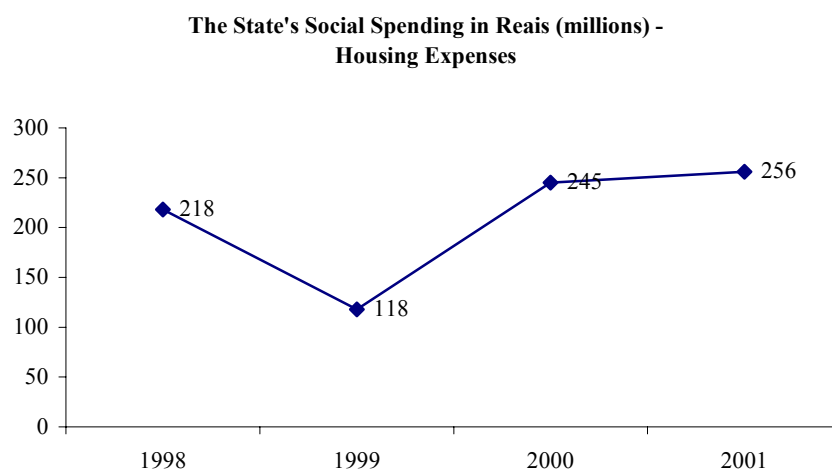
Figure 5



Source: CPS/FGV based on microdata from Pesquisa de Orçamento Familiar 1995/1996 IBGE

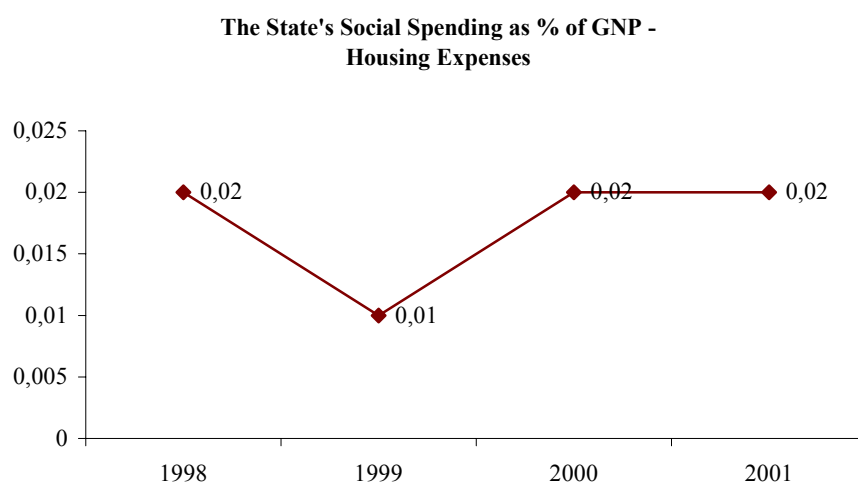
In terms of government spending devoted to housing, there has not been much change over the past four years, with the percentage of GNP devoted to housing expenses being stagnated at 2%. There was a cutback in 50% of expenses in 1999, but these returned to their original level the following year. The graphs provided indicate the value (in million R\$) of the state's spending devoted to housing expenses, as well as the actual percentage of GNP consumed by the same.

Figure 6



Sources: SIAFI, TEM/FAT, BACEN, MPAS,MF/SRF, MF/STN, BNDES.
Elaboration: CPS/FGV

Figure 7



Sources: SIAFI, TEM/FAT, BACEN, MPAS,MF/SRF, MF/STN, BNDES.
Elaboration: CPS/FGV

Table 1

Access to Assets in Brazil According to Income Deciles

Household Characteristics - Household Financing - 2001 (%)

Horizontal Composition

	People with Rented or Ceded Housing	People with Rented Housing	Have Own Housing (already paid for)	Have Own Housing (still paying)
1	23,20	8,81	73,36	2,17
2	20,83	7,93	77,07	1,64
3	20,58	10,23	74,14	4,49
4	27,32	11,39	68,05	3,05
5	27,54	13,90	67,03	4,31
6	25,53	13,82	69,04	4,64
7	25,88	15,47	68,00	5,41
8	25,69	17,05	67,46	6,20
9	23,18	16,66	69,38	7,02
10	19,77	16,22	70,91	9,07

