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The Floating World of Brazilian Inflation

1992

To the memory of

Octávio Gouvêa de Bulhões (1906-1990)

Delegate to the Bretton Woods Conference, 1944

Finance Minister of Brazil (1964-1967)

Honorary President

Fernand Braudel Institute of World Economics (1988-1990)

He taught us all.

Some of us listened and are grateful.

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Contents

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1. Brazil and the new anti-inflation consensus in Latin America 6
2. Difficulties for the world's fastest-growing big economy..................................9
3. The hollow frontier and Brazilian inflation. 10
Weakness of the transportation infrastructure..14
Inflation and urbanization...16
Inflation: a permanent tool of policy..18
4. Financing the Brazilian "miracle" of the 1980s..20
Breakdown of fiscal systems 21
Psychosis of overshooting 24
"Inertial" inflation and public finance 24
General swelling of world financial activity 27
Malthus, income concentration and public debt 31
Inflation and the world middle class 34
More government jobs 38
Chronic inflation: the social contract..39
Sterile savings 40
The indexing illusion..41
Bibliography 44

1. Brazil and the new anti-inflation consensus in Latin America

At the close of the 20th Century, the world economy is trying to deal with the end of a fiscal and financial expansion that began six decades ago at the bottom of the Great Depression. This expansion accelerated during World War II and the "Golden Age" of postwar recovery and robust growth (1950-73), then was distorted by the oil crisis of the 1970s and the debt crisis of the 1980s. Brazil is one of the few important countries that has failed to come to terms with the end of this fiscal and financial expansion.

Since 1980, Brazilians have suffered through eight different plans for monetary stabilization and six price and wage freezes, used four different currencies, applied 11 official indexes to measure inflation, conducted their business despite 55 changes in price control guidelines, 15 wage policies, 18 changes of foreign exchange rules while successive governments announced 21 decrees of fiscal austerity, 22 proposals to renegotiate the foreign debt, six plans for tightening of credit and one great confiscation of financial assets, aimed at stopping hyperinflation in its tracks and restructuring the financial system. Despite all these measures, Brazil has become poorer and more disorganized, while chronic inflation has continued.

In its first 101 years of republican government (1889-1990), Brazil's price level multiplied 32 quadrillion times [32 x 10^{15}], while world prices rose 23 times in the worst period on record of sustained global inflation.[1] This scale of price increases was spectacular but not unique, exceeded by Argentina and perhaps by Chile and Peru as well. In the century before the First World War, annual inflation averaged around 1% in the advanced capitalist economies, embracing sustained price downswings as well as decades of increases and slightly faster inflation in peripheral countries.[2] In the 20th Century, consumer inflation in 1900-86 accelerated to a 5.7% yearly average in the rich countries (excluding Austria and Germany, which suffered hyperinflations in the 1920s), while it averaged 20% in Brazil and Peru and 30% in Argentina and Chile.[3] One of the most frightening economic events in recent years is the acceleration of world inflation. Widening differences in inflation rates between rich and poor countries, reflecting different levels of economic organization and capital-formation, point to a polarization of the world economy if these trends continue.

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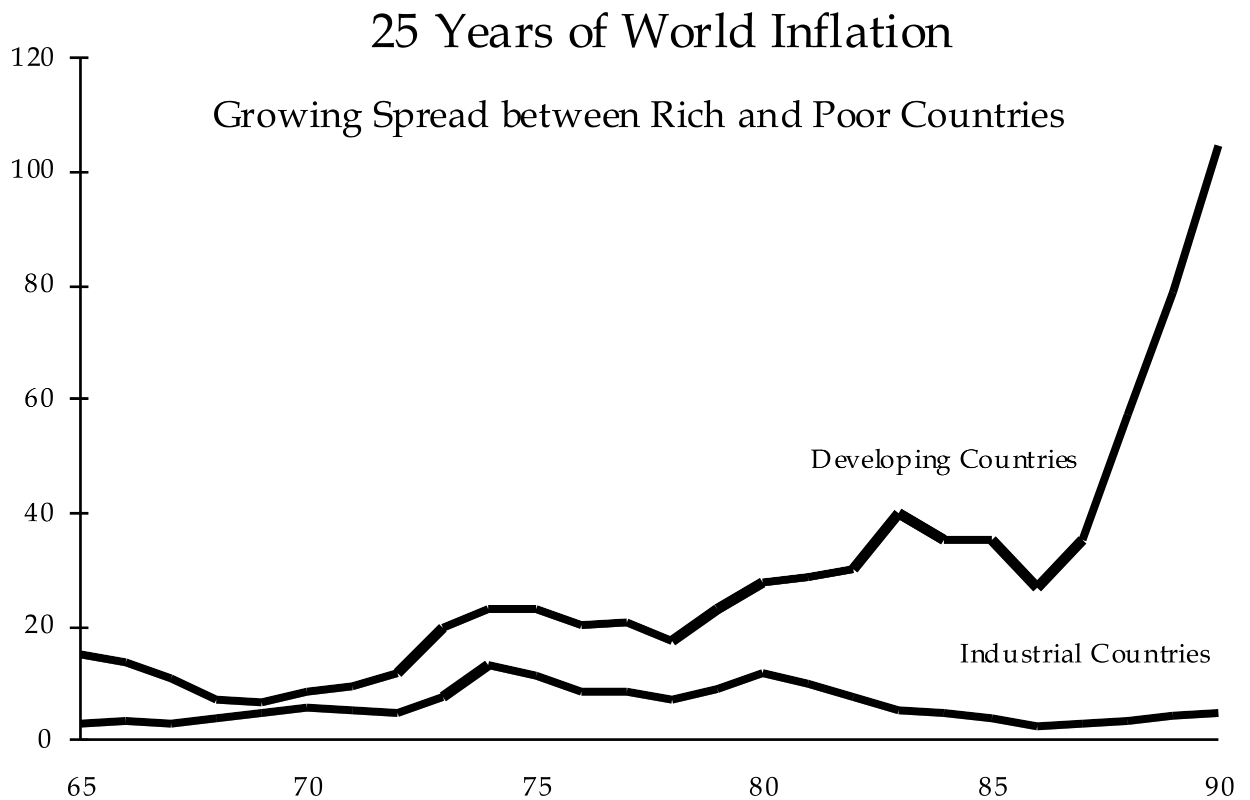
[1] Calculation by Professor Celso Martone of the University of São Paulo, a member of the Fernand Braudel Institute of World Economics.

[2] [2] Anna J. Schwartz, "Secular Price Change in Historical Perspective, " *Journal of Money, Credit and Banking.* V5/1 (1973) p257. W. ArthurLewis,*Growth and Fluctuations 1870-1913.* London: Unwin 1978 p106-7.

[3] Angus Maddison, *The World Economy in the 20th Century.* Paris: OECD 1989/p21.



Several Latin American economies are struggling, with different degrees of intensity, to avoid being engulfed by the pressures of chronic inflation that trap them in unstable, low-level adaptation to the process of decapitalization. While conditions for further economic progress exist in Latin America, the scope for self-inflicted damage is wide and very threatening, thanks largely to institutional problems that have found expression in decades of chronic inflation that has escalated toward hyperinflation. In 1990, Latin American inflation rose to 517%, against 342% the previous year, while world consumer prices rose by 21%. From 1960 through 1990, the world price level multiplied 14 times, while inflation in Latin America has become such a chronic disease that its consumer prices by 1990 had multiplied not 14 times but 1.7 million times their 1960 level. Inflation in Brazil was much worse even than this horrendous Latin American average, with prices multiplying 1.9 billion times since 1960, while in Argentina they rose 359 billion times. The scale and duration of chronic inflation in Latin America are without precedent in human experience, threatening a kind of adaptive failure that also is unfamiliar to us. [4]

[4] Price data for 1960-90 taken from the IMF's *International Financial Statistics Yearbook 1990* and *International Financial Statistics Supplement on Price Statistics.* Supplement Series No. 12 (1986).

In response to this threat, the governments of Chile, Mexico, Argentina, Bolivia and Peru, as well as those of several African countries, undertook slow and painful stabilization efforts in recent years to avoid further deterioration of living conditions. They were driven to these efforts not by differences between more or less economic growth, more or less social justice or more or less discomfort, but because they saw that the survival of their communities was at stake. These efforts were undertaken in desperation. In 1985, for example, when President Victor Paz Estenssoro announced the program that ended hyperinflation in Bolivia, he told his people: "Our country is dying and we must refuse no means of emergency treatment to stop this outcome....There is no formula to solve the terrible crisis that shakes Bolivia, if not the joining of moral strength and constant work to permit an increase of exportable wealth; to administer carefully our scarce economic and financial resources; to agree to a pause in the social struggle, and to convince ourselves that there will be no rebirth of the Republic if we do not understand the magnitude of the catastrophe and the few effective remedies we have to reverse this overwhelming situation."[5] In nearly all these cases, desperation was reinforced by the kind of external shocks which Brazil was spared: the 1975 fall of world copper prices that wrecked Chile's public finances and shrank its GDP by 11%; the collapse of the London tin market in October 1985 that forced the new Paz Estenssoro government to deepen its stabilization effort by closing several nationalized tin mines that had been bleeding the Treasury for decades;[6] the September 1985 Mexico City earthquake and the sudden fall of oil prices in February 1986 that truncated GDP by 6.5%, forcing the governments of President Miguel de la Madrid (1982-88) and Carlos Salinas de Gotari (1988-94) to deepen cuts in public spending, to intensify renegotiation of foreign debts, to deregulate the Mexican economy and open it to freer trade, to privatize state companies and to negotiate an incomes policy "pact" between the private sector, labor unions and government. These shocks, according to President Salinas's chief economic adviser, showed that "the time had arrived to face structural problems and macroeconomic inefficiencies. Previous stabilization efforts, using orthodox macroeconomic policies exclusively, produced overadjustment that lowered public investment by roughly 50% and average real wages by 30%. Nevertheless, they opened the way for structural reforms (trade liberalization, deregulation, privatizations, etc.) to be implemented in an orderly fashion and in a climate of greater stability."[7]

Why has Brazil failed to join this emerging anti-inflation consensus in Latin America? In comparing Brazil with Mexico, it often is said that Mexico has been a one-party state for the past six decades, developing a competent economic bureaucracy, while Brazil has suffered much more political instability in these decades. What is not often noted is

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[5] Text of speech published in Bolivia's daily newspapers, August 30, 1985.

[6] For a historical account, see Norman Gall, *Bolivia: The Price of Tin. Part I: Patiño Mines and Enterprises. Part II: The Crisis of Nationalization.* American Universities Field Staff Reports, 1974.

[7] José Córdoba, "Diez lecciones de la reforma económica en México," *Nexos.* No. 31. Mexico City 1991.

that Mexican leaders are driven to effective solutions by fear of repeating the successive political disasters of the 19th Century, culminating in more than a decade of civil war after 1911, which today would be compounded by the colossal problem of Mexico City. Except in the Northeast, Brazil has not been subject to the recurrent and devastating droughts that preceded most Mexican political convulsions, including the 1911 revolution. Brazil's open spaces and more benign ecology make it more tolerant of the kind of economic distortion that developed in Mexico from 1970 to 1982. Mexican fear of disaster has triggered effective solutions. Brazilians have no such fear, believing that their natural resources give them infinite elasticity and that their spectacular record of economic growth will be enough to overcome deepening decapitalization and social disorder. These beliefs form part of the triumphalism inherited from the regime of President Juscelino Kubitschek (1956-61), which institutionalized chronic inflation as well as conflict with the International Monetary Fund as part of the ideological equipment of Brazilian politics.

This triumphalism survived the 1980s, which became known as the "lost decade" in Latin America. It even might be argued that another Brazilian economic "miracle" took place in the 1980s. According to the United Nations Economic Commission for Latin America (CEPAL), the annual inflation rate of Latin America and the Caribbean rose from 56% to 1,023% in 1981-89, while the region as a whole lost 8.3% of its per capita GDP. The surge in inflation was concentrated in four economies --Argentina, Brazil, Peru, Venezuela-- that generate three-fifths of the region's output. In addition, Mexico and Bolivia, producing another 23% of Latin America's GDP, suffered big inflationary bursts during the decade, but carried out stabilization programs that returned price increases to below their 1981 rates. During this "lost decade," several Latin American countries suffered massive losses in per capita output: Argentina (-23.5%); Bolivia (-26.6%); Guatemala (-18.2%); Mexico (-9.2%); Nicaragua (-33.1%); Panama (-17.2%); Peru (-24.7%); Trinidad and Tobago (-40.8%); Venezuela (-24.9%). Brazil's "miracle" of this "lost decade" was that, while inflation rates multiplied 20-fold and the price level multiplied 11.3 million times during the decade, its per capita income remained stable.[8]

2. Difficulties for the world's fastest-growing big economy

This "miracle" may have modified Brazil's long-term performance as the world's fastest-growing big economy for more than a century. This long-term performance

[8] United Nations Economic Commission for Latin America (CEPAL), *Changing Production Patterns with Social Equity.* Santiago, Chile: 1990/pp20 & 28. CEPAL reports a per capita income loss of 0.4% for Brazil for 1981-89, based a preliminary estimate of per capita growth of 0.9% for 1989. Brazil's official estimate of GDP growth for 1989 was 3.6%, giving per capita growth of 1.5% and placing per capita income at the same level as in 1980.

expanded its gross domestic product (GDP) by 4.4% yearly since 1870.[9] The new "miracle" was different from President Juscelino Kubitschek's dash for "50 years' progress in five," when output rose by more than one-third in 1957-61. It also was different from the Brazilian "miracle" of 1968-74, which drew worldwide attention as production nearly doubled in seven years. It was different from its spectacular performance of 1975-80, when Brazil again led the world in economic growth, as both foreign debt and inflation tripled, expanding its product by 46% while most countries were reeling from the two oil shocks of the 1970s. However, as the 1980s progressed, the new miracle of sustained per capita output became more widely understood as a transition toward deepening economic disorganization. The hyperinflation erupting in 1989, during Brazil's first free presidential election campaign in three decades, aggravated these fears. In the escalation toward hyperinflation, three areas of difficulty unfolded:

> 1. Brazil lacks a clear and stable political framework for deciding internal conflicts and reversing economic disorganization. The political framework was weakened and confused further by the 1988 Constitution, enacted by Congress sitting as a Constituent Assembly, which increased inflationary financial transfers and social guarantees on a scale equivalent to their expansion in Argentina in the early 1970s. Most of this uncontrolled fiscal expansion took place in the political thicket of intergovernmental transfers to states and municipalities. The Federal share of government spending at all levels was 73% in 1987, while the Federal share of all tax receipts was only 52%. Under the new constitution, the state and local share of the two most important taxes, on incomes and industrial products, will have risen from 20% in 1966-68 to 33% in 1986 to more than half by 1993.[10]
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> 2. The escalation of deranged economic transfers has limited government spending largely to payment of salaries and debt service. In the runup to hyperinflation, the government could not meet even these commitments. By January 1990, Brazil's domestic public debt service (including monetary correction) was 73% more than all Treasury income. Meanwhile, public investment fell since 1975 from 4.5% to below 1.5% of GDP,[11] insufficient to prevent diminishing reliability of energy supplies and decay of transportation, comunications and public health infrastructure. Federal government investment for 1990 is set at 0.3% of GDP. Officials complain that recent numbers

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[9] Angus Maddison, "Desempenho da Economia Mundial desde 1870," em Norman Gall and Werner J. Loewenberg eds., *Nova Era da Economia Mundial.* São Paulo : Instituto Fernand Braudel de Economia Mundial/Editoral Pioneira, 1989/p20.

