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The Rise and Halt of Economic Development in Brazil, 1945-2004

Industrial Catching-up, Institutional Innovation
and Financial Fragility

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Abstract

This paper seeks to explain the dynamics of Brazilian industrial catch-up in the last 60 years by discussing its background institutional conditions as well as its main macroeconomic features. After a brief introduction, the second section describes how after the institutional innovations introduced during the Vargas' and Kubitschek's administrations, a Brazilian version of the Developmental State was created, releasing the growth potential of the economy during the 1950s. The third section analyses the inflationary crisis and institutional inertia of the mid-1960s, and its solution through the introduction of a new wave of institutional innovations and conflict management devices, which lead to the Brazilian growth miracle, until the debt crisis of early 1980s signaled its end. The fourth section analyses why the financial crisis, .../.

Keywords: development, catch-up, institutions

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coupled with ineffective institutional changes and unsuccessful macroeconomic stabilization plans lead growth to a halt. It also includes an analysis of the pro-market reforms from the early 1990s onwards. The fifth section concludes the paper offering a brief sketch on how the analytical narrative fits the conceptual framework within which it was performed.

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1 Introduction

In the 35 years following the Second World War, Brazilian GDP doubled every decade. This extraordinary economic performance came to a halt in the last 25 years. This paper seeks to explain that dynamics by discussing the background institutional conditions for this history of growth acceleration and stagnation, where waves of institutional innovation were followed by periods of institutional inefficiency and/or inertia, as well as its main macroeconomic features. We aim to show how these waves of institutional change impacted state capacity, policymaking, long-term expectations concerning investment decisions, and the overall macroeconomic performance, including the instruments for conflict management. The purpose of the paper is mainly analytical, ‘an analytical narrative’ to quote Rodrik’s felicitous subtitle. It will cover, very synthetically, the period that ranges from the end of the first Vargas Government in the mid 1940s to the end of the second Cardoso administration. Our analytical framework is structured around the concepts of technological and institutional innovation (Schumpeter), the relationship between long-term expectations, investment and growth (Keynes), financial fragility and destabilizing stability (Minsky) and the critical importance of the presence of a Developmental State (Gerschenkron 1961; Johnson 1982).

The structure of the paper develops in five sections. After this brief introduction, we proceed with an analysis of the economic conditions at the end of the 1940s and how the institutional innovations introduced during the Vargas’ and Kubitschek’s administrations gave birth to the Brazilian version of the Developmental State and released the growth potential of the economy during the 1950s. The following section will deal with the inflationary crisis and institutional inertia associated with the Brazilian economic and political crisis of the early and mid-1960s, the wave of institutional innovations and conflict management devices introduced in the economy and in the political sphere between 1964 and 1967; and their impacts on long term expectations and growth during what is usually known as the Brazilian growth miracle (that is, from 1968 until 1980). The fourth section will cover the institutional changes associated with the debt crisis of early 1980s and the cluster of ineffective institutional innovations that materialized in the host of unsuccessful macroeconomic stabilization plans from the mid-1980s through the mid-1990s, the period which is usually known as the Brazilian inflationary trap. It will proceed to the analysis of another wave of institutional innovations associated with the Brazilian pro-market reforms of the 1990s and their consequences up to the present. A brief conclusion stressing the analytical framework within which the narrative was embedded will close the paper.

In order to organize the analysis, the crucial relationship between institutional change and economic growth will be organized around four main issues. First, what was the role of the state in general, and the government policymaking bureaucracy in particular, as an agent of institutional innovation and change? Second, how the institutional structure channeled resources to capital accumulation and coped with the bottlenecks common to late-late industrialization? Third, how the existing institutions managed the economic and social conflicts in each period? Fourth, how the institutional landscape, especially government procedures, was affected by the dominant ideology of the time?

2 Building state capacity and forging the catch-up: 1945-1960

During his 15 years in office (1930-45),¹ Getulio Vargas promoted a fundamental institutional change in the Brazilian economy. His ousting shortly after the end of the Second World War² signalled the end of the first great period of institutional innovation in Brazilian economy in the last century. Especially after 1937, Vargas³ started to promote a considerable transformation of the country's administrative, legal and productive structure in a pragmatic and increasingly authoritarian way.⁴ International trade and modern activities were monitored and, in different extents, guided by the new institutions created in the 1930s. In the period, the state delimited workers rights and organized professional and political representation from above, using coercion in no small way. The self-consciousness about the shortcomings of the bureaucracy⁵ was attacked through the creation of a specific department (DASP – 'Departamento da Administração do Serviço Público' – Department of Public Services Administration), accountable only to the President, to select and train public servants, and the overall state's capacity to monitor and support the development was greatly improved.

The proclaimed objective of Vargas was development through the restructuring of the forces of the nation and the foundation of the basis of its fundamental industries. (Castro 1994: 186) Financial resources and entrepreneurship skills were transferred from the production and export of coffee (the sole hegemonic economic activity up to the thirties) to the manufacturing industries, and the frequent devaluation of the currency created the conditions for the internal production of industrialized goods. The state progressively centralized finance, coordinated investment projects, built infrastructure and produced basic goods. Those were the years where the basis of the Brazilian Developmental State was crafted.⁶

The democratic government, which took office after Vargas forced departure in 1945, discontinued his policies, lowering the competence of the civil service and cutting short the industrializing plans. Without great consideration for the interests of the industry, Eurico Dutra's government (1946-50) kept the exchange rate which prevailed during the war. Imports rose swiftly, and international reserves disappeared. When it had to incur in short term debt, the government introduced a system of quantitative import control through licensing without devaluing the currency, in order to protect coffee interests. (Furtado 1965) Raw materials, intermediate goods and equipment imports were

1 At first as a revolutionary leader (1930-34), then as a democratically elected President (1934-37), and finally as a dictator (1937-45).

2 Brazil declared war on the Axis powers in 1942, and sent troops and planes to combat in the Italian theatre of war. The late Brazilian economist Celso Furtado was amongst the Brazilians in Italy.

3 For a short account of Brazilian economic history until 1930, see Dean (1989). Wirth (1970) covers the main aspects of the Vargas era. Levine (1998) gives a colourful portrait of the life, times and legacy of Vargas.

