The Past, Present, and Future of Income Distribution in Brazil, 1960-2007

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Abstract

This paper will review the evolution of the aggregate personal distribution of income in Brazil since the 1960s and explore prospects for the future. The period covered begins in 1960 and includes the stabilization, high-growth, debt-crisis, and high-inflation periods prior to the 1994 Real Plan. It also reviews the more recent periods of the Cardoso and da Silva governments beginning in 1995. The analysis will take into account trends and variations in real economic performance and the rate of inflation. The paper finds that the successful Real Plan provided a significant change in the economic environment of Brazil, first in the area of inflation and the level of poverty, and more recently in real economic performance and income distribution. Finally, the question of whether recent improvements in income distribution since 2001 should be seen as transitory or as long-lasting will be considered.

Section One: Introduction

Income inequality in Brazil has been of continuing concern to economists and other observers of the Brazilian economy since at least the early 1970s when the 1970 census data revealed a sharp worsening of the distribution of income since 1960. As the 1960s included the high-growth and politically repressive period that followed the 1964 military takeover, the concerns linked the worsening income distribution with the policies of the military regime (Tolipan and Tinelli, 1978, and Wells, 1974). This concern continued through the debt crisis and redemocratization periods after 1980 as income inequality continued and even worsened. Even with some improvement in measured inequality since 2001 (Barros, 2006; IPEA, 2006; and Soares, 2006), inequality and the associated poverty have remained high.

Income distribution is also of interest internationally as a persistent problem and as a phenomenon subject to change through growth and globalization. Some consider global income inequality among persons (Anand and Segal, 2008), while others find increasing inequality within countries and decreasing inequality between countries (Firebaugh, 2003). As one of the first countries since World War II to experience growth associated with a worsening income distribution, Brazil is an interesting case in the current context. Indeed, according to World Bank data, income distribution in Brazil continues among the most unequal in the world among countries for which data are available.

The early 1970s income distribution debate in Brazil was triggered by a sharp increase in the Gini index between 1960 and 1970 from .50 to .568. The decade of the 1960s was a complicated period as it included several years of growth followed by stagnation and inflation, almost four years of economic stabilization and institutional reform following the 1964 military takeover, and finally three years of high growth rates above 10% per year at the end of the decade. Because the increase in income inequality came during a period of limited public political participation and debate, it became an especially hot political issue in academic circles. The debate was couched in terms of the roles of "institutions" versus "market forces" in the determination of income, with "institutions" being a proxy for the repressive use of the labor and wage policy tools by the military governments of the times. Generally speaking, the debate was won by the proponents of the market forces position, with the argument that the increased inequality observed in 1970 was associated with large income gains for those workers who possessed the scarce resource of education, then in short supply, and whose gains showed up in the upper reaches of the income distribution (Langoni, 2005). The market forces position continues as the dominant explanation for income determination and inequality in Brazil.

More theoretically, a result of the debate is a pro-cyclical model of income determination where income inequality worsens during periods of rapid growth because growth disproportionately benefits scare-skilled workers and professionals. Conversely, stagnation or recession would disproportionately adversely impact the same scarce-skilled workers and professionals, resulting in a measured improvement in income inequality. Underlying this conceptualization is the idea of a distribution of workers in order by income, so that at one end of the distribution are the highest income workers, while the lowest income workers are in the other, lower tail of the distribution. The pro-cyclical view can be contrasted with an anti-cyclical view, where growth disproportionately favors those in the lower income tail of the distribution, perhaps because the unemployed or underemployed become fully employed, thereby narrowing measured inequality. In neither view is the impact of the business cycle on the various portions of the income distribution neutral.

The "institutional" approach focused on policies, regulations, and programs that directly or indirectly affect incomes, in particular labor incomes. In this context, institutions include the regulation of labor unions, strikes, wage policy and wage indexation, the minimum wage, and prices and values indexed to the minimum wage, including social payments and rents as administered by the government of the time. In the 1960s, after the 1964 military takeover, this set of policies was applied to contain inflation, which meant the policy was in the direction of lower wages, especially in the lower portion of the income distribution. In the 1970s, the policies were continued. In the late 1970s and early 1980s, coincident with labor unrest and then the redemocratization process, their regressive implementation was somewhat reversed. With the return to civilian rule in 1985 and the new constitution in 1988, labor repression ended. The minimum wage policy and income transfer programs became more progressive with the passage of time, and markedly so after 2003.

Guided by the pro-cyclical view of income inequality, we can examine the growth rates and Gini coefficients for the four completed decades between 1960 and 2000 to determine if a high rate of economic growth is associated with an increase in income inequality and if lower rates of growth are associated with a smaller increase in inequality, or even a decline. We note strong real GDP growth rates for the first two decades, of 82% for the 1960s and 129% for the 1970s (Table One). For the later two decades, the growth rates were much lower, with a rate of 16.9% for the period from 1980 through 1990 and a rate of 27.8% for the period from 1990 through 2000. The low rates of growth in the 1980s and 1990s illustrate why these decades have been called the "lost decades."

Table One: Output Growth and Income Distribution in Brazil, 1960-2000: Growth Real Gross Domestic Product by Decade and Income Distribution by the Gini Index, 1960, 1970, 1980, 1990, and 2000.