[10] "O tortuoso caminho," *Conjuntura econômica.* September 1990/p9.

[11] Investments of federal, state and local governments, excluding government enterprises. Brazil's public investment compares with Britain (1.7%), Sweden (2.4%), Germany (2.3%), France (3.1%) and Japan (7%). Source: OECD *Quarterly National Accounts.* No. 1/1990.

exaggerate real public investment levels because of failure of the government to pay its bills, forcing contractors and suppliers to embed big inflation premiums in their prices to compensate for interest charges during payment delays.

3. With high levels of private savings sucked into the vortex of financing current government spending, the decapitalization of infrastructure and institutions is exposing large swaths of Brazil's population to increasing survival risks in the mounting density and complexity of urban concentrations. The 1990 census[12] was expected to count 15 Brazilian cities with more than a million population, against only two in 1960. Rapidly rising demand for welfare and protection services, bringing inflationary decapitalization and politically skewed distribution of entitlements, threaten higher levels of mortality unless self-destructive policy choices are modified by sounder economic criteria.

This report explores the long-term institutionalization of deranged economic transfers that we identify with chronic inflation. It also tries to explain why chronic inflation developed in Brazil over the past century and how it accelerated into hyperinflation over the past decade.

3. The hollow frontier and Brazilian inflation.

The floating world of Brazilian inflation is animated by a fantasy of infinite expansion that is peculiar to the frontier societies of the Western Hemisphere. The frontier mystique took special shape in Brazil's continental expanse of ancient rock and mainly acidic soils, bulging into the South Atlantic. It was rooted in a precariously organized political structure, surviving behind barriers of distance, culture and law that separated Brazil's enormous interior from the rest of the world economy. Brazilian inflation is an old problem, rooted in a floating world of rent-seeking[13] and low natural returns to labor. The returns to labor remained low because of weak political and economic organization over a vast national territory and because of insufficient investment in infrastructure and human capital. Yet the promise of the frontier remained vibrant in view of Brazil's cornucopia of natural resources and its experience as the world's fastest-growing national economy over the past 120 years.[14] A climax was reached with the 10% annual average growth of the "miracle" years 1968-73. Nourishing the fantasy of infinite expansion is the idea of a soft budget constraint in the behavior of governments and firms, combined with another idea of limitless

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[12] Postponed for budgetary reasons, as were the 1990 censuses of many other countries.

[13] Profiteering from government regulation, including competition for privilege, as defined by Anne O. Krueger, "The Political Economy of the Rent-Seeking Society," in *American Economic Review.* June 1974. An early sketch of rent-seeking is in Adam Smith, *An Inquiry into the Nature and Causes of the Wealth of Nations.* Book I/Ch. 10/part 2.

[14] Angus Maddison, "Desempenho da Economia Mundial desde 1870," em Norman Gall and Werner J. Loewenberg eds., *Nova Era da Economia Mundial.* São Paulo : Instituto Fernand Braudel de Economia Mundial/Editoral Pioneira, 1989/p20.

horizons in the harvest of a virgin resource base, as described by the Texas historian Walter Prescott Webb in *The Great Frontier* (1952):[15]

[15] Walter Prescott Webb, *The Great Frontier*. 2d edition. University of Texas Press 1964/p301.

> *In the presence of the frontier, capitalism and democracy could exist side by side, but when we penetrate below the surface we see that in reality the frontier subsidized both of them in a way we might not like to admit....the sovereign was dispensing the frontier to the people and to the capitalists with a lavish hand and on practically a free basis....everybody concerned lost sight of the fact that the proceedings were extraordinary and that the greatest dividend in the history of the world was being declared to people who had made no considerable investment.*

The words "capitalism and democracy" should be used with care in the Brazilian context. The free and egalitarian frontier style, romanticized by North Americans, thrived only where export trade failed to develop in the early stage of colonization. Elsewhere, in the new lands of the Americas and Eastern Europe, slavery, serfdom and indentured labor served a hierarchy more strict and steep than anything common in Western Europe. In colonial times, trade was regulated by the metropolis, limiting competition and offering many opportunities for rent-seeking. A reason for enduring schisms of class and income distribution in Brazil, and other new lands, was that, according to McNeill, "frontier conditions could not sustain the elaborately graded hierarchy that prevailed in the heartlands of European civilization."[16] In the 19th Century, the practice of Brazilian democracy was only for those at the top of the pyramid. Voter registry was limited by income and literacy requirements. In 1872, from a population of 8.9 million, only 1,089,659 Brazilians were eligible to vote and only 20,006 did so.[17] Over the next six decades, while population multiplied fourfold, the number of registered voters rose by only one-third by 1933.[18] The historian Steven Topik observed: "The total of federal, state and local employees in 1920 was about 200,000. That equaled the number of votes necessary to win the 1919 presidential election."[19] Capitalism as well as democracy was limited to small minorities living in coastal cities and a few export enclaves, tied into trade diasporas of mainly foreign merchants that linked these communities to the world economy.[20] By the 1820s, 60 British merchant houses operated out of Rio de Janeiro, 20 more in Bahia and 16 in Pernambuco.[21] Beyond

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[16] William H. McNeill, *The Great Frontier: Freedom and Hierarchy in Modern Times.* Princeton 1983/p20-1.

[17] Linda Lewin, *Politics and Parentela in Paraíba.* Princeton University Press 1987/p16n16. This is a brilliant study of clan-based politics in the Brazilian Northeast.

[18] IBGE, *Estadísticas Históricas do Brasil: Séries Econômicas, Demográficas e Sociais de 1550 a 1985.* Rio de Janeiro: IBGE 1987/p590.

[19] From Steven Topik, *The Political Economy of the Brazilian State, 1889-1930.* Texas 1987/p21.

[20] Philip D. Curtin, *Cross-Cultural Trade in World History.* Cambridge University Press 1984.

[21] Carlos Marichal, *A Century of Debt Crises in Latin America: From Independence to the Great Depression, 1820-1930.* Princeton 1989/p19.

the pale of these trading communities lay the poverty and dispersion of the back country. Early in this century, life expectancy at birth of Brazilians was only 27-34 years, comparable with that of India before 1950. High mortality was the fruit of low agricultural yields and productivity by a labor force of squatters, sharecroppers and small proprietors. In 1912 a group of Brazilian public health experts traveled through the Northeastern backlands and found:[22]

> *Rare was the individual who knew that Brazil exists. Piauí was one country, Pernambuco another, and so with other states. Government for these pariahs is a man far away who gives orders. The existence of this government is known because the man sends his agents each year to collect taxes. When we ask these people if these lands (Piauí, Pernambuco, etc.) are linked to each other, forming a nation, they say they don't understand this. Illiteracy embraces more than 80% of the people. Life is reduced to raising pigs, chickens, a few scrawny cattle, the vicissitudes of the drought, waiting for rain, and nothing more. After the winter rains comes malaria. Between the old and new towns of São Raymundo, there is a natural basin that floods during the rains, leaving water in stagnant pools during two or three months of drought as epidemic malaria spreads. The water is detestable, salty, taken from the town well, a filthy ditch dug beside the bed of a small stream, where people fill their buckets.*

A notable success of Brazilian policy in the 19th Century was that the huge country did not disintegrate formally into local satrapies, although the weak central power could collect few taxes and *de facto* local rule was the rule. By the 1820s, patterns of inflationary public finance and foreign borrowing were established. During the Napoleonic Wars, the Bank of Brazil, in its first incarnation (1808-29), had a banking monopoly which it used mainly to print money for covering government deficits, leading to its liquidation in 1829. Currency in circulation multiplied 216-fold in 1813-27.[23] In the first wave of British lending to Latin America in 1822-25, Brazil borrowed £3.2 million, mainly to indemnify Portugal for loss of its colony by peaceful separation. Brazil was, however, the only Latin American borrower that did not default in the trans-Atlantic postwar crash of 1825-26, thanks to buoyant exports that sustained Brazil's international credit until 1937.[24] However, political disintegration was a permanent threat. In the early decades of this Century, Brazil's poor internal communications had slowed suppression of regional revolts that ate away at the power and credibility of the federal government, leading the American geographer Preston James to report: "Even among patriotic proclamations there is an audible

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[22] Arthur Neiva and Belisário Pena, "Viagem cientifica pelo Norte da Bahia, sudoeste de Pernambuco, sul do Piauhí e de norte a sul de Goiaz," *Memorias do Instituto Oswavldo Cruz* (8) Rio de Janeiro: 1916/p191.

[23] Carlos Manuel Pelaez, "The Establishment of Banking Institutions in a Backward Economy: Brazil, 1800-1851," *Business History Review.* XLIX/4 (1975). Also see Pelaez and Wilson Suzigan, *História Monetária do Brasil.* Rio de Janeiro: IPEA 1976.

[24] Carlos Marichal, *A Century of Debt Crises in Latin America: From Independence to the Great Depression, 1820-1930.* Princeton 1989/pp35&49.

undercurrent of talk in Brazil about the possible breakup of of this colossus among nations into smaller and weaker units."[25] Meanwhile, the Brazilian frontier was expanding into the interior along lines of force generated by the metropolis of São Paulo, the world's fastest-growing industrial city in this century, whose population grew from 65,000 in 1890 to about 18 million today. The frontier moved northward along a 2,500-mile arc running from the southernmost state of Rio Grande do Sul into Paraná, Mato Grosso, Rondônia, and, most recently, Roraima near the Venezuelan border.[26] However, starting in the 1930s, geographers began calling this a "hollow frontier,"[27] marked by extensive agriculture and the low level of farming technology employed in Brazil's huge continental interior. Continuous road penetration, forest clearing, soil depletion and new pastures ate at the receding margins of the forest. A few harvests exhausted the weak fertility of latosols and ranching replaced crops as the main kind of farming. Hollowness was created by "rapid depopulation and decadence of areas back of the frontier" from shifting cultivation and continuous abandonment of newly cleared lands.[28]

Weakness of the transportation infrastructure

Helping to shape the inflationary bias of the Brazilian economy was the weakness of the transportation infrastructure that increased food costs as the hollow frontier expanded and population grew. Lacking investment capacity, Brazil's entry into the railroad age was precarious and late. Brazilian authorities already understood the principle formulated a century later by the Danish economist Ester Boserup that "railways are economical only in densely populated areas" and that "dense railway networks" were needed for development and integration of specialized industry and agriculture: "Countries with extensive rail networks are at high technological levels today, while nearly all countries with small networks or none are at low or relatively low technological levels....Those sparsely populated areas which got an early start in industrialization and are at high technological levels today are areas which were able to pay the high per capita cost of extensive railway construction in the 19th Century."[29] By 1890, only 9,973 km. of track were laid in all of Brazil's territory of 8.1 million sq.

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[25] Preston James, "Forces for Union and Disunion in Brazil," *Journal of Geography.* October 1939.

[26] The process is described in Norman Gall, *Letter from Rondônia. Part II: Strategic Reach.* American Universities Field Staff Reports (1978). Portuguese version serialized in *O Estado de São Paulo* . February 26 and March 5, 12 & 19, 1978.

[27] The best statement of this idea that I have found is by the geographer Paul I. Mandell, *The Development of the Southern Goiás-Brasília Region: Agricultural Development in a Land-Rich Economy.* Columbia University doctoral thesis 1969, especially chapter 2, explaining: "A hollow frontier exists if the marginal rent surface, generalized from variation in resource quality and the irregularities produced by multiple market centers, everywhere decreases from the point of maximum market potential, reaches a local minimum of great areal extent and then again increases until some maximum point coincident with the locus of the agricultural frontier."

[28] Preston James, *Latin America*. 3d edition. New York: Odyssey 1959/p491.

[29] Ester Boserup, *Population and Technological Change: A Study of Long-Term Trends.* Chicago 1981/p132-4.

km. This modest achievement proved so burdensome that in 1898 railroad profit guarantees absorbed one-third of the federal budget, leading to reluctant expropriation of 12 foreign-owned railroads in 1901. The highway network remained so primitive that by 1930, after a big construction effort, there only 121,800 km. of roads, of which only 900 were paved, increasing to a still-modest 3,000 km. paved by 1955.[30] According to Leff, transport deficiencies created an inelasticity of supply that was critical in the price rises of domestically produced foodstuffs throughout the 19th Century at a higher rate than those of goods traded on world markets. This was an "autoregressive" long-term inflation, impacting the more backward economic sectors, expressed in 2.5% annual trend inflation and 5.1% annual money supply expansion from 1822 to 1913. Leff added:[31]

> *The most important part of the story here is not the magnitude of aggregate inflation, but the fact that: (1) going against world economic trends, Brazil experienced sustained price increases during the 19th Century; (2) the pace of inflation varied greatly between the economy's major sectors....Thus prolonged experience with continuing price increases may have dissipated money illusion among economic agents in 19th Century Brazil. Because of the high degree of autocorrelation, inflation assumed an internal momentum and became correspondingly more difficult to control ....What was of special importance was that these pressures encountered internal supply conditions which were relatively inelastic with respect to price. The result was chronic inflation.*

The desperate need to build infrastructure drove the Brazilian State early in its history toward becoming one of the most economically active in the capitalist world. By 1841, the government was subsidizing new factories in Rio de Janeiro. It also subsidized coastal steamboats, railroad construction, modernization of sugar mills in the Northeast and European immigration. Between 1823 and 1888, the year before a military coup overthrew the monarchy and established a republic, government spending exceeded revenues by more than 15% in 34 of those 66 years and by more than 50% in 12 years. While fiscal weakness limited revenues to £1 per inhabitant for most of the 19th Century, government debt rose to £4.1 per head by 1870, after the Paraguayan War, which stretched government debt and inflationary spending as World War I was to do later in Europe.[32] By the time of the 1929 crash, a government that ideologically favored free enterprise owned two-thirds of Brazil's railroads, its

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[30] Nathaniel H. Leff, *Underdevelopment and Development in Brazil. Vol. I: Economic Structure and Change, 1822-1947.* London: Allen & Unwin 1982/p17-18. Steven Topik, *The Political Economy of the Brazilian State, 1889-1930.* Texas 1987/p95. United Nations Economic Commission for Latin America (ECLA), "Economic Policy in Brazil, 1954-63," *Economic Survey of Latin America.* New York: United Nations, 1966/p297.