4 Myrdal's (1970) concept of 'soft-state' provides a good description of the Brazilian case before Vargas period.

5 Vargas acknowledged in 1934 that the government was unable to determine how much money it owed to foreign lenders because officials could not find copies of all the loan agreements signed (Geddes 1990: 19).

6 Cf. Johnson (1982) for the coining of the concept and Woo-Cumings (1999) for its discussion.

privileged, with the (unintended) consequence that the industry was protected from imported similar products and benefited greatly from the import control. The self-conscious and proclaimed preoccupation with industrial development started to wane after the first steel-making plant, contracted under Vargas, was inaugurated in 1946.⁷

Vargas returned to power in 1951, this time as a democratically elected President, and increased his commitment to state-led developmentalism, which greatly diminished the political support from the elites. Investments in infrastructure, energy and transportation were the proclaimed main objectives. For the first time in an integrated, explicit and purposeful way, the main agrarian, industrial, urban, and institutional questions were identified and tackled. Between 1951 and 1954 far-reaching development goals were proposed, to be met only in the closing years of the decade. On the crucial question of energy, public enterprises were created to deal the problems of energy shortages and oil production.⁸

In this post-war period, the seeds of some fundamental public institutions for an industrial society were sowed. The emerging scientific community was organized through the Brazilian Society for the Progress of Science (SBPC 1948), and the National Council of Research (CNPq), under the direct supervision of the President, was formed in 1951. Universities were organized, mainly in São Paulo and Rio de Janeiro, to advance the technical learning and form the necessary expertise, while some elite military engineering schools reflected the increasing professionalization of the armed forces since the war.⁹

Two main restrictions put pressure on Vargas' strategy schemes: inflation was rising quickly,¹⁰ and external and public finance deficits were mounting, despite Vargas efforts in the first half of his term to put public finances in order and to apply an orthodox monetary discipline. Sustainable economic growth, however, needed foreign capital. Official loans were favoured,¹¹ through the Eximbank and the International Bank for Reconstruction and Development. The public character of these loans gave the government discretionary power over its uses, complementing state investments in infrastructure. Public enterprises were to become the main economic actors of the

⁷ It was only *after* Vargas election in 1950 that the departing government signed an agreement with the USA to form a Joint Brazil-United States Development Commission to elaborate a diagnosis of the Brazilian economy. Work began in July 1951 but the final report was presented only in December 1953 (Malan et al. 1980: 60).

⁸ Both were understood by the key Vargas' policymakers as 'essential facilities' to enable a comprehensive 'take-off' of the whole economic system. The two companies, Eletrobras and Petrobras, were still the main players in their sectors 50 years later. The oil company, Petrobras, one of the landmarks of Vargas era, is still the largest Brazilian company.

⁹ Of particular importance, given future developments, is the creation in 1952, of the Technological Institute for Aeronautics (ITA), the best engineering school of the period, (under the coordination of an MIT Professor), and for decades to come, to support the Brazilian Air Force, an independent service since 1941. This institution became the cradle of the aircraft industry formed in the next decade (EMBRAER). Cf. Schwartzman (2001).

¹⁰ From 11.27 per cent a.a. when Vargas took over in 1951 to 27.16 per cent a.a. next year. In the same period, commercial account surplus (as a percentage of GDP) went from 0.2 per cent to -1.4 per cent.

¹¹ Vargas was adamant in subordinating private capital investments to the 'fundamental interests' of the country, defined by his government.

period. The BNDES (Banco Nacional de Desenvolvimento Econômico e Social – National Bank for Economic and Social Development)¹² was created in 1952 with the manifest intention of rationalize the use of public resources, meaning that policies ought to be supported by technical criteria, resisting the political pressures to which public institutions are usually subjected (Castro 1994: 187).¹³

A currency crisis in 1952 led to a dual exchange rate system, whereupon some imports and the main exports followed an official rate, whilst a free market rate accounted for the rest. The result was a decrease of exports, with the public debt mounting without monetary flexibility or credit expansion.

In October 1953, Vargas reestablished the currency monopoly of Banco do Brasil¹⁴ through SUMOC Norm n°70 which also created a system of multiple exchange rates, eliminating direct quantitative controls and establishing foreign currency auctions. These auctions were to become an important source of revenue for the state. Imports were classified according to its ‘essentiality’ character, and SUMOC allocated foreign reserves accordingly; import exchange rates were determined by auctions. Government purchases and fundamental imports (oil and corn, mainly) were excluded from this scheme of auctions. This arrangement favoured specially capital goods’ imports, bringing about a much needed technological upgrade, but did not stimulate an exports drive. Accordingly, a sizable market reserve for domestically produced goods was created, through the higher relative costs of imports included in the ‘non-essential’ categories¹⁵, first, and, second, through the subsidies in the imports of capital goods and raw materials necessary for industrial development (Vianna 1987). The resulting industrialization was neither self-sustainable integrated nor particularly intensive: light durable consumer goods were the main items whose production was endogeneized.

In 1954, political tensions and pressures had become so unmanageable that Vargas appealed for a desperate and irreversible political statement through a personal sacrifice. On 24 August the President committed suicide. This dramatic gesture unleashed a period of turmoil until the election of a new President, Juscelino Kubitschek (1956-60), under whose leadership Brazil experienced somewhat of a golden age.¹⁶ In a deliberate

¹² Initially the institution was named the National Bank for Economic Development (BNDE) and aimed only to economic development. In the 1980s the bank’s operations were extended to social areas and its name was changed to the National Bank for Economic *and Social* Development (BNDES). For simplicity, we refer to it as BNDES in this paper.

¹³ The BNDES was set apart from the traditional bureaucracy, and its staff were known for technical competence and a strong sense of public mission. Nevertheless, it was subordinate to the President and lacked autonomous funding. This was initially provided by a compulsory loan equivalent to 15 per cent surtax on the income tax of individuals and corporations. Only in Kubitschek’s government did BNDES become a major player in the Brazilian economy, according to Geddes (1990: 226).