Source: CPS/FGV based on microdata from PNAD/IBGE

Access to Assets in Brazil According to Income Deciles

Household Characteristics - Household Financing - 1999 (%)

	People with Rented or Ceded Housing	People with Rented Housing	Have Own Housing (already paid for)	Have Own Housing (still paying)
1	21,18	7,37	75,42	2,80
2	19,13	6,76	78,60	1,86
3	20,29	10,01	73,41	5,73
4	27,09	10,40	67,96	3,99
5	25,93	12,27	68,16	4,96
6	26,07	13,01	67,95	5,28
7	25,90	15,17	67,10	6,46
8	24,73	15,94	66,92	7,92
9	23,04	16,55	68,03	8,66
10	20,47	16,39	69,83	9,55

Source: CPS/FGV based on microdata from PNAD/IBGE

Access to Assets in Brazil According to Income Deciles

Household Characteristics - Household Financing - 1996 (%)

	People with Rented or Ceded Housing	People with Rented Housing	Have Own Housing (already paid for)	Have Own Housing (still paying)
1	22,73	5,81	74,94	1,92
2	21,29	7,33	76,52	2,10
3	20,75	9,53	72,62	6,20
4	26,64	9,88	68,26	4,09
5	26,54	12,06	67,80	4,89
6	25,99	13,39	67,23	6,01
7	25,69	14,83	66,92	6,84
8	24,95	16,22	66,10	8,54
9	23,97	17,31	66,09	9,64
10	21,24	16,90	67,35	11,26

Source: CPS/FGV based on microdata from PNAD/IBGE

Table 2

Access to Assets in Brazil According to Income Deciles

Household Characteristics - Household Financing - 2001

	People with Rented or Ceded Housing	People with Rented Housing	Have Own Housing (already paid for)	Have Own Housing (still paying)
1	6628492	2517861	20959702	619594
2	5938109	2261173	21968694	466771
3	5940308	2951971	21399193	1295571
4	7704644	3212384	19192793	861167
5	7900604	3988167	19229143	1236983
6	7246378	3921609	19593572	1317817
7	7424071	4437174	19506471	1550616
8	7292225	4840572	19149683	1759899
9	6638399	4772853	19871945	2011255
10	5617493	4609873	20150684	2577585

Source: CPS/FGV based on microdata from PNAD/IBGE

Access to Assets in Brazil According to Income Deciles

Household Characteristics - Household Financing - 1999

	People with Rented or Ceded Housing	People with Rented Housing	Have Own Housing (already paid for)	Have Own Housing (still paying)
1	5713936	1987925	20348175	754915
2	5187980	1833269	21313752	504346
3	5436728	2680858	19666951	1536022
4	7311349	2805684	18340041	1077149
5	6982313	3302551	18352771	1336125
6	7023875	3504529	18304693	1423363
7	7076891	4145216	18330962	1764797
8	6575425	4237999	17791936	2105014
9	6207974	4459985	18333937	2334398
10	5516299	4415788	18817019	2573644

Source: CPS/FGV based on microdata from PNAD/IBGE

Access to Assets in Brazil According to Income Deciles

Household Characteristics - Household Financing - 1996

	People with Rented or Ceded Housing	People with Rented Housing	Have Own Housing (already paid for)	Have Own Housing (still paying)
1	5996708	1533207	19768928	505969
2	5564808	1916285	20003350	550050
3	5305721	2437542	18570278	1584709
4	6921757	2567011	17735735	1061468
5	7457210	3388645	19048169	1373889
6	6262651	3226134	16198855	1446821
7	6645738	3837035	17312964	1769765
8	6582626	4278931	17438115	2253305
9	6150479	4441328	16959106	2472508
10	5527190	4397764	17523931	2930368