[31] Nathaniel H. Leff, *Underdevelopment and Development in Brazil. Vol. I: Economic Structure and Change, 1822-1947.* London: Allen & Unwin 1982/pp100-8.

[32] Nathaniel H. Leff, *Underdevelopment and Development in Brazil. Vol.II: Reassessing the Obstacles to Economic Development.* London: Allen & Unwin 1982/pp82-3, 100.

biggest commercial banks as well as savings and mortgage banks. It protected Brazilian industry with the highest tariff in the Americas. It defended the world coffee price with an audacious "valorization" scheme of government purchases of excess production financed with huge foreign loans, stimulating big increases in yields and area planted in the teeth of falling prices and stagnating world demand. In the first three decades of this century, defense of coffee thus provided transfers to planters that enabled them to prolong coffee monoculture far beyond profitability, embedding the transfer culture more deeply and systematically into public finance than any previous government undertaking.[33] These transfers may have contributed to a lag in fixed capital-formation in the interwar decades (1914-45) to barely half the robust rate of real output growth (4.3%). At the same time, they fed into a dramatic expansion of the banking system and concentration of deposits in São Paulo and Rio de Janeiro that, according to Raymond Goldsmith, led to growth of financial intermediation by 1945 to the levels of large developed countries before the First World War. Over the next two decades, however, institutionalized chronic inflation drove down the weight of financial assets "to a level generally found only in quite underdeveloped countries,"[34] under the impact of the long-term price surge that began in 1935 and continues today, six decades later.

Inflation and urbanization

The maturing of Brazil's transfer culture helped to densify the hollow frontier at mid-century. Chronic inflation accelerated as the pace of urban population growth surged from 3.8% yearly in the 1940s to 5.2% in the 1950s, creating more pressures for investment in housing, infrastructure and public services. Only part of the cost could be charged to consumers. Government accomodated these pressures by creating money and credit, contributing heavily to a fivefold increase in industrial output in 1945-64. Lewis helped to develop the linkage between inflation and "the difficulties and cost of rapid urbanization" as "the human effort required to organize decent urban conditions is immense," laying out streets, water, electricity and sewer lines, building homes and creating systems of urban transport and daily deliveries of fresh and perishable food for large populations. Lewis estimated that two-thirds of urbanization

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[33] Mario Henrique Simonsen observed: "The government made the mistake...of transferring the monopoly profits to domestic producers instead of absorbing them through export taxes. Excess profits led to excess supply, which weakened the country's monopoly over coffee production. Understanding the problem was delayed by the fact that coffee is a perennial crop whose current supply depends, with a long lag, on past prices." From Simonsen, "Brazil," in Rudiger Dornbusch & F. Leslie C.H. Helmers, editors, *The Open Economy.* Oxford 1988/p285.

[34] Raymond Goldsmith, *Brasil 1850-1984: Desenvolvimento Financeiro sob um Século de Inflação.* São Paulo: Harper & Row 1986/pp 153, 173, 215, 319. The key measures used by Goldsmith are the financial interrelations ratio (financial assets: tangible assets) and financial assets/GNP.

costs are in construction, including infrastructure and housing.[35] In Brazil, construction costs tend to lead the inflation indices.

Brazilian consumer prices rose by a 25% yearly average in the first two decades after World War II, nearly four times as fast as in the troubled interwar decades.[36] Inflation exceeded 10% in 1940, reaching 100% by 1981 and 1,000% by 1989. Commenting on Brazil's "short-lived and ineffective" stabilization measures of the early 1950s, the United Nations Economic Commission on Latin America (ECLA) observed: "The opposition of the private sector to credit reductions at a time when the rise in prices coincided with increasing dependence on the banking system, and a rapidly expanding market, was reinforced by the complex of interests dedicated to maintenance of the level of public expenditure --among them, the industrial sectors supplying inputs and equipment for the investment program and almost entirely dependent on State demand."[37] Credit usually was at negative interest, with Bank of Brazil loans, government debt and long-term mortages paying roughly half the inflation rate, producing a big transfer of wealth from creditors to debtors. Goldsmith estimated this transfer at 20%-27% of GDP during the first two postwar decades.[38] By then, government confronted "a severe dilemma" that it was to face over and over in coming decades: "either to tolerate an inflationary process that was becoming daily more dangerous for the sake of maintaining the economy's dynamic impetus, or to curb the inflationary mechanisms, which involved another set of social and economic hazards."[39]

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[35] W. Arthur Lewis, *Growth and Fluctuations 1870-1913.* London: Unwin 1978/pp148 & 240. Also Lewis, *The Evolution of the International Economic Order.* Princeton 1978/p39-42.

[36] Raymond Goldsmith, *Brasil 1850-1984: Desenvolvimento Financeiro sob um Século de Inflação.* São Paulo: Harper & Row 1986/pp144 , 221 & 224.

[37] ECLA, "Economic Policy in Brazil, 1954-63," *Economic Survey of Latin America.* New York: United Nations, 1966/p290.

[38] Raymond Goldsmith, *Brasil 1850-1984: Desenvolvimento Financeiro sob um Século de Inflação.* São Paulo: Harper & Row 1986/pp261 & 278.

[39] ECLA, "Economic Policy in Brazil, 1954-63," *Economic Survey of Latin America.* New York: United Nations, 1966/p304.

Inflation: a permanent tool of policy.

Brazil became the first continental nation ever to rely on the internal combustion engine to develop its economy and to integrate its territory.[40] Accelerating the process of tying together and developing this backward continental economy depended on expanding fiscal transfer mechanisms that already had become key ingredients of Brazil's economic metabolism. The critical episode of this acceleration was the *Plano de Metas* (Target Plan) of President Juscelino Kubitschek (1956-61), promising "fifty years' development in five." In 1955-61, the size of the paved road network multiplied 4.5 times. Big projects were undertaken in transport, steel, electricity, cement, fertilizers, shipbuilding and in creating an automotive industry from scratch, leading to extraordinary developmental achievements. Access to the domestic market became more clearly a privilege granted by government to selected companies. Exchange and interest rates became government policy instruments as much as market prices. The "soft budget constraint," seen by Kornai as characteristic of the political economy of socialist Eastern Europe, emerged in Brazil's privileged investment plans that were immune to spending cuts. A 1961 survey showed that spending of 65 federal decentralized agencies was more than twice budgeted levels.[41] Inflation developed an ideological content as it was defended by many economists as a *permanent* tool of policy.

The centerpiece of the *Plano de Metas* was the building of a new capital, Brasília, to fulfill the old ambition of occupying the country's enormous interior. Seen as the hub of a new highway system, Brasília was reached by 7,000 km. of new roads, stretching as far as the distant Amazon cities of Belem and Porto Velho. Kubitschek later explained the haste of his politically-mandated construction schedule in a memoir: "It is an ancient tradition in Brazil that no administration has ever brought to a successful conclusion any project begun by its predecessor."[42] The cost of Brasília was calculated at roughly 2.5% of GDP over the first six years (1957-62), but the real cost cannot be estimated because the building went on and on and continues today. Generous helpings from social security funds helped to finance the project, which helped to cut the real value of the assets of these funds from 7% of GDP in 1960 to 3% by 1964, while lags in collecting employers' contributions in an inflationary environment may have cut remaining assets by half.[43] The real cost of Brasília would be hard to calculate without factoring in the cost of the economic collapse of Rio de Janeiro, the old capital,

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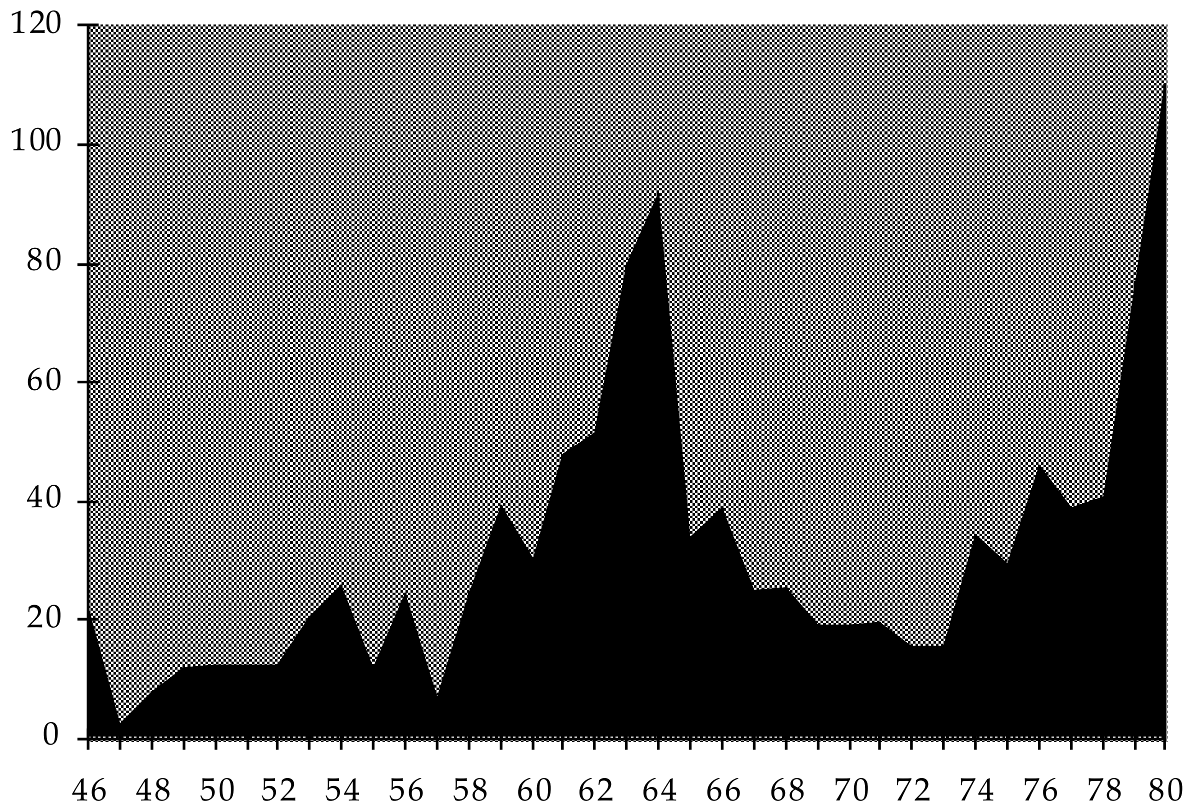
[40] The process is described in Norman Gall, "The Rise of Brazil," *Commentary.* January 1977. Portuguese versions published in *O Estado de São Paulo* . March 13 & 20, 1977 and *A Defesa Nacional*, No. 674 (1978).
[41]ECLA p302.
[42] Juscelino Kubitschek, *Por que Cnnstruí Brasília.* Rio de Janeiro: Bloch 1975, quoted in Alex Shoumatoff, *The Capital of Hope: Brasília and its People.* University of New Mexico Press 1980/p30.
[43] Angus Maddison, *Economic Progress and Policy in Developing Countries.* London: Unwin 1970 p96; Goldsmith p273; ECLA pp 297 & 302.

now a metropolis of 11 million people whose social problems have given all of Brazil an undeserved international reputation for criminality and violence. Over the next three decades, Brasília grew from a giant construction camp of 200,000 in 1961 to a city of 2 million today. The soft budget constraint that bred chronic inflation also provides the citizens of Brasília with public services far better than those of other Brazilian cities at prices far below cost. Then as now, Brasília was as dependent on air transportation as on highways as it became a fly-in, fly-out *entrepôt* for rent-seeking promoters that helped to keep inflation moving onward and upward. The analytical question is not whether Brasília should have been built. Many countries have built planned cities as inland capitals --such as Peking, Madrid, Ottawa, Canberra, New Delhi-- just as many countries built railroads. The question is one of sustainability and choice. What are the limits? What must be sacrificed to achieve these ends? From where do the resources come? How far can the resources be stretched?



Source: IMF, *International Finantial Statistics*, several numbers.

The romantic project of building Brasília need not have led to escalating chronic inflation if the fiscal devices of Kubitschek's *Plano de Metas* had not been expanded and institutionalized in succeeding decades. Excepting the surge of 1962-64, annual Brazilian inflation oscillated roughly within a band of from 20% to 40% over the two decades from 1958 to 1978. It accelerated again after President Ernesto Geisel (1974-79) launched a second *Plano de Metas* of heavy investment and import-substitution, using new fiscal devices that were financed by foreign loans, in a strategy aimed at enabling Brazil to grow its way out of the oil crisis of the 1970s. Brazil grew but the growth could not be sustained at the intensity of the "miracle" that drew worldwide attention and created false standards of performance. The true Brazilian "miracle" of this century is the extension of life expectancy at birth from 30 to 65 years as well as the building of modern industry, agriculture and infrastructure that contributed to vastly better living standards and to creation of a complex system of cities supported by a continental economy. The sustainability of these achievements is questioned increasingly because of the decapitalization and disintegration bred by the paralyzing effects of chronic inflation and the mess in public finances. We now will see how these difficulties reached dangerous proportions during the 1980s.

4. Financing the Brazilian "miracle" of the 1980s

> *When national debts have been accumulated to a certain degree, there is scarce, I believe, a single instance of their being fairly and completely paid. The liberation of the public revenue, if it ever has been brought about at all, has always been brought about by a bankruptcy; sometimes by an avowed one, but always by a real one, though frequently by a pretended payment.* **Adam Smith, *An Inquiry into the Nature and Causes of the Wealth of Nations* (1776).**[44]

The public finances of Brazil are intelligible to nobody but a few members of the priesthood dedicated professionally to their elaboration, execution and analysis. Even these few often are lost in the confused accounting, deficient information and bubble-like fluctuations describing the stocks and flows of the State's resources and operating capacity. The confusion grew over the years because of so many portals of back-door financing; so many lines of taxation, transfers, incentives, guarantees, credits, drawbacks, exemptions and indexation; so many vagaries and instabilities in prices, wages, interest rates, exchange rates and administrative improvisation. "Institutional disorder and legal permissiveness make it difficult to define the public sector in Brazil in any precise way," observed Professor Celso Martone of the University of São Paulo. "The lack of transparency in public accounts and actions is frequently put to political use; it is a convenient set-up for the administration to accomodate conflicting groups and win political support without the close scrutiny of other special interests and of

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[44] Adam Smith, *An Inquiry into the Nature and Causes of the Wealth of Nations.* Book V/Ch III.

society as a whole."[45] Medieval economic regulation applied to complex societies, in the form of barriers to entry and administered prices, creates disguised taxes and subsidies, leading to appropriation of public resources by rent-seeking *cartórios* [officially-favored interest groups dominating specific economic activities].[46] World Bank economists argued in 1989 that "regulation in Brazil goes far beyond that justified on the basis of creating order and ensuring socially-beneficial outcomes. In fact, administrative regulation far exceeds the budget in the magnitude of resources transferred."[47] It also contributes to our definition of chronic inflation as the institutionalization of deranged economic transfers.