¹⁴ During this period, Brazil did not have a central bank. The government main financial institution was Banco do Brasil (Bank of Brazil), and monetary and currency policies were implemented by SUMOC (The Money and Credit Bureau) through normative instruments.

¹⁵ Interestingly, industrialists opposed ‘Norm 70’. Industry protection resulted from the ‘essentiality’ criteria as a by-product, and did not emerge from a deliberate industrial policy (Vianna 1987: 106).

¹⁶ In the last years of the 1950s, a most extraordinary flowering of Brazilian culture happened in such disparate areas as music (origin of the ‘bossa nova’ style), architecture, literature and sports (ranging from the beginning of world football dominance, in the World Cup of Sweden, to winning the legendary ladies tennis championship in Wimbledon).

effort to advance beyond conjunctural responses, long-range targets ('Plano de Metas', Development Targets Plan) were proposed to install an integrated industrial structure, with a growth of productive capacity far ahead of any expected expansion of the markets in the capital and durable goods sectors. Its slogan was 'Fifty years in Five'.

According to both Furtado and Castro, since that time the country's growth horizon has been associated with the constitution of a modern and comprehensive industrial structure, based on the prevailing technological paradigm. (cf. Furtado 1965 and Castro 1994: 187) The new President created, within a few years, an impressive climate for development, which cannot be explained by looking at the accomplished goals alone. The Plano de Metas had a considerable success in its four main areas (transportation, energy, intermediate goods and capital goods), as well as in the fifth, the building of the new capital, Brasilia.

On the other hand, Kubitschek's main solution to the funding problems inherent on development projects was an inflationary one. It consisted on the allocation of funds for specific areas based on special surtaxes which amounted to 22 per cent of the total federal receipts in 1957. These surtaxes were not included in the federal budget (meaning that once they were set up congress had no further discretion over their use) and were collected and deposited directly with the BNDES. In the new administration the BNDES came into its own, providing more than investments and the matching of funds required by foreign lenders: it also performed an important screening function, enforcing efficiency criteria and consistency with plan goals as conditions for receiving incremental loans (Geddes 1990: 227).

Reversing a trend from the previous period, between 1955 and 1959 Brazil took advantage of a favourable international economic environment, and favoured the installation of multinational companies in the country. Through SUMOC's Norm n°113 (1955)¹⁷ special conditions to import machine tools and equipment were created. The public sector increased its direct participation in the internal formation of capital, including through inflationary funding,¹⁸ and several forms of external credit access were granted. From 1957 onwards the exchange rate system was simplified (Lessa 1982) and a monetary stabilization plan was attempted in the period, but did not go very far, especially after Kubitschek broke out with the IMF.

In the administrative sphere another kind of insulated agencies was created by presidential decree, the 'Grupos de Trabalho' (Working Groups) and the 'Grupos Executivos' (Executive Groups).¹⁹ The first were consultative organs which brought together representatives of the public and private sectors, elaborating sectoral studies in order to increase the efficiency of the incentives policies. The executive groups worked as forums of consultation, exchange of information and negotiation between the government and the business class. Both played a key role in the task of implementing the goals for particular sectors of the economy, with enough autonomy concerning

¹⁷ Enacted in January, *before* Kubitschek's election.

¹⁸ Inflation more than doubled from 1955 (18.44 per cent a.a.) to 1959 (42.70 per cent a.a.).

¹⁹ Benevides (1976). Geddes refers to this as the 'Second Innovation Strategy' (the first one was the Civil Service Reform implemented by Vargas in the 1930s), referred to by the Brazilians as *bolsões de eficiência* or 'efficiency pockets' (Geddes 1990: 225).

budgets and personnel recruitment.²⁰ There were five main Working Groups, of which the Electric Energy and Steel ones were the most successful. Of the Executive Groups, those related to the auto,²¹ naval and mechanical industries were the most relevant. Backward linkages were deliberately introduced into the main sectors through regulations created by the technocrats of these groups. Using Chalmers Johnson's perspective we can think of the Executive Groups as the Pilot Agency in charge of effectively handling the development strategy and incentives.

Before closing this section, it is worth underlying Hirschman's conclusion on that period. He pointed out that at least one experience in Latin America, that of Brazil during the 1950s, came fairly close to the picture drawn by Gerschenkron: sustained and rapid progress of steel, chemical and capital goods industries combined with inflation to increase the supply of capital and the flowering of a 'developmentalist' ideology (cf. Hirschman 1971: 95). The particular experience of Brazil in the 1950s, however, could not be replicated easily: it was very dependent on exogenous conditions and lacked conflict management institutions (as the most innovative institutions circumvented official bureaucratic channels).²²

The newly elected President of Brazil, Jânio Quadros, took office in the new capital (in 1960) in a country with a much more robust industrial structure, but also with serious political tensions and a growing inflationary pressure. In the next few years, the extraordinary experience of the 1950s was thrown in disarray by the political, economic (inflation doubled again and growth came to a halt)²³ and social disturbances of the early 1960s to which we now turn.

3 Institutional creative destruction, rapid growth and increasing financial fragility: 1964-84

As we saw in the previous section, although the catch-up strategy of the Kubitschek administration was a huge success in terms of upgrading the industrial structure, it, nonetheless, had very shaky finance-funding mechanisms and virtually no 'conflict management' institutions. The soaring inflation coupled with the deceleration of the

²⁰ On average, all the target plans administered by the executive with BNDES funding were fulfilled; of the projects administered by the federal bureaucracy, the average fulfilment was 32 per cent. (Geddes 1990: 228)

²¹ To illustrate: the GEIA (Executive Group for the Auto Industry) was composed by a minister, and a representative of Sumoc, BNDE, Foreign Trade and Bank of Brazil each.

²² The questionings made by Furtado (1965) still holds: has a system of power oriented to the preservation of the *status quo* conditions to formulate and carry out a development policy in a country where development necessarily means modifications in the social structure? Will this system of power hold, or will it evolve towards a rupture?

²³ Inflation surged from 42.70 per cent a.a. (1959) to a maximum of 85.60 per cent a.a. (1964) before falling. GDP growth was 9.8 per cent a.a. in 1959, but in 1963 only 0.60 per cent a.a.

growth rate and the defeat of the running coalition in the 1960s presidential election²⁴ signalled to a *politics-policy watershed* beginning in 1961.