Decade	Percent Growth	Year	Gini Index
		1960	.50
1960-70	82.0%	1970	.568
1970-80	129.0%	1980	.59
1980-90	16.9%	1990	.615
1990-00	27.8%	2000	.611

The associated Gini indices show a sharp increase in inequality between 1960 and 1970, a decade of positive net growth, from .50 to .568, and a further increase in inequality to .59 between 1970 and 1980, a decade of more consistent, though less dramatic growth.
In the 1980s and 1990s, on a decade-to-decade basis, in spite of the relative stagnation of these two decades, inequality either rose or was stable, and did not decline, with a Gini of .615 in 1990 (from the PNAD) and a Gini of .611 in 2000 (from the Census). Therefore, through 2000, regardless of real economic performance, income inequality either worsened or stayed constant. At times it appeared that inequality worsened in good years and stayed constant in bad years, providing limited support to the idea of pro-cyclical income inquality. However, not seen was a marked decline in inequality in response to stagnation or to a GDP decline.

A unique feature of the Brazilian experience of this period through 1994 was the high, variable, and increasing rates of seemingly intractable inflation. Inflation that formerly had been sporadic was institutionalized in the mid-1960s reforms through a system of indexation called "monetary correction." Monetary correction focused on financial assets and mortgages, but also broadly included mechanisms for adjustment of some prices and wages. Indexation involves altering nominal values upward to compensate for inflation in order to maintain real values. A purpose was to provide an orderly means to adjust nominal prices, including wages, upward to compensate for past inflation without overcompensating and creating new inflationary pressures.

Although the concept of "indexation" implies full compensation for past inflation, in fact the correction factors applied were somewhat discretionary, most famously in the cases of the minimum wage and wage policy during the arrocho salarial (wage squeeze) of the mid 1960s. Indexation did, however, restore some confidence in the orderliness of the financial system and allowed expansionary monetary and fiscal policies after 1967, even as what was considered the normal rate of inflation rose from about 20% per year around 1970 to 200% per year in the mid-1980s. As the normal rate of inflation rose, the period between adjustments shortened, so the erosion of real values was less than that implied by the higher inflation alone.

As the economic actors learned to live with inflation, inflation acquired an independent, or autonomous role. Inflation was expected and became self-perpetuating as past price and wage increases lead to future price and wage increases without any alteration in basic supply and demand conditions. Because adjustment cycles varied for each price or wage, there was a constant shifting of relative prices in the short run, which could in turn alter actors' behavior as the real value of one's income fluctuated relative to all other goods and to specific goods. Not only did actors come to expect the next adjustment, they planned expenditures around the timing of the adjustments of others.

Eventually, the Brazilian inflationary process came to be known as "inertial inflation" since, once in motion, the tendency was for inflation to self-perpetuate itself. Alternatively, it came to be understood that there was an "inflationary inertia" that could be very strong, if not dominant, but also could be reduced. In either case, with the establishment of indexation, the rate of inflation became somewhat built-in, or "inertial," as past price increases guaranteed the increase of other prices. The inertial quality of inflation, with its staggered cycle of adjustments, meant that some actors were always "behind" in the adjustment cycle, making orthodox stabilization program difficult to administer due to claims of lagging groups who wanted to catch up. Therefore monetary and fiscal policy might stop an increase in the rate of inflation, perhaps at high cost in unemployed resources, but might not be able to decrease the rate of inflation itself. In addition, the rate of inflation itself became somewhat of a policy instrument on the upside, at least in the short run, as often the immediate benefits accrued to the government when the source was excess money creation and the social costs were managed by the indexation.

Inflation is connected to income distribution through indexation or its absence. The impact of inflation is not necessarily neutral across income groups, as different households and economic actors vary in their access to the protection of indexation. Higher-income persons and persons with formal contracts in labor and financial markets might have better access to indexation than those in the informal sector who must constantly renegotiate their prices and wages, or hold real assets in the case of wealth. Access to indexation is defined as full compensation, the ability to shorten adjustment periods, and institutionalized protection from sudden increases in inflation, without lags.

After the onset of the debt crisis and with inflation at a minimum plateau of the 100% a year in the early 1980s, the Brazilian economic authorities shifted to dramatic large-scale heterodox stabilization plans that coordinated monetary and fiscal policy with direct or indirect management of prices and wages. The major plans were the Cruzado Plan of 1986, the Collor Plan of 1990, and Real Plan of 1994, although there were smaller, less dramatic stabilization programs over the period. Each plan built on the lessons of the previous ones and was short-lived, of less than a year, until finally the Real Plan was effective.

Brazil's inflation history is reported on Table Two, expressed as average annual rates of inflation for five-year periods as well as the highest and lowest annual rates in the five-year period. This allows us to capture both the upward trend in inflation through 1994 and some of the yearly variation in the rate of inflation. (The full set of annual rates of inflation is reported below on Tables Three to Six below.)

Table Two: Average Annual Inflation in Brazil by Five-year Period, 1961-2005: Average Annual Rate of Inflation, Highest Annual Inflation in Period with Year, and Lowest Annual Inflation in Period with Year.