Breakdown of fiscal systems

The State as an institution no longer can manage all this. It is losing credibility and power to deal with the rising broth of unrealized claims by its creditors, employees, suppliers, clients and, of course, ordinary citizens. This broth of claims drove Brazil into hyperinflation in 1989-90. Brazil's political economy, and those of other Latin American republics, face a challenge on a scale faced by Europe after the First World War. In *The Crisis of the Tax State* (1918), Joseph Schumpeter wrote that "the fiscal problems left in the wake of the war cannot be solved within the framework of our pre-war economic order....If the will of the people demands higher and higher public expenditures, if more and more means are used for purposes for which private individuals have not produced them, if more and more power stands behind this will, and if finally all parts of the people are gripped by entirely new ideas about private property and the forms of life --then the tax state will have run its course....Without doubt, the tax state can collapse."

The breakdown of fiscal systems in countries like Argentina, Peru and perhaps Brazil is all the more dramatic because it is happening not as a byproduct of war, as in Europe in the 1920s, but in an era of sustained peace and stability in the world economy as a whole. In Argentina and Peru, as in parts of Eastern Europe and Africa, we may be witnessing collapse of national economies on a scale never previously

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[45] Celso Luiz Martone, *Fiscal Policy and Stabilization in Brazil.* World Bank Working Paper WPS 50, July 1989/p1.

[46] The economic historian E.L. Jones associates rent-seeking in many cultures with "long-lasting social and intellectual conservatism leading to ascriptive behavior that cramps the optimal allocation of resources, and new or greedier rent-seeking that replaces or hampers productive effort. These things are the arthritis that follows trauma and increases the minimum effort that an economy needs to achieve or regain *intensive* growth. Rent-seeking is a political act. It refers to receipts above the opportunity cost of the resources -- receipts obtained by 'politicking', and accruing, like some perverse halo effect, to the prestige or political influence of the agent. It means non-market allocation. A monopoly will earn rents if it can use political means to block new entrants from entering its industry. No consumer surplus is created this way....This is pie-slicing behavior, and step by historical step it will have reduced the ability of society to increase the size of its pie." From E.L. Jones, *Growth Recurring: Economic Change in World History.* Oxford 1988/p122-3.

[47] World Bank, *Brazil: Public Expenditure, Subsidy Policies and Budgetary Reform.* Washington: Report No. 7738-BR, December 15, 1989/p9.

recorded in peacetime human experience. In Brazil, the issue of fiscal collapse was raised by the escalation toward hyperinflation in 1982-90. The escalation was slowed by three stabilization plans involving price freezes and unfulfilled promises to balance government finances. After each of these failures, Brazilian inflation moved faster. In December 1988 consumer prices rose by 28.8%, annualized at nearly 2,000%, about where German inflation was in June 1922. Brazilian inflation reached 1% a day in January 1989 and again, eight months later, in September 1989. In Germany, prices broke that barrier for the first time in August 1921, but did not pass it again until 11 months later, in July 1922. In the 28 days preceding the inauguration on March 15, 1990 of President Fernando Collor, Brazil's first freely elected leader in three decades, consumer prices rose by 83%, or by 2.2% per day. This approached the 2.9% daily rate of Germany in June 1923 in the runup to the price explosion that peaked only five months later at a monthly rate of 30,000% (20.9% daily).[48]

Brazil's new government, headed by President Fernando Collor de Mello, immediately launched a stabilization effort in March 1990 to avoid this kind of price explosion. It took drastic measures to truncate fiscal obligations to the financial system and announced radical market-opening reforms and cuts in government spending that are being implemented more slowly. Meanwhile, it is relying heavily on monetary policy. Monthly inflation undulated, falling from 82% in March 1990 to 7% in April, but then edged upward again to 21% by January 1991, provoking yet another price freeze that cut April 1991 to inflation. However, palace intrigues, corruption scandals and the prospect of big money supply increases later in 1991 provoked a change of economic teams. At this writing (August 29, 1991), monthly inflation is 13% and drifting upward, with monthly consumer interest rates running at 28%-35% (1,834%-3,560% annualized). A standby agreement is being negotiated with the IMF, but may not be signed because of failure to meet targets and and impasse in foreign debt negotiations. Two-thirds of the cut in federal spending came from the March 1990 freeze of financial assets, which wiped out 30% of the public debt by under-indexing for inflation by about 50% for March and by lesser amounts since then. Brazilians are relieved by the fall in inflation, but do not perceive readily that inflation cannot be stabilized at a 14% monthly rate. Many failed stabilization plans previously have brought down inflation much further, in Brazil and elsewhere. Indeed, the three most recent Brazilian predecessors of the present effort --the 1986 Cruzado Plan, the 1987 Bresser Plan and the 1989 Summer Plan-- all achieved much lower inflation levels before collapsing a few months later.

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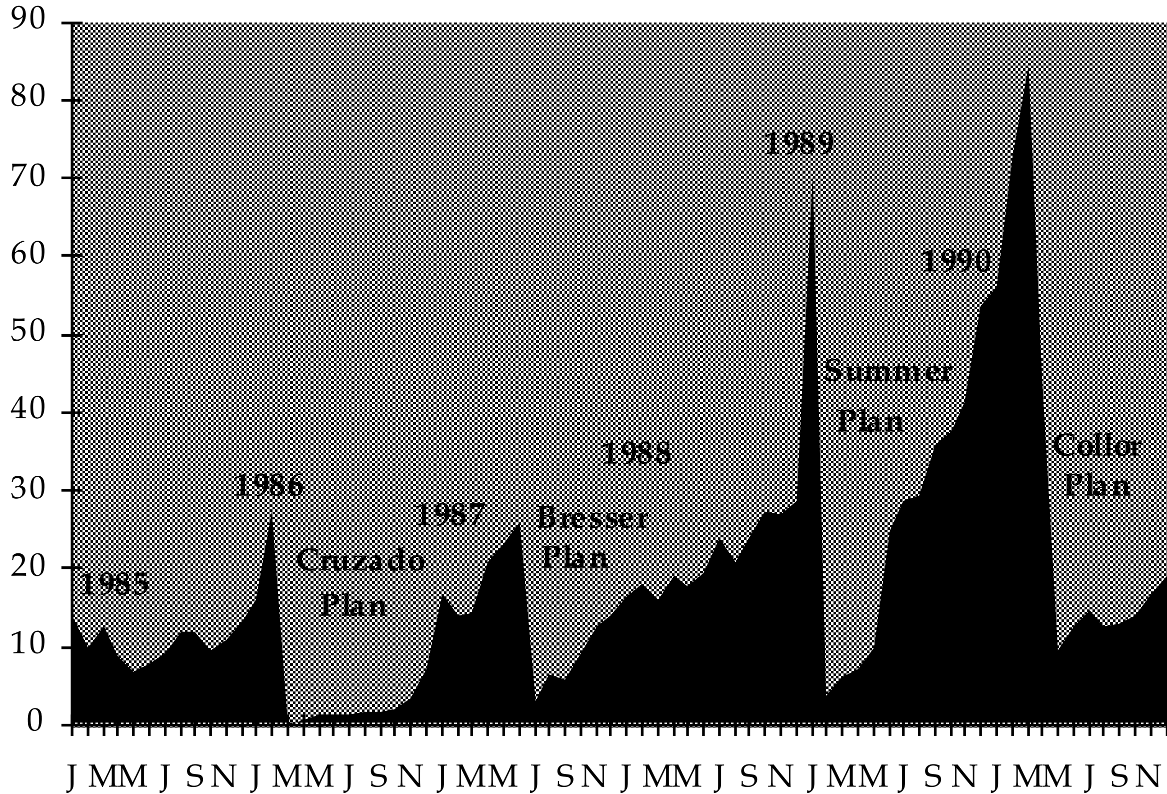
[48] Rudiger Dornbusch, "Lessons from the German Inflation Experience of the 1920s," in Dornbusch, *Exchange Rates and Inflation.* MIT Press 1988/p419.

Monthly Brazilian Inflation; 1985-9
(%)



Source: Fundação Getúlio Vargas, *Conjuntura Econômica*, several numbers.

As chronic inflation surged toward hyperinflation in 1989-90, Brazil became the first continental nation in history to suffer hyperinflation in peacetime and the first of any size to deal with the problem using management tools of electronic financial technology. The country learned to live with high inflation in the 1980s thanks both to indexing and to computers. For a time, these techniques provided some stability amid financial turbulence by enabling Brazilians to shift liquidity into a big internal public debt that is rolled over nightly. Beyond indexing public debt and offering very high real interest rates, the high-technology central bank also guaranteed automatic repurchase of government paper. "In this case, liquidity is as instant as with cash, and the price of liquidity is nil," observed Affonso Celso Pastore, a former central bank president. "With high, surging inflation, with the central bank issuing repurchase commitments and permitting high leveraging of dealers, overnight lending grew. In

Brazil, in recent years, we reached the outer limit at which all public and private paper came to be financed overnight, and this guaranteed liquidity was free of charge."[49]

Psychosis of overshooting

The fast growth of monetized public debt bred a psychosis of overshooting that spread from the computerized money markets to the economy at large. Overshooting was launched from a platform of downward rigidity in the inflation rate created by indexing of most prices for past inflation, putting a floor on future inflation and limiting losses from errors in overshooting of prices. Over the past decade, overshooting was stimulated by the cumulative impact of several confiscations and price shocks. The most important of these were (1) the persistent undercorrection for inflation of financial assets, wages and administered prices; (2) the 30% maxidevaluations of 1979 and 1983; (3) the sudden deindexing of financial instruments in 1986, which cut the stock of public debt by 2.5% of GDP; (4) the lagging of exchange rate devaluation behind inflation in 1980, 1986 and 1990, which sucked hot money into the country for a few spins of the "bicycle" game, multiplying cruzeiros at high domestic interest rates to reap spectacular dollar profits when the cruzeiros were reconverted into many more dollars a few months later.

"Inertial" inflation and public finance

These zig-zags of economic policy involved heroic efforts by government officials to control and manipulate as many economic variables as possible. This heroism reached an apotheosis in the late 1980s with the "heterodox" schemes to stop "inertial" inflation, somewhat miraculously, with "a consistent economic policy to cut inflation to zero with distributive neutrality."[50] A new theory of inertial inflation was announced: "In an environment of chronic inflation, people develop strongly defensive behavior in formation of prices, trying to restore the previous peak of real income in each periodic price adjustment. When everyone adopts this strategy for regaining previous peaks, the prevailing inflation rate in the system tends to perpetuate itself: the inflation trend equals past inflation."[51] But future inflation did not adhere to past inflation; it always went up. The government, seeking a break with the past, decreed an end to inflation by freezing prices, wages and exchange rates, by currency reform (changing the name of the money and removing zeros from the aggregates), by lagging public sector prices behind inflation and by converting old contracts to new values by inventing a *tablita,*

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[49] Affonso Celso Pastore, "A Reforma Monetária do Plano Collor," in Clovis de Faro ed., *Plano Collor: Avaliações e Perspectivas.* Rio de Janeiro: Livros Técnicos e Científicos Editora, 1990/p160.

[50] Alberto Octavio Espejo Ortega, *O Plano de Estabilazação Heterodoxo: A Experiência Comparada de Argentina, Brasil e Peru.* Rio de Janeiro: BNDES 1989/p18.

[51] Francisco Lopes, *Choque Heterodoxo: Combate à Inflação e Reforma Monetária.* Rio de Janeiro: Editora Campus 1986/p124.

or conversion table, that made it easier to calculate the new numbers. Economists posed this choice: "The presence of inertia is thus a central reason for incomes policy in a stabilization program. Otherwise, only through significant recession can inflation be affected."[52] However, recession was banished from political ritual and economic discourse as an unacceptable alternative.