Among the several episodes which constituted that watershed, besides the ‘macro-fundamentals’ deterioration, were Jânio’s strident discourse against inflation and corruption, his ambiguous external policy²⁵ and, especially, his enigmatic resignation only eight months after taking office,²⁶ leaving the country in a deep political and institutional crisis.²⁷ Both the military, foreign capital interests and the new-born native entrepreneurs were caught off-guard by this odd juncture, and were afraid of the Vice President’s (João Goulart, nicknamed Jango) ‘dangerous’ proximity to the working classes and ‘suspicious’ external missions (cf. Skidmore 1972). The escalating tensions precipitated what, in retrospect, could be seen as a first rehearsal of 1964s *coup d’etat*: Congress changed the system of government, introducing a parliamentary system to replace the presidential one that was, legitimately, in place. When Goulart took office as President, on 7 September 1961, his powers were considerably shrunk. Tancredo Neves, a (conservative) liberal was designated as Prime Minister.

The parliamentarian episode lasted until the beginning of 1963 when a plebiscite brought back the presidential system but by then inflation had jumped to 62 per cent and the trade balance had turned negative for the second time since 1953.²⁸ Institutionally and in terms of macro conditions, the country had clearly deteriorated. Both short and long term expectations were substantially eroded and that showed in investment and production decisions: the investment/GDP rate declined from 18 per cent in 1959 to 13.11 per cent in 1961, and the annual growth that had reached 9.8 per cent in that same year went down to 6.6 per cent in 1962 and 0.6 per cent in 1963.²⁹

Politically, the situation was also dismal. Goulart was a weak President who had much more powerful foes than allies and, therefore, could not govern. His actions while in office did not help to solve the confidence crisis among the military, businessmen and a sizeable part of civil society. A new profit remittance law was approved in September 1961 (limiting the profit repatriation to 10 per cent of the invested capital) and by the end of 1963, with inflation reaching 80 per cent, Goulart himself raised the wages of all public employees by 60 per cent and the minimum wage by 56 per cent (cf. Villela 2004: 63). The economy was clearly in a situation of stagflation. Promises, by the President, of nationalistic and *socialistic* reforms (such as the Foreign Capital Law and the Land Reform) and his appeals to the rank and file inside the military forces (at the expense of the *commanding officers*) only aggravated the political tensions and triggered the announced crisis.

²⁴ When Jânio Quadros from the – rather small – National Labour Party, and João Goulart from the Brazilian Labour Party were elected as President and Vice President respectively. Brazilian legislation at the time allowed separate elections for the President and Vice President.

²⁵ For example hosting and commending Che-Guevara in an official ceremony in 1961.

²⁶ And, to date, never adequately explained.

²⁷ On the day of Jânio’s resignation (25 August 1961) the Vice President was in China on an official mission.

²⁸ Cf. Appendix to this paper.

²⁹ Cf. Giambiaggi et al. (2004: appendix A14) and FIPE statistics for the Brazilian economy (www.fipe.org.br).

On 31 March 1964, the military seized power, backed by the business elite, foreign capital, the middle class and the US government. Democracy was put *on hold* and an era of political and institutional changes commenced (cf. Skidmore 1972; Belluzzo and Melo 1982).

The new military government appointed two leading conservative economists, Octávio Gouveia de Bulhões and Roberto Campos (as Finance and Planning ministers, respectively) to produce a diagnosis of the crisis and to undertake the necessary reforms to put the economy back on the growth track while getting rid of inflation and fixing the balance of payments. Campos was the one who really produced both the diagnosis and the stabilization plan, which contained a robust institutional reform including as its backbones a fiscal and a financial dimension. The diagnosis pointed mainly to government deficits and wage pressures as the *causa causans* of the inflationary process: the deficits fed the monetary expansion which satisfied the (nominal) wage demands (and these wage demands were *met* by the previous President's populism and turned into wage raises).³⁰

The main elements of the 'Campos-Bulhões' stabilization plan were the following: (a) a programme of fiscal adjustment which targeted an increase in fiscal revenue by means of tax raises, (b) a monetary programme that targeted decreasing rates of expansion of the means of payment, (c) a financial policy targeting credit control by tying its expansion to the monetary budget, (d) a wage indexation mechanism through which the nominal wage raises allowed by the government should keep the *average real wage constant* except for the partial incorporation the productivity increases, if they materialized (Hermann 2004).

The fourth element deserves a special comment, due to the fact that indexation was rapidly extended to almost all contracts in the economy, being removed completely only after the hyperinflation of 1988-94.³¹ Wage indexation was introduced as an authoritarian, but notwithstanding clever, 'conflict management' institutional device. It was planned as a way to keep wages and prices relatively aligned (although the readjustment rule was designed to provide wage-price *realignment* in order to allow profit margins to increase) while inflation was gradually being brought under control. The problem with the indexation mechanism is that its short and long term effects are conflicting ones. While in the short term it stabilizes expectations by way of producing some degree of predictability on future wage negotiations, it also introduces an element of inertia in the inflationary dynamics that prevents it from being effectively controlled and, also, amplifies the inflationary consequences of any sort of supply shock, as we will see in the next section Brazilian policymakers had a hard time learning this. In fact, it was hyperinflation – as mentioned – who taught them this lesson.

As a stabilization plan, the PAEG ('Plano de Ação Econômica do Governo' – Government Plan for Economic Action) did not succeed very well, which the evidence

³⁰ Cf. Campos (1964) and also, the extremely interesting, chapter 12 of his monumental autobiography (Campos 1994).

³¹ Although just four years later, following the Asian and Russian crisis turbulences, indexation, now to the exchange rate, was re-established for some (just privatized) public utilities. See section 4.

shows.³² As an institutional reform, on the other hand, it was a success. The fiscal and financial reforms re-equipped the state to lead the development process. They improved considerably the ‘fundamentals’ of the Developmental State forged during the Vargas and Kubitschek administrations and launched the era of extremely rapid growth during 1968-80 (the so-called ‘Brazilian Miracle’). It is to them that we now turn.