Five-year Period	Average Annual Rate of Inflation	Highest Annual Inflation in Period with Year	Lowest Annual Inflation in Period with Year
1961-1965	62.5%	85.6% (1964)	41.2% (1965)
1966-1970	27.4%	46.3% (1966)	17.5% (1970)
1971-1975	22.9%	33.1% (1974)	14.0% (1973)
1976-1980	54.2%	84.8% (1980)	38.1% (1976)
1981-1985	151.3%	228.2% (1985)	90.9% (1981)
1986-1990	920.5%	1,639.1% (1990)	68.1% (1986)
1991-1995	1,008.7%	2,491.0% (1993)	23.2% (1995)
1996-2000	5.2%	10.0% (1996)	-1.8% (1998)
2001-2005	7.3%	9.9% (2002)	4.5% (2005)

The highest rates of inflation were in the early 1990s in the run-up to the Real Plan. The lowest rates of inflation immediately followed in the late 1990s. In the earlier periods, the mid-1960s stabilization is evident, as well at the progressively higher inflation rates in each five-year period from the early 1970s to the early 1990s.

After the introduction provided by this section, the second section will report in detail on the economic and income distribution performance of the Brazilian economy from 1960 through 1994, the period we will call "the past." The section that follows will do the same for the 1994-2007 period, the period we understand to be "the present." The fourth section will review the evolution of income inequality so far and will consider analyses of the recent decrease in income inequality. The fifth section will consider prospects for the future and provide concluding remarks. The basic data are presented in Tables Three, Four, Five, and Six, which follow in Section Two, below, and are taken from IpeaData (www.ipea.gov.br) in July 2007, with updates in March 2008 and July 2008.

Section Two: The Past: Economic Performance in Brazil, 1960-1994

For purposes of this analysis, the almost 50 years under review are divided into four periods based on logical breaks in economic performance. The Real Plan in 1994 marked one such logical break. Similarly, 1980 is a logical break as it is the last year of the long period of notable economic growth which started in 1968, as well as the last year before the period of inflation, stagnation, and and failed stabilization plans of the "lost decades." The third break point in 1973 was chosen largely as the last year of the high-growth "miracle and the year of the first "oil shock." Data availability improved substantially in 1976, with the beginning of the annual National Household Survey (PNAD) that produced annual information on income distribution and poverty. The result is four periods: 1960-1973, 1973-1980, 1980-1994, and 1994-2007. The first three periods are the past. The fourth period is the present and will be covered in Section Three. The future will be considered in Section Five.

Period One: Growth, Stabilization, and Growth, 1960-1973

Table Three: Growth, Stabilization and Growth, 1960-1973: Annual Change of Gross Domestic Product, Gross Domestic Product per Capita in Reais of 2006, the Gini Index, Annual Inflation, the Poverty Rate, and the Extreme Poverty (Indigency) Rate in Brazil, per Year, 1960 to 1973.

Year	GDP Annual % Change	GDP/Capita (Reais of 2006)	Gini Index	Annual Inflation IPC-FIPE	Poverty (% of population)	Extreme Poverty (% of Population)
1960	9.4 %	R$ 4,490		32,2 %		
1961	8.6 %	R$ 4,730		43.5 %		
1962	6.6 %	R$ 4,900		61.7 %		
1963	0.6 %	R$ 4,790		80.5 %		
1964	3.4 %	R$ 4,820		85.6 %		
1965	2.4 %	R$ 4,800		41.2 %		
1966	6.7 %	R$ 4,970		46.3 %		
1967	4.2 %	R$ 5,040		25.3 %		
1968	9.8 %	R$ 5,380		25.2 %		
1969	9.5 %	R$ 5,720		22.6 %		
1970	10.4 %	R$ 6,140		17.5 %		
1971	11.3 %	R$ 6,650		20.6 %		
1972	11.9 %	R$ 7,230		17.5 %		
1973	14.0 %	R$ 8,010		14.0 %		

The first period is defined by the 1960 census and the end of the "miracle" in 1973. It includes the two data points, 1960 and 1970, which triggered the income distribution debate. The period also includes the military takeover of 1964 that brought to an end the 1945-1964 largely democratic period during which Brazil had experienced substantial economic growth through 1962. In total, there are three subperiods: the growth period

(1960-1964) that stalled out in 1963, leading to the military takeover in 1964, the period of stabilization and reform (1964-1967), and the high-growth period that immediately followed (1968-1973). To be noted (Table Three) are the GDP growth rate of almost zero in 1963 and the decline of GDP per capita that did not recover for several years, and the high growth rates of above 9% from 1968 to 1973. In the inflation area, there were high inflation rates of 80% and 85% in 1963 and 1964 and lower rates of between 15% and 25% from 1967 to 1973 after the stabilization period.

Period Two: More Growth with More Inflation, 1973-1980

The second period, 1973-1980, is defined by the end of the "miracle" in 1973 and the end of the period of sustained growth in 1980. It includes both the 1973 and 1979 "oil shocks" and took place in an external economic context that included a newly floating dollar against the major currencies, high oil prices, and easy access to external credit in the petrodollar market. The access to credit facilitated the large investment projects in the late 1970s Second National Development Plan (PND II) which fueled in part the post-miracle growth period. Politically, the final military president took office in early 1979, for a term of six years to early 1985 for the transition to civilian government. In 1979, minimum wage policy became more progressive, as did wage policy, at least at the lower end of the distribution.