Source: CPS/FGV based on microdata from PNAD/IBGE

Table 3**Access to Assets in Brazil According to Income Deciles**

Household Characteristics - Household Financing - 2001

Vertical Composition

	People with Rented or Ceded Housing	People with Rented Housing	Have Own Housing (already paid for)	Have Own Housing (still paying)
1	6,55	6,27	13,87	14,28
2	5,06	6,06	15,22	14,02
3	8,33	9,08	12,27	11,97
4	7,37	7,39	10,53	10,47
5	8,56	8,52	9,44	9,56
6	8,44	8,78	10,08	10,01
7	10,13	10,16	8,61	8,80
8	11,63	11,52	7,91	8,11
9	14,30	13,91	6,84	7,19
10	19,63	18,31	5,22	5,58

Source: CPS/FGV based on microdata from PNAD/IBGE

Access to Assets in Brazil According to Income Deciles

Household Characteristics - Household Financing - 1999

Vertical Composition

	People with Rented or Ceded Housing	People with Rented Housing	Have Own Housing (already paid for)	Have Own Housing (still paying)
1	9,07	5,96	10,73	4,90
2	8,23	5,49	11,24	3,27
3	8,63	8,03	10,37	9,97
4	11,60	8,41	9,67	6,99
5	11,08	9,90	9,68	8,67
6	11,14	10,50	9,65	9,24
7	11,23	12,42	9,67	11,45
8	10,43	12,70	9,38	13,66
9	9,85	13,36	9,67	15,15
10	8,75	13,23	9,92	16,70

Source: CPS/FGV based on microdata from PNAD/IBGE

Access to Assets in Brazil According to Income Deciles

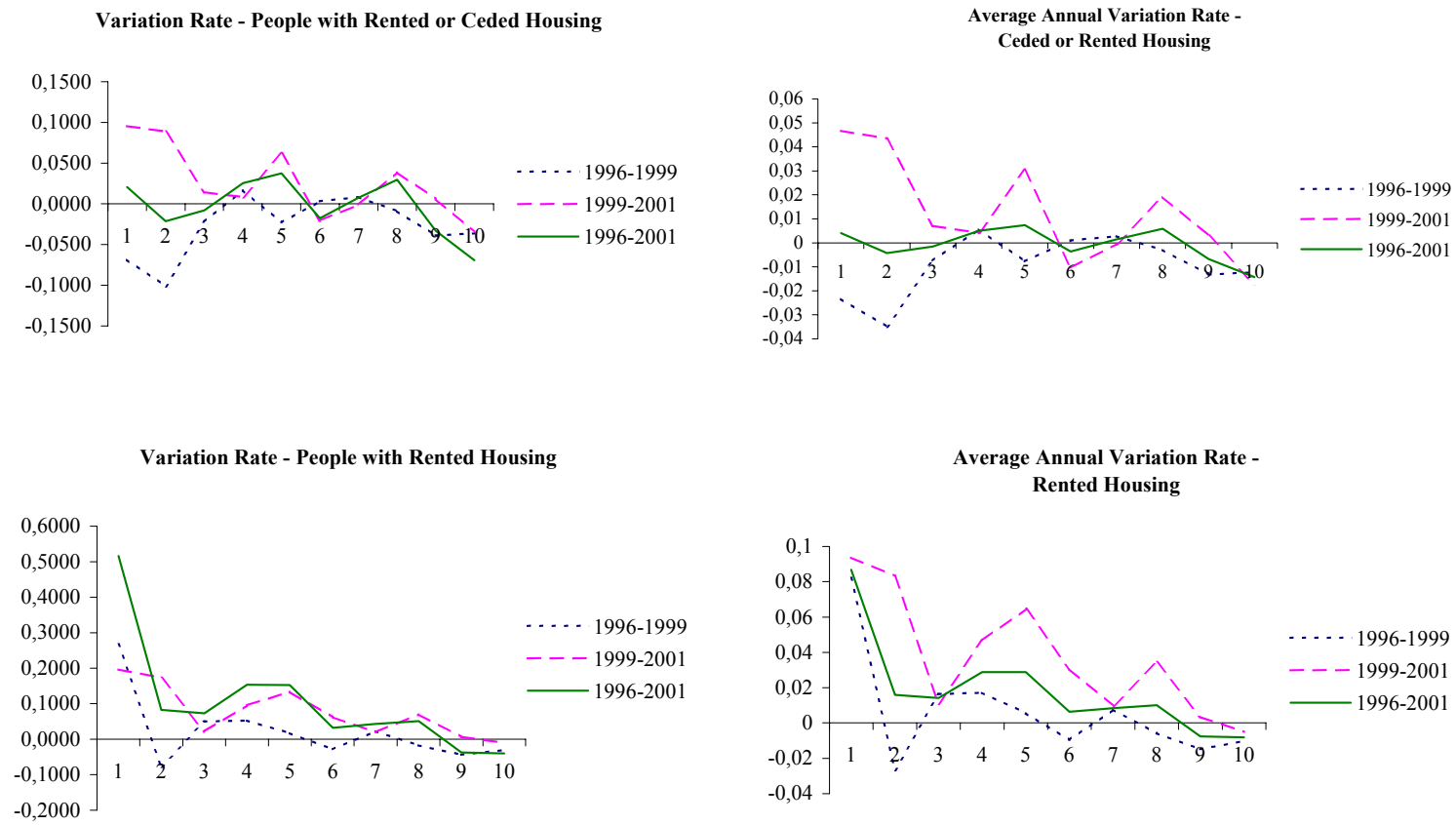
Household Characteristics - Household Financing - 1996