The fiscal reform aimed explicitly to raise the state’s fiscal revenue as well as the rationalization of the tax structure. A host of measures were introduced³³ in order to grant a stronger and more centralized fiscal base. The results showed up quickly: the tax/GDP rate went from 16 per cent in 1963 to 21 per cent in 1967 and escalated to 26 per cent in 1970.³⁴ The financial reform was robust and comprehensive.

Its most important elements were: (a) the creation of the Brazilian Central Bank³⁵ as the economy’s main policy-agent regarding monetary and financial issues and of the National Monetary Council as its main regulatory institution; (b) the creation, also in 1964, of a ‘National System of Real Estate Funding’ (lead by the National Bank for Housing Finance – BNH) in order to promote the construction industry; (c) the creation, in July 1964, of indexed bonds which were made attractive for private investors and created what would become a massive market for public-debt; (d) a capital-market law, enacted in 1965, which extended indexation to financial products issued by private financial institutions; (e) several incentives, mainly in the form of tax exemptions, to the acquisition of stocks by private investors; (f) a new law concerning foreign investment allowing much more flexibility to financial transfers abroad and profit repatriation; (g) a central bank resolution (Resolution n^o 63) that regulated foreign borrowing by native banks and its conversion to domestic credit to private firms; and (h) the extension of foreign borrowing directly to private firms. Financial deepening and financial openness were put together to produce an *institutional creative destruction*. The result was, to use a Schumpeterian analogy, synchronization between the capitalist economic-*system* and the capitalist institutional-*order* in Brazil.³⁶

An analytically meaningful way to access the financial reform is to see it as doing for the private sector what the fiscal reform did for the state. Besides also rationalizing the

³² The inflation targets were set as follows: 70 per cent for 1964, 25 per cent in 1965 and 10 per cent in 1966. The actual numbers turned to be 92, 34 and 39 per cent respectively. It is worth noting that the label *semi-stagnation* that is commonly used by textbooks on the Brazilian economy to describe this period (1964-67) is considerably misplaced; it was not a stagnation at all. GDP growth in that period was 3.4, 2.4, 6.7 and 4.2 per cent respectively. What was in place, to use a Minskyian phrasing, was a financial instability type of crisis. Cf. Minsky (1982; 1986).

³³ We do not have space to discuss them in detail here. The interested reader may peruse Hermann (2004) and Resende (1990).

³⁴ In 2004 the tax burden was around 36 per cent. See Giambiagi et al. (2004).

³⁵ Until then (1964) the Central Bank functions were, as already mentioned, inserted in the SUMOC and in the Banco do Brasil. This latter was, therefore, an ambiguous institutional creature mixing commercial lending and other functions of a public commercial bank with policymaking and implementation.

³⁶ Cf. Schumpeter (1928, 1942). By economic system he meant economic mechanisms at work like the impact of credit expansion on prices or the impact of technological change on productivity. For institutional order, Schumpeter specified the non economic elements which embedded the economic system (like the legal framework, entrepreneurial and other associations, conventions and ideologies).

country's financial system it, in fact, created a private capital market in Brazil. In so doing, while keeping the *visible hand* of the state in the core of the development process, the reform also gave business the means to privately finance its own growth.³⁷ The result was the conversion of the vast amount of industrial idle capacity inherited from Kubitschek's industrialization policy into extremely rapid growth.

The spurt began in 1968 with the GDP growing 9.8 per cent and accelerating to 11.3 per cent in 1971, 11.9 per cent in 1972 and topping 14 per cent in 1973. For the period 1968-73, the average was 11 per cent and for the 1968-80 period, 8.23 per cent. The impact of the first oil-shock in 1973 on growth was, as in South Korea,³⁸ merely to *decrease the growth rate*. Even more surprising was the overall macroeconomic performance. This massive growth was accompanied by decreasing inflation between 1968 and 1973 and stable inflation between 1974 and 1978.³⁹ Plus, the balance of payments situation improved with surpluses showing up from 1967 to 1973 and again in 1976-78.⁴⁰ That was Brazil's *miracle*.

The political basis of the *miracle* was, of course, the military whose rule acted as a powerful (and surely authoritarian) 'conflict management institution' (arbitrating gains and losses and suppressing, therefore, open conflicts and answering mainly to themselves). Notwithstanding, the civil elites and upper middle class were also 'enrolled' in supporting the new regime by the shape of the growth spurt: financial gains and the diffusion of durable goods were the *incentives* (Cardoso 1977). Economically, the miracle was heir to Kubitschek's 'Fifty years in Five' catch-up strategy, but its institutional architecture was clearly crafted by the Campos-Bulhões 'mandate'. Ironically it was Antonio Delfim Neto, Finance Minister from 1967 to 1974 (dubbed the 'czar of the economy') who took credit for the 'miracle'. Seen in retrospect, what really happened was that when Delfim assumed the 'commanding heights' of the economy (in March 1967) both the industrial capacity and the institutional framework were in place, and what he did was basically to 'cruise' an economy already prepared for a new boom. His greatest achievement was to recognize that and to explicitly announce it to the business community which, in turn, reinforced their long term expectations and investment decisions.

The inner mechanisms of the growth spurt are not difficult to understand. Robust increasing returns and learning effects associated with capacity utilization and industrial and commercial expansion, cheap labour, a vast pool of liquidity provided by financial

³⁷ Despite the fact that both Campos and Bulhões defended a smaller role *and* size for the state. One is tempted to say, at that time, theirs were 'ideas out of place' in the sense that to manage the inflationary crisis and, especially, the *institutional sliminess*, the state had to become (economically) both stronger and bigger.

³⁸ In fact, there are striking similarities between the Park regime in South Korea and the military rule in Brazil until 1980, especially regarding industrialization and industrial policy. There are also important distinctions such as rates of inflation, foreign capital treatment, social policy and, most of all, educational policy. Some of these similarities and contrasts are explored in Canuto (1994) and Amsden (2001), but the theme is still far from being exhausted and deserves further research. A useful comparison between Brazil and Argentina can be found in Fausto and Devoto (2004).