Table Four: More Growth with More Inflation, 1973-1980: Annual Change of Gross Domestic Product, Gross Domestic Product per Capita in Reais of 2006, the Gini Index, Annual Inflation, the Poverty Rate, and the Extreme Poverty (Indigency) Rate in Brazil, per Year, 1973 to 1980.

Year	GDP Annual % Change	GDP/Capita (Reais of 2006)	Gini Index	Annual Inflation IPC-FIPE	Poverty (% of population)	Extreme Poverty (% of Population)
1973	14.0 %	R$ 8,010		14.0 %		
1974	8.2 %	R$ 8,420		33.1 %		
1975	5.2 %	R$ 8,620		29.3 %		
1976	10 .3 %	R$ 9,250	0.623	38.1 %	48.2 %	23.1 %
1977	4.9 %	R$ 9,460	0.625	41.1 %	39.6 %	16.3 %
1978	5.0 %	R$ 9,680	0.604	39.9 %	42.6 %	20,7 %
1979	6.8 %	R$ 10,090	0.593	67.2 %	38.8%	15.9 %
1980	9.2 %	R$ 11,040	--	84.8 %	--	--

Growth was solid in the period, with growth in real GDP of between roughly five and ten percent in all year. Real GDP per capita continued its increase every year, rising from R$ 8,010 1973 to R$ 11,040 in 1980. Inflation was more problematic, settling into an annual rate of about 40% during the central 1976-1978 years, before rising to 84.8% per year in 1980 under pressure from the second oil shock, rising world interest rates in dollars, and a renewed growth imperative internally. Data from the new annual National Household

Survey (PNAD), which was first available for 1976, showed some improvement at the lower end of the income distribution. The newly available annual Gini indices showed a slight decline, implying an anti-cyclical story. Similarly, the newly available annual figures on poverty also showed declines under both measures, to about 40% and 16-20%, down from 48% and much closer to 25%, in spite of rising inflation.

Period Three: Stagnation, Debt, Indexation, and Redemocratization, 1980-1994

The third period, 1980-1994, lends itself to periodization by the electoral cycle, which would note the years of congressional and presidential elections, and changes in the term of office. For example, the late 1982 congressional elections provided members of the electoral body for the indirect election of the president for the term 1985-1990. Similarly, the late 1986 congressional election provided members for the constituent assembly that wrote the new, 1988 constitution. The first direct elections for president following the military period were in late 1989, for the 1990-1995 presidential term of office. The Real Plan officially was implemented in mid 1994, on the eve of both congressional and presidential elections in late 1994. With a 1998 constitutional amendment shortening the presidential term to four years, while permitting reelection once, the two now follow the same four-year cycle. A stabilization policy based periodization generates three subperiods, each ending with one of the three great stabilization plans, the Cruzado Plan of early 1986, the Collor Plan of early 1990, and the Real Plan of mid 1994. The first two plans come within the first year of a new presidency. The Real Plan comes shortly before the 1994 elections, following however the removal by impeachment of the elected president in 1992.

The first subperiod, from 1980 through 1986, is that of orthodox stabilization (1980-1984), the 1982 elections for legislative offices and state governors, the civilian president with opposition support in 1985, and the Cruzado Plan (1986). Real GDP fell in 1981 and 1983 while recovering only slightly in 1982. Real GDP per capita fell below R$ 10,000 in 1983 and 1984, and recovered its previous peak of R$ 11.040 in 1980 only in 1987. Recovery was apparent by end of 1984. Economic activity was solid, above 7%, in 1985 and 1986. Inflation doubled during the early 1980s stabilization period, from about 90% per year in 1981 to almost 180% in 1984 and reached a historical high of about 228% in 1985 during the run-up to the heterodox shock Cruzado Plan. Inflation for 1986 was only 68.1%, much of which would have predated the Cruzado Plan.

The Gini index values remained below .60 in the .58-.59 range during the stabilization period. In 1983 and 1984, the years of decline in real GDP per capita, poverty rose to 48%. In 1986, the year of the Cruzado Plan, the economy grew at a rate of 7.5%, real GDP per capita almost equaled its value in 1980, and poverty fell sharply to about 26%, a decline of a third from the normal rate of 40% and almost a 50% decline from its 1983 high. Extreme poverty fell to below 10%

The second subperiod, from 1986 through about 1990, includes the beginning of the period of substantive redemocratization, 1986-1992, including the election of the constituent assembly in 1986, the 1988 constitution, direct elections in 1989, and the

Collor Plan of 1990. After the growth spurt during the Cruzado Plan, the economy was generally more stagnant and flat in 1988. Inflation was higher, returning to three digits in 1987 and exceeding 1,600% in 1989 and approaching hyperinflation, although the economy was indexed. Coincident with the renewed inflation, the Gini index rose above .60 in 1987 and a new high of .636 in 1989. Poverty and extreme poverty rates rose above their normal rates as well. The subperiod ended with the short-lived Collor Plan, a program that tried to curb excess demand by impounding the excess liquidity of households and other economic actors, in combination with more traditional stabilization tools and neo-liberal restructuring of the state apparatus. Although real GDP fell 4.3%, the largest decline since 1981, the inflation rate, the Gini index, and the poverty rates finished the year at about the same values as they did the previous year.

