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Income Polices, Income Distribution, and the Distribution of Opportunities in Brazil

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Income Policies, Income Distribution, and the Distribution of Opportunities in Brazil[1]

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Abstract

This paper analyses the effect of income policies on income distribution in Brazil, its near-term impacts and potential long-term effects through the distribution of opportunities. It demonstrates the impact of electoral cycles motivating the expansion of monetary transfers. It evaluates the targeting efficiency of the principal income policies in terms of the fiscal costs versus short-term benefits to social welfare. We take advantage of the recent expansion of these benefits to test how this affected the distribution of opportunities. It evaluates the impacts of these policies using a difference-in-difference approach between income strata and discusses desirable upgrades for Brazilian policies.

Keywords: poverty, income policies, income distribution, growth.

JEL Classification: **D31, I38, O15, I32**

Introduction

During the last thirty years, changes in those Brazilian social indicators that are based on per capita income—such as inequality, poverty, and social welfare—have reflected the marked volatility of the nation's macroeconomic environment. Until 1994, the source of instability was the rise and failure of successive stabilization attempts, though after this period the main source of instability was the impact of external crises. This chapter argues that to understand the mechanics of these sharp macroeconomic fluctuations, as well as their consequences for income-based social indicators, it is crucial to understand the role played by various state-sponsored income policies. During the period of inflationary instability until 1995, income policies were behind both the core of chronic inflation and stabilization attempts. This is to say that they were part of both the problem and of the solutions offered. Anti-inflation plans—such as the Cruzado, Collor, and Real plans—tried to interfere directly with the processes of price formation and income determination through various measures such as price freezes, exchange rate policies, wage de-indexation rules, and currency change. Only the Real Plan was successful in lowering and controlling inflation. Similarly, besides price stabilization, state-sponsored regressive income policies are also key to understand the causes behind high inequality and attempts to fight it in Brazil. In recent anti-inequality policies, income policies have been employed in which the state transfers incomes directly from the public budget. Currently, there is considerable evidence that specific income policies—at least in the short term—have played a direct role in affecting income inequality. This chapter demonstrates that this role offers a diversity of results depending on the specific policies enacted. These effects may also change over time as a function of changes in income policy targets and operation, or changes in the general economic environment.

Brazil is an interesting case study. During the period from 1992 to 2006, there was a fall in poverty levels despite the meager growth observed. Brazil reached the first UN Millennium Development Goal in this period, as the portion of its population earning less than $1 per day (at purchasing power parity) fell 60 percent.[3] The poorest income segments have experienced growth rates on a par with those of China since the beginning of the present decade. The cumulative variation of per capita income of the poorest 10 percent was 57 percent from 2001 to 2006 and, falling monotonically as we reach the top of the income

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[3] Neri (2006a).

ladder, the figure for the top 10 percent was 6.7 percent.[4] This redistributive movement is noteworthy because Brazil has been notorious for being one of the countries with the highest levels of income inequality in the world. After its steep rise in the 1960s, Brazil's income inequality maintained a high yet stable Gini index for per capita income of about 0.6 between 1970 and 2000.[5] In the period 2001–6, however, inequality was in decline. The fall of inequality observed in this five-year period is roughly 71 percent, comparable to the rise observed in the 1960s.[6] This change reflects a combination of labor market improvements seen by low-skilled workers, including increases in educational attainment and the adoption of increasingly targeted official income policies.

The fact is that Brazilian inflation is at its lowest levels in decades and the inequality of per capita incomes is at the lowest level since the Pesquisa Nacional por Amostra de Domicílio (the Brazilian National Household Survey, PNAD) measurements began in 1976. In both cases, an instrumental role has been played by the stability of prices and by the efficacy of income policies such as redistributive programs and anti-inflation plans. The evidence presented here suggests that the speed with which these programs have met with success may be a function of increased targeting of income policies, along with efforts to craft income policies in tune with the electoral cycle.

The former role of stabilization plans is now played by redistributive income policies. President Fernando Henrique Cardoso is credited with stabilizing the currency, and President Luiz Inácio Lula da Silva has continued this process in redistributing the newly stable currency through a structure of social programs initiated under his predecessor. Brazil has slowly come to appreciate the importance of macroeconomic fundamentals for achieving lasting stability, and it must now learn to appreciate the fact that a sustained decrease in inequality depends on other fundamentals, such as the equality of opportunities, represented by the access to stocks of productive assets such as health and education and of physical assets and their impact on work decisions and outcomes.

The main challenge facing the new generation of income policies is to track changes induced in income flows with the high stocks of future productive wealth by the poor. This is the objective of the so-called conditional cash transfers such as Bolsa Família (Family Grant), Bolsa Escola, Bolsa Alimentação, Peti, and so on, and their Latin American counterparts such as Oportunidades and Progressa in Mexico and Praaf in Honduras. The

[4] Neri (2007b).
[5] Hoffman (1989), Bonelli and Sedlacek (1989), Paes de Barros and Mendonça (1992), Ramos (1993), Paes de Barros, Henriques, and Mendonça (2000).
[6] Langoni (1973), Fishlow (1972), Bacha and Taylor (1978).

structural side of income policies has yet to be fully understood and perfected in Brazil's social policymaking. Brazil must reinforce the structural side of compensatory policies with individual incentives geared toward the accumulation of productive capital.

In this chapter, I map the impact of income policies on a series of state variables in order to predict the long-term effects of compensatory policies in Brazil. The chapter examines the recent expansion of these benefits between 2004 and 2006 and takes advantage of recent data from the special supplement of the PNAD that covered these social programs during these two years. I use this as a basis for testing how the expansion affected the distribution of opportunity-related social indicators between income strata and also between those low-income individuals who have benefited from the new income transfers versus those low-income individuals who have not benefited. I evaluate the effects of income policies using a difference-in-difference approach to test the effects on elements such as work decisions, fertility, child mortality, education, migration, the accumulation of physical assets, and access to credit.

The chapter summarizes my previous work on the role played by redistributive income policies in Brazil, discussing some of its political economy determinants, its short-run effects on income distribution and its potential long-run effects that operate through the distribution of opportunities. I also discuss desired upgrades for the next generation of income policies in the country, exploring changes in targeting strategies, the need for imposing new conditionalities, and possible links with the supply of financial instruments. The chapter is organized as follows. The second section discusses the main features of the changes in Brazilian public policy and income distribution in the recent past. The third section discusses the role played by electoral cycles in the adoption of different income policies targeted toward various demographic groups. The fourth and fifth sections describe the principal Brazilian income policies, evaluating their targeting ability and offering a cost/benefit analysis. I devote special attention to conditional cash transfers, noncontributory social security benefits, and minimum wages, studying the close relationship between them. At the end of the fifth section, I discuss the history of how income policies have affected the distribution of income of various age groups. The sixth section takes advantage of recently released data and explores the long-term effects of income policies on a series of state-level variables such as health, education, access to credit, physical assets accumulation, and work decisions. In the light of this evidence, in the seventh and final section, I propose desirable upgrades of official income policies.

1. Subjective Well-Being, Poverty, and Income Distribution Trends

This section presents an overview of the recent evolution of a series of objective and subjective social indicators in Brazil. We provide a general background of the main stylized facts of economic policy,

A. General Background

The Brazilian experience has been quite peculiar in the sense that structural reforms, and in particular trade liberalization, began relatively late in comparison with those of its neighbors. Whereas the other countries of Latin America started opening their economies in the early or middle 1980s, this process started in Brazil only in the early 1990s. The same happened with inflation control; whereas Mexico started its stabilization process in the middle 1980s and Argentina in the early 1990s, Brazil achieved successful price stabilization only after 1994.

Brazil experienced some of the world's highest inflation rates over the period from 1960 to 1995. From at least the beginning of the 1980s, curbing inflation became the focus of public policy in Brazil. Successive macroeconomic packages and three major stabilization efforts have been attempted since then: the Cruzado Plan in 1986, the Collor Plan in 1990, and the Real Plan in 1994. The Real Plan was based on an "exchange-rate-based stabilization" model that led to consumption booms instead of recessions. But the need to support an overvalued exchange rate for stabilization purposes increased the fragility of the Brazilian economy, making it vulnerable to external shocks such as the Mexican (1995), Asian (1997), and Russian (1998) crises.

The 1999 Brazilian devaluation crisis triggered important changes in macroeconomic policy that can be still observed today, including (1) the adoption of floating exchange rates; (2) the adoption of inflation targets; and (3) the implementation of the Fiscal Responsibility Law, which is binding on all government levels and state enterprises alike but has increased the size of the tax burden by about 10 percentage points of GDP from 1995 onward, reaching around 37 percent at the end of 2008. One also has to bear in mind that there were very high real interest rates and an expansion of public expenditures that contributed both to the rise in Brazil's public debt, which reached more than 50 percent of GDP, and also to the slow growth trend assumed. During the 2002 elections, Brazil faced another crisis, which was controlled by the new government in the following year. This was done by means of a so-called confidence shock, which meant keeping the country's previous directions for macroeconomic policy. Following a mild

recession in 2003, a boom in the global economy and improved internal fundamentals isolated the Brazilian economy from adverse external shocks. Since 2005, average growth has been higher in Brazil: 8 percent per year on per capita incomes based on the PNAD, which are comparable to the per capita GDP growth rates observed during the economic miracle of 1968–73. According to the new estimates, Brazil became a BRIC, but only in this recent period. (Brazil is often examined alongside three other large and populous emerging economies under the rubric "BRICs"—for Brazil, Russia, India, and China.) During the period from 2004 to 2007, Brazil generated about 10 million new jobs, in particular 6 million formal jobs with no recent labor reforms attached to them. In 2007, employment generation reached 1.6 million new jobs, the new record of Cadastro Geral de Empregados e Desempregados (CAGED) series since 1992. Despite the economic crisis in the developed countries, during the first five months of 2008, Brazil generated 27 percent more new formal jobs than in the same period in the previous year.

B. Life Satisfaction

Years ago, when I first wore a pair of eyeglasses to correct my myopia, I began to notice the depth and clarity of things, and I marveled at the subtle shades and hues of the world around me. Similarly, the possibilities of observing nuances in Brazilian society have evolved through the years. An important landmark in this process was the decision made by the Instituto Brasileiro de Geografia e Estatística in 1995 to release its household survey data along with its tabulations and reports. This small but significant step gave individuals the freedom to look at the Brazilian social data from their own perspective, as opposed to a preestablished one. Nowadays, with the release of each PNAD or CAGED report, Brazilian society debates its own achievements and drawbacks with increasing interest and knowledge. The more democratic environment in the political arena and the increasing access to information (enabled by the so-called information and communication era) has contributed to greater transparency and integrity in the public debate. I remember reading in the *New York Times* in 1994—around the same time I began wearing those glasses—an article on social issues, such as the determinants of women's unemployment or the birth weight of children, and I thought how distant Brazilians were from this type of information. At that time, Brazilians would think first and foremost about inflation rates, and this had a distorting effect on the senses and concerns of Brazilians' daily life.

There is a new breed of international surveys, of which Gallup's World Poll is perhaps the best example. This new breed boasts two important innovations. First, they use

the same questionnaire in their research in more than 130 countries, allowing global comparisons and the flexibility enabled by the processing of individual answers (i.e., microdata). The second novelty refers to the type of question that is asked, side by side with traditional survey questions. The respondent is asked directly about individual and collective subjective matters, be they local, national, or global. This feature allows the researcher to delve into the way that people form their aspirations, attitudes, and expectations by inquiring about the interviewee's perceived life satisfaction and their assessments about the national educational system, performance of the local economy, and other topics.

The Center for Social Policies (Centro de Políticas Sociais / Instituto Brasileiro de Economia / Fundação Getúlio Vargas, CPS/IBRE/FGV) has been selected along with other Latin American institutions by the Inter-American Development Bank to help analyze and interpret Gallup's global data. This ambitious project will mark the Inter-American Development Bank's fiftieth anniversary by bringing quality of life, as perceived by the respondents themselves, into the debate's center stage.