Midwife to the theoretical innovation of "inertial" inflation was an accounting innovation adopted in 1983 by the IMF in evaluating Brazil's public finances. This became a crucial episode in the growth of the psychosis of overshooting. The IMF yielded to pressure from the Brazilian government and from foreign bank creditors to let Brazil become the first country in the world to use the concept of the "operational deficit" as its key measure of fiscal performance. The new standard implied that Brazil and these international agencies agreed that Brazil's debts were unpayable and that chronic inflation henceforth would be viewed as a norm instead of deviant economic behavior. The operational deficit purges from the Public Sector Borrowing Requirement (PSBR), or "nominal" deficit, the money-creating effects of indexing for inflation of government liabilities, by monetary correction and exchange rate devaluation.[53] While the concept of the operational deficit was seen as a clearer indicator of a government's adjustment effort, it enabled Brazil's government to publish deficit figures far lower than any other government in the world could publish under conventional standards of public finance accounting. "We invented the concept of the operational deficit because of our shame at admitting to the IMF that Brazil had a nominal deficit of 17% of GDP at the end of 1982," the Finance Minister at the time, Ernane Galveas, recalled recently. "We persuaded the IMF staff to accept our concept of the operational deficit, then 6%, so we could get our program approved by the IMF board."[54]

New accounting standards were needed because, only three months after approving a stabilization plan in December 1982, the IMF suspended its $2 billion loan disbursement because the government failed to cut its nominal deficits. The 30% devaluations in December 1979 and February 1983 asserted the personal authority of Planning Minister Antônio Delfim Neto, who had seized the reins of economic managment in August 1979 from Mário Henrique Simonsen, a brilliant mathematical economist but an ineffective politician, who was swept aside by Delfim's demands for a "growth" policy to overcome inflation. As Agriculture Minister in the first few

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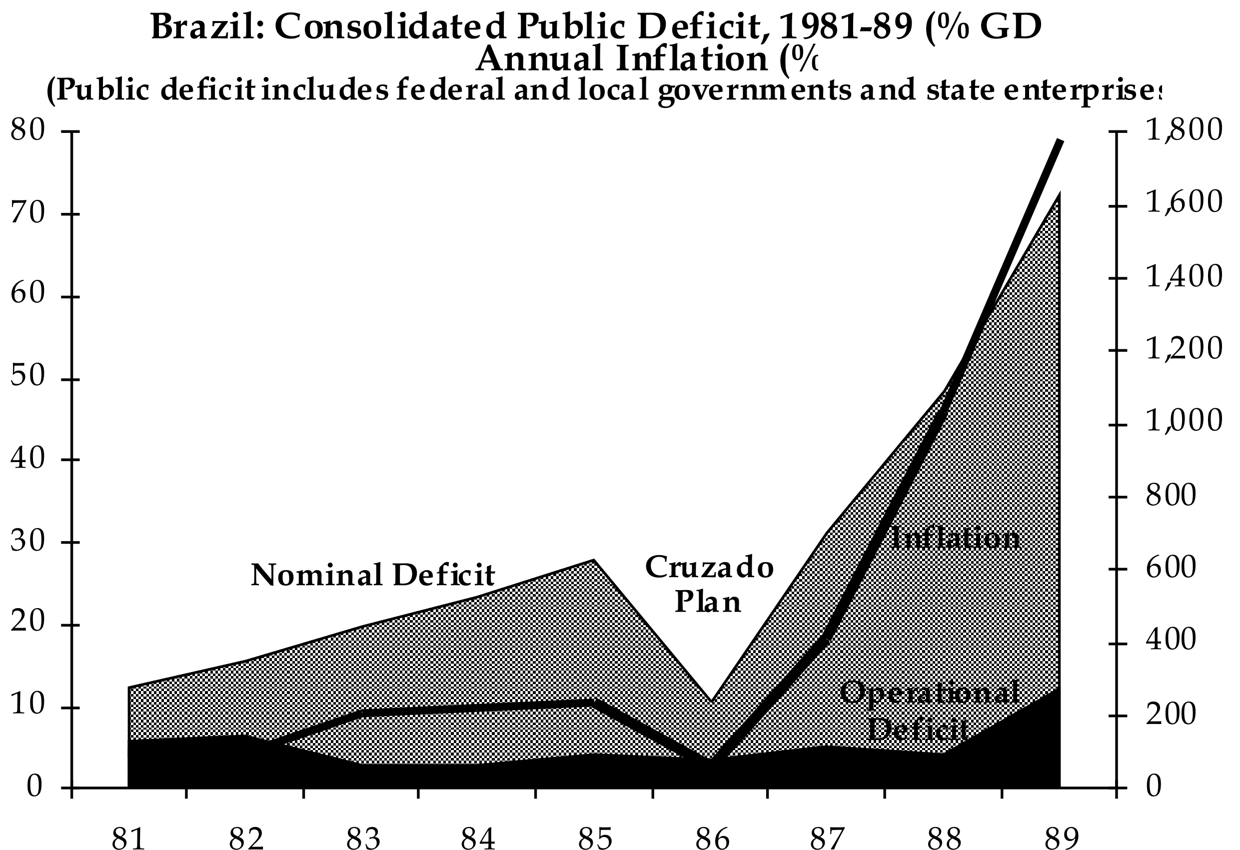
[52] Eliana A. Cardoso and Albert Fishlow, "The Macroeconomics of the Brazilian External Debt," in Jeffrey D. Sachs, editor, *Developing Country Debt and Economic Performance.* University of Chicago Press 1990. Vol. 2/p307.

[53] An incisive explanation of the application of the two deficit concepts in Brazil's inflation is given in Celso Luiz Martone, *Fiscal Policy and Stabilization in Brazil.* World Bank Working Paper WPS 50, July 1989.

[54] Talk by Ernane Galveas at the seminar on Reform of the State organized by the International Academy of Law and Economics, São Paulo, November 23, 1990.

months of the government of President João Figuereido (1979-85), Delfim greatly expanded subsidized farm credit for the 1979-80 harvest "to fill the pots of the people" as the first in a series of abrupt swerves in economic policy. After replacing Simonsen as Planning Minister, he froze interest rates while the money supply and subsidized credit surged, even as subsidized farm credit was diverted by "farmers" into government debt at higher yields. A new wage law cut the adjustment intervals from a year to six months, empowering backward-looking indexation to overwhelm an attempted tightening of monetary policy in the early 1980s. The competetive benefits of the devaluation of December 1979 were wiped out by prefixing exchange devaluation at 45% for 1980, imitating the failed Argentine policy of the previous year, while inflation was running at 110%. In 1979, the index of monetary correction ran 20% behind accelerating inflation. By December 1980, a unit of indexed savings was worth only 47% of its 1974 value.[55]



Source: Banco Central do Brasil, *Relatório Anual*, several numbers.

[55] Peter T. Knight et. al., *Brazil: Financial Systems Review.* World Bank 1984/p. xxv.

The 1979 and 1983 maxi-devaluations were price shocks that greatly enlarged and confused nominal deficit values, departing from the institutionalized practice of daily minidevaluations to avoid exaggerated lags of the exchange rate behind domestic inflation, while failing to prevent overvaluing the currency in subsequent years. In early 1983, Delfim wanted a big devaluation to help meet the IMF plan's goal of a $6 billion trade surplus for 1983 to strengthen his hand in future debt negotiations, although exchange-rate indexing of government bonds would wreck chances of meeting public finance targets. The impact of the 30% devaluation on the budget was compounded by inflationary transfers as Delfim pumped more credit subsidies into export promotion and import substitution to strengthen further his hand in debt negotiations as well as his political base in the business community. Tax collections fell in 1983 because of a 3.2% loss in output provoked by the world recession and the IMF plan. Although the government induced a severe industrial recession in 1983, annual inflation doubled to 210%. As spending cuts narrowed the operational deficit from 6.6% in 1982 to 3% in 1983, a widening breach opened between Brazil's new "operational" budget concept and the nominal standard used everywhere else. Delfim's expenditure-switching devaluation, backed by export subsidies, shifted resources successfully into generating foreign trade surpluses, but the government had to sign seven successive IMF letters of intent as it failed persistently to meet domestic policy targets. Brazilian officials claimed that new accounting standards were needed urgently because traditional budget concepts did not reflect the impact of the effort they were making to cut fiscal imbalances. Simonsen later observed that the choice between the two deficit criteria "depends on the degree of money illusion in the economy."[56] Under the pressures of the debt crisis, the new "operational" fiscal standard was adopted in negotiations with the IMF. With this change in accounting methods, all parties were able to avoid an open rupture by hiding the disorder in Brazil's public finances. Adopting the concept of the operational deficit amounted to a license to print money, endorsed by the international financial system, as monetary correction aggregates increased at an explosive rate.

General swelling of world financial activity

This "way out" from Brazil's embarrassment in public finance and foreign debt was part of an upward inflection of world financial activity that began in 1982-83. The inflection was stimulated at first by Mexico's debt default, leading to a general surge of asset values for the rest of the decade. Until Mexican Finance Minister Jesús Silva Herzog flew to Washington in August 1982 and, in the words of a U.S. Treasury official, "turned his pockets inside out," Federal Reserve Chairman Paul Volcker refused to modify his anti-inflation policy because of the impact of high U.S. interest rates on heavily-indebted poorer countries and Western Europe, explaining: "They have their problems. We have our problems. I am hired to take care of our

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[56] Mario Henrique Simonsen, "A Conta Corrente do Governo, 1970-88,"

problems."[57] The Mexican default came only six weeks after the failure of Oklahoma City's Penn Square Bank, which had sold energy loans to Chicago's Continental Illinois, amounting to 60% of Continental's capital, and to other big banks, such as New York's Chase Manhattan and Seattle's Seafirst, starting a funding collapse that led the government to risk $4.5 billion in taking over Continental two years later in the biggest bank failure on record. When Federal examiners searched its books in mid-1984, they found that 66 banks lent Continental more than their capital and another 113 more than 50%.[58] After the Penn Square failure in 1982, Continental had been able to shift its short-term funding overseas, in the spectacular growth of the international interbank market, at a time when Brazilian and Mexican banks also were rolling over big debts nightly in the same interbank market. Brazilian banks were borrowing $5 billion overnight in the New York interbank market and relending the money for eight years in Brazil. Each morning, Banco do Brasil's New York branch made huge entries into the CHIPS interbank payments system and reborrowed the money during the same day, increasing the strain on the network.[59] In November 1982, as these foreign debt difficulties deepened, the U.S. Congress launched another form of financial inflection by passing the Garn-St. Germain Depository Institutions Act that created the legal framework for the $500 billion of estimated losses incurred in the 1980s by savings and loan banks.[60] By this time, U.S. authorities faced a critical choice of either allowing the financial system to suffer more liquidations or to expand money and credit faster to reduce embarrassment of financial institutions. They chose to pour money into the system. The choice came more easily than the one described a half-century earlier by the British economist Lionel Robbins at the bottom of the Great Depression: "We eschew the sharp purge. We prefer the lingering disease. Everywhere, in the money market, in the commodity markets and in the broad field of company finance and public indebtedness, the efforts of central banks and governments have been directed to propping up bad business positions."[61]

Yearly U.S. broad money growth surged from an average of 6.2% in 1980-82 to 16.2% in 1983 to settle on a plateau averaging 9.3% in 1984-86, spawning the longest business

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[57] Quoted in Martin Mayer, *Markets.* New York: Norton 1988/52.

[58] Jack M. Guttentag and Richard J. Herring, *Disaster Myopia in International Banking.* Princeton Essays in International Finance. No. 164 September 1986/pp17-19. According to Guttentag and Herring, there were no more than 200 banks in the interbank market in 1973 but well over 1,000 in 1982, reflecting "a downward trend in the size of banks that are able to operate in the international financial markets."

[59] Martin Mayer, *The Money Bazaars.* New York: New American Library 1985/p192. Jack M. Guttentag and Richard J. Herring, "Funding Risk in the International Interbank Market," in Wilfred J. Ethier and Richard C. Marston eds., *International Financial Markets and Capital Movements.* Princeton Essays in International Finance. No. 157, September 1985.

[60] The new law sought to rescue savings banks from disintermediation between mortgage and deposit interest rates, allowing them to pay any rate they wished for deposits and to invest the money in any scheme they chose, while still enjoying Federal deposit insurance guarantees. For a detailed account of this form of inflection, see Martin Mayer, *The Greatest-Ever Bank Robbery: The Collapse of the Savings and Loan Industry.* New York: Scribners 1990.

[61] Lionel Robbins, *The Great Depression.* London: Macmillan 1934/p73.

expansion since World War II. Meanwhile, broad money growth in 1981-89 averaged 9.5% in Japan and 15.5% in Britain. As in the United States during the 1920s, inflation among most advanced economies in the 1980s was reflected in asset prices rather than prices of goods and services, especially in the United States, Britain and Japan. Consumer price inflation is viewed widely as a political as well as an economic problem, while asset inflation is viewed more positively as a "wealth effect" of a boom.[62] Not only did the global portfolio of stocks and bonds grow by 250% in 1983-88, despite the October 1987 stock market crashes. In the United States, public debt tripled during the 1980s to about $3 trillion, while outstanding mortgage and consumer debt doubled in 1982-88 alone.[63] Real prices of residential real estate rose sharply in all major economies, doubling in 1982-89 in New York, London and Tokyo. Inflation-adjusted office rents roughly doubled in Tokyo, São Paulo, Madrid and Lisbon in 1985-89, while they rose by 50%-75% in London, Paris, Frankfurt, Milan, Brussels and Stockholm. Commercial land prices in Tokyo tripled in 1985-89, rising much faster than office rents and thus reviving a pattern of the early 1970s.[64] Property-related loans by U.S. commercial banks rose from 29% to 37% of all assets in 1985-89. Among British banks the share of property loans in total assets nearly tripled in the 1980s to 33%. Japanese banks lent heavily into hot land and commercial property markets, where prices in some major cities tripled since 1982.[65]

The most important form of worldwide asset growth in the 1980s was public debt. Among the major seven OECD countries, gross public debt rose from 40% to 59% of GDP in 1975-87 before receding slowly in the late 1980s, with the fastest surge coming after 1981.[66] Brazil pursued the same course after the collapse of foreign borrowing in 1982 forced a switch from external to domestic deficit finance that pushed interest rates and inflation upward.[67] As tax revenues were falling in the 1980s, the domestic public debt (translated into current dollars) swelled at a 19.4% yearly rate in 1983-89 and by 47% in 1989 alone, making 1989 a historic year as internal debt ($100.8 billion) outgrew government foreign debt ($87.7 billion).[68] Brazil's fiscal disorder is more striking in that

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[62] Bank for International Settlements (BIS) observed: "As with the price of other long-term assets, that of real estate is subject to greater fluctuations than those of goods and services. Since property is a real resource, its price, like that of equities, tends to move pro-cyclically....Moreover, as with equity prices, the increase in wealth associated with the sustained economic recovery may have raised the risk tolerance of agents, encouraging a shift into property and speculative activity." BIS, *60th Annual Report.* Basle: June 1990/p104.

[63] *Economic Report of the President.* Washington: February 1990/pp380 & 392.

[64] BIS, *60th Annual Report.* Basle: June 1990/p104.