Vertical Composition

	People with Rented or Ceded Housing	People with Rented Housing	Have Own Housing (already paid for)	Have Own Housing (still paying)
1	9,61	4,79	10,95	3,17
2	8,92	5,98	11,08	3,45
3	8,50	7,61	10,28	9,94
4	11,09	8,02	9,82	6,66
5	11,95	10,58	10,55	8,61
6	10,03	10,07	8,97	9,07
7	10,65	11,98	9,59	11,10
8	10,55	13,36	9,66	14,13
9	9,85	13,87	9,39	15,50
10	8,86	13,73	9,71	18,37

Source: CPS/FGV based on microdata from PNAD/IBGE

Figure 8



Source: CPS/FGV based on microdata from PNAD/IBGE

THE STATE'S SOCIAL SPENDING
R\$ million and % GNP

	1998		1999		2000		2001	
	R\$	%PIB	R\$	%PIB	R\$	%PIB	R\$	%PIB
TOTAL	141.78	15.51	149,788	15.54	172,885	15.91	212.62	17.95
Social Security Benefits	53,376	5.84	58,447	6.06	65,787	6.05	75,328	6.36
Expenses with inactive state personnel	21.91	2.4	24,068	2.5	26,447	2.43	30,617	2.58
Expenses with the functioning of the social security system	1,409	0.15	1,517	0.16	1,458	0.13	1,451	0.12
LOAS	1,137	0.12	1.46	0.15	12,007	0.18	2,676	0.23
Expenses with Social Aid	2,312	0.25	2,584	0.27	2,265	0.21	3,929	0.33
Labor and Employment	7,506	0.82	6,288	0.65	6,811	0.63	7,783	0.66
Social Expense - Fundiaria Policy	3,228	0.35	3,023	0.31	3,385	0.31	4,103	0.35
Cultural and Educational Expenses (excluding personnel)	3,455	0.38	3,622	0.38	4,871	0.45	4.99	0.42
Active Personnel (Education)	3,935	0.43	4,568	0.47	4,724	0.43	4,851	0.41
Mandatory transfers to states and municipalities	8.07	0.88	9,123	0.95	11.22	1.03	12,896	1.09
Health Expenses (excluding personnel)	12,781	1.4	15,231	1.58	17,617	1.62	19,356	1.63
Active personnel (health)	2,249	0.25	2,501	0.26	3,006	0.28	2,628	0.22
Water Treatment Expenses	563	0.06	544	0.06	445	0.04	1,642	0.14
Housing Expenses	218	0.02	118	0.01	245	0.02	256	0.02
Benefícios ao servidor	2,223	0.024	2.23	0.23	2,329	0.21	2,669	0.23
Recursos Humanos Órgãos não executores de gasto social	116	0.01	102	0.01	124	0.01	154	0.01
Fiscal resources, subsidies and S system	17,293	1.89	14,361	1.49	17,955	1.65	32,367	2.73

Source: SIAFI, TEM/FAT, BACEN, MPAS, MF/SRF, MF/STN, BNDES

Elaboration: MF/SFE E Sec.Executiva

9. Preliminary Data

We present below preliminary estimates based on new sources of data that will be developed in the next version of this paper.