How do Brazilians' perceived level of satisfaction with life in 2006 compared with the rest of the world? On a subjective scale from 0 to 10, Brazilians stated that their happiness level is 6.61, as compared with a score of 5.25 for the rest of the world and 5.64 for Latin America. Comparatively, U.S. citizens reported a happiness score of 7.09, while citizens of Belgium and India—countries frequently references in the Brazilian social debate—rated 7.15 and 5.27, respectively. Denmark holds the world record for happiness with a score of 7.98, whereas Chad ranks last with 3.36. Brazil ranks 23rd among 132 countries.

How has happiness evolved in the last five years in the world? According to Gallup's survey, average global happiness increased from 4.84 in 2001 to 5.26 in 2006. That is, the first five years of the new millennium showed a considerable and consistent advance, concurrent with the expansion of the global economy. When asked about projected happiness in five year's time, the worldwide average was 6.0. In other words, we expect a 25 percent growth in the world level of perceived happiness compared with how we saw ourselves five years ago and how we see ourselves five years ahead. Furthermore, two-thirds of this advance was expected to happen in the second half of the decade. This positive scenario could be at risk, however, given the recent turmoil in markets. But at the moment, Brazilian's expected level of happiness in five years—8.24—exceeds those of all other 130 countries surveyed. In fact, Brazilians believe they will be happier in 2011 than the Danish,

whose predicted happiness score of 7.86 ranks them second. The country least optimistic about its future happiness is Paraguay, with 4.08. It is likely that Brazil's results are a reflection of the nation's innate optimism. To control for such cultural aspects, I have compared Brazilians' expected leap in happiness for the next five years with current levels. According to the survey, Brazilians expect to gain 2.56 points in the next five years, exceeded only by 10 countries in the sample, including China's impressive gain of 3.04. On average, Brazil's economic growth is not on a par with China's. What, then, are the determinants of Brazilian optimism? The reduction in inequality since 2001? The 2006 elections? The answers to these questions are explored in the next sections.

C. Income Changes in 2005 and 2006

In last section, I presented some evidence of the positive expectations of Brazilians. In a 2006 Gallup survey of 132 countries, Brazil was ranked as the most optimistic country with regard to projected levels of happiness in five years' time. Why do Brazilians expect so much if their economic scenario does not rival those of other emerging countries? According to the national accounts statistics, and GDP in particular, Brazil should not be considered one of the BRICs (again, Brazil, Russia, India, and China) or building blocks of future global wealth. Intrinsic cultural optimism helps to explain why the average Brazilian's expectations and reality are out of sync with each other. Swayed by this optimism, a Brazilian's glass is always half full. Nonetheless, even calculating the difference between future expectations and the current reality and accounting for cultural and psychological biases, Brazil's ranking is still remarkable because it nearly equals Chinese rates of expected happiness. If the Brazilian economy is not growing as robustly as the Chinese, however, why do Brazilians experience such a similar feeling of prosperity about their future?

This puzzle can be solved if it is understood that, in fact, Brazil's economic growth parallels China's. Briefly stated, Brazil's national accounts in 2005 and 2006 show an accumulated per capita GDP growth of 3.84 percent. According to PNAD estimates, per capita household income growth, excluding the population growth rate, was 16.4 percent for the same period, or 4.3 times larger than per capita GDP, even after the adjustments made to the national accounts. In any case, either Brazil is growing more than suggested by its GDP, or poverty is not falling as much as suggested by the PNAD figures (23.9 percent in 2005–6).

To reconcile this statistical problem, we could look into the growth of GDP elements that are not captured by the PNAD—that is, consumption movements unrelated to income. The issue here thus concerns the order of magnitude of the observed discrepancy. Another issue is that these explanations increase the paradox, instead of reducing it. In particular, the consumer credit boom points to an increase in consumption expenses that is larger than increases in income. In addition, the BOVESPA index increase of 60 percent between 2005 and 2006 suggests that the Brazilian economy has not undergone a strong reduction of income gains that could explain part of this discrepancy in growth rates.

PNAD income is tabulated from answers to nine direct questions about how much people received from different income sources. The PNAD, however, with its well-balanced sample of more than 400,000 individual answers, has not undergone a single methodological change, nor has the Índice Nacional de Preços ao Consumidor (INPC, National Consumer Price Index) been used in its adjustment. The Chinese-like appearance of the PNAD statistics is reflected in other indicators for 2005–6, such as retail sales (11.8 percent) and job creation (4.6 million jobs created, among which 2.5 million are new formal employment positions).

As demonstrated in the next subsection, Brazil's poorest populations experienced a Chinese-like growth at the beginning of the present decade, but in the past few years, all social groups have had this kind of growth.[7] The recent Brazilian boom is of even a better quality than the Chinese because it is combined with greater equity, while China has increasing inequality—similar to Brazil's rates during the economic miracle of the 1960s. Another parallel with Brazil in the second half of the 1960s is the lack of political freedom in China—whereas Brazilians currently livesin a democracy. Growing under a strict political regime is easier in the short term, but not in the long term. In environmental terms as well, China has been noticed as the pollution "black sheep," whereas in Brazil, conservative management by the Ministry for the Environment hampers growth while also making it more sustainable. To sum it up, Brazil's Chinese-like growth of the last couple of years has been better than China's.

[7] See Neri (2007c).

D. Changes in Income Distribution from 2001 to 2006

We move now to the analysis of recent income distribution changes. Figure 8-1 shows that Brazil's poorest (and only them) experienced Chinese-like growth at the beginning of the present decade, but in the past few years all income strata have experienced similar levels of growth. In 2006, Brazil experienced phenomenal growth across the entire income spectrum. According to the PNAD, average individual income increased 9.16 percent in 2006 against a 2.3 percent growth in per capita GDP, even after the methodological revision of national accounts. The first statistic suggests Chinese-like growth, while the second points to Haitian-like stagnation. As shown in table 8-1, in 2006, the average income of the poorest 50 percent of the population increased 11.99 percent against an increase of 7.85 percent for the richest 10 percent and 9.66 percent for the middle 40 percent. These income increases were the largest of any year this decade, including 2004.

Figure 8-1. Accumulated Variation in Income by Per Capita Household Income Decile, Brazil, 2002–6 Compared with 2005–6 (percent)
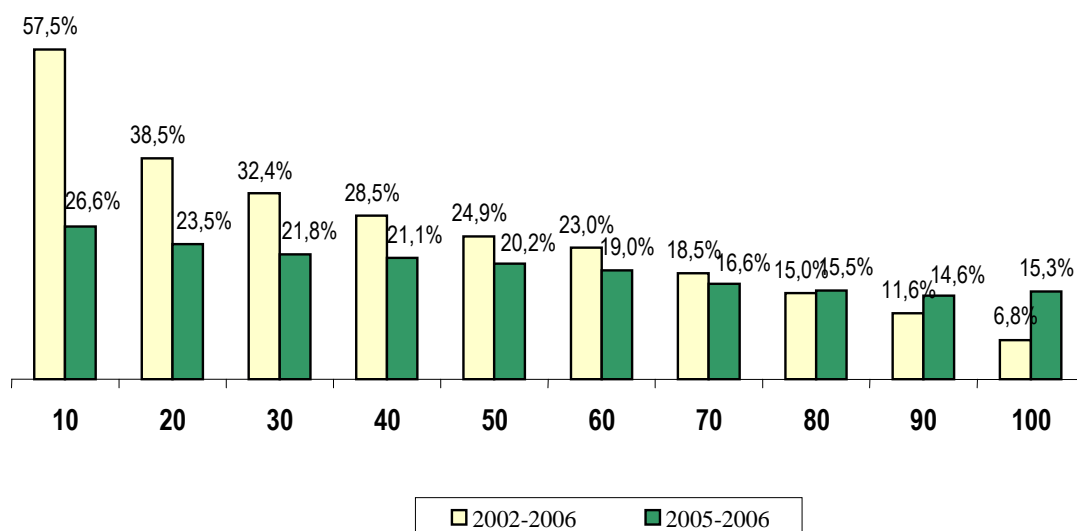
Table 8-1. Variation in Brazilians' per Capita Income per Year, 2002–6 (percent)

Year	Total	50 Percent Poorest	40 Percent Intermediate	10 Percent Richest
2006	9.16	11.99	9.66	7.85
2005	6.63	8.56	5.74	6.89
2004	3.14	8.34	4.13	0.68
2003	–5.81	–4.15	–4.67	–7.32
2002	0.30	3.65	0.34	–0.68

Source: Centro de Políticas Sociais / Fundação Getulio Vargas from Pesquisa Nacional por Amostra de Domicílio / Instituto Brasileiro de Geografia e Estatística microdata.

Concurrently, as shown in figure 8-2, in 2006 the inequality measured by the Gini index decreased at an intermediate value of –1.06 percent, much lower than values from four previous years: –1.2 percent in 2002, 1 percent in 2003, –1.9 percent in 2004, and –0.6 percent in 2005. The high income inequality seen in Brazil between 1970 and 2000 finally began to relent at the turn of the century. The increasing income equality between the years 2001 to 2006 roughly mirrored the rise of inequality observed in the 1960s. Given that this decrease in inequality has occurred since 2001, one may eventually call this era the decade of reduction in inequality, in the same manner as the previous decade could be coined the stabilization decade or the 1980s may be called the redemocratization decade—all of which are part of the same process.

Figure 8-2. Gini Coefficents on Per Capita Household Income for Brazil, 1992–2006

Gini - Brazil

Source: Centro de Políticas Sociais / Fundação Getulio Vargas, processing Pesquisa Nacional por Amostra de Domicílio / Instituto Brasileiro de Geografia e Estatística microdata.
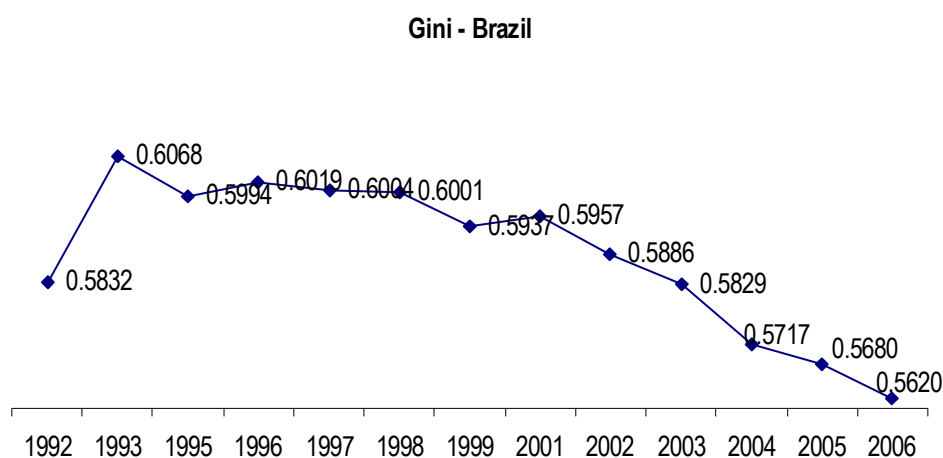
E. Updating Income Distribution Changes

It is traditional amongst the research institutions to use data from the Monthly Employment Survey (PME) at individual levels, as opposed to the household levels. Nevertheless, PME is a household survey comparable to the National Household Survey (PNAD). It is important to highlight two PME limitations, as follows: it does not consider income unrelated to work, such as those from income transfer government programs and income from interest gains for the groups with a financial wealth stock; it only covers the six main metropolitan areas in Brazil. In short, the research only provides evidence of labor in the metropolitan areas. The main question here is how to improve the monitoring of our population's living conditions in the past 18 months not covered by PNAD. The series of mean income, the proportion of poor poverty and inequality captured by the Gini index, presented on table 8-2.

Table 8-2. Per Capita Household Income from Work – (6 main metropolitan areas)

	MEAN INCOME - R$	GINI	POVERTY RATE - %
Apr/02	256,56	0,6270	34,93
Apr/03	283,24	0,6284	37,13
Apr/04	290,68	0,6258	37,17
Apr/05	345,03	0,6036	32,58
Apr/06	371,27	0,6011	31,61
Apr/07	412,31	0,5963	29,09
Apr/08	464,09	0,5844	25,16

Source: Centro de Políticas Sociais / Fundação Getulio Vargas from Pesquisa Mensal do Emprego / Instituto Brasileiro de Geografia e Estatística microdata.