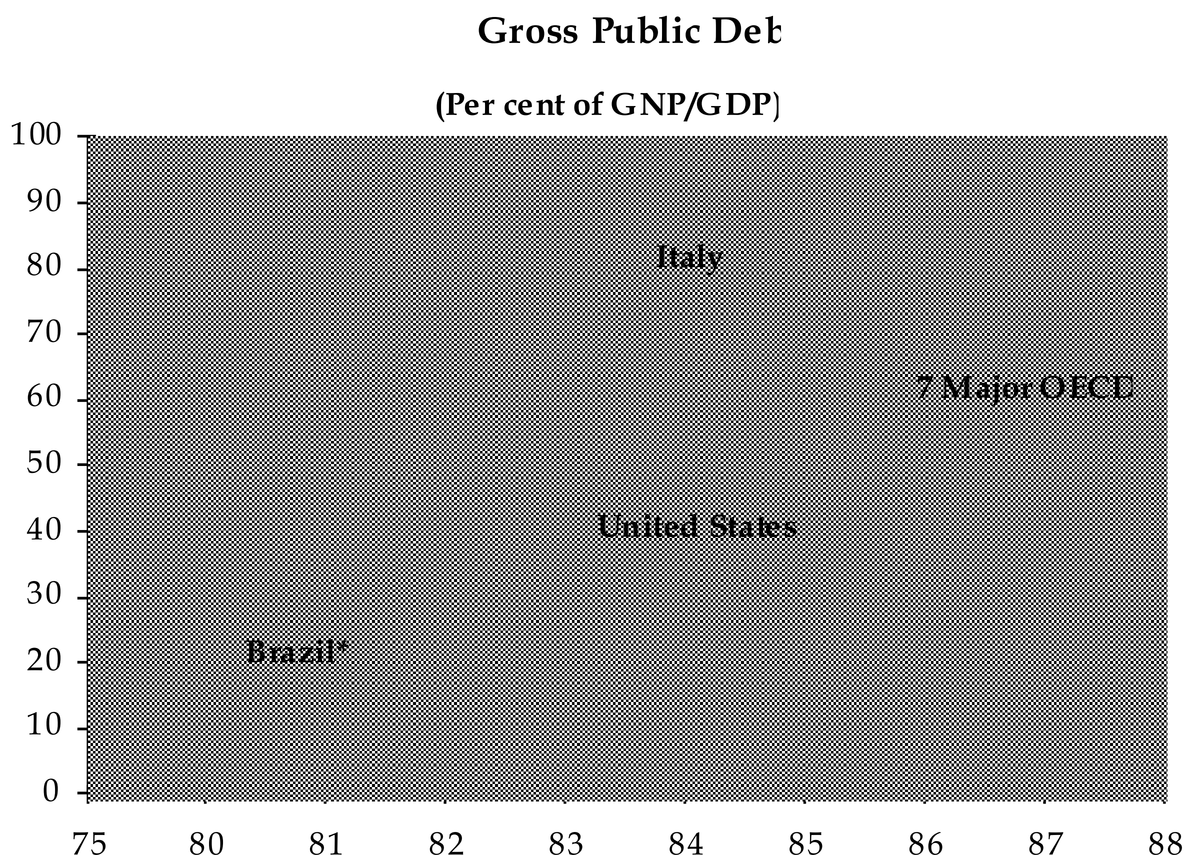
[65] "The Property Crumble," *The Economist.* November 3, 1990/pp19-21 and accompanying editorial, "Crunched by credit," p13.

[66] *OECD Economic Outlook.* No. 47 (June 1990) p119.

[67] Eliana A. Cardoso and Albert Fishlow, "The Macroeconomics of the Brazilian External Debt," in Jeffrey D. Sachs, editor, *Developing Country Debt and Economic Performance.* University of Chicago Press 1990. Vol. 2/p319.

[68] Banco Central do Brasil, *Relatório 1989.* [annual report] p71.

neither general government spending, net of interest payments, nor the size of public debt are very large by



Source: Brazil: Bacen, ***Relatório do Banco Central do Brasil 1989;*** **Fundação Getúlio Vargas,** ***Conjuntura Econômica, September 1990*****; BID,** ***Brazil. Responses to the Debt Crises,*** **1990; World Bank,** ***Debt Tables. Debt of Developing Countries, Vol ll, 1987-88*****; Other countries: OECD**

international standards. Total public debt (foreign and domestic) rose roughly in line with world trends of the 1970s and 1980s. However, they surged from 46% of GDP in 1982 to 62% in 1989 at a time when many other governments, rich and poor, were more successful at curbing growth of their debts.[69] Even though Brazil's net public debts are a smaller share of GDP than those of OECD countries like Italy, Austria, Belgium, Greece, Ireland and the Netherlands,[70] the effort to finance them has bred, through indexation, spectacular growth of financial aggregates. The Italian economist Luigi Spaventa saw trouble coming, and not only for Brazil: "If one starts with a potentially

[69] Banco Central do Brasil, *Relatório 1989.* [annual report] p71.

[70] OECD government finance statistics exclude debts of public enterprises. By that measure, Brazil's net public debts equal 42% of GDP, against 94% for Italy, 58% for Austria, 122% for Belgium, 79% for Greece and 123% for Ireland.

lax fiscal rule, when an unfavorable change in conditions has occurred and debt has started growing fast, an orthodox path to re-entry may prove extremely difficult."[71]

Spaventa quotes John Maynard Keynes, who was as much the 20th Century's ideologue of inflation as Karl Marx was the 19th Century's ideologue of the class struggle.[72] In his "Open letter to the French Minister of Finance (whoever he is or may be)" (1926), Keynes argued for "one Exit only --a rise of internal prices....The great army of your predecessors have failed, in spite of all their efforts, to depreciate adequately *the internal purchasing power* of the franc. Your present difficulties are due, not to the inflation of the notes or to the fall of the exchange (for these events are tending all the time to help you out of your troubles), but to the failure of these factors to diminish proportionately the internal purchasing power of the rentier's money claims."[73] During the 1980s, virtually every Brazilian with a bank account was a rentier of the public debt. Brazilians could have asked themselves, as Thomas Malthus asked in 1820, "whether the evils attendant on the national debt are not more than counterbalanced by the distribution of property and increase of the middle classes of society; and whether by saving, in order to pay it off, we are not submitting ourselves to a painful sacrifice, which...will leave us with much less favorable distribution of wealth?"[74]

Malthus, income concentration and public debt

Malthus raised three basic questions about public debt and shifts in wealth, still largely unanswered, that address today's problems of chronic inflation: (1) What is the effect of public debt on private savings? (2) How does public debt affect income distribution? (3) What is the role of the middle class in supporting and benefiting from public debt and in the broader process of chronic inflation? The relation of public debt to private savings is one of today's big theoretical issues in public finance. The OECD's 1989-90 *Economic Survey of the United States* could have been discussing Brazil in the 1980s when it suggested that "private saving might fall if a lower federal deficit led to lower interest rates [because] the wealth effects of interest rate changes are generally thought to be more powerful than the direct effects of variations in borrowing costs."[75] Few analysts doubt that the growth of public debt, increasing the weight of financial

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[71] Luigi Spaventa, "The Growth of Public Debt," *IMF Staff Papers.* June 1987/p396.

[72] The development of Keynes's inflation ideology is documented in Peter Clarke, *The Keynesian Revolution in the Making, 1924-1936.* Oxford 1988.

[73] Italics in original. Reproduced in Keynes, *Essays in Persuasion* (1932). New York: Norton 1963/pp107-8.

[74] Thomas Malthus, *Principles of Political Economy,* as reproduced in Piero Sraffa ed. , *The Works and Correspondence of David Ricardo, Vol. II: Notes on Malthus's Principles of Political Economy.* Cambridge University Press 1951/p445.

[75] OECD, *Economic Survey of the United States.* Paris: November 1990/pp79&118n86. Elsewhere, the OECD Secretariat observed that "personal saving is quite interest-rate sensitive, so that fiscal deficits displace private consumption in the first instance, with only a limited effect on interest rates and a partial impact on interest-sensitive investment." From OECD, *Economies in Transition: Structural Adjustment in OECD Countries* . Paris 1989/p200.

markets, helped to accelerate the concentration of Brazilian income distribution in the 1980s, with the share of the richest 10% of earners rising from 45% to 51.5% of all personal income.[76] While financial services contributed only 5.4% to GDP in 1970, one-third less than government services, their weight in the economy reached 13% by 1988, nearly twice that of public administration, reflecting the great surge in Brazilian private savings as a share of GDP after 1982.[77] In Malthus's time, Britain's public debt exceeded national income for a century until after 1860, proportionately twice the size of Brazil's today and greater than that of any other major country except Chile and Italy. At the time Malthus published his *Principles of Political Economy* (1820), Englishmen groaned under the burden of their public debt, but the wealth of the people was growing and many were moving into the middle classes:[78]

> *....the middle classes are receiving recruits from the lower in much greater number than the latter do from the former. This state of things is clearly proved by the vast number of neat houses of the smaller class arising in every part of England, in exchange for the crowded and filthy dwellings formerly inhabited by artisans which are as rapidly in every county disappearing, this view is further strengthened by by referring to the great increase in the consumption of all those articles which form the comforts of those a few steps above the indigent class. Thus, within the last 12 years, the increased use of soap, candles, leather, sugar and other articles is evidence to show that the augmentation of our inhabitants is chiefly in that class of society who are not compelled to live on the lowest description of food....The increase in the...capitals accumulated in the various savings banks in a few years from two to 14 millions sterling afford other grounds for taking a favorable view of the situation of those one or two steps above the condition of mere day laborers....*

Something like this happened in Brazil since 1950, at a faster pace and on a more spectacular scale. Census and household survey data available after 1960 show an awesome process of income concentration, accompanied by extension of middle class living standards, in a population that was similar to that of preindustrial Europe in terms of distribution of wealth and formalization of economic activity.

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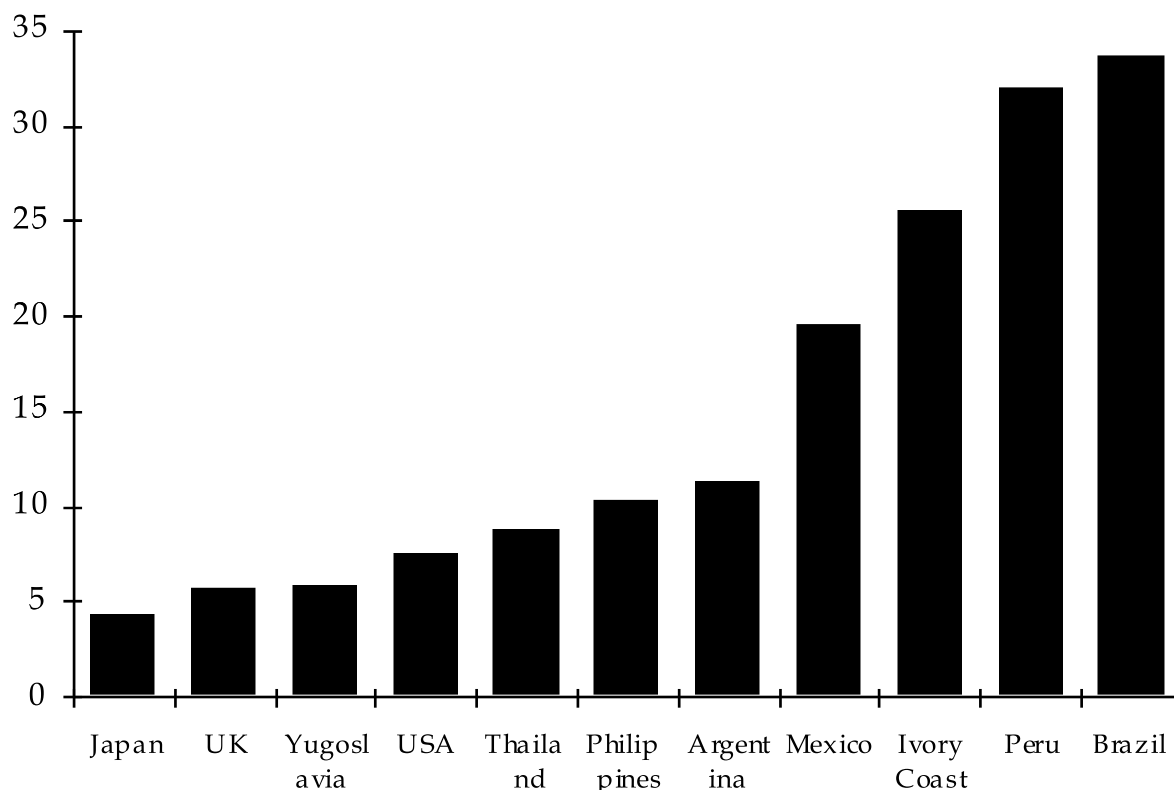
[76] From IBGE, *Pesquisa Nacional por Amostra de Domicílios: Síntese de Indicadores da Pesquisa Básica da PNAD de `981 a 1989.* Rio de Janeiro 1990, with additional tables supplied by PNAD technicians. According to Fox and Morley, "the size of this transfer to holders of government bonds must have worsened Brazil's already unequal income distribution. As much of this transfer was financed by the inflation tax, which is paid primarily by holders of cash and small savings accounts where government regulated rates have not always been positive *ex post,* a significant but unmeasurable transfer from the lower and middle ranges of the spectrum to the top probably took place, especially in the last half of the decade." From M. Louise Fox and Samuel Morley, *Who Paid the Bill?: Adjustment and Poverty in Brazil, 1980-1995.* Background paper to WDR90. Washington: World Bank, February 1990/p17.

[77] Instituto Brasileiro de Geografia e Estatística (IBGE), "Contas Nacionais: Revisão e Atualização para 1988," *Indicadores IBGE.* Rio de Janeiro: December 1989/pp107-8.

[78] W. Jacob, *Second Report on Agriculture and Corn in Europe* (1828) xviii/p149, quoted in M. Dorothy George, *London Life in the 18th Century* (1925). Penguin 1987/p394.

INCOME DISTRIBUTION MULTIPLES
(richest 20%/poorest 20%; 1975-86)



Source: United Nations Development Program, *Human Development Report 1990.* Oxford 1990.

Brazil's unequal income distribution has gained international notoriety. Incomes of the richest quintile of households in 1987 were 33.7 times more than those of the poorest 20%, the highest multiple among countries listed by the United Nations Development Program, much greater than the multiples of the United States (7.5), Britain (5.7), India (7.0) and Japan (4.3) and greater than poorer countries like Peru (32.0), Kenya (25.0) and Côte d'Ivoire (25.6).[79] In the three decades following 1960, the share of the top 20% of earners in all flows of personal income rose from 55% to 67.5%, while the share of the other 80% of Brazilians fell. However, from 1960 to 1980, there also were dramatic rises in constant money incomes, measured in 1989 prices, at all levels. Real incomes of the richest 10% tripled and the poorest 10% rose by one-third, while those of the middle eight deciles roughly doubled. During the 1980s, however, real incomes of the poorer half fell slightly, while those of the richer half rose, especially in the top three deciles.

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[79] United Nations Development Program, *Human Development Report 1990.* p159. These multiples are given for only 16 of 84 poor countries listed by this document.

While avoiding the losses of per capita product suffered by its neighbors, Brazil was able to escape Latin America's calamity of the 1980s in other ways. Throughout Latin America, the "modern" share of urban employment --in medium-sized and large companies-- fell dramatically in the 1980s, while job-creation "took place almost wholly in lower productivity sectors," in informal activity and in firms with 10 or less workers, whose combined share of the urban labor market rose from 39% to 51%, growing by more than 7% yearly, while the share of "modern" employment fell from 40% to 30%.[80] In other words, informal economic activity in the rest of Latin America grew to Brazilian levels. In Brazil, however, the proportion of informal (unregistered or self-employed) non-agricultural workers remained stable. In agriculture, the share of registered workers rose sharply.[81] According to household survey data, Brazilian living conditions improved. The share of homes receiving piped drinking water rose during the 1980s from 60% to 73%, helping infant mortality to continue its decline. Homes with electric lighting rose from 75% to 87% of the total, while those with refrigerators grew to 70% in 1989 from 57% in 1981. The proportion of families in owner-occupied homes rose from 62% to 66%. The question for the 1990s is whether decapitalization has advanced so far that these gains in living standards are now endangered.