³⁹ Inflation dropped from 25 per cent in 1968 to 13.9 per cent in 1973. It escalated to 33 per cent in 1974, after the oil shock, but remained relatively stable in the 30s until 1978.

⁴⁰ Cf. Giambiaggi et al. (2004: appendix table A4, p. 407).

opening and deepening, improved public finance (especially the fiscal leverage) and, last not least, an *easy money* policy.

Delfim's 1968 Strategic Development Plan was openly 'developmental' exhorting (a) the consolidation of private enterprise, (b) expansion of the domestic market (especially for durable goods), (c) infrastructure development (to be provided by the government, by means of public enterprise's investment), (d) price stabilisation *but* with no mention to explicit inflation targets, (e) incentives to increase foreign borrowing,⁴¹ and (f) the extension of indexation to the exchange rate (what became known as the 'mini-devaluations'). Of these, the last three were the *Achilles' heel* of the plan and forerunners of both the soaring inflation and the financial fragilization of the 1980s. They helped to create, as we will stress in a moment, a classic minskyan situation of 'destabilizing stability'.

Before getting to that subject, it is mandatory to explain – albeit in a compressed form – the persistence of the growth path from 1974 to 1980 in spite of the oil shock and the international recession that followed it. Two factors were crucial to enable it: first, the industrial strategy of the Brazilian government, which was one of structural adjustment by means of industrial deepening. The Second National Development Plan (II PND) launched in 1974, under General Ernesto Geisel's Presidency and with Mario Henrique Simonsen as Finance Minister and João Paulo dos Reis Velloso as Planning Minister,⁴² diagnosed that a recessive (orthodox) response to the external shocks would only worsen the domestic situation both through impeding the completion of the heavy phase of Brazilian import-substitution strategy (and, therefore, retarding the economy's capacity to achieve self-sufficiency) and by eroding an export-led response to the balance of payments deterioration.⁴³ II PND was a bold complement to that diagnosis. It was a comparator of South Korean's 1973 Heavy and Chemical Push, and also had 'national self-sufficiency' as its main target (cf. Burlamaqui 1989). The key sectors to be created or expanded were oil production and substitution (the alcohol-as-fuel programme), steel, petrochemicals, telecommunications, electric energy (especially the giant hydroelectric plant in Itaipu), highways and the nuclear programme (cf. Castro and Souza 1985 and Castro 2003). The projected GDP growth for the period 1974-79 was 10 per cent per year!⁴⁴ Those were the years of the *marcha forçada* (forced march) of

⁴¹ Brazil's foreign debt went from US\$3.4 billion in 1967 to US\$25 billion in 1975. In 1980, it had reached US\$64 billion. Cf. Brazil's Central Bank statistics (n.d.).

⁴² If someone had to be dubbed czar of the economy, it should be Velloso who occupied the Planning ministry from 1969 to 1979. His memoirs are extremely interesting from the point of view of the unfolding of Brazil's 'second catch-up'. Cf. Velloso (1986).

⁴³ Cf. Velloso (1986) and Castro and Souza (1985). For a more critical account, see Suzigan and Villela (1997). The recessive orthodox response to an external shock which is supposed to increase export by switching expenditure from domestic to the external sector would only work: (a) if the economy was at fully employing its productive capacity. This was clearly not the case. The economic structure was being submitted to a *major change*. New and more technologically upgraded capacity was being produced; (b) if (global) imports demand was infinitely elastic with respect to (increasing) national exports which, obviously, is never the case, and especially was not in the recessive years of 1974-79. To sum up: the orthodox response was based on a static and perfect competition model which never really worked neither for the developed countries nor, a fortiori, for the developing nations; as the east-Asian policymakers realized better than most of their peers elsewhere.

⁴⁴ The actual rates were, respectively, 8.15, 5.15, 10.26, 4.93, 4.97, and 6.76 per cent.

the Brazilian economy, to quote Castro and Souza's (1985) classic book about the II PND.

The second enabling condition to that *marcha forçada* was (reckless) finance. Skyrocketing external debt provided by the huge liquidity pool created with *petrodollars* and the, consequent, international banker's penetration in Latin-America to find customers for their star merchandize: debt. Brazilian external debt, which was already rapidly increasing since 1967 reached US\$38 billion in 1977, US\$64 billion in 1980 and escalated to US\$102 billion in 1984) (cf. Brazilian Central Bank statistics n.d.). As is well known, both the terms and interest rates attached to these debt contracts were not fixed but floating, and were revised each six months. Therefore, the 'forced march' years can be seen, as mentioned (and analogously to what happened during the Kubitschek's years) as a successful 'second catch-up' from the point of view of Brazil's industrial structure (cf. Castro 2003), but also, as a classic case of *destabilizing stability* which unfolded as a double process of financial fragilization: rapidly raising both domestic inflation and external vulnerability.⁴⁵

The second oil shock in 1979, followed by the mega-raise of interest rates in the US by the Volker administration pushed the Brazilian government's debt structure from a Speculative position into a Ponzi one (cf. Minsky 1982; 1986).⁴⁶ In 1981, a huge recession was in place; in the next year the Mexican government declared moratorium and, from then on; the external financing sources completely dried out. Although GDP still increased 7.8 per cent and 7.5 per cent in 1985 and 1986, the growth era was clearly coming to an end. The 1985-2004 period would become known as the *lost decades* and its fundamental policy concern would become macroeconomic stabilization.

On the ideological front, big changes were also taking place. With stagflation and financial liberalization, both Keynesianism and National developmental-*ism* were, as economic ideologies, fading away.⁴⁷ In that sense, the elections of UK Prime Minister Margaret Thatcher and US President Ronald Reagan were really a watershed. With

⁴⁵ From Minsky's perspective, finance and financial relationships are fundamental because they *oxygenate* economic units, allowing them to purchase without previous savings; and they make growth and structural transformation possible, by providing current purchasing power to those who would use it to expand the boundaries of the system. However, in his thinking, finance has a double-edge quality. The other side of the 'positive' roles mentioned above is that finance allows economic units to become illiquid in the present (by way of cash commitments) in exchange for the *possibility* of recovering liquidity (plus profitability) in the future; specifically, it permits these units to acquire assets whose expected cash-flows will exceed the cash commitments entered into to acquire them. Thus finance allows the undertaking of future commitments that may turn out to be impossible to fulfil. Failures of expectations realization then take the form of liquidity crunches, or in severe cases, of insolvencies and bankruptcies.