PNAD 1981

BRASIL: PERFIL DA SAÚDE - 1981	
População - Composição Vertical	
Informações que levam em conta apenas as pessoas que responderam o questionário	
	População Total
	0
Informações Hospitalares	
Motivo da última hospitalização	
Parto	22.60%
Cirurgia	20.30%
Outro	57.04%
Sem Declaração	0.06%
Tipo do hospital usado	
Particular	64.69%
Público	35.28%
Sem Declaração	0.03%
Condição de uso do hospital	
Particular	10.97%
Prev. Social	77.04%
Sist. Pré-Pagam.	1.65%
Sist. Empregador	4.18%
Sem Declaração	0.03%
Outro	6.14%
Forma de pagamento do hospital	
Gratuita	75.03%
Toda Paga	11.07%
Parte Paga	13.89%
Sem Declaração	0.01%
Teve gastos hospitalares	
Sim	25.12%
Não	74.81%
Sem Declaração	0.07%
Gastos hospit-faixa	
1 a 999	3.11%
1000 a 4999	24.21%
5000 a 9999	21.37%
10000 a 49999	38.57%
50000 a 99999	7.63%
100000 a 299999	3.30%
300000 e mais	0.39%

Sem Declaração	1.42%
Informações sobre atendimento dentário	
Teve gastos atend. dentário	
Sim	64.41%
Não	35.58%
Sem Declaração	0.01%
Gastos dentário-faixa	
1 a 999	18.50%
1000 a 4999	33.85%
5000 a 9999	21.67%
10000 a 49999	23.22%
50000 a 99999	1.81%
100000 a 299999	0.56%
300000 e mais	0.03%
Sem Declaração	0.34%
Informações sobre deficiências	
Ligado inst. assistência	
Sim	7.86%
Não	92.08%
Sem Declaração	0.06%
Recebe assistência especial	
Sim	12.90%
Não	87.04%
Sem Declaração	0.06%
Informações sobre utilização de serviços de saúde	
Onde procurou atendimento	
Rede pública	48.91%
Rede privada	50.00%
Rede pública e privada	1.09%
Tipo de atend. dentário	
Particular	59.91%
Credenciado	13.80%
Público	21.78%
Outro	3.10%
Mais de 1 tipo	1.39%
Sem declaração	0.01%
Tipo de assistência	
Médica	13.76%
Reabilitação	2.92%
Habilidade profissional	0.19%
Outra	0.66%
Mais de 1 tipo	82.06%
Sem declaração	0.42%

Bahia - Informações dos domicílios
População Total

	Total de pessoas	Número de homens no domicílio*	Condição de ocupação do domicílio					
			Próprio construção e terreno	Próprio apenas construção	Alugado	Cedido por empregador	Cedido por particular	Outra
Bahia	11,867,338	3.0	8,479,759	1,066,213	931,594	708,629	530,571	84,630

	Telefone			Iluminação			
	Não tem	Uma linha	Duas ou mais linhas	Elétrica com medidor	Elétrica sem medidor	Óleo ou querosene	Outra
Bahia	10,646,319	1,109,843	45,234	7,499,953	637,627	3,422,223	241,594