There is between April 2006 and April 2008 a 25% increase in mean per capita earnings income. The Gini index falls from 0,6011 in April 2006 to 0,584 in April 2008, which once again is considerable given the scale of variation in the index, particularly within the Brazilian context. The same index was 0,627 in April 2002. Conceptual and geographical differences aside, for comparison purposes, this absolute decrease in six years 0,0426 is exactly in the same rhythm in the 1960s'. The combination of higher mean and lower dispersion of earnings led to a fall of an additional 20,4% fall in poverty based on per capita labor earnings. This point is noteworthy given the reduction of the level of activity in developed countries since mid 2007 and the fact that this additional poverty fall occurs on top of falling long run trends in poverty detailed in the following section. The side effect of this redistributive change was the emergence of a new middle class in Brazil: the C class moves from 42% to 52% of the population between April 2004 and April 2008 (See Neri 2008c).

F. Poverty Trends

If long-term poverty movements are measured against the targets set forth in the UN Millennium Development Goals (MDGs), Brazil has succeeded in accomplishing the first goal—and perhaps the most celebrated one—by reducing extreme poverty by 50 percent in less than twenty-five years. In fact, extreme poverty in Brazil has been reduced by 60.53 percent, as figure 8-3 illustrates. Extreme poverty is understood as an individual income level beneath $1 a day. According to MDG calculations, the portion of the population living in extreme poverty fell from 11.73 percent in 1992 to 4.69 percent in 2006, as shown in figure 8-4.

Figure 8-3. Cumulative Variation of Extreme Poverty in Relation to the Millennium Development Goals, Brazil, 1993–2006 (percent)
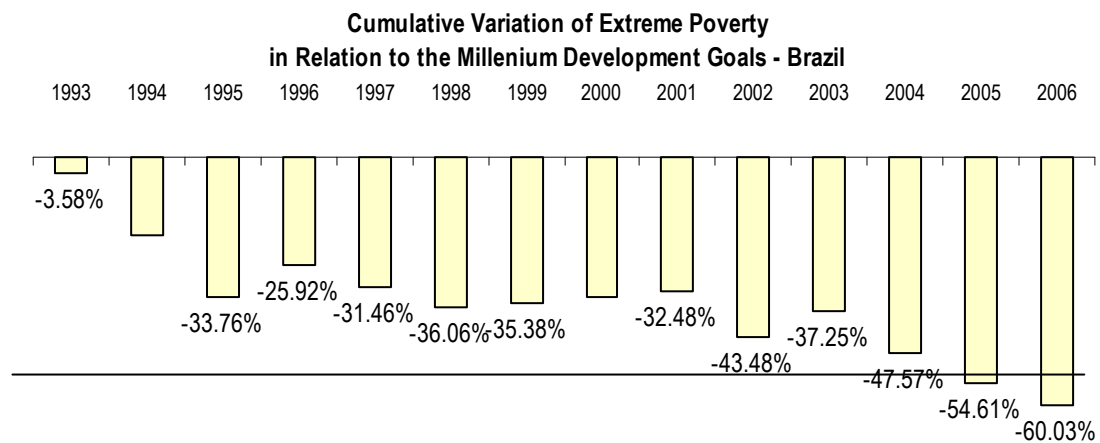
**Cumulative Variation of Extreme Poverty
in Relation to the Millenium Development Goals - Brazil**

| 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |

-3.58%
-33.76%
-25.92%
-31.46%
-36.06%
-35.38%
-32.48%
-43.48%
-37.25%
-47.57%
-54.61%
-60.03%

Source: Centro de Políticas Sociais / Fundação Getulio Vargas, processing Pesquisa Nacional por Amostra de Domicílio / Instituto Brasileiro de Geografia e Estatística microdata.

Figure 8-4. Extreme Poverty in Brazil, 1992–2006 (percentage of the population living on less than $1 a day, at purchasing power parity)
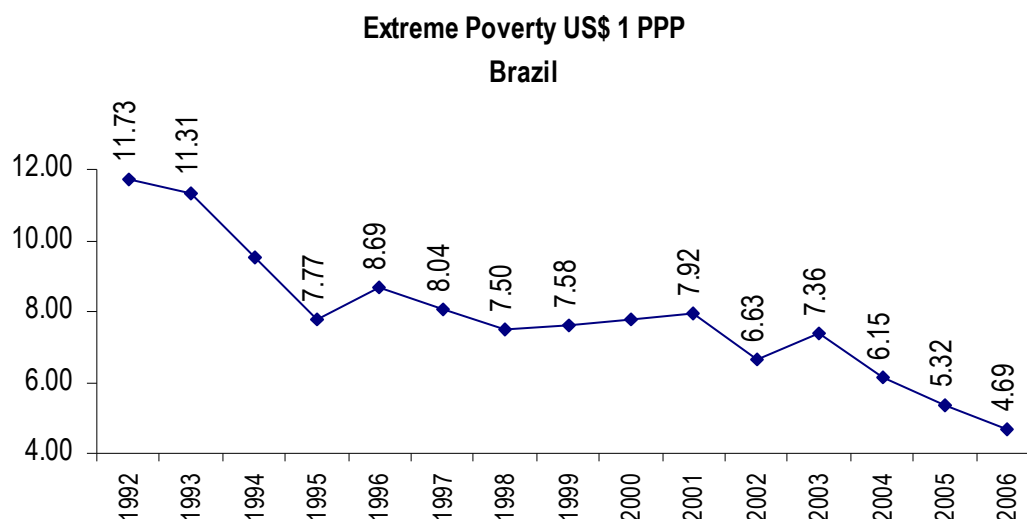
Extreme Poverty US$ 1 PPP

Brazil

Source: Centro de Políticas Sociais / Fundação Getulio Vargas, processing Pesquisa Nacional por Amostra de Domicílio / Instituto Brasileiro de Geografia e Estatística microdata.
Note: In 1994 and 2000, Pesquisa Nacional por Amostra de Domicílio data were not collected, so these are average values.

Figure 8-4 points out the dates of presidential elections (1994, 1998, 2002, and 2006), which seem to show reductions that are clear to the naked eye. In the same way that I used the MDGs to consider the long-term trends in poverty, in the next section I use the electoral cycles to explain some of the oscillations in per capita income across different income sources.

2. Income Policies and Electoral Cycles

This section captures the existence of political business cycle in Brazilian social indicators . It discusses the role played by specific income policies in explaining the electoral cycles found in different per capita household income sources.

A. Description

The literature on electoral cycles describes the behavior of politicians who emphasize or embellish their successes in election years as a way of influencing the result of the elections. According to the political economy literature, the outcomes of elections are determined by the median voter—hence, the option here for the use of median income, which is dated close to the first round of the elections, at the beginning of October, when the PNAD is usually launched. The PNAD did not collect data in 1994 and 2007, so it is not

possible to capture the full effects of cycles associated with the two episodes, as table 8-3 demonstrates.

Table 8-3. Variation in Median Income and Electoral Cycles, 1982–2006

Year	Percent	Year	Percent	Year	Percent
1982	**3**	*1990*	*–2*	2001	2
1983	*–23*	1992	–3	**2002**	**1**
1984	–1	1993	–2	*2003*	*–4*
1985	20	1995	25	2004	6
1986	**53**	1996	0	2005	9
1987	*–27*	1997	3	**2006**	**10**
1988	–11	**1998**	**2**		
1989	**6**	*1999*	*–4*		

Source: Centro de Políticas Sociais / Fundação Getulio Vargas, processing Pesquisa Nacional por Amostra de Domicílio / Instituto Brasileiro de Geografia e Estatística microdata.
Note1: Electoral Year in bold, Post-electoral Year in Italic
Note 2: In 1991, 1994, and 2000, Pesquisa Nacional por Amostra de Domicílio data were not collected, so we present cumulative values in the following year.

Table 8-3 demonstrates that median per capita household income has increased in all years that preceded a national election for both legislature or the presidency since 1980 (i.e., 1982, 1986, 1989, 1998, 2002, and 2006) and that this income has fallen in all postelection years (1983, 1987, 1990, 1999, and 2003). The average variation rate in median income in preelection years was 12.52 percent, versus –11.87 percent in postelection years, when the adjustment account is made. In the most recent elections, this trend was less exaggerated, but still existed: 4.38 percent (1998, 2002, and 2006) during election years, versus –3.68 percent in postelection years (1999 and 2003). Table 8-4 presents a summary of the fluctuations in poverty rates in preelection and postelection years. Similarly, as table 8-4 demonstrates, we observe a general decrease in poverty rates in every year when national elections were held since 1980 (1982 is the exception), followed by increasing rates in all postelectoral years. The average rate of variation in poverty in preelectoral years was –7.69 percent, against 14.05 percent in postelection years.

Table 8-4. Variation in Poverty Rate and Electoral Cycles, 1982–2006

Year	Percent	Year	Percent	Year	Percent
1982	**0**	1990	1	2001	–2
1983	*19*	1992	0	**2002**	**–3**
1984	–1	1993	0	*2003*	*5*
1985	–13	1995	–21	2004	–10
1986	**–37**	1996	1	2005	–10
1987	*47*	1997	–2	**2006**	**–15**
1988	13	**1998**	**–5**		
1989	**–5**	*1999*	*4*		

Source: Centro de Políticas Sociais / Fundação Getulio Vargas, processing Pesquisa Nacional por Amostra de Domicílio / Instituto Brasileiro de Geografia e Estatística microdata.
Note 1: Electoral Year in bold, Post-electoral Year in Italic
Note 2: In 1991, 1994, and 2000, Pesquisa Nacional por Amostra de Domicílio data were not collected, so we present cumulative values in the following year.

The data given in figures 8-5 and 8-6 were culled from the PNAD from the years of 1992 to 2006. During this period, the PNAD surveys' questionnaires and income concepts are more comparable. The evidence shows that during this period, election years demonstrated marked poverty reductions and increases in median income. The reduction of poverty between 1993 and 1995 is visible, as a result of the Real Plan in July 1994. The 1998 and 2002 elections display temporary reductions of poverty, that is, poverty reduction beyond the previous trend. In sum, an election year is the time for good illusions, for "inebriating" news, whereas in the following period come the bill and the "hangover." Political cycles have become less pronounced as the new Brazilian democracy of 1985 has matured. Now let us further inspect the mechanism that connects elections and income-based social indicators in the Brazilian context.

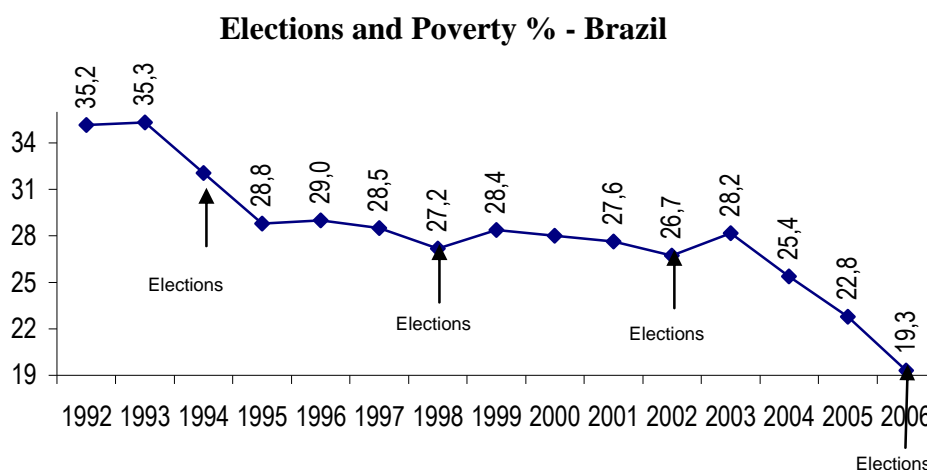**Figure 8-5. Elections and Poverty in Brazil, 1992–2006 (percent)**

Source: Centro de Políticas Sociais / Fundação Getulio Vargas, processing Pesquisa Nacional por Amostra de Domicílio / Instituto Brasileiro de Geografia e Estatística microdata.