⁴⁶ Minsky's analysis is based on the relationship between debt structures and investment expending and defines three balance sheet configurations: hedge, speculative and Ponzi. The Ponzi structure is one that emerges when economic units need to increase their borrowing just to 'stay in business', but to which, according to the aphorism and good credit assessment, bankers should not lend under any circumstances (in this respect see also Kregel 1997).

⁴⁷ Although as policy-strategy, national-developmentalism would cross the 1980s with relatively little challenges in Brazil (and *a fortiori* in the 'Asian tigers'). Cf. Bielshowsky (1995). For general discussions on that issue, see Campbell and Pedersen (2001) and Gao (1997). For a comparison between Brazil and Mexico's Developmental States, see Schneider (1999).

them, neoliberalism began its crusade. The state turned out to be, in their phrasing, ‘part of the problem, not the solution’.

4 Stabilization, institutional reforms, and stagnation – the ‘lost decades’: 1985-2004

The mid-1980s marked the return to a civilian government. Partly because of the poor economic performance of the early 1980s, and partly because of the society’s own demand for a return to democracy, the military government ended in 1985. Despite the popular pressures for direct presidential elections, the transition was managed by the top military and civil leaders and culminated in the indirect election of (former Prime Minister in the short 1961-63 parliamentary experiment) Tancredo Neves, by the Senate and the House of Representatives, in 1985. President Neves was supposed to take office in March of that same year, but he fell ill days before his inauguration and died a couple of months later. The (indirectly) elected Vice President, José Sarney, took office in Neves’s place and governed Brazil until March 1990.

Reducing inflation quickly became the main priority of economic policy since, in the wake of the debt crisis and the subsequent abrupt exchange-rate depreciation necessary to reduce Brazil’s current-account deficit, the annual inflation rate rose from 90 per cent, in 1980, to 202 per cent, in 1984.⁴⁸ In an economy with a high degree of price indexation, devaluation was quickly transmitted to domestic prices, which in their turn led to another increase of the exchange rate in a continuing loop. In other words, because of the widespread indexation of contracts, Brazilian inflation had a strong persistency, in the sense that an adverse supply shock would push it up to new level, where it would remain stable until another supply shock hit the economy. From an institutional perspective, the conflict-management rules instituted by indexation were clearly counterproductive because, as each side tried to defend itself against changes in relative prices, the only result was more inflation and increasing macroeconomic instability.

Between 1985 and 1994 the Brazilian economy was subject to six heterodox stabilisation plans, namely: the *Cruzado* plan of 1986 (named after the new currency created at the time); the *Bresser* plan of 1987 (named after the then Finance Minister); the ‘Summer’ plan of 1989 (implemented in January); the *Collor I* plan of 1990 and the *Collor II* plan of 1991 (named after the President at the time); and the *Real* plan of 1994 (after the new currency). The common element of all these plans was the use price controls and a currency reform to reduce inertial inflation abruptly to one-digit levels. The general consensus at the time was that an orthodox (IMF-style) stabilisation strategy would be useless because inflation was mostly inertial and, therefore, independent of the level of economic activity. The main differences of each plan were how to control prices and manage macroeconomic policy after the currency reform.⁴⁹

⁴⁸ Inflation measured by the change in the GDP price index.

⁴⁹ Due to space limitations, an analysis of each stabilization attempt is beyond the scope of this paper. The basic references of the Brazilian debate over stabilization are Arida and Resende (1984), Lopes (1986), Bresser-Pereira and Nakano (1986), Modiano (1988), Pastore (1990) and Franco (1995).

In general, the first five plans failed mostly because of a host of *policy failures*, namely, a mix of poorly designed price controls and a chronic inability to control the exchange rate. In the late 1980s and early 1990s capital inflows to Brazil were minimal and the economy's trade surpluses were insufficient to sustain an exchange-rate peg, which was a vital part of any stabilisation strategy. Thus, after an initial success in reducing inflation, each of the first five plans failed because of the circumvention of the price controls and exchange-rate pressures.⁵⁰ The most dramatic episode occurred in 1987, when the erosion of foreign reserves because of the expansion and exchange-rate appreciation caused by the Cruzado plan led the government to adopt a moratorium on foreign debt (cf. Batista Jr. 1988).

The late 1980s and early 1990s were also marked by major political and institutional changes. In 1989 Brazil had its first direct presidential election since 1960. In a highly competitive and turbulent process, Fernando Collor de Mello defeated the left-wing candidate, Lula, and took office in 1990.

Collor's economic policy was based on a mix of a heterodox stabilisation strategy, as mentioned above, and liberal institutional reforms. The basic idea was that it would be possible to reduce and stabilise inflation only after capital flows returned to Brazil, which in turn required liberalized capital markets. The change occurred in the early 1990s when there was a world-wide increase of capital flows to emerging markets, and when the failure of the *Collor* stabilisation plans led the Brazilian government to intensify the liberal part of its strategy. In fact, in parallel to institutional reforms geared towards financial and trade liberalisation, the Collor administration also adopted a high-real-interest rate policy,⁵¹ to which financial markets responded quickly.

The surge in capital inflows was temporarily halted in 1992, when clear and widespread evidences of corruption led to a massive popular movement to impeach Collor; in turn increasing the political and economic uncertainty of investing in Brazil. Collor was impeached in October of that year and replaced by his Vice President, Itamar Franco. Franco started with a more nationalist and interventionist economic strategy, but quickly toned down his position when faced with the risk of a major economic crisis. After having three Finance ministers in his first seven months in office, Franco gave in to business ('the markets') and political pressures and, in May 1993, appointed Fernando Henrique Cardoso to the position.⁵²

In response to the high real interest rates and Cardoso's market-friendly approach to economic policy, capital flows returned *en masse* and the country was able to accumulate the foreign reserves necessary to make another stabilisation attempt, this time with the aid of an exchange-rate peg. In parallel to restoring capital inflows,

⁵⁰ Solnik (1987) presents an interesting account of the failure of the Cruzado plan and the state of ideas at the mid-1980s. Castro (2005a; 2005b) contains a summary of all stabilization attempts.