Fonte: CPS/FGV processando os microdados do Censo 91

Censo 2000

Frequênta escola ou creche 7-15 anos														
Sim, rede particular														
Curso que frequênta														
Totc	População	creche	pré-escolar	classe de alfabetização	alfabetização de adultos	ensino fundamental ou 1º grau - regular seriado	ensino fundamental ou 1º grau - regular não-seriado	supletivo(ensino fundamental ou 1º grau)	ensino médio ou 2º grau - regular seriado	ensino médio ou 2º grau - regular não-seriado	supletivo (ensino médio ou 2º grau)	pré-vestibular	superior - graduação	superior - mestrado ou doutorado
Totl	100.00	.	0.15	0.28	0.00	10.71	0.25	0.04	1.04	0.04	.	.	.	.
Total														
PESDEC	100.00	.	0.15	0.29	0.00	10.64	0.24	0.04	0.97	0.04	.	.	.	.
1														
2	100.00	.	0.07	0.11	0.02	8.74	0.34	0.16	2.87	0.15	.	.	.	.
3	100.00	.	0.03	0.10	0.01	13.29	0.56	0.21	4.14	0.20	.	.	.	.
4	100.00	.	0.05	0.15	0.02	19.87	0.65	0.22	5.52	0.23	.	.	.	.
5	100.00	.	0.12	0.17	.	29.69	0.82	0.45	6.96	0.86	.	.	.	.
6	100.00	.	0.12	0.12	.	34.98	1.34	0.55	8.95	0.23	.	.	.	.
7	100.00	.	0.15	0.05	.	40.82	1.28	0.39	10.03	1.08	.	.	.	.
8	100.00	.	0.08	0.05	.	47.86	0.77	0.41	10.51	0.51	.	.	.	.
9	100.00	.	0.45	.	.	52.96	1.90	.	12.15	0.71	.	.	.	.
10	100.00	.	0.82	.	.	54.46	0.60	1.89	13.46	0.90	.	.	.	.

Fonte: CPS/FGV processando os microdados do Censo 2000/ IBGE

Frequênta escola ou creche 7-15 anos														
Sim, rede pública														
Curso que frequênta														
Totc	População	creche	pré-escolar	classe de alfabetização	alfabetização de adultos	ensino fundamental ou 1º grau - regular seriado	ensino fundamental ou 1º grau - regular não-seriado	supletivo(ensino fundamental ou 1º grau)	ensino médio ou 2º grau - regular seriado	ensino médio ou 2º grau - regular não-seriado	supletivo (ensino médio ou 2º grau)	pré-vestibular	superior - graduação	superior - mestrado ou doutorado
Totl	100.00	.	1.03	2.25	0.07	78.77	2.07	0.40	2.76	0.13	.	.	.	.
Total														
PESDEC	100.00	.	1.05	2.29	0.07	79.18	2.05	0.37	2.51	0.11	.	.	.	.
1														
2	100.00	.	0.29	0.78	0.25	67.58	3.00	1.67	13.36	0.63	.	.	.	.
3	100.00	.	0.41	0.90	0.19	60.88	2.68	1.53	14.32	0.55	.	.	.	.
4	100.00	.	0.16	0.74	0.15	55.99	2.45	1.42	11.74	0.65	.	.	.	.
5	100.00	.	0.19	0.47	0.14	45.37	2.01	0.85	11.54	0.36	.	.	.	.
6	100.00	.	.	0.11	0.11	42.89	1.69	1.12	7.53	0.26	.	.	.	.
7	100.00	.	0.16	0.43	.	36.68	1.04	0.47	7.22	0.21	.	.	.	.
8	100.00	.	0.47	0.02	.	30.88	1.74	0.51	5.63	0.55	.	.	.	.
9	100.00	.	.	0.26	0.23	24.13	1.04	0.65	5.30	0.23	.	.	.	.
10	100.00	.	.	.	.	22.23	0.62	.	4.61	0.41	.	.	.	.