Table Five: Stagnation, Debt, and Inflation, 1980-1994: Annual Change of Gross Domestic Product, Gross Domestic Product per Capita in Reais of 2006, the Gini Index, Annual Inflation, the Poverty Rate, and the Extreme Poverty (Indigency) Rate in Brazil, per Year, 1980-1994.

Year	GDP Annual % Change	GDP/Capita (Reais of 2006)	Gini Index	Annual Inflation IPC-FIPE	Poverty (% of population)	Extreme Poverty (% of Population)
1980	9.2 %	R$ 11,040	--	84.8 %	--	--
1981	-4.2 %	R$ 10,320	0.584	90.9 %	40.8 %	17.3 %
1982	0.8 %	R$ 10,170	0.591	94.6 %	41.0 %	17.8 %
1983	-2.9 %	R$ 9,650	0.596	164.1 %	48.8 %	23.1 %
1984	5.4 %	R$ 9,940	0.589	178.6 %	48.4 %	21.8 %
1985	7.9 %	R$ 10,480	0.598	228.2 %	42.1 %	18.2 %
1986	7.5 %	R$ 11,030	0.588	68.1 %	26.5 %	8.8 %
1987	3.5 %	R$ 11,200	0.601	367.1 %	38.8 %	17.1 %
1988	-0.1 %	R$ 10,970	0.616	891.7 %	43.6 %	20.9 %
1989	3.2 %	R$ 11,110	0.636	1,636.6 %	41.4 %	19.3 %
1990	-4.3 %	R$ 10,440	0.614	1,639.1 %	42.0 %	20.0 %
1991	1.0 %	R$ 10,370	--	458.6 %	--	--
1992	-0.5 %	R$ 10,150	0.583	1,129.4 %	42.2 %	20.0 %
1993	4.7 %	R$ 10,460	0.604	2,491.0 %	43.0 %	20.3 %
1994	5.3 %	R$ 10,840	--	941.3 %	--	--

The third subperiod, from 1990 through about 1994, includes the impeachment of Collor in 1992 and the formulation and implementation of the Real Plan of 1994. The economy was basically flat in the Collor years, with real GDP per capita falling to R$ 10,150 in 1992, the lowest level since 1984. Inflation fell to three digits in 1991, before rising again with the recovery and the run-up to the Real Plan. The Gini index fell with the recession in 1992 and rose again with the recovery in 1993, while the poverty rates were only slightly higher, supporting the idea that both growth and rising inflation can be sources of increased inequality. The year of the Real Plan, 1994, closed with solid growth, increased real GDP per capita, and inflation at only 941.3%, largely from the first half of the year. PNAD data are not available for 1994.

Section Three: The Present: Economic Performance in Brazil, 1994-2007

Period Four The Post-Real Period, 1994-2007

The fourth period, 1994-2007, and beyond, is the subperiod, or period, that we have been calling the present. It began with the 1994 breakpoint of the successful Real Plan. There has not yet been another event of the significance of the previous breakpoints to declare that this period, too, is the past. The period is characterized by almost unprecedented price stability, with inflation of never more that 10% after 1996, and often below 5% per year. This has been accomplished at the cost of economic stagnation even by recent historical standards, with growth of real GDP above 4% only three years since 1995. The anti-inflation effort has been carefully managed with restrictive monetary and fiscal policies. Until recently, there has been a significant overhang of external debt resulting in the need for a primary budget surplus.

Table Six: Stagnation and Stability: the Post-Real Period, 1994-2007: Change of Gross Domestic Product, Gross Domestic Product per Capita in Reais of 2006, the Gini Index, Inflation, the Poverty Rate, and the Extreme Poverty (Indigency) Rate in Brazil, by Year.

Year	GDP Annual % Change	GDP/Capita (Reais of 2006)	Gini Index	Annual Inflation IPC-FIPE	Poverty (% of population)	Extreme Poverty (% of Population)
1994	5.3 %	R$ 10,840	--	941.3 %	--	--
1995	4.4 %	R$ 11,150	0.601	23.2 %	35.1 %	15.2 %
1996	2.2 %	R$ 11,220	0.602	10.0 %	34.7 %	15.6 %
1997	3.4 %	R$ 11,420	0.602	4.8 %	35.1 %	15.6 %
1998	0.04%	R$ 11,250	0.600	-1.8 %	34.0 %	14.5 %
1999	0.3 %	R$ 11,120	0.594	8.6 %	35.3 %	15.0 %
2000	4.3 %	R$ 11,420	--	4.4 %	--	--
2001	1.3 %	R$ 11,400	0.596	7.1 %	35.1 %	15.2 %
2002	2.7 %	R$ 11,540	0.589	9.9 %	34.3 %	14.0 %
2003	1.1 %	R$ 11,500	0.583	8.2 %	35.7 %	15.2 %
2004	5.7 %	R$ 11,980	0.572	6.6 %	33.6 %	13.1 %
2005	3.2 %	R$ 12,160	0.569	4.5 %	30.7 %	11.4 %
2006	3.8 %	R$ 12,440	0.563	2.5 %	25.1 %	8.7 %
2007	5.4 %	R$ 12,928	n.a.	4.4 %	n.a.	n.a.