Figure 8-6. Median per Capita Income in Brazil, 1992–2006 (in constant 2006 reais)
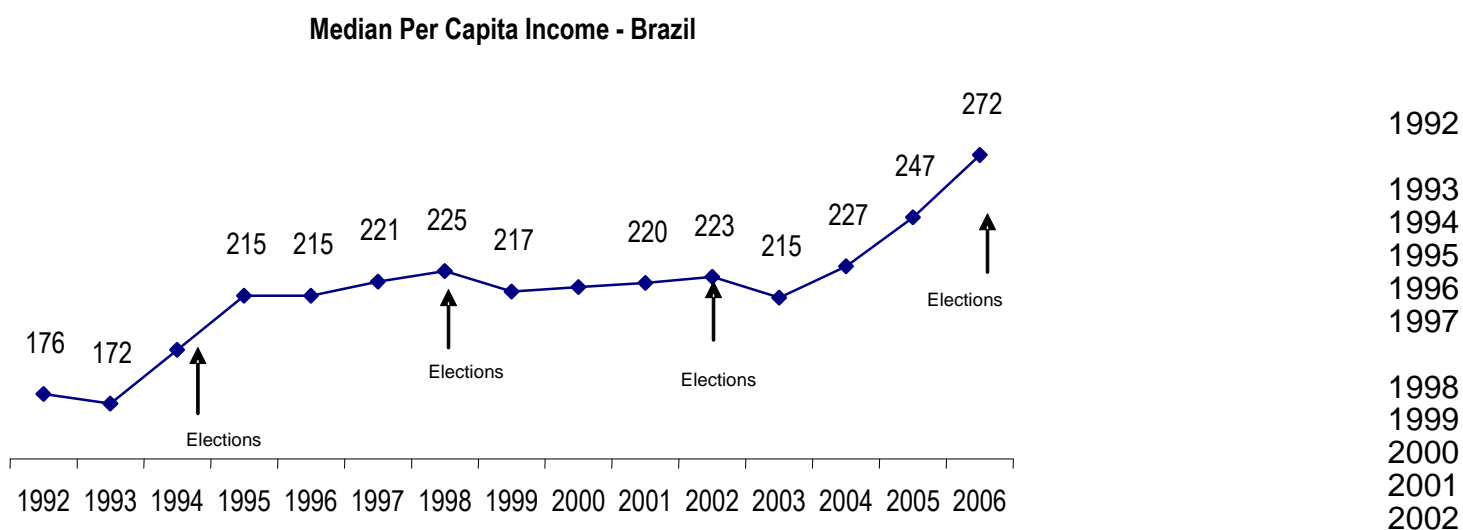
Median Per Capita Income - Brazil

B. Mincerian Equations and Electoral Cycles

To study the short-term effects of election year politics on both voters and nonvoters, I examined data from electoral and nonelectoral years.[8] The sample is thus divided into four groups. The interactive effect between the voting age dummy (dV) and the electoral-year dummy (dY), gives us the difference-in-difference estimator. We examined this relationship using a standard Mincerian regression applied to each of the main income sources and to the total sum of sources found in the 1992–2006 PNAD questionnaires using the INPC as the deflator. Mathematically, this difference-in-difference estimator ($D - D$) can be represented with this Mincerian-type per capita income equation:

$$\text{Ln } Y = g0 + g1*dV + g2*dY + (D - D)*dV*dY + \text{other controls}$$

It is useful to detail the income channels of public action that have recently affected mean income in electoral episodes and that have been captured by the new PNAD, that is, 1998, 2002, and 2006. Table 8-5 synthesizes the main findings; the data clearly show four

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[8] See Neri (2006b). Neri and Carega (2000) studied the impact of electoral cycles on per capita labor income on longitudinal data for the main Brazilian metropolitan regions. The main channel there was income policies associated with stabilization plans. Neri (2006b) uses the same approach used here.

results for all income sources (e.g., employment, benefits from social security, and other social programs[9]). First, as expected, per capita income is lower for those above the minimum voting age of sixteen years; this is a common feature across countries. Second, the greatest income differential is found in social security, which is 51.29 percent higher for voters than nonvoters. The smallest differential is in social programs, where income is 28.57 percent higher. Third, income increases were greater in election years, characterizing the electoral cycle. In those years, on average, income from social programs increased the most (22.57 percent), followed by social security (10.51 percent) and general employment (3.16 percent). These numbers further indicate that the use of income transfer programs is tied to the election cycle. Fourth and finally, and most important, despite the per capita household income that smoothes the effects examined here, the income of people of voting age increases more in an election year than the income of children and teenagers who do not participate directly in political contests. This difference-in-difference result is captured by the interaction of the two variables mentioned above. In this case, the main relative gain comes from income from social programs. During election years, this income stream increases 3.43 percent more for eligible voters than for children and teenagers below the voting age. Social security follows this trend, with a relative increase of 2.74 percent for eligible voters, followed by the indirect effect of employment income, with 1.27 percent.[10]

[9] Income from social programs includes Bolsa Família, unemployment benefits, and other public programs, but also the financial income whose main source is also the state. The income from all sources also includes the income from other types of employment, rents, and private transfers between households (maintenance payment, donations, etc.).

[10] We checked the importance of political cycles directly for work income through raises in the wages of public servants at the three government levels, particularly the municipal level at the time of voting. In the case of hiring public servants, the effect is negative, perhaps given the electoral year's restriction in job openings.

Table 8-5. Mincerian Equation of the Per capita Household Income, Various Income Sources

Variable	Income Source			
	All Sources	Main Work	Social Security	Social Programs
Votes (under 16 years of age)	0.4192 **	0.3125 **	0.5129 **	0.2857 **
Electoral Year	0.0611 **	0.0316 **	0.1051 **	0.2257 **
Votes*Electoral Year	0.0136 **	0.0127 **	0.0274 **	0.0343 **

Source: Centro de Políticas Sociais / Fundação Getulio Vargas, processing Pesquisa Nacional por Amostra de Domicílio / Instituto Brasileiro de Geografia e Estatísticamicrodata.
*Significant at 90 percent.
**Significant at 95 percent.
Observations: Controlled by sex, ethnicity, head of the household, educational level, size of the city, migration, and state.

Note that in this empirical test carried out using 2005 as the last year, the set of hypothesis given above presented the expected signal, but it was not statistically significant for main work and social security income—which illustrates the potential magnitude of the impact of the last presidential elections for income data. The qualitative smoothing factor that must be applied to the 2006 and 1994 elections, for which data were not collected (1994) or for which data are not yet available (2007, the 2006 postelection), is that the effects seem to last longer than all the remaining election episodes in the the so-called New Democracy in Brazil. In other words, we are talking about expansions of a sustained character to people's lives; hence the expression "real" goes beyond the name of Brazil's monetary denomination and applies to these two episodes. In the Neri, we detail the regressions summarized here.

3. Trends in Income Policies

The change in poverty levels in the 1993–95 period was associated with the implementation of the Real Plan, but what are the associated features for changes in poverty levels between 2003 and 2006? What is the role played by income transfer policies sponsored by the state, with the expansion of the Bolsa Família and minimum wage adjustments? What are the specific channels for these policy operations? These are some of the questions we would like to answer, so that the causes and consequences of the recent reduction in inequality can be assessed. I offer a mix of each of these elements by summarizing past research and updating it with new data. I believe that this type of analysis

helps to explain the social changes observed in past years, as well as challenges, limitations, and opportunities.

It is true that although other important achievements occurred—such as the universal provision of primary school education in the second half of the 1990s—the turning point for the job market in recent years is associated with greater equity in income, undoubtedly the most marked improvement for a country located on the continent with the most widespread inequality in the world. To reinforce the structural side of compensatory policies with an incentive to demand the accumulation of human capital, it has to be combined with an improvement in the quality of structural policies, for which health and education are important. The Education Development Plan involves sector-specific actions to keep the supply of social services in pace with induced demand increase.[11]

With respect to fighting inequality in the short term, there is no doubt that in Brazil there is a generation of policies better focused and more capable of redistributing income than the policies implemented in the distant past. The problem is that Brazil does not opt for the new generation's policies instead of other less effective policies when attacking inequality and the improvement of welfare. Hybrid, less-focused policies will have a lesser impact than if the resources were allocated today and in the future to more focused policies. Brazil has opted to expand both new and old policies. To paraphrase Ricardo Paes de Barros of the Instituto de Pesquisa Econômica Aplicada, Brazil keeps throwing money out of a helicopter—the difference being that now the doors have also opened over poor corners and slums, which were not targeted by previous policies.

A useful measure in the design of public policies is the income gap (P1). It allow us to calculate how much income is needed on average for the extremely poor to be able to meet their basic needs. Using the Fundação Getulio Vargas's extreme poverty line as a basis (R$125 per month at 2006 São Paulo prices), the average deficit of each extremely poor Brazilian would be R$48.52. Because just part of the Brazilian population is below this line, data show that it would be necessary to add R$9.37 per person on average to alleviate poverty in Brazil, at a total monthly cost of R$1,717,955,185, or yearly cost of R$20,615,462,223, around 4 percent of Brazilians' total income, according to the PNAD. This information reveals the minimum amount of transfers needed to lift each extremely poor person up to the basic need level.

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[11] Neri and Buchmann (2008b).

This exercise should not be seen as a defense of certain policies but as a reference to the social opportunity cost of adopting nontargeted policies. For example, if universal income maintenance was provided to all Brazilians to eradicate extreme poverty, it would cost 5.6 times more than the minimum cost pointed out above. If we were to use the lower figure of the MDGs, the cost would be 11.1 times higher than the minimum cost.

The fact that inequality reduction has played an instrumental role in Brazil's poverty reduction is reinforced by the Datt-Ravallion methodology.[12] The proportion of extremely poor people in Brazil will fall from 19.3 percent in 2006 to 18.55 percent in 2007, a 3.95 percent drop, if per capita income grows 3 percent in the year. The reduction will be even greater if this growth comes hand in hand with a reduction in inequality. If the 3 percent expansion were combined with a slight decrease in the Gini index (moving from Brazil's to Rio de Janeiro's Lorenz curve, which corresponds to moving the per capita household income Gini index from 0.562 to 0.5605), Brazilian poverty would fall almost twice, or 6.55 percent, which is 2.4 times faster than the first MDG of halving poverty in twenty-five years. The proportion of extremely poor people would be 16.50 percent.

A. Noncontributory Pensions

During the so-called new Brazilian democracy period that started in 1985, the elderly group was able to achieve substantial gains in income transfers by the state. Apart from the 1988 federal Constitution, other more recent social policies have caused changes in the lives of elderly Brazilians. Among these policies, I highlight (1) the 1998 reduction of the minimum age for entitlement from seventy to sixty-seven years (and, more recently, to sixty-five); and (2) the Elderly Statute of 2003, which establishes social rights and promotes equity between the elderly and the remaining members of the population in different fields, increasing their self-esteem and their sense of citizenship.

Concerning income transfers, according to Camarano and Pasinato,[13] following the reduction in the minimum age for eligibility for the Benefício de Prestação Continuada (BPC, Continued Contribution Benefits; under the Lei Orgânica de Assistência Social, known as LOAS)[14] in 1998, the number of beneficiaries increased 253 percent between 1997 and 1999 and 648 percent between 1997 and 2003. If we consider the BPC and the

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[12] See Datt and Ravallion (1992).
[13] Camarano and Pasinato (2004).
[14] Brasil, Loas - Lei Orgânica da Assistencia Social 8742, December 1993, DOU of 12/93, Senado Federal Brasília.

lifetime elderly monthly income, we observe that the number of payment benefits rises 72.9 percent between 1997 and 2003. Apart from an increase in the number of assistance benefits, there was a real increase in the minimum wage deflated by the INPC—an inflation index that informs the calculation of social security benefits—of 22.3 percent between 1997 and 2003. According to the evolution of the real value of all benefits, there was a 44.4 percent increase over the same period. Because the adjustment policies of the social security benefits since 1998 have differentiated benefits payments that are equal to the minimum floor allowed by the 1988 Brazilian Constitution, the effect of the increase of the number of beneficiaries observed rose cumulatively. Besides, in 1998, an income policy was adopted to give higher real adjustments to the floor for social security payments (one minimum wage) that coincides with the BPC and noncontributory rural social security benefits.