Fonte: CPS/FGV processando os microdados do Censo 2000/ IBGE

POF – 1995/1996

Family Consumption Portrait According to Income Deciles
Brazil

	1	2	3	4	5	6	7	8	9	10
Current Income	121.31	238.00	350.88	470.77	617.46	804.34	1,084.01	1,513.52	2,332.01	5,971.64
Labor Current Income	66.34	152.43	245.49	349.1	461.06	601.34	771.18	1,095.18	1,666.23	4,103.28
Other Current Income	47.74	71.96	86.4	90.86	116.66	152.84	229.48	294.17	459.48	1,296.16
Unusual Trifling Income	7.15	13.51	18.85	30.02	38.68	49.19	80.08	121.61	195.87	489.37
Windfall Income	0.09	0.12	0.13	0.78	1.06	0.97	3.28	2.57	10.42	82.83
Liquid Credit	28.97	1.79	50.98	7.67	10.32	15.71	29.91	26.21	55.53	12.68
Loans	0.04	0.52	0.49	0.59	1.13	1.72	1.57	2.05	6.01	6.61
Liquidação de Ativos	36.98	4.64	57.17	31.25	25.53	53.63	76.11	107.47	195.55	533.25
Asset Increase	0.85	2.82	3.84	22.59	14.32	36.44	37.73	62.23	126.63	471.64
Real Estate Installment Fees	8.08	2.66	4.04	4.02	3.11	6.41	11.71	26.36	28.81	93.37
Taxes	4.96	8.07	14.46	22.00	34.77	49.5	66.1	106.79	181.8	705.86
Income Taxes	0.01	0.01	0.09	0.04	1.01	1.65	1.53	9.15	30.36	345.98
INSS	1.67	5.25	8.48	14.75	21.45	31.61	42.19	59.93	93.55	217.81
Other Deductions	0.33	0.98	2.13	3.06	6.11	7.42	10.71	15.24	25.83	59.67
IPTU	1.14	1.44	2.93	3.00	4.08	5.67	7.74	14.35	17.82	39.57
IPVA	1.66	0.21	0.26	0.87	1.06	1.8	2.65	7.02	11.27	35.33
Other Taxes	0.15	0.19	0.56	0.28	1.06	1.35	1.28	1.1	2.96	7.49
Liquid Income	87.39	228.14	285.44	441.1	572.37	739.13	988.00	1,380.52	2,094.67	5,253.11
Total Expenses	289.61	330.55	446.04	509.66	648.44	795.84	1,020.43	1,408.11	2,144.57	4,335.9
Fixed Expenses	49.31	61.04	72.00	89.19	117.38	148.14	202.58	285.15	410.36	863.41
Rent	10.39	21.52	21.75	29.23	41.8	50.00	63.91	86.53	93.15	151.59
Housing	3.05	2.2	2.75	4.67	5.84	9.77	16.91	23.61	36.68	130.84
Water and Sewerage	5.26	6.79	9.6	9.45	10.94	13.78	14.67	17.17	18.62	18.88
Electricity	12.01	14.18	17.82	19.81	21.19	25.2	29.69	34.58	41.04	61.88
Telephone	2.38	2.5	4.02	4.2	5.94	8.86	15.2	27.72	44.55	93.83
Domestic Servant	2.88	3.21	2.86	3.45	6.94	8.68	15.4	25.81	58.55	174.74
Health Insurance	13.34	10.65	13.2	18.38	24.73	31.86	46.81	69.72	117.77	231.65
Durable goods	14.78	21.82	32.03	38.51	50.06	53.58	58.29	74.17	102.03	181.3
Non-durable Goods and Services	154.56	195.91	257.5	296.66	358.15	434.71	535.84	690.98	978.65	1,750.86
Food and Cleaning Products	74.18	97.37	124.8	137.79	155.58	183.23	199.52	240.32	314.47	477.51
Food	71.3	93.95	119.92	132.76	149.29	176.47	192.76	232.67	303.08	462.98
Cleaning Products	2.88	3.42	4.88	5.03	6.29	6.75	6.75	7.65	11.39	14.53
Basic Services	40.47	53.17	73.36	87.09	111.22	133.5	168.22	236.53	363.25	613.89
Hygiene and Personal Care	4.79	6.42	8.81	9.99	14.21	15.4	18.95	20.29	31.44	44.24
Education	3.09	5.29	7.61	9.13	13.41	18.35	27.9	46.94	95.79	199.6
Farmácia	12.26	14.24	15.55	16.82	21.1	21.53	25.9	29.81	39.81	51.5
Transportation	20.33	27.22	41.4	51.15	62.51	78.22	95.46	139.48	196.21	318.55
Bus	13.31	21.08	28.52	34.48	37.21	42.73	45.03	50.56	46.65	29.37
Train	0.19	0.24	0.58	0.48	1.01	0.38	0.98	0.48	0.72	0.7
Taxi	1.11	0.57	1.3	1.06	2.77	1.81	3.06	3.99	6.96	17.07
Subway	0.44	0.29	0.12	0.57	0.81	1.09	1.31	1.48	3.03	2.41
Other	0.08	0.79	0.12	0.3	0.93	0.99	0.61	0.99	2.06	1.35
Own vehicle	5.2	4.25	10.77	14.27	19.78	31.24	44.48	81.98	136.79	267.64
Other non-durable goods and services	39.91	45.38	59.34	71.77	91.34	117.98	168.11	214.13	300.93	659.46