Inflation and the world middle class

It would be important for future research to shed light on another question raised by Malthus, little-studied but extremely relevant to chronic inflation in Brazil today. This question concerns the relation between government income transfers, especially through the public debt, and the growth of the middle class. The Harvard sociologist Nathan Keyfitz calculated in 1976 that, according to consumption patterns, the world's middle class population grew from 200 million in 1950 to 500 million in 1970, at an annual rate of 4.7 percent, while world population as a whole grew by only 1.9 percent. Keyfitz warned: "We cannot hope to keep tripling the middle class every 20 years."[82] He was skeptical about how long the trend could continue without running into financial, resource and environmental limitations. Survey data does not presently reflect the claims and burdens of sustaining middle class consumption patterns, nor the mechanisms by which this effort is being made. With income gains concentrated in the top strata as chronic inflation intensified in the 1980s, private health and education systems serving the middle class are in trouble because of income lags of both customers and providers. Meanwhile, indexation of cash balances, held as public debt,

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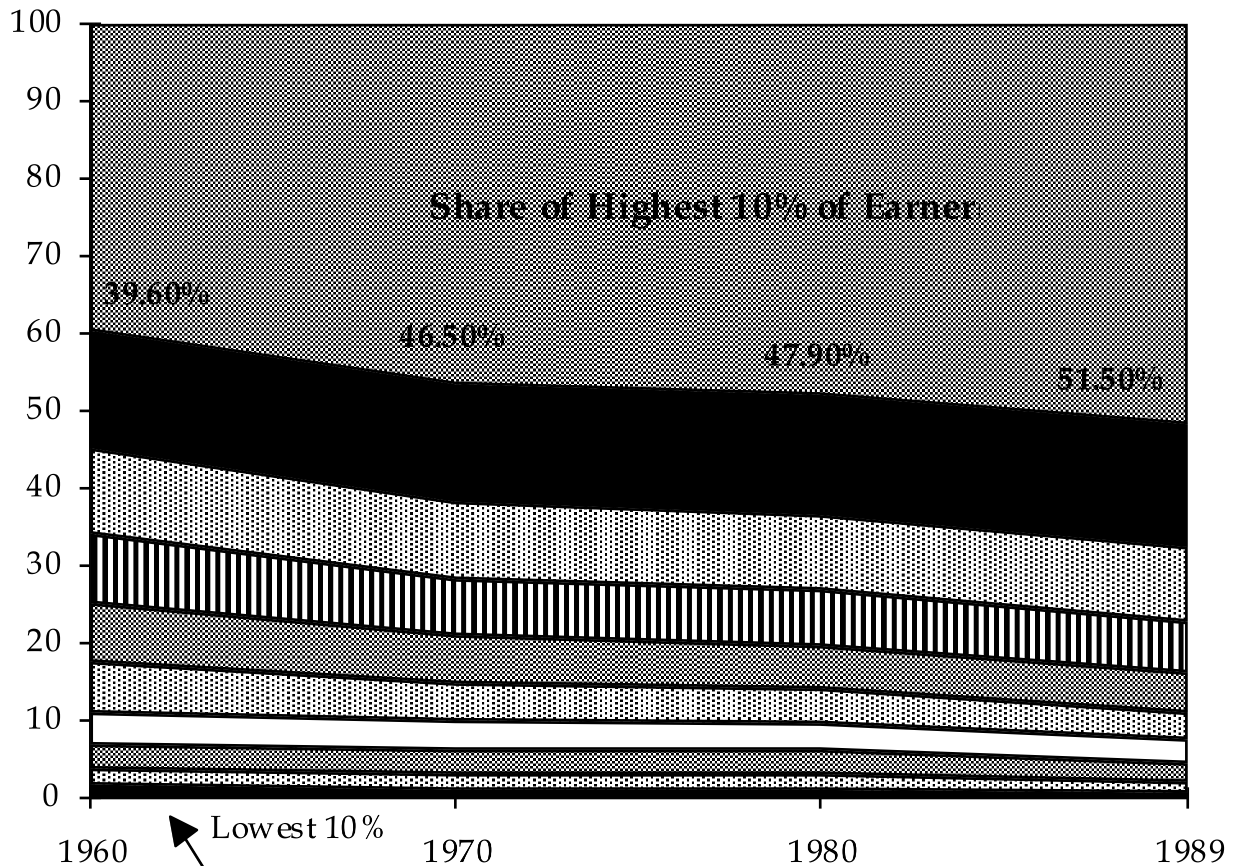
[80] PREALC (Program Regional de Empleo para América Latina e el Caribe), *Empleo y Equidad: Desafío de los 90.* Santiago: Chile, October 1990/pp14-20. PREALC is the Latin America subsidiary of the International Labor Office (ILO).

[81] From IBGE, *Pesquisa Nacional por Amostra de Domicílios: Síntese de Indicadores da Pesquisa Básica da PNAD de `981 a 1989.* Rio de Janeiro 1990/pp44-7.

[82] Nathan Keyfitz, "World Resources and the World Middle Class," *Scientific American.* July 1990.

helped to keep the financial system intact and to stabilize overall per capita income in the 1980s. The new government's seizure of financial assets as part of its stabilization program of March 1990 will make it harder to achieve stability through these devices in the future.



Source: Silva, Nelson do Valle, ***Human Development in Brazil 1960-88,*** **United Nations Development Program, dec. 1990; IBGE,** ***Síntese de Indicadores de Pesquisa Básica da PNAD de 1981 a 1989.***

The short-term protection of per capita output, and the survival of the financial system, were the main beneficiaries of the explosive growth of indexed public debt after the new governmental accounting rules were adopted in 1983 by Brazil and the IMF. Under the new "operational" accounting standards, Brazil continued to pay interest to foreign commercial banks until February 1987, after collapse of the Cruzado stabilization plans, when it declared a moratorium on $68 billion of these debts. Interest payments resumed after disbursement of $4 billion in "new money" loans in

November 1988 under a new refinancing package,[83] but were suspended again in June 1989, with $8 billion in interest arrears accruing since then. After 1983, Brazilian authorities announced the new operational account as the "real" public deficit, which became institutionalized by the time of the 1986 Cruzado Plan. Cardoso and Fishlow later commented:[84]

> *Not only was fiscal consolidation during the 1986 stabilization program difficult because of the size of the debt, but policymakers also made no honest effort to correct the deficit. Some among them argued that Brazilian inflation was different from that elsewhere and that the budget deficit did not have a role in it; inflation was purely inertial and all that was needed to stop it was a price freeze and some formulae to recalculate wages, rents and future installments. Others denied the existence of the problem by putting numbers together that would show a negligible budget deficit.*

These innovative accounting procedures carried less and less weight in the 1980s as other countries, rich and poor, were able adjust their public finances under the traditional budget conventions. Meanwhile, the breach widened between Brazil's old and new way of defining its fiscal gap. By the operational standard, the deficit rose slowly and intermittently from 3% of GDP in 1983 to 12.4% in 1989, when yet another accounting measure (t+1) was introduced to deflate the fast-growing stock of public debt by inflation in the month *after* monetary correction instead of by current monthly inflation, thus bringing down the operational deficit to 6.9% of GDP. At the same time, the nominal deficit ballooned from 15.8% in 1982 to 73% of GDP in 1989.[85] At the end of the decade Vito Tanzi, head of the IMF's Fiscal Affairs Department, observed that "the operational deficit is not a good measure of uncertainty when the inflation rate is very high. Thus, real interest rates may rise even when the operational deficit --and probably the debt-to-GDP ratio-- are falling. This will happen when the rate of inflation is very high."[86] The distinction became more and more meaningful as domestic interest payments rose from roughly 5% of all revenues in the early 1970s to

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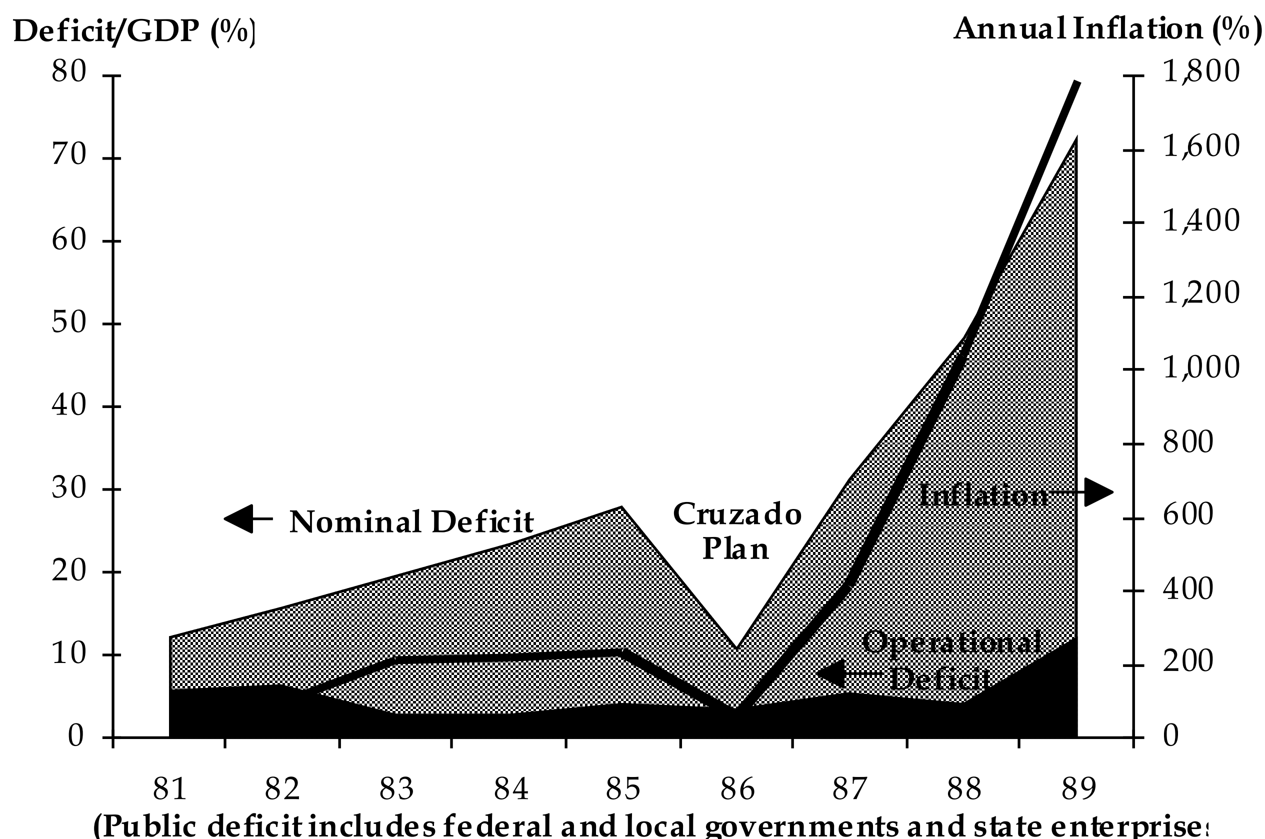
[83] Ruben Lamdany, "The Market-Based Menu Approach in Action: The 1988 Brazilian Financing Package, " in Ishrat Husain and Ishac Diwan, *Dealing with the Debt Crisis.* Washington: World Bank 1989.
[84] Eliana A. Cardoso and Albert Fishlow, "The Macroeconomics of the Brazilian External Debt," in Jeffrey D. Sachs, editor, *Developing Country Debt and Economic Performance.* University of Chicago Press 1990. Vol. 2/p322.

[85] This ballooning was interrupted by the suspension of monetary correction of public debts during the 1986 Cruzado Plan, which reduced the nominal deficit to 11.2% from 27.8% in 1985. The deindexing of financial assets that year gave the government a capital gain through reduction in the real value of the public debt.
[86] Vito Tanzi, comment on Helmut Reisen, "Public Debt, North and South," in Ishrat Husain and Ishac Diwan, *Dealing with the Debt Crisis.* Washington: World Bank 1989/p128. Tanzi added that "the operational deficit may become a better measure for assessing needed changes in economic policy," especially to assess "the effect of the fiscal deficit on the debt-to-GDP ratio" that helps shape real interest rates, but this infuence wanes as inflation rises to very high levels.

10% in the early 1980s to 69% in 1988.[87] In August 1990 the IMF, negotiating a new stabilization plan in Brasília, pressed Brazilian officials to revive budget criteria used by the rest of the world by giving more weight to nominal deficits.[88]



Source: Banco Central do Brasil, *Relatório Anual*, several numbers.

At around 31% of total output, Brazil's public spending is roughly as much as in the United States and Argentina, much less than that of several OECD welfare states, but more than other big developing countries such as India, Mexico and Indonesia. The international definition of "general government" excludes the accounts of public enterprises. This is an important item in Brazil because state corporations alone ran deficits in 1989 totaling 30.4% of GDP, triple Italy's whole public sector borrowing requirement by the same accounting standard and three times what the financing needs of these state companies were only two years earlier. In 1986-89, Brazil's general government deficit (including state enterprises) rose in nominal terms from 11% to the equivalent of 73% of the country's total output, including the 1989 deficit of state

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[87] Instituto Brasileiro de Geografia e Estatística (IBGE), "Contas Nacionais: Revisão e Atualização para 1988," *Indicadores IBGE.* Rio de Janeiro: December 1989/pp108-9.