This period, with its relative macroeconomic stability, was not without its external shocks. These included the Asian currency crisis of the late 1990s with its "Tequila Effect," by the devaluation of the real in early 1999, and in the last several years by a stroke of good luck at long last in the form of a current account surplus generated by primary products exports into world markets dominated by China-led demand. After a slow start, macroeconomic performance under the Lula government that came into office in 2003 has been somewhat better than in the immediately previous years. With the strong world demand for natural resources and agricultural products, pressure in the external sector has been relieved, especially with regard to debt, although the Real has appreciated significantly.

In the area of social indicators, with Real Plan and the end of serious inflation, the poverty rate fell from above 40% to around 35%, where it continued until 2004. The same patter is seen in the rate of extreme poverty, which fell from 20% to 15%. However, in the area of income distribution, the annual Gini indices continued at about .6 from 1993 (at .604) though 1998 (at .600) before beginning to decline in 1999 (at .594) and 2001 (at .596) to 2004 (at .572) and most recently to 2007 (at .563). This consistent decline has attracted significant attention as the Gini index is now below the .568 recorded for 1970 and conceivably on its way to the .50 posted for 1960.

<u>Analysis by Presidential Term</u>

With price stability and predictable four-year presidential terms, it is now interesting to consider presidential terms as the unit of analyis. This period included three completed four-year presidential terms: the Cardoso First Term, 1995-1998, the Cardoso Second Term, 1999-2002, and the Lula First Term, 2003-2006. Given the broader economic and political stability since 1995, comparisons can be made among the three terms of office, and eventually with the Lula Second Term, 2007-2010, as it develops. Table Seven presents, organized by presidential terms, the annual rates of growth of real GDP for the twelve full years since the implementation of the Real Plan, as well as the growth of real GDP over each four-year period.

<u>Table Seven: Annual Growth in Real Gross Domestic Product Following the Real Plan</u>: by Year, in the First and Second Cardoso Adminstrations, 1995-1998 and 1999-2002, and in the First Lula Administration, 2003-2006, and in 2007.

First Cardoso Term		Second Cardoso Term		First Lula Term		Second Lula Term	
Year	Real GDP Growth	Year	Real GDP Growth	Year	Real GDP Growth	Year	Real GDP Growth
1995	**4.4 %**	1999	**0.3 %**	2003	**1.1 %**	2007	**5.4%**
1996	**2.2 %**	2000	**4.3 %**	2004	**5.7 %**		
1997	**3.4 %**	2001	**1.3 %**	2005	**3.2 %**		
1998	**0.04%**	2002	**2.7 %**	2006	**3.8 %**		
1994-1998	**10.3 %**	1998-2002	**8.8 %**	2002-2006	**14.4 %**		

(Percent changes calculated from data from the IPEA website, July 2007 and March 2008.)

Specifically, the four-year growth rate during the first Cardoso term (1995-1998) between the Real Plan and the January 1999 devaluation was 10.3 % with activity in the earlier years. The four-year rate for the second Cardoso term was slightly weaker, at 8.8 %, with the strength in the second year. The four-year rate for the first Lula term was higher, at 14.1%, with second-year performance the strongest. One notes that even without 2006, growth during the first three years of the Lula Administration was greater than growth under either of the Cardoso Administrations.

For a decade-to-decade analysis, for the period from 2000 through 2006, the six-year growth rate is 18.7% with 5.4% more posted for 2007. With three years to go and with its current economic strength, Brazil's ten-year performance could still top that of the 1990s of 27.8 %, even with the slow start at the beginning of the decade.

<u>Table Eight</u>: <u>Income Inequality in Brazil According to Gini Indices since 1985</u>, by Year and Presidential Term, from the PNAD Data.

Sarney Term		Collor/Franco Term		First Cardoso Term		Second Cardoso Term		First Lula Term	
1985	**.598**	1990	**.614**						
1986	**.588**	1991	**--**	1995	**.601**	1999	**.594**	2003	**.583**
1987	**.601**	1992	**.583**	1996	**.602**	2000	**--**	2004	**.572**
1988	**.616**	1993	**.604**	1997	**.602**	2001	**.596**	2005	**.569**
1989	**.636**	1994	**--**	1998	**.600**	2002	**.589**	2006	**.563**

Table Eight presents, also organized by presidential term, income distribution data for each presidential term starting with civilian rule in 1985. Organized by the four-year presidential terms, distinct patterns emerge. Most clear is the continuing high level of inequality of .60 during post-Real first Cardoso term. During the Sarney term, we note a slight decline in 1986, the year of the Cruzado Plan, and increases in the three subsequent years as rate of inflation accelerated. More to the point of this paper, inequality fell consistently on a year-to-year basis during the second Cardoso term and again during the first Lula term. All three observations for the Lula term are equal to or lower than any previous observation in the series, dating back to 1976.