Today, Brazil transfers more income to the elderly relative to its GDP than any other country in Latin America.[15] Note that this had started to happen before the country completed its demographic transition. During the last fifteen years, the expansion of noncontributory programs to the low-income elderly population explains a substantial part of this movement. My calculations based on Brazilian national household surveys between 1992 and 2006 show that the elderly population's (i.e., age sixty and above) share in income increased from 7.9 to 9.96 percent. This same age group's share of individual income in the aggregate rose from 13.34 to 17.64 percent, while its share of per capita income in the aggregate rose from 10.8 to 14.51 percent. In per capita terms, the elderly were able to get additional income of 172 reais from the state in this period, while children got direct transfers of 17 reais. Even after Bolsa Família was established in 2003, the elderly were able to get higher absolute income gains and relative poverty reductions. Some researchers have argued that the elderly redistribute their incomes within households. Even under this assumption, the poverty level in 2006 was more than 500 percent higher for children compared with the elderly.

Furthermore, Neri, Carvalhaes, and Reis shows an improvement of health perceptions much smaller for the indirect beneficiaries of transfers than those observed for direct beneficiaries living in the same households.[16] The fact that the elderly live in smaller families would also diminish the impact of this breadwinner effect (*efeito arrimo de família*). For instance, there were 3.23 household members in families with people over sixty years of age, against 4.98 in the total sample of families in 2003. This may be relevant

[15] Neri, Considera, and Pinto (1999); Camarano and Pasinato (2007).
[16] Neri, Carvalhaes, and Reis (2008).

for policy purposes because people expected that the increasing transfer to the elderly poor in Brazil would generate a sizable externality to other household members' individual welfare levels.

B. Bolsa Família

Bolsa Família, created in October 2003, is a direct descendent of Bolsa Escola, Bolsa Alimentação, Vale Gás, and other social programs that were designed in the aftermath of the 1999 Brazilian macroeconomic crisis and were gradually implemented during the last years of the Cardoso administration. President Lula integrated these different programs under the name of Bolsa Família and gave it scale. Between the end of 2004 and 2006, there was a sharp expansion of Bolsa Família, moving from 6.5 million to 11 million families, nearly 25 percent of the Brazilian population at a total fiscal cost of less than 0.8% of GDP.

The common feature of this new generation of income policies is to try to combine speed, targeting, and conditionalities. Families with a per capita income below 50 reais a month were entitled to an unconditional monetary transfer of 50 reais plus a transfer of 15 reais for children between birth and fifteen years of age, up to a maximum of three children, subject to specific conditions, depending on the child's age. Children between birth and six years of age had to undergo vaccinations, whereas children and young teenagers between seven and fifteen years of age had to be enrolled in school with a maximum of 15 percent of days of class missed. Families with incomes between 50 and 100 reais were entitled only to the conditional part of the monetary transfers. Another important feature of Bolsa Família was to elect the mother as the main beneficiary of the transfer, betting on a high degree of altruism.

C. Inequality and Demographic Trends

As we have seen, the main transfers in terms of social income such as social security and cash transfers are aimed at specific age groups. Social security benefits attempt in principle to smooth living conditions, specifically in old age, whereas the new generation of cash transfer programs in Brazil mostly focuses on children and teenagers. Labor income is also predominantly earned by nonelderly adults. There are, however, exceptions for cash transfer programs included in the other sources of nonlabor income that attempt to provide income to other age groups, such as the continuous assistance benefit, the BPC, for the old and disabled and unemployment insurance, which benefits mostly adults.

Nonsocial income accrues to individuals in very diverse age groups. To make things more complex, these programs are mixed in different income concepts. One way to check the levels and trends of how total incomes affect different age groups in different ranks of the society is to compare the per capita growth rates of these groups in the population with their respective pro-poor growth rates (meaning growth rates that are sensitive to inequality changes). Kakwani, Neri, and Son propose a growth and pro-poor growth account methodology that explains the intense and regressive income changes in the PNAD.[17] The pro-poor growth measure comes from a combination of the weights attributed to individuals in a Gini-type social welfare function, whereas the individual welfare follows a logarithmic form. These two forces, in combination, make the pro-poor measure more sensitive than the one implicit in Gini and Theil inequality indexes in isolation.

I have divided the population into three age groups and calculated the levels and trends of the following variables:

—Per capita children and young teenagers in household, aged between birth and fifteen years.

—Per capita adults in household, age sixteen to sixty-four years.

—Per capita elderly in household, aged from sixty-five years and over.

In 1995, children and young teenagers as a group represented 34.7 percent of the population; the corresponding figure goes up to 39.3 percent when we use the inequality-adjusted weighting scheme. This implies that it is more likely to find a child in the lowest per capita income ranks of Brazilian society than elsewhere. Furthermore, as can be seen in table 8-6, the average annual growth rate of the population below sixteen years of age in the 1995–2004 period was –1.96 percent, whereas its inequality-adjusted growth rate was –1.64 percent. This implies a declining trend in the number of children in average households, but with a much slower decline among poor households. Conversely, the number of adults in a household shows an increasing trend. These findings suggest that the cash transfer programs related to children can be further expanded due to the increase in the number of working people in Brazil.

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[17] Kakwani, Neri, and Son (2006c).

Table 8-6. Demographic Trends 1995–2004: Population Annual Growth Rate, (percent)

Period	Unadjusted			Inequality Adjusted		
	Per Capita, Children	Per Capita, Adults	Per Capita, Elderly	Per Capita, Children	Per Capita, Adults	Per Capita, Elderly
1995–2004	–1.96	0.83	1.66	–1.64	0.96	–0.67
1995–2001	–1.94	0.90	1.37	–1.60	1.00	–2.03
2001–2004	–2.05	0.70	2.59	–1.81	0.90	2.31

Source: Nanak, Neri and Son (2006c).

The situation is opposite in all aspects for the old-age group. Its share of the total population is higher than the inequality-adjusted weights, and this gap has increased over the decade. In the 1995–2004 period, the annual per capita growth rate of the elderly was 1.66 percent, against their inequality-adjusted growth rate of –0.67 percent. Overall, the elderly population in Brazil is increasing. This trend, in turn, puts pressure on cash transfer programs targeting the elderly. The good news, however, is that the increase in the elderly population among the poor appears to be slower than among the nonpoor. Hence, the sustainability of cash transfer programs for the elderly in the long term calls for a targeting strategy so that the poor elderly receive greater benefits from the programs compared with nonpoor people.

4. How Pro-Poor Were Monetary Transfers?

Kakwani, Neri, and Son also apply a growth and a pro-poor growth account methodology to Brazil that explains the intense and regressive changes observed in the different income sources found in the PNAD.[18] The separation of per capita total income into different components allows one to capture the contribution of the main sources of income in the total growth patterns assumed, in pro-poor growth, and in the inequality aspects of social welfare. The interaction between the high nonlinearity of these last two concepts and the additive nature of income sources required the use of a Shapley decomposition to obtain the impact of each income source's contribution to pro-poor growth. I review these results with particular emphasis on social security benefits and conditional cash transfers.

Here, I calculate the ratio between the additional fiscal cost and the benefit in terms of pro-poor growth of expanding the main public cash transfer programs in the period

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[18] Kakwani, Neri, and Son (2006c).

studied. The final objective is to reveal the contribution of each income policy component discussed above to total per capita growth and to pro-poor growth.[19]

A. Social Security Benefits

Social security is the main component of social income in Brazil, and it is second only to labor earnings among the data on all income sources collected by the PNAD. Social security benefits include a contributory pay-as-you-go system and noncontributory benefits, both of which are subject to the government's discretionary income policies. Given the dominance of the public transfer aspect in this income aggregate, it is useful to observe the ratio of pro-poor growth to total growth contribution. This can be interpreted as an elasticity that shows how many public resources (measured by their share of total income) are translated into social welfare, a type of cost/benefit analysis. The corresponding elasticity of pro-poor growth with respect to total growth (i.e., its fiscal cost), both explained by social security, rose from 0.45 in the 1995–2001 period to 2.82 in 2001–4, demonstrating a marked improvement in the ability of social security benefits targeting the poorest segments of Brazilian society.[20] After 1998, the government adopted the new policy of setting higher adjustment rates to lower social security benefits. In the entire 1995–2004 period, this elasticity amounted to 0.74. This elasticity makes it possible to compare to what extent different types of public transfers reach the poor.

B. Bolsa Família

Other nonlabor income sources include very different types of incomes, ranging from cash transfer programs such as the Bolsa Família to capital income such as flows derived from interest rates paid on government debt. The pro-poorness aspects of these items are expected to be very different, despite the fact that both are not only subject to public policy choices but also are mostly mediated by the state.[21] Interest income is largely underestimated by the PNAD data, hence, this income concept is largely explained by public cash transfer programs such as Bolsa Família.

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[19] This means growth in social welfare that is very pro-poor using a specification that uses the weights of a function that yields the Gini coefficient and an individual logarithmic welfare function like the Theil Index.

[20] One possibility is to divide the information on social security benefits in two regimes: one with benefits equal to one minimum wage, the constitutional floor, and the rest. Neri (1998, 2001) followed this approach and showed that about 60 percent of social security benefits amounted to one minimum wage, while 80 percent of social security income accrued to benefits above this level. Each additional real spent adjusting the social security benefits floor resulted in 4.5 times more poverty reduction than a uniform adjustment to all benefits.

[21] The public debt is the main source of interest gains earned by Brazilian households.

The elasticity of the contribution to pro-poor growth of a particular income transfer with respect to its contribution to total growth is useful for guiding policies aimed at the poorest groups in Brazilian society. The corresponding elasticity of other nonlabor income sources was 14.66 during the 1995–2004 period, which is much higher than the one found for social security benefits. Each percentage point in the share of government transfers in this item bought 19.8 times more pro-poor growth in other nonlabor income than in social security benefits; this result is consistent with the evaluation of conditional cash transfers done in Brazil and elsewhere.[22]

Figure 8-7 synthesizes the main channels affecting mean incomes, social welfare, and inequality growth rates from 2001 to 2005. Because mean growth was rather small, inequality changes are similar to social welfare changes (i.e., equality is equal to pro-poor growth minus growth). Thus, half the inequality reduction is due to labor income change and the other half is due to monetary transfers. Splitting this last term into its components, we find that the Bolsa Família effect is equal to 80 percent of the income policies segment, whereas social security is equal to the remaining 20 percent.

Figure 8-7. Determinants of Social Welfare, Mean, and Inequality of Per Capita Household Income
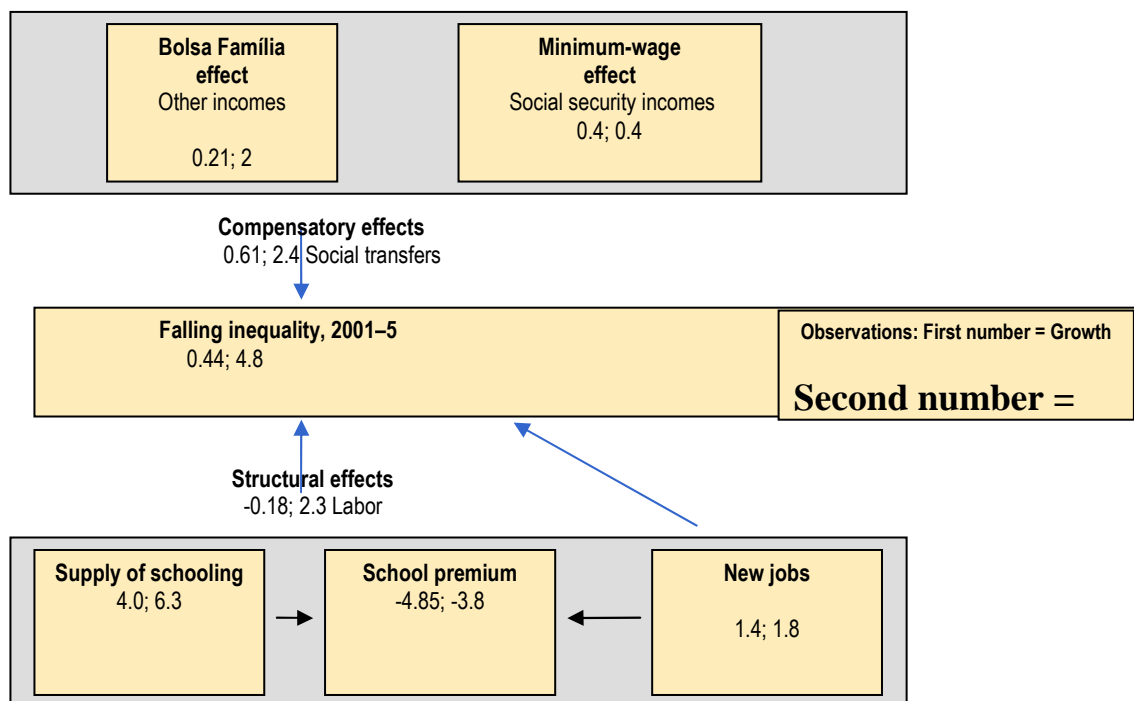
Source: Nanak, Neri, and Son (2006).