[88] Celso Pinto, "O FMI quer o deficit global," *Gazeta Mercantil.* São Paulo: August 30, 1990/p1.

enterprises (30% of GDP) and those of the central government (22%) and state and local governments (19%).[89] Brazil's overall tax burden was steady at around 25% of GDP in 1970-82, but then fell to 19.6% by 1989.[90] In the same span of years, real spending rose in roughly the same proportion, accelerating after approval of the 1988 Constitution. In 1989 alone, newly-mandated welfare, retirement and salary benefits swelled public spending by 3.8% of GDP. In the words of Carlos Alberto Longo, "the growth of public spending became a new right, guaranteed by the Constitution."[91] In 1988-90, real transfers by federal and state governments to *municípios* rose by three-fourths in per capita terms, generating 74% of their funding. In 1990, the *municípios* absorbed 46% of all tax revenues and three-fifths of all government consumption, creating a kind of moral hazard characterized, according to José Serra and José Roberto Afonso, "by the lack of responsibility felt by state and muncipal administrations for the public sector as a whole and for the macroeconomic problems of the country, as well as by the perception (confirmed so many times in practice) that the federal government will wind up paying for their financial crises through transfers, absorption of debt service and permanent rollover of credits by central financial institutions."[92]

More government jobs

In 1984-88, personnel expenses rose in real terms by 71%, three times faster than GDP, with their share of Federal revenues rising from 37% to 70%.[93] The big growth in payrolls came in state and local governments, which in 1982-88 added 650,000 new jobs, about as many as in the whole Federal bureaucracy. Since 1920, the number of state and local government jobs grew by 6.1% annually, or 2.4 times the rate of population increase, while the number of Federal employees multiplied at roughly the same rate as population. By 1988, there were 4.5 million people on state and local government payrolls, against 700,000 Federal employees and 860,000 in public enterprises, totaling about one-seventh of the urban labor force, and their salaries were rising fast in comparison with those of the private sector. Again, as in the increase in public debt, the problem was not the number of public employees in comparison with those of other countries, but in their rate of increase and the growth of payroll expenses that could be financed only by cutting investment and breeding inflation. "The major factor keeping the economy afloat was government consumption, a significant portion of which was public employment," Fox and Morley argued. "Instead of reducing the size of the public sector or increasing taxes, the government's

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[89] Latest public finance numbers from Central Bank of Brazil's quarterly *Brazil: Economic Program.* Vol. 24 March 1990 and the Central Bank's 1989 annual report.

[90] IPEA/INPES, *Perspectivas da Economia Brasileira-1989.* Rio de Janeiro 1989/p577. Revised data for 1988-89 provided informally by IPEA.

[91] Carlos Alberto Longo, *O Estado Brasileiro: Diagnóstico e Alternativas.* São Paulo: Editora Atlas 1990/p33-4 (ms).

[92] José Serra and José Roberto R. Afonso, "Finanças Públicas Municipais: Trajetória e Mitos," *Conjuntura Econômica.* Rio de Janeiro: October 1991/p45.

[93] Mario Henrique Simonsen, "A Conta Corrente do Governo, 1970-88," unpublished manuscript.

choice was to expand public sector employment and finance this wage bill with bonds and money. Initially the cost of this employment was low, as government wages were squeezed also. However, as public sector wages increased over the decade (and employment continued to increase as well), more private savings were required to finance the growing deficit."[94]

To mobilize resources for the huge increase in public debt and employment, the "deepening" of the financial system was accelerated. Beginning with the stabilization and indexation of the mid-1960s, the economic weight of the system's main financial assets rose from 23% of GDP in 1965 to 60% in 1985 to 103% by December 1989.[95] The number of bank branches nearly doubled in 1975-87, and tripled in outlying areas, as the four biggest private banks invested heavily in new branches and automation to capture inflationary rents and further concentrate their market share. In 1985-87, the banks kept 60% of the annual inflation tax[96] on M1, and by 1987 harvested an inflation subsidy of 8.5% of GDP. The price of maintaining the financial structure intact, as the level of inflation rose roughly 40-fold in 1979-89, was to sacrifice investment as financial assets shifted into government debt. The crowding out increased the public sector's share of all credit flows rose from 21% in 1981, roughly the same level as in the 1950s, to 80% in 1988. By then, three-fifths of the financial system's liabilities were either held by government institutions or by private banks as government-mandated loans.[97]

Chronic inflation: the social contract

Brazil's financial system was magnetized by fiscal needs. The Fernand Braudel Institute of World Economics is analyzing the development of chronic inflation in the financial system as a social contract between government and a priveleged community of rent-seekers. Some Latin American countries, notably Brazil and Argentina, show common elements in formation and dispersal of financial distortions taking place in fairly discreet modes and stages:

1. The share of government debt in private portfolios seems to follow a cycle from (a) expanding public transfers/investments breeding resource gaps filled

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[94] M. Louise Fox and Samuel Morley, *Who Paid the Bill?: Adjustment and Poverty in Brazil, 1980-1995.* Background paper to WDR90. Washington: World Bank, February 1990/pp15-17.

[95] Eliana A. Cardoso and Albert Fishlow, "The Macroeconomics of the Brazilian External Debt," in Jeffrey D. Sachs, editor, *Developing Country Debt and Economic Performance.* University of Chicago Press 1990. Vol. 2/p320. Central Bank of Brazil's quarterly *Brazil: Economic Program.* Vol. 24 March 1990/p48.

[96] Unearned government income derived from seignorage, or the exclusive right to issue money. An ancient term, seignorage today is measured as the change in central bank non-interest bearing liabilities (typically the monetary base) as a percent of GDP.

[97] World Bank, *Brazil: Selected Issues of the Financial Sector.* Washington: June 2, 1989 pp17-24;35; 75 & 142. United Nations Economic Commission for Latin America, "Economic Policy in Brazil, 1954-63," *Economic Survey of Latin America.* New York: United Nations, 1966/p293.

by foreign loans; (b) shift to domestic finance of public deficits as inflation accelerates; (c) terminal distress in public finance, with little private intermediation and forced rollover of government debt, amid hyperinflation and general loss of confidence; (d) a post-repudiation phase, with negligible intermediation and return to more primitive financial operations. The cycle involves rapid expansion and shrinkage of government debt in private portfolios.

2. With the surge of inflation and public borrowing, maturities shorten and indexed assets expel nominal assets from the financial system. Firms become more liquid by cutting both debt and capital spending. Composition of private investment shifts from productive facilities toward speculative allocations (real estate, inventories and assets denominated in foreign currency), even though the overall investment level, as registered by the national accounts, does not change much.

3. At a later stage, capital flight accelerates as private financial markets collapse in the sense that non-financial firms become net lenders, with all credit magnetized by the demands of the government deficit.

Sterile savings

In this way, until large-scale capital flight began in the late 1980s, Brazilians were lending nearly all their private savings, in the form of indexed securities, to the government in hope of preserving the real value of their cash balances. Because it promised interest, monetary correction and overnight liquidity for the money it borrowed from the public, the government had to create large amounts of new money to roll over and expand these obligations, swollen by risk and inflation premiums. As hyperinflation threatened, real interest on government debt, as reported by the central bank, rose from a 0.5% monthly average in the first six months of 1988 to 6.4% in the five months before March 1990.[98] By national accounts measures, private savings rose from 15.6% of GDP in 1982 to an astonishing 35.6% in 1988 to compensate for negative saving of government that drained 12.6% of GDP from private sources in 1988, against 0.4% negative savings in 1982 and positive government savings of 6% a decade earlier.[99] However, the confusion bred by escalating inflation prevented holders of public debt from having a clear idea of what their assets were earning.[100] Simonsen

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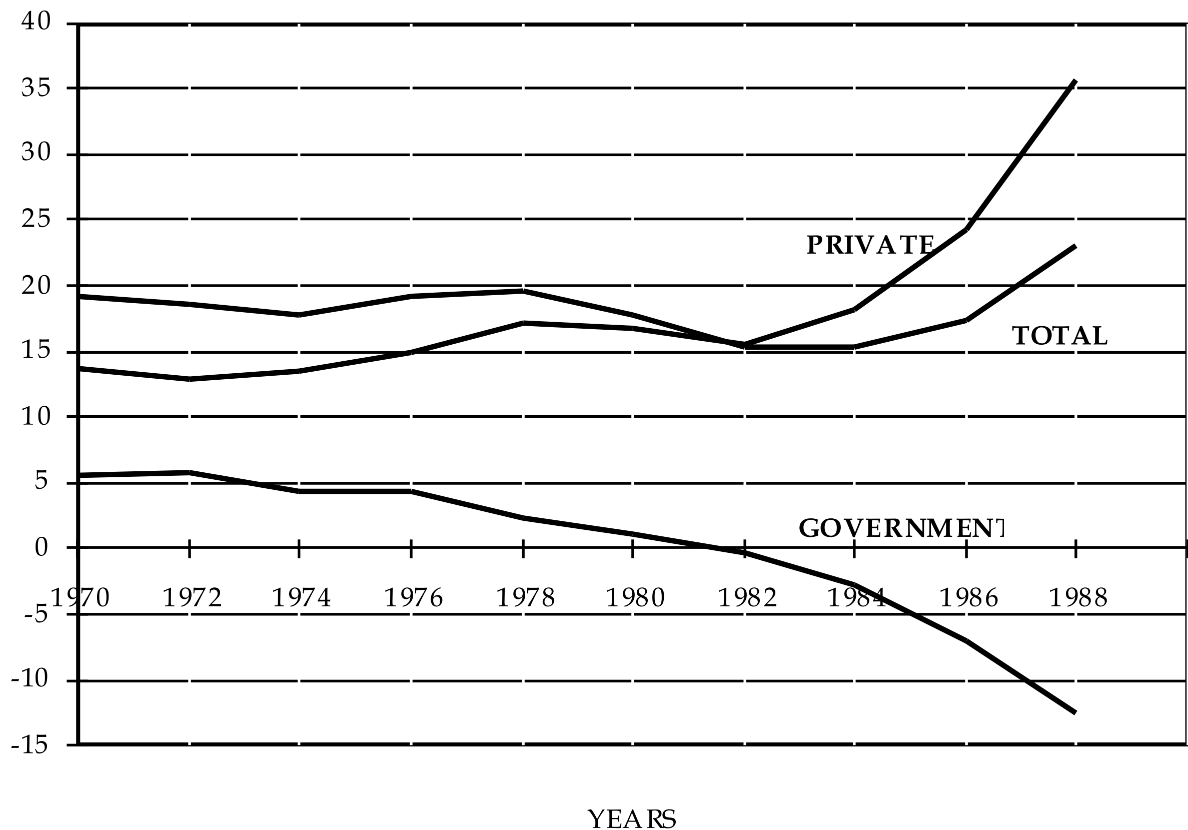
[98] Central Bank of Brazil, *Brazil: Economic Program.* Vol. 25 June 1990/p43.

[99] Instituto Brasileiro de Geografia e Estatística (IBGE), "Contas Nacionais: Revisão e Atualização para 1988," *Indicadores IBGE.* Rio de Janeiro: December 1989/pp96-7, 108-9.

[100] The central bank published three different estimates of real annual returns for 1989 on the basic public debt instrument, ranging from 8.9% to 34.5%. Central Bank of Brazil, *Brazil: Economic Program.* Vol. 24 March 1990/p56.

observed that "monetary correction of the public debt...explains most of the fall in nominal government savings as much as most of the rise in nominal private savings."[101]



SOURCE: Instituto Brasileiro de Geografia e Estatística (IBGE), "Contas Nacionais: Revisão e Atualização para 1988," ***Indicadores IBGE.*** **Rio de Janeiro: December 1989/pp96-7, 108-9.**

These savings were sterile for several reasons. First, the basic government debt instrument lost about half its real value between 1981 and 1987, from a big confiscation during the 1986 Cruzado Plan through suspension of indexation and from continuous mini-confiscations as monetary correction persistently lagged behind effective inflation in the 1980s. Second, very high real interest rates were "capitalized" by high rates of monetization that averaged 77% of the public debt increase in 1982-87 and peaked at

[101] Mario Henrique Simonsen, "A Conta Corrente do Governo, 1970-88,"

192% in 1986.[102] Third, the lag of public sector prices behind inflation not only tended to purge nominal savings of future productive potential but also eroded present productive capacity as basic infrastructure --roads, telecomunications, electricity systems-- decayed rapidly for lack of investment and maintenance. Fourth, the sterility of nominal savings was aggravated by the shift of public resources from investment into consumption, dramatized by the spectacular growth of government employment. James Dinsmoor of the Inter-American Development Bank observed: "Economic agents, including some of Brazil's best minds, were utilizing increasing amounts of time and energy in an ongoing effort to protect the real value of financial assets (or in speculative activities of a distinctly nonproductive nature), as willingness to undertake new productive investments steadily waned." While gross savings grew spectacularly in relation to GDP, net savings after 1979 were stagnant or negative after deducting monetary correction.[103]

The indexing illusion

The mushrooming of nominal savings was fruit of the indexing illusion that replaced the money illusion. The indexing illusion spawned the belief that this kind of thing could go on indefinitely. It helped to create the Brazilian "miracle" of the 1980s, by which Brazil was able to keep its financial system intact and to avoid the kind of losses in per capita output that other heavily-indebted countries suffered. Broad money supply (M4) kept to a remarkably stable average of 30.5% of GDP since 1981, even though annual inflation rose from 93% to 2,338%.[104] But indexing, created to help people live with inflation, itself became an engine of inflation instead of a source of comfort and security. A decade after leaving the Finance Ministry, Simonsen sadly concluded that "homogenous indexation is nothing but a useless exercise in complication."[105] Economic growth that is driven perversely by consumption demand and government deficits becomes a force for decapitalization and disintegration, rearing its head as difficulties in the balance of payments, inflation and high interest rates that are seen at first as transitory. In the 1980s, Brazilians had no idea of what kind of problem they faced although, as Finance Minister Mailson da Nóbrega suggested just before announcement of the *Plano Verão* (Summer Plan) in January 1989, they were close to agreeing that the system no longer was working:[106]

> *We used to say that hyperinflation won't come to Brazil because we have monetary correction. I myself said this many times. But we have been deceiving ourselves. Inflation*

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[102] Celso Luiz Martone, *Fiscal Policy and Stabilization in Brazil.* World Bank Working Paper WPS 50, July 1989/p8.

[103] James Dinsmoor, *Brazil: Responses to the Debt Crisis: Impact on Savings, Investment and Growth.* Washington: Inter-American Development Bank 1990/p111.

[104] Central Bank of Brazil, *Brazil: Economic Program.* Vol. 25 June 1990/p28 & 41.

[105] Mario Henrique Simonsen, "Brazil," in Rudiger Dornbusch & F. Leslie C.H. Helmers, editors, *The Open Economy.* Oxford 1988/p285.

[106] Taped interview, *Folha de São Paulo*, Dec. 11, 1988/pB10.

will reach a point where indexing loses credibility....The system of indexing anesthetized Brazilian society, making us think that inflation is not a problem. This must stop. The patient needed surgery. But they gave him only anesthesia. He felt no more pain and was satisfied. Anesthesia cures the pain but not the disease....Gradualism is the registered trademark of anti-inflation policies in Brazil over the past 25 years. The first reason for gradualism was the political difficulty of managing conflicts over distribution. Another was how to share the burdens of the adjustment we need. Indexation disguised this problem. We could push it with our bellies. Gradualism was the anesthesia that let us postpone surgery and the bitter pill.

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