While not yet close to the .50 registered by data from the 1960 census, the PNAD's Gini of .569 for 2005 is close to the .568 posted by data from the 1970 census. If this pattern of inequality reduction were to continue, it would indeed be an accomplishment, erasing the increase of inequality since 1970, though not that of the 1960s.

<u>Section Four: Analysis of the Evolution of Income Distribution</u>

In the discussion above we have reviewed the performance of the Brazilian economy over two decades of growth followed by the two lost decades, plus the beginning of the current decade where the story is not complete. Performance includes inflation, which rose systematically for 30 years from the mid 1960s to the mid 1990s. Social indicators reviewed include the poverty rate and the extreme poverty rate as well as the distribution of income as measured by the Gini index.

Substantial improvement in poverty as measured by the two poverty rates since the PNAD data began in 1976. In the late 1970s, the rate of poverty fluctuated around 40% and the rate of extreme poverty fluctuated around 20%. In the recession of the early 1980s, poverty markedly to about 48% in 1983 and 1984, while extreme poverty was above the 20%. During 1986, the year of the Cruzado Plan with its price controls and stimulative macroeconomic policies, poverty fell to 26.5% and extreme poverty to 8.8%. With the collapse of the Cruzado Plan, both returned to their customary levels by 1988, if not slightly higher, where they stayed until the Real Plan.

There was substantial improvement in measured poverty and extreme poverty associated with the 1994 Real Plan. This improvement was sustained in the years that followed. The poverty rate stayed close to 35% from 1995 through 2003; the rate of extreme poverty stayed close to 15% over the same period. Over the next three years for which we have data, the rates fell by 2006 to 25.1% for poverty and 8.7% for extreme poverty. This improvement is consistent with the idea of declining inequality resulting from income gains in the lower end of the distribution.

Income distribution, as had been reported previously, did not improve with the success of the Real Plan. Essentially, the annual Gini index values stayed at .60 or very close to from 1993 through 2000, although .60 is slightly down from its high during the worst years of inflation. Since 2001, however, there has been significant improvement. Specifically, the Gini index fell from .596 in 2001 to .572 in 2004, followed by declines to .569 in 2005 and to .563 in 2006. The .572 in 2004 was the lowest Gini index value in the life of the PNAD; the .563 in 2006 was lower than the Gini index value for 1970 of .568 (from census data).

The questions then become what are the sources of the decline in inequality and will it continue. Turning to the traditional macroeconomic answers, those affecting everyone, we note that there was no change in the years after 2000. There were no marked shifts in real output; real output was growing modestly or was stagnant. There was no inflation to alter behaviors, and labor policy was not being actively managed.

An early analysis, if not the earliest (Soares, 2005), indentified five potential sources of the decline in income inequality, two of which he found to be relevant. The analysis was done by calculating the change in equality and inequality of the distribution each type of income. He found that three-quarters of the decline between 2001 and 2004 due to a decline in inequality in labor income while one-quarter of the decline was due to a decline in inequality in transfer income. In the later case, this was in particular due to increase in the number of households receiving payments under the Bolsa Familia program. In his conclusion, he (2006, p. 26) argues that that because three-quarters of the decline came for the labor market, continued reduction in inequality could be sustainable, unlike improvements due to transfer programs, where increased expenditures would be necessary.

Moving on to the macroeconomic context, he also points out that the improvement in distribution took place in a period (1995-2004) when average income was falling according to his measures. He finds that the gains of seven out of ten Brazilians at the lower end of the distribution was associated with losses of the three out of ten Brazilians at the upper end of the distribution. This is not to say that there was a direct transfer from the top of the distribution to the bottom, but that in the lackluster macroeconomic environment, those Brazilians positioned in the higher-income segments of the economy experienced losses and would see the economy as performing weakly while those in the lower-income segments experienced gains and would see the economy as performing strongly.

Refering back to the pro-cyclical view of income distribution we derived from the income distribution debate of the 1970s, we ask if the result of declining inequality would hold if the economy were growing more strongly. Specfically, under conditions of strong macroeconomic demand, which segment of persons in the income distribution would be most favored? With 1970s growith conditions, might not the income distribution worsen again as a result, as was argued for the late 1960s and for the 1970s?

There was substantial debate on the new income distribution result, both in terms of the data themselves and their interpretation, including and further studies associated with IPEA. Of particular interest are a "technical note" based on data through 2004 produced by IPEA staff in interaction with meetings of Brazilian and international experts (IPEA, 2006) and also an edited volume of specialized papers (Barros, et. al., 2006).

Possible sources of the decline in inequality are found (IPEA, 2006, p. 8) to be 1) the demographic composition of households, 2) transfers, 3) assets earnings, 4) access to the labor market and employment, and 5) the distribution of labor income. Distribution of labor income in turn can be determined by productivity and non-productivity characteristics including schooling, experience, discrimination by race and gender, and labor market segmentation. The first, demographic composition, was found to have very modest, almost negligible impact. The third, earnings from assets, were not found to have an impact.

Transfers were found to account for about one-third of the decline in inequality, with equal impact from 1) government pensions and retirement programs, 2) the Continuous Monthly Benefit (BPC), and 3) Bolsa Familia and others, including the Child Labor Eradication Program and Bolsa Escola. The BPC and the Bolsa Familia and similars were believed to be a cheaper and cost-effective way to influence the outcome. Expanded coverage of these resulted in high impact, relative to expanded coverage of pensions and retirement programs.