Source: Pesquisa de Orçamentos Familiares - 1995/96; Elaboration: Centro de Políticas Sociais/FGV.

PME 1994-2002

Poverty Evolution in the Metropolitan Region (Yearly Averages)

	1994	1995	1996	1997	1998	1999	2000	2001	2002 *
Brazil - Metropolitan Region	0.3342	0.2782	0.2515	0.2543	0.2733	0.2896	0.2787	0.2877	0.2955
Metropolitan Region of Rio de Janeiro	0.3865	0.3037	0.2619	0.2612	0.2821	0.2918	0.2862	0.3021	0.3072
Metropolitan Core	0.3885	0.3063	0.2710	0.2766	0.2887	0.2955	0.2999	0.3120	0.2949
Metropolitan Periphery	0.4004	0.3016	0.2531	0.2467	0.2754	0.2883	0.2715	0.2911	0.3210
Metropolitan Region of São Paulo	0.2554	0.2077	0.1998	0.2058	0.2260	0.2471	0.2388	0.2426	0.2513
Metropolitan Core	0.2413	0.1968	0.1867	0.1954	0.2153	0.2403	0.2353	0.2377	0.2390
Metropolitan Periphery	0.2654	0.2214	0.2193	0.2254	0.2448	0.2591	0.2448	0.2512	0.2703
Metropolitan Region of Belo Horizonte	0.3122	0.2425	0.2093	0.2118	0.2418	0.2600	0.2475	0.2579	0.2673
Metropolitan Core	0.2690	0.2073	0.1779	0.1829	0.2099	0.2268	0.2201	0.2295	0.2387
Metropolitan Periphery	0.3789	0.2857	0.2469	0.2455	0.2756	0.2966	0.2756	0.2844	0.2919
Metropolitan Region of Porto Alegre	0.1950	0.1706	0.1666	0.1721	0.1856	0.1919	0.1812	0.1807	0.1939
Metropolitan Core	0.1924	0.1794	0.1743	0.1804	0.1845	0.2006	0.1885	0.2039	0.2222
Metropolitan Periphery	0.1943	0.1647	0.1606	0.1682	0.1884	0.1859	0.1771	0.1666	0.1761
Metropolitan Region of Salvador	0.5559	0.4943	0.4272	0.4229	0.4226	0.4497	0.4089	0.4260	0.4427
Metropolitan Core	0.5346	0.4726	0.4048	0.4006	0.3980	0.4283	0.3887	0.4042	0.4156
Metropolitan Periphery	0.6852	0.5935	0.5230	0.5266	0.5313	0.5435	0.4948	0.5197	0.5589
Metropolitan Region of Recife	0.6069	0.5485	0.4921	0.4835	0.4961	0.5135	0.4924	0.5029	0.5023
Metropolitan Core	0.6081	0.5216	0.4689	0.4641	0.4653	0.4814	0.4597	0.4707	0.4682
Metropolitan Periphery	0.6653	0.5848	0.5107	0.4989	0.5206	0.5395	0.5197	0.5305	0.5320

Prepared by CPS/FGV based on micro-data from PME-IBGE

* Month Average until April 2002

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