[22] Lindert, Skoufias, and Shapiro (2005); Barros (2005); Hoffman (2005); Soares (2006), Bourguignon, Ferreira, and Leite (2003); Coady and Skoufias (2004); Suplicy (2002).

In sum, other nonlabor income sources have played a dominant role in a pro-poor growth pattern that is assumed to have made a minor contribution to total growth and to the Brazilian fiscal accounts. It seems that a small increase in government cash transfer programs had a large impact on poor people's living conditions.

5. The Impact of Income Policies on Distribution Opportunities

This section takes advantage of the PNAD's 2006 special supplement on social programs, which allows separating the beneficiaries of different official income transfer programs. Because the same questions were also used in the 2004 PNAD, there is an opportunity to test the effects of Bolsa Família using a difference-in-difference estimator like the one used in the section above on electoral cycles. The main advantage of this approach, which compares the relative evolution of the eligible and the ineligible, is that it allows inferences on causality.

I have taken advantage of the richness of the PNAD questionnaire to consider a variety of potential Bolsa Família effects using a series of variables:

—Education conditionalities (enrollment, school assiduity, and the motivations associated with these education elements, such as a lack of income)

—Access to education infrastructure (hours of study, school lunches)

—Child health (infant mortality rates, fertility)

—Communication and information technology (Internet access, cellular telephone)

—Public infrastructure (sewerage, water)

—Housing (access to toilets, house financing, land property rights)

—Durables (e.g., a refrigerator)

—Work decisions (participation, occupation, multiple occupation, hours worked, contribution to social security)

—Labor income (individual earnings, per capita earnings)

Almost all the exercises were performed for the three age groups: children and young teenagers (birth to fifteen years), adults (sixteen to sixty-four), and the elderly (over sixty-five). Here, I emphasize the specific age groups for which the issues discussed are more relevant. For example, in the case of fertility and the risk of losing a child, I consider nonelderly adults. In the case of the youngest group, I further divide them into three subgroups: birth to six years, seven to fifteen years, and sixteen to seventeen years,

following the different conditionalities imposed by Bolsa Família on their human capital accumulation.

The focus of the empirical analysis is on the impact of the eligibility criteria to access Bolsa Família with year dummies for 2004 and 2006 indicating temporal evolution and their interaction. This last variable corresponds to the difference-in-difference estimator captured by the relative impact of Bolsa Família's expansion on its potential beneficiaries, with a direction of causality implied in the interpretation of the results. I implement the analysis in two stages, first putting more emphasis in the interpretation by comparing by means of multivariate regressions the relative evolution of eligible and ineligible individuals, where eligibility is defined as per capita income without considering public transfers below 100 reais in real 2004 prices. I put the coefficient (or the odds ratio, in the case of logistic regressions) of the interactive term of the two exercises performed for each variable between brackets. The first captures differences across time between eligible individuals—that is, per capita household incomes without the social benefits of the program of R$100 or below—and the noneligible population. The regressions use controls such as gender, race, migration, state, city size, age, age squared, and per capita income without social programs. The second type of analysis stems from bivariate tabulations of the same variable but also provides a zoom-in on the eligible group, depending on the size of benefits to which they are entitled.

The second stage of the empirical analysis is a simple bivariate exercise presented in the appendix tables. They allow checking the absolute evolution of the variables of interest and a comparison within the eligible group the performance of those with per capita income below R$50—that were eligible for an additional R$50 per family besides the R$15 for each completed conditionality maximum of three (R$45) within each beneficiary family— and those with per capita income between R$50 and R$100 that receive only the benefits associated with conditionalities. The idea here is to test the effects of discontinuities in the size of benefits on economic behavior.

A. Human Capital Accumulation

This part studies the effects of Bolsa familia conditionalities on capital accumulation elements such as school permanence, fertility and child health.

a) School Permanence

To be eligible for Bolsa Família, children between seven and fifteen years of age must be enrolled in school and must not miss more than 15 percent of classes. There was an increase in this variables among lower income groups. When we compare low-income eligible groups and noneligible children in Table 8-7, we see that the former groups tend to present ambiguous effects on relative school permanence, with a relative decrease in school attendance (0.96) but with a substantial reduction in the number of classes missed (0.8313). When we use qualitative data on income insufficiency (or need to work) as the main reasons behind reduction in school permanence, we observe a reduction in these motivations for nonenrollment (0.8179) but a small increase for missed classes above Bolsa Família's 15 percent limit (1.0494). The impact on access to school infrastructure increases somewhat, both measured by the variable indicating the fact that children eating school lunches rose slightly (1.01) and especially by the reduction of daily school hours up to four hours a day (0.97). Nevertheless, among the poorest group, around two-thirds of the children stay only four hours in school. This set of results indicates that the program is not pointing to the achievement of its objectives in terms of school attendance but that children in school have a relative increase in school hours and in their access to infrastructure.

Table 8-7. Human Capital Accumulation: Education, 7 to 15 Years of Age - Odds Ratio

Logistic Model 16 to 64 years				Enrolled in School		Misses More Than 15% of Classes - Enrolled in School		Not Enrolled due to Lack of Income		Miss Class due to Lack of Income - Enrolled		*Logistic Model 16 to 64 years*
Eligibility	Low Income		**	0,9100	**	1,2030	**	1,2733	**	1,2049		Eligibility
Eligibility	Non Elegible			1,0000		1,0000		1,0000		1,0000		Eligibility
Year	2006		**	1,1600	**	0,7358	**	1,8873	**	1,1297		Year
Year	2004			1,0000		1,0000		1,0000		1,0000		Year
Eligibility * Year	Low Income	2006	**	0,9600	**	0,8313	**	0,8179	**	1,0494		Eligibility * Year
Eligibility * Year	Low Income	2004		1,0000		1,0000		1,0000		1,0000		Eligibility * Year
Eligibility * Year	Non Elegible	2006		1,0000		1,0000		1,0000		1,0000		Eligibility * Year
Eligibility * Year	Non Elegible	2004		1,0000		1,0000		1,0000		1,0000		Eligibility * Year

Source: Centro de Políticas Sociais / Fundação Getulio Vargas, processing Pesquisa Nacional por Amostra de Domicílio / Instituto Brasileiro de Geografia e Estatística microdata.

*Significant at 90 percent.
**Significant at 95 percent.

b) Fertility and Child Health

A main concern with respect to compensatory policies is the possible effect on fertility. Bolsa Família allows a maximum of three additional transfer conditionalities for children between birth and fifteen years of age and imposes conditionality on prenatal examinations and child vaccinations. Eligibility due to low income from private sources among women sixteen to sixty-four years of age shown in Table 8-8 indicates a differential decrease in the fertility for the lower-income groups captured by the odds ratio of the variable indicating if the woman is a mother (0.9806). This may indicate a dominance of the income effect inducing a reduction in fertility over the possible incentive effects of the Bolsa Família program. The program might induce localized incentives for families with fewer than three children between birth and fifteen years of age, which were not tested here. The results on child morbidity (the quality of child health care) is the opposite; for the lower income groups, there is a differential increase in the percentage of babies born dead (1.0264) and in the death of children in their early childhood up to one year of age (1.0624), but no statistically significant change for children up to six years of age. In sum, the results indicate that the income effect of expanding income transfers is possibly dominating the other incentive effects of Bolsa Família on birthrates but not on the quality of childcare.

Table 8-8. Human Capital Accumulation: Fertility and Child Morbidity, Mothers 16 to 64 years of Age - Odds Ratio.

Logistic Model 16 to 64 years			Is a Mother	Had Child Born Dead	Death of kids in childhood (up to one year of age)	Death of kids in childhood (up to six years of age)
Eligibility	Low Income		** 2,2793	** 1,2507	** 0,8169	** 0,8219
Eligibility	Non Elegible		1,0000	1,0000	1,0000	1,0000
Year	2006		** 1,0598	** 1,0629	** 1,1977	0,9987
Year	2004		1,0000	1,0000	1,0000	1,0000
Eligibility * Year	Low Income	2006	** 0,9806	** 1,0264	** 1,0624	1,0078
Eligibility * Year	Low Income	2004	1,0000	1,0000	1,0000	1,0000
Eligibility * Year	Non Elegible	2006	1,0000	1,0000	1,0000	1,0000
Eligibility * Year	Non Elegible	2004	1,0000	1,0000	1,0000	1,0000

B. Consumption Decisions and Physical Assets Accumulation

A differential increase in the purchase of durables, public services, and housing is generally associated with the eligibility criteria for Bolsa Família, as shown in Table 8-9. The only exceptions are access to sewerage collection among Bolsa Família beneficiaries and access to housing credits for eligible low-income groups, which suggests that this item became more of a luxury service.

There is an improvement in public infrastructure in the household (access to bathroom (1.04), sewerage (nonsignificant), and water (1.0884) that may have a positive impact on health indicators. The access to communication and information technology (cellular telephone, 1.1284; computer with Internet connection, 1.3828) indicates a differential increase in the ability to generate income in the future. The Brazilian government is discussing the possibility of financing the acquisition of new refrigerators by the Bolsa Família beneficiaries in order to induce energy savings and environmental protection. The poor informal access to electricity inhibits the price effects for energy savings. Eligibility criteria and effective access to Bolsa Família are associated with an increase in access to refrigerators (1.07). Finally, although access to housing credit (0.9819) is growing at smaller rates for low-income eligible groups, groups eligible for Bolsa Família are experiencing higher rates of access to land property rights (1.18) than are noneligible groups, which may indicate a future improvement in poor people's ability to access not only housing finance but also other forms of credit. This may be enhanced by explicit credit consignation clauses, as were applied to social security benefits from 2004 onward. I will return to this point in the next section.

Table 8-9. Consumption Decisions and Physical Assets Accumulation, 16 to 64 Years of Age - Odds Ratio

Consumption Decisions and Physical Assets – 16 to 64 years of Age

Logistic Model 16 to 64 years			Has Cellular Phone	Has Computer with Internet Connection	Has Fridge
Eligibility	Low Income		** 0,4588	** 0,9884	** 0,5249
Eligibility	Non Elegible		1,0000	1,0000	1,0000
Year	2006		** 2,1729	** 1,2107	** 1,0534
Year	2004		1,0000	1,0000	1,0000
Eligibility * Year	Low Income	2006	** 1,1284	** 1,3828	** 1,0700
Eligibility * Year	Low Income	2004	1,0000	1,0000	1,0000
Eligibility * Year	Non Elegible	2006	1,0000	1,0000	1,0000
Eligibility * Year	Non Elegible	2004	1,0000	1,0000	1,0000

Logistic Model 16 to 64 years			Has Housing Finance		Has Property Title	
Eligibility	Low Income		**	0.6729	**	0.5800
Eligibility	Other case			1.0000		1.0000
Year	2006		**	0.9972	**	0.9300
Year	2004			1.0000		1.0000
Eligibility * Year	Low Income	2006	**	0.9515	**	1.1100
Eligibility * Year	Low Income	2004		1.0000		1.0000
Eligibility * Year	Other case	2006		1.0000		1.0000
Eligibility * Year	Other case	2004		1.0000		1.0000

Source: CPS/IBRE/FGV processing PNAD 2004-2006/IBGE microdata.