With regard to the labor market, labor market inequalty, the source of two-thirds of the decline in inequality, labor was found to be falling since 1995, and more so since 2001. Sources include the decline in educational inequality among workers as well as the decline in wage differentials between level-of-schooling groups, with the second being more important than the first. Age and experience differences among workers were found to be decreasing, although at a slow pace, while the wage differentials associated with age and experience have increased, for a slight net positive contribution to the decline. Race and gender differentials, high in Brazil, were not found to have contributed to the decline in inequality, nor has spatial segmentation among Units of the Federation. However, labor market integration within states between municipalities of different sizes has contributed to the decline, as has the integration of rural and urban labor markets. On the other hand, the wage differentials between formal and informal labor markets have increased, although formalization has increased, for a net impact in favor of increased inequality.

With regard to whether the decline in inequality will continue, the IPEA documents are cautiously optimistic, however with caveats. On the optimistic side, the sources of between two-thirds and three-quarters of the decline in inequality are found to be on the labor market side, a trend that has been operative since 1995 and which may continue without direct intervention, especially since there are many processes operating. On the other hand, data from the Pesquisa Mensal de Emprego, which surveys only the six largest metropolitan areas and are available before the PNAD data, suggest a declining rate of improvement in inequality. The declining rate of improvement in income inequalty was in fact the case between 2004 and 2006, although inequality continued to improve.

Section Five: Concluding Remarks and Prospects for the Future

The sources of changes in income inequality can be divided broadly into macroeconomic sources and microeconomic sources. Macroeconomic sources are those that are experienced by everyone and which may, or may not affect everyone equally. These would include the business cycle and the rate of change of the general price level (inflation). All actors experience the cycle, although possibly in different ways at different points in the cycle, or not. Similarly, different actors might be affected by inflation differently, possibly because of differing access to safe assets, indexation, and easy liquidity.

Microeconomic sources are those connected to individual workers, starting with individual productivity characteristics such as schooling and education, age, experience, and qualification. Included would be rigidities such as race, gender, and spatial and sectoral discrimination and segmentation, as well as focussed income transfer programs. Also still on the microeconomics side would be the earnings (or rates of return) associated with the productivity characteristics, as mediated by the rigidities, although these would be associated with supply and demand conditions in individual markets, which in turn would be influenced by the business cycle.

The early portions of this paper are associated largely with macroeconomic analysis, starting with growth and negative fluctuations of real GDP and reporting the indicators of well-being (GDP per capita, income inequality, poverty, extreme poverty) in the context of inflation and the major anti-inflation programs. Consideration was given to whether or not demand-driven growth increased or decreased inequality, and whether declines in inequality were associated with real macroeconomic decline, like in 1992, or relative stagnation, as in the last ten years. For the years up to and including the Real Plan, there is evidence that high inflation in the presence of growth in the run-up to the majorstablization plans (Cruzado, Collor, and Real) can generate greater inequality either due to real demand factors, or through differential access to indexation.

For the years following the 1994 Real Plan, the macroeconomy, though relatively stagnant, was also much more stable. The reality of inflation stopped being a factor in economic behavior, although fear of inflation continued. Macroeconomic performance continued to be constrained by the external sector, especially the deadweight of the external debt until recently, and several currency crises in the context of a much more open economy in the trade sense that followed the unilateral neo-liberal reforms of the early 1990s.

What appears in the IPEA analysis of various measures of income dispersion and inequality is a sense of there being two Brazils (IPEA, 2006, p.20). One is the Brazil of the middle class experiencing stagnation or even slow decline in real income. The other is the Brazil of the poor and lower classes, whose economic situation is improving, mostly due to slowly improving labor market productivity characteristics and conditions, but also due to transfers.

If one accepts the macro-micro dichotomy presented here, then the progress at the lower end of the distribution comes from the end of inflation (a macroeconomic phenomenon), slow improvement in worker productivity and the working of labor markets (a microeconomic phenonemon), and somewhat favorable demand conditions in that part of the labor market. However, for Brazil as a whole, in a world where the developed world economies and developing economies like China and India are performing quite well, the story is not so positive.

As it happens, there are signs of macroeconomic improvement in Brazil which should influence the numbers reported here. With 2007 posting GDP performance that is much stronger than that for 2006, and it is possible that 2008 will be stronger than any year in the last 20 years. This should result in higher GDP per capita, and lower poverty and extreme poverty rates. Given favorable external, interest-rate, and inflation conditions, it is possible that Brazil can break out of the relative stagnation of the last ten years. If so, the economic parameters that give us the IPEA income inequality result may have changed.

In the area of income inequality, the prediction depends on one's view of inequality and the business cycle. Inequality as measured by the Gini index might continue to decline, suggesting either that the upswing of the business cycle favors equality, or that the microeconomic foundations continue to improve. Or inequality may stop declining or even rise, suggesting that the trend observed in recent years may have played itself out, or that markedly improved demand conditions result in greater inequality. Fortunately, we will not have to wait long for at least partial answers to these questions.

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