Logistic Model 16 to 64 years			Has Bathroom		Has Sewarage		Has Water	
Eligibility	Low Income		**	0,7100	**	0,7086	**	1,0345
Eligibility	Non Elegible			1,0000		1,0000		1,0000
Year	2006		**	1,0500	**	0,9586	**	0,9753
Year	2004			1,0000		1,0000		1,0000
Eligibility * Year	Low Income	2006	**	1,0400		1,0006	**	1,0884
Eligibility * Year	Low Income	2004		1,0000		1,0000		1,0000
Eligibility * Year	Non Elegible	2006		1,0000		1,0000		1,0000
Eligibility * Year	Non Elegible	2004		1,0000		1,0000		1,0000

Source: Centro de Políticas Sociais / Fundação Getulio Vargas, processing Pesquisa Nacional por Amostra de Domicílio / Instituto Brasileiro de Geografia e Estatística microdata.

C. Work Decisions and Outcomes

This part studies Bolsa Familia collateral effects on work decisions and outcomes. The first part emphasizes occupational choices. The second part gauges these effects on continuous variables such as individual and per capita labor earnings and hours.

a) Work Decisions

One of the main possible side effects of compensatory policies are work disincentive effects due to a raise in reservation wages. The results in Table 8-10 for the labor market categories will be reinforced in the next item with another log-linear equation of continuous variables presented in table 8-11. There is an absolute fall in lower-income groups for the main labor activity variables such as participation rates (68.06 percent in 2004 to 65.36 percent in 2006) and occupation rates with respect to the whole population in the age group (53.85 percent in 2004 to 52.37 percent in 2006). The results are mixed, with a slight increase in the lower-income bracket for multiple occupation rates (4.75 percent in 2004 to 4.8 percent in 2006) and in the contribution to social security, with a slight increase (10.22 percent in 2004 to 11.79 percent in 2006) but a decrease in the intermediary income bracket

of individuals eligible for lower Bolsa Família benefits. Moving now to the controlled tests, the numbers are the odds ratio calculated directly from the interaction coefficients of binomial logistic regressions. This reduction in work activity is valid for all measures used, including participation rates (0.89), occupation (0.9), multiple occupation (0.866), and contribution to social security (0.8889).

Table 8-10. Work Decisions, 16 to 64 Years of Age - Odds Ratio

Logistic Model 16 to 64 years			Labor Market Participation		Occupied		More than One Job		Contributes to Social Security
Eligibility	Low Income		**	0,6800	** 0,5000	**	0,7331	**	0,3819
Eligibility	Non Elegible			1,0000	1,0000		1,0000		1,0000
Year	2006		**	1,0100	1,0000	**	1,0541	**	1,0284
Year	2004			1,0000	1,0000		1,0000		1,0000
Eligibility * Year	Low Income	2006	**	0,8900	** 0,9000	**	0,8655	**	0,8889
Eligibility * Year	Low Income	2004		1,0000	1,0000		1,0000		1,0000
Eligibility * Year	Non Elegible	2006		1,0000	1,0000		1,0000		1,0000
Eligibility * Year	Non Elegible	2004		1,0000	1,0000		1,0000		1,0000

Source: CPS/IBRE/FGV processing PNAD 2004-2006/IBGE microdata

Source: Centro de Políticas Sociais / Fundação Getulio Vargas, processing Pesquisa Nacional por Amostra de Domicílio / Instituto Brasileiro de Geografia e Estatística microdata.

b) Labor Earnings and Hours

This new set of results reinforces the previous conclusions suggesting the operation of work disincentive effects for Bolsa Família shown in Table 8-10. The results of a log-linear equation of continuous variables will be reinforced in the next item with other labor market categorical variables, all presented in table 8-910For the lower-income group that is eligible to higher benefits, we observe the combination of a reduction in real labor earnings and in the workload by the lower-income active-age individuals between 2004 and 2006: per capita labor earnings (from R$19.74 in 2004 to R$16.33 in 2006), individual labor earnings (from R$40.15 in 2004 to R$32.67 in 2006), with an opposite movement for the other income brackets. In the case of working hours, the lower bracket also experienced a fall (from 35.22 weekly hours in 2004 to 34.17 in 2006), but it was also observed in the other income groups. To assess the statistical significance of these changes, we move now to controlled difference-in-difference analysis to evaluate the relative fall between eligible and noneligible groups. In this case, the numbers in brackets are the premiums measured directly from the interaction coefficients of the estimated Mincerian equation. To be sure,

they correspond to the difference-in-difference of returns between beneficiaries and nonbeneficiaries of Bolsa Família: per capita labor earnings (–0.0347), individual labor earnings (–0.046), and working hours (–0.0312). In sum, all the labor market indicators show a relative deterioration in the working performance of adult individuals who are eligible for Bolsa Família benefits.

Table 8-11. Work Decisions, 16 to 64 Years of Age - Semi-Elasticity

Semi-Elasticity

Mincerian Equations (Log-Linear) *16 to 64 years*			Per Capita Labor Income		Individual Labor Income		Weekly Hours Worked	
Eligibility	Low Income		**	-1,1541	**	-0,6254	**	-0,1211
Eligibility	Non Elegible			0,0000		0,0000		0,0000
Year	2006		**	0,0470	**	0,0547	**	-0,0196
Year	2004			0,0000		0,0000		0,0000
Eligibility * Year	Low Income	2006	**	-0,0460	**	-0,0347	**	-0,0312
Eligibility * Year	Low Income	2004		0,0000		0,0000		0,0000
Eligibility * Year	Non Elegible	2006		0,0000		0,0000		0,0000
Eligibility * Year	Non Elegible	2004		0,0000		0,0000		0,0000

Source: Centro de Políticas Sociais / Instituto Brasileiro de Economia / Fundação Getulio Vargas, processing Pesquisa Nacional por Amostra de Domicílio / Instituto Brasileiro de Geografia e Estatística microdata.

D. Summary of Empirical Results

During the period between 2004 and 2006, during which there was a marked expansion of Bolsa Família benefits, the overall group of working-age individuals eligible for these benefits saw a relative decrease in all indicators of their labor market activity and performance indicators in comparison with the noneligible group. This may indicate the need to work more on the disincentives aspect in the design of the programOn living conditions, measures showed that an increase in the purchase of durables, access to public services, and housing is generally associated with a differential increase of individuals in the group eligible for Bolsa Família. The only exceptions among Bolsa Família beneficiaries are access to sewerage collection and access to housing credits. The first exception may indicate the need to work with the supply side of sewerage, taking advantage of economies of scale and perhaps direct subsidies to Bolsa Família beneficiaries to allow them to pay water and sanitation service bills. This is justified by both economies of scale and scope and by externalities, with a potential impact on health outcomes, especially for

children between one and six years of age.[23] The relative reduction in the access to housing credit and work performance may indicate the convenience of using opportunities, such as access to microfinance, and taking advantage of the program's informational and operational structure.

More specifically, with respect to Bolsa Família conditionalities impact and design, I found that the income effect of expanding income transfers is possibly dominating the other incentive effects of Bolsa Família on birthrates. However, indicators of the quality of childcare, such as prenatal and infant mortality, have shown a differential reduction. Finally, with respect to schooling decisions, the results indicate that the program is not pointing to the achievement of its objectives in terms of school attendance but that children in school have a relative increase in school hours and in their access to educational infrastructure.

6. Conclusions: The Next Generation of Income Policies

Brazilian social policies combine an old and ineffective regime of income policies with a modern regime geared toward the young and the poorest segments of society. Excessive public expenses from social programs have had the undesired effect of impeding growth through a high tax burden (37 percent of GDP in 2007) and real interest rates (one of the highest in the world). Recently, Brazil has seemingly lived in a paradox: In spite of decreased average incomes, the income of those with smaller purchasing power grew as a result of large income transfers from the state. This combination of economic stagnation and poverty reduction, which resulted in decreased inequality, contrasts with the typical path of Brazil in the past. For instance, from 1967 to 1980, Brazil had high growth rates with growing inequality. In the following period, from 1980 to 1994, it had low growth rates, while inequality remained high and persistent. This newer situation of economic stagnation with poverty alleviation occurred from 1994 to 2005 but was more pronounced from 2001 to 2004 due to the expansion of better-targeted income policies. As we have seen from 2005 onward, Brazil is now growing at a much faster pace, yet inequality is still falling (though at a lower rate than in the previous period). In this more recent period, there has been a remarkable expansion of both well-targeted (Bolsa Família) and not-so-well-targeted income policies (associated with institutional links with minimum wage increases). In the near future, faster growth and trends toward income equality could mean greater levels of poverty reduction, but the current situation demands better-targeted income policies.

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[23] Neri (2008b).

The advantage of expanding compensatory policies is, in general, the speed with which their effects are felt. In contrast, the associated metaphor for structural policies is that it is better to teach a person how to fish than to give them a fish. The issue is not whether policies involve income transfers or asset stocks but their social implications in the short and long terms. A compensatory action that hinders the productive destructuring—as with the task forces against drought—or that motivates the accumulation of capital—like Bolsa Família's attempts—can have persistent effects on poverty. The long-term potential impact of income transfers is comparable to the transfer of productive assets.

The long-term objective of social policies is to enable individuals to realize their productive potential. This movement can be achieved in various ways, by completing the portfolio of their assets or their access to markets where they are dealing. These public policies provide an exit from poverty by opening up access to markets. Thus, it is possible to generate welfare gains without fiscal implications, which makes them particularly attractive. Figure 8-8 presents a scheme of reforms based on income policies.

There are three desired upgrades for Bolsa Família. The first desired upgrade would be to *improve targeting*—that is, to seek more effective targeting by improving the ability of the program to reach the poor. This, in turn, has three aspects. The first is to *integrate income transfers under the Bolsa Família program's framework*. The targeting objective becomes more difficult as the program expands. But the main conclusion here is to avoid spending additional resources on income transfer—alternatives less targeted than Bolsa Família, such as those associated with real increases in the value of the minimum wage or the unconditional universal provision of minimum maintenance income. Bolsa Família reaches nearly 25 percent of the Brazilian population and costs less than 0.8 percent of Brazilian GDP, as opposed to the more than 12 percent of GDP spent on social security payments.

Figure 8-8. Bolsa Familia UpGrades - Exit Doors
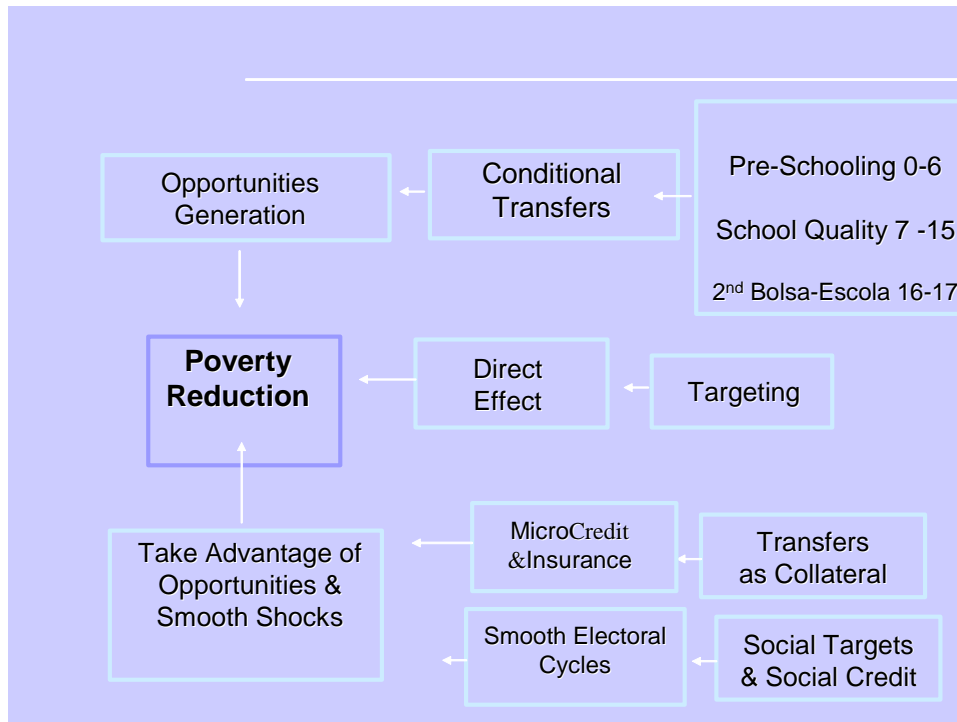
The ultimate objective here should be to integrate all noncontributory income transfers in a single program, preferably under the Bolsa Família framework. A first step in this direction was already taken in 2007, when noncontributory social security spending was split from the rest of the social security accounts. This allows better comparisons between the opportunity costs of different income policies. It does not seem equitable to provide income transfers associated with noncontributory transfers that are ten times higher than Bolsa Família benefits.

Complementarily, the Bolsa Família structure could be used to reach nearly 25 percent of the Brazilian population to distribute other services besides monetary transfers. The direct effects vary depending on the target's individual budget constraint or his individual welfare paid through direct transfers. One important difference between Bolsa Família and the previous Fome Zero policy was the emphasis given to alternative channels. Fome Zero attempted to direct expenditures through food transfers, leading to allocation inefficiencies. Incidentally, Cedeplar's evaluation of Bolsa Família indicated that a large part of the transfers were directed to food expenses. However, there are situations where economies of scale and economies of scope will allow a better use of the program's structure than just monetary transfers.

The second aspect of effective targeting is to *avoid fragmentation*. Brazil should avoid the temptation to fragment its income policies into different monetary transfer programs according to region, gender, race, and housing conditions (*favelas*, etc.). This fragmentation would make the management of public policy more complex. The binomial income-age provides a straightforward criterion that allows researchers to take into account for the poor population the main phases of the life cycle, such as education, working, and retirement. Our empirical results for the determinants of access to Bolsa Família show an implicit affirmative action in practice: When we compare individuals with identical observable characteristics (gender, region, age, per capita income, etc.), the chances of a black Brazilian gaining access to Bolsa Família benefits are 24 percent higher than those of a white person with the same characteristics. Income transfers from a previous generation, such as BPC, present the opposite results; low-income minorities are underrepresented. A similar effect is observed for those who live in slums (*favelas*). One interpretation is that these marginalized groups' characteristics provide a clearer signal that they are poor, hence favoring their access to a better-targeted program. In sum, the Bolsa Família program in operation—not just design—presents an affirmative action mechanism favoring those groups traditionally associated with lacks of opportunities.

The third aspect of effective targeting is intrahousehold distribution channels. The evidence found in Neri, Carvalhaes, and Reis shows that BPC transfers to the elderly benefit the health of the recipient more than the health of other household members.[24] Bolsa Família tries to use mothers (in 91 percent of the cases) as the recipients of monetary transfers. This strategy relies on the assumption that mothers will best allocate the resources to reduce intrahousehold inequalities of both opportunities and results. It will be important to study the redistributive and long-term consequences of this strategy.

The second desired upgrade of the Bolsa Família concerns *conditionalities*. Besides the program's ability to reach the poorest segments of the population with monetary and nonmonetary transfers, another improvement of income policies is enhancing its ability to positively affect lives through the imposition of explicit conditionalities—especially for relevant state variables where there clearly are market failures, such as externalities and credit constraints. Most of the current conditionalities of Bolsa Família seem to have a high degree of redundancy in the sense that many of the conditions they impose have already

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[24] Neri, Carvalhaes, and Reis (2008).

been adopted by the beneficiaries before the start of the program. Let us examine the three specific age groups that are the objects of the conditionalities.

—The first age group includes those from birth to six years of age. The program only demands children's immunization; an experimental evaluation of Bolsa Família by the Cedeplar team has shown no improvement in the vaccination rates of program beneficiaries. This was expected because more than 90 percent of Brazilian children in this age range were already covered before the program started. To provide incentives for preschools and even in nurseries, integrating these demand incentives with new education supply elements, such as the institution of Fundeb, could be more interesting than the current Bolsa Família itself.

—The second age group includes those from seven to fifteen years of age. Similarly, the current conditionality of enrollment and maximum of 15 percent of classes allowed to be missed are redundant.[25] Before the program started in 2001, only 3 percent of the children did not attend school. Good program conditionalities should become obsolete across time, which means the pursuit of higher standards. Second, these conditionalities also present intrinsic implementation difficulties. It is hard for a teacher to signal that his or her poor student is not satisfying the conditions. The teacher may be tempted to benefit a specific student in the short run and harm all students, including this one, in the future by not strictly following the rules of the program. Third, conditionalities tend to increase the tension in the student-teacher relationship. It is perhaps better to avoid the personal student-teacher relationship by delegating the evaluation to a third party. Fourth and finally, we should perhaps be less concerned with mean indicators such as school attendance and more concerned with end-use indicators such as learning outcomes. The final objective of an education policy is to enable students to learn rather than to attend class. The conjunction of these weak points with the opportunity opened by the implementation of Prova Brasil in 2005 and 2007, and now Provinha Brasil in 2008, lead me to the following proposition: Use these test results at the student level to track the learning process of each student. It is important to note that we are not talking about levels but differences in performance across time. A good school is one what teaches someone who does not know and not one that picks an already-good student who keeps performing well during these tests.[26] , There are two complementary application possibilities. First, use these scores as an additional monetary reward to the Bolsa Família class attendance standard. This means looking not only at

[25] Neri (2002), Cardoso and Souza (2003), Schwartzman (2005).
[26] Neri and Buchmann (2007a).

necessary but also at sufficient conditions. The other is to use the test scores to condition the resources provided to schools in the educational budget. In sum, we aim here to improve the quality of education for people, demanding not only quantity but also education quality, creating incentives based on new information sources.

—The third age group includes those from sixteen to seventeen years of age. The need here is to create not an incentive for the first job but, through a second Bolsa Família, to improve the low educational levels observed in all parts of Brazil. This was recently adopted, and it is less subject to redundancy criteria because 18 percent of individuals in this age group are out of school. However, only 25 percent of these students have said that they do not attend school due to income insufficiency.[27]

The third desired upgrade of Bolsa Família concerns *access to markets*. Additional empirical results show that quite a few effects of the Bolsa Família transfers are not subject to explicit conditionalities. The income and liquidity effects of Bolsa Família might explain the differential-increasing share of durables, access to public services, and to communication and information technology items, as well as improved housing conditions. Housing credit expanded at slightly lower rates among Bolsa Família beneficiaries; the percentage of households with land titles among their beneficiaries improves the market value of the real estate (in a De Soto–type argument) and the ability of individuals to access credit in general. This can improve access to financial markets by the poor. One possibility is to use social benefits as collateral to expand the credit frontier to where it has never been before: to the poor and to informal workersthrough the use of social benefits as collateral.[28] The possibility of using Bolsa Família's structure to provide access to current accounts in public banks starts to enter the agenda, but the possibility of exploring links with microcredit and microinsurance seems to be more feasible now than it was before Bolsa Família was structured.

A final possible extension of Bolsa Família that has been discussed here is to incorporate targets and incentives at a more aggregate level, such as municipalities that are responsible for selecting Bolsa Família beneficiaries. There is an agenda of incentives provision that uses the accomplishment of social targets to condition the transfers sent to municipalities, following the same spirit of conditionalities to individual families adopted in the current Bolsa Família design. The main lesson provided by this social-targets literature

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[27] Neri (2006).

[28] See "O Efeito-Colateral" and "Alvorada: Um projeto acima de qualquer governo," both published in *Revista Conjuntura Econômica* in 2002. This idea is further developed in Neri and Giovanni (2005) and Neri (2008a).

is that one should not set contracts on the level of social indicators but rather on the value added across time.[29] A second point is that one should not use the absolute performance but the relative performance across municipalities, something like the yardstick competition of the economic-regulation literature. The combination of these two factors yields a relative value-added criterion that resembles a difference-in-difference estimator. Heuristically, the idea is to create a pseudo-market for social returns, allowing public resources to flow where the returns are higher

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[29] See "Metas sociais para tirar a miséria do país" published in *Revista Conjuntura Econômica* in March 2000. This idea is explored in Neri and Xerez (2007, 2004) and Neri and Buchmann (2008a)

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Appendix Tables:

Elegibility criteria to Bolsa Familia
Human Capital Accumulation: Education, 7 to 15 Years of Age (percent)

Year	Eligibility	Enrolled in School	Misses More Than 15% of Classes	Not Enrolled Due to Lack of Income	Misses Class Due to Lack of Income	Eats School Lunch	School Hours Up to 4 Hours
	PCHI less than 50	93.24	13.06	0.79	2.46	74.38	67.88
2004	50 < PCHI < 100	95.05	11.32	0.67	1.30	77.67	64.21
	Non-eligible	97.11	8.51	0.33	0.85	59.15	50.29
	PCHI less than 50	94.85	8.93	0.78	2.21	80.96	67.71
2006	50 < PCHI < 100	95.12	7.39	0.70	1.48	81.21	61.72
	Noneligible	97.54	6.25	0.39	0.82	60.36	48.30

Source: Centro de Políticas Sociais / Fundação Getulio Vargas, processing Pesquisa Nacional por Amostra de Domicílio / Instituto Brasileiro de Geografia e Estatística microdata.
Note: PCHI = Per Capita Household Income

Human Capital Accumulation: Fertility and Child Morbidity (percent)

Year	Eligibility	Mother	Death of Children in Childhood (Up to 1 Year of Age)	Death of Children in Childhood (Up to 6 Years of Age)
	PCHI less than 50	78.68	0.36	0.86
2004	50 < PCHI < 100	78.81	0.36	0.81
	Noneligible	65.50	0.26	0.51
	PCHI less than 50	77.87	0.57	1.07
2006	50 < PCHI < 100	79.90	0.38	0.66
	Noneligible	65.86	0.31	0.51

Source: Centro de Políticas Sociais / Fundação Getulio Vargas, processing Pesquisa Nacional por Amostra de Domicílio / Instituto Brasileiro de Geografia e Estatística microdata.
Note: PCHI = Per Capita Household Income

Consumption Decisions and Physical Assets, 16 to 64 Years of Age (percent)

Year	Eligibility in R$	Has Bathroom	Has Sewerage	Has Water	Has Cellular Phone	Has Computer with Internet Connection	Has Refrigerator	Has Housing Finance	Has Property Title
2004	PCHI less than 50	75.72	25.40	53.65	19.84	4.03	58.71	1.78	66.74
	50 < PCHI < 100	85.41	25.69	60.53	23.69	0.44	70.87	2.03	67.11
	Noneligible	97.38	52.48	84.28	59.16	16.66	93.39	5.02	72.17
2006	PCHI less than 50	75.18	24.67	55.23	33.46	5.81	60.30	1.54	65.79
	50 < PCHI < 100	85.31	23.51	60.79	41.12	1.21	72.14	2.01	68.10
	Noneligible	97.48	51.90	84.49	74.19	22.13	93.81	5.01	71.40

Source: Centro de Políticas Sociais / Fundação Getulio Vargas, processing Pesquisa Nacional por Amostra de Domicílio / Instituto Brasileiro de Geografia e Estatística microdata.
Note: PCHI = Per Capita Household Income.

Work Decisions, 16 to 64 Years of Age - (percent, hours and R$)

Year	Eligibility	Participation (Employed + Unemployed) %	Occupied %	Have More Than One Work %	Makes Contributions to the Social Security and Pensions System %	Per Capita Labor Income R$	Individual Labor Income R$	Weekly Hours Worked Hours
2004	PCHI less than 50	68.03	53.85	2.56	5.50	19.74	40.15	35.22
	50 < PCHI < 100	68.77	58.98	2.49	12.36	62.18	112.07	39.15
	Noneligible	75.67	70.08	3.39	38.33	450.01	577.93	42.47
2006	PCHI less than 50	65.36	52.37	2.51	6.17	16.33	32.67	34.17
	50 < PCHI < 100	68.99	58.91	2.41	11.19	64.25	118.97	37.76
	Noneligible	76.18	70.58	3.74	39.52	498.90	632.32	41.89

Source: Centro de Políticas Sociais / Fundação Getulio Vargas, processing Pesquisa Nacional por Amostra de Domicílio / Instituto Brasileiro de Geografia e Estatística microdata..
Note: PCHI = Per Capita Household Income.