⁵¹ More precisely, at the end of in 1991 the Central Bank of Brazil started to set its interest rate substantially above the growth rate of the Real-US\$ exchange rate, offering huge arbitrage gains to foreign and domestic investors.

⁵² Cardoso brought back to the government most of the economists who were in charge of the Cruzado plan.

Cardoso also renegotiated Brazil's foreign debt along the lines of the Brady plan, normalising the country's financial situation in foreign markets.⁵³

The *Real* plan was implemented in 1994. The basic idea was to simulate a hyperinflation by creating two official currencies: one to serve as the unit of account, and the other to serve as means of payment. In other words, prices had to be quoted in a government index, but transactions had to be settled in the official currency. The government adjusted the value of its unit of account on a daily basis to keep it stable in terms of US dollars and, after private agents had four months to adjust their prices to the new unit of account a new currency, the *real*, was introduced, at par with the US dollar.⁵⁴ The success was immediate, that is, inflation fell abruptly to a one-digit level and the economy boomed because of the reduction of the inflation tax and currency appreciation.

In order to keep inflation down after the currency reform, the Brazilian government continued to use high real interest rates to attract foreign capital and sustain the appreciated exchange rate, so that the prices of tradable goods became anchored to international prices. Moreover, to intensify the competitive pressure on domestic producers, the government also reduced import tariffs unilaterally, which together with appreciation and a consumption boom quickly led the economy to high current-account deficits.⁵⁵ However, despite the increase in foreign indebtedness-based financial fragility of the economy, the stabilisation strategy worked well as long as there were plenty of foreign capital inflows flooding the economy. The unfavourable domestic counterpart was an increase in the ratio of public debt to GDP, since government bonds were the main instruments used to attract foreign capital.⁵⁶ In terms of Minsky's analysis, the *Real* plan brought, again, a highly speculative position to the Country in relation to international financial markets, a position that could only be reversed by a huge increase in net exports which was *expected* to happen after the stabilisation and liberal reforms increased the international competitiveness of the economy.

Cardoso was elected President in 1994, and re-elected in 1998. Contrary to the liberal expectations, the recovery of net exports did not materialize during his first term (1995-98). In fact, the balance-of-payments problems worsened after the 1997 East Asian crisis, and became unsustainable after the Russian 1998 crisis. Because of the reduction in foreign finance and the high current-account deficits, the inevitable

⁵³ The renegotiation was completed in 1994 and it involved the securitization of approximately US\$40 billion.

⁵⁴ The *real* was introduced at par, but the government let it fall to 85 cents in the US\$ in the initial months of the *Real* plan. Only after the Mexican crisis of 1994-95 did Cardoso devalue the currency, by 6 per cent, and switch to a policy of 'minidevaluations' in order to keep the real exchange rate stable.

⁵⁵ In terms of GDP, the current-account deficit was 0.33 per cent in 1994, 2.61 per cent in 1995, 3.03 per cent in 1996, 3.77 per cent in 1998, and 4.24 per cent in 1998.

⁵⁶ The Collor I stabilisation plan also involved a forced refinancing of domestic public debt, at lower interest rates and longer maturities, reducing the debt-GDP ratio substantially in the early 1990s. The situation changed after the *Real* plan, with the public debt-GDP ratio rising from 33 per cent in mid-1994 to 55 per cent at the end of 2002.

currency crisis came in 1999.⁵⁷ Inflation rose, but due to the lower degree of indexation brought by the *Real* plan and the restrictive macro policy adopted by the government, it did not run out of control. On the monetary side, the Central Bank of Brazil adopted an inflation-targeting policy and a floating exchange-rate regime shortly after the crisis. On the fiscal side, because of the crisis and as a condition to obtain liquidity assistance from the IMF, the government increased its primary surplus substantially to avoid an explosive increase in the public debt-GDP ratio.⁵⁸

Despite the change in the exchange-rate policy, the Brazilian macroeconomic policy continued to be characterized by high real interest rates after 1999, but this time with high primary fiscal surpluses. Officially, the Central Bank of Brazil had no exchange-rate target, but because of liberalized capital flows and the importance of the exchange rate for domestic prices, monetary policy had to follow international conditions and investors' expectations otherwise a sharp devaluation of the *real* would have driven inflation well above the pre-specified ceilings.

Independently of the more restrictive macro policy and investor-friendly approach of the Cardoso administration, the economy was hit hard again in 2001, because of the Argentine crisis, and in 2002, because of the expectation of Lula's victory in that year's presidential elections. The two events led investors to anticipate a default by Brazil, which in its turn resulted in a substantial reduction in capital inflows.⁵⁹ The exchange rate shoot up, inflation accelerated, growth decelerated, and, finally, net exports started to rise.

Despite the expectations of a major change in macroeconomic policy after Lula's victory, the new administration quickly announced that it would basically follow the same strategy of Cardoso, if anything with a higher intensity.⁶⁰ In fact, the first measures of Lula were to raise interest rates, increase the government primary surplus and assure investors that the country would not default on its debt.⁶¹ As usual financial markets responded quickly and enthusiastically. Capital flows poured in, the exchange rate fell, inflation decelerated and, after a short recession in 2003, the economy boomed in 2004. Whether or not such an expansion will be sustainable is not clear because of the contradictions of the macroeconomic policy inherited from the Cardoso administration.

In short, since 1999 Brazil has a dirty floating regime with high real interest rates and high primary surpluses to avoid an acceleration of inflation and an explosive increase of

⁵⁷ The question asked by most of the business community then was not *if* but *when* it would materialize. That is also why when it came, almost all firms and wealthy individuals were hedged and the effects in the banking system were extremely mild.

⁵⁸ The average primary surplus was 0.5 per cent of GDP during Cardoso's first term, and 3.2 per cent during his second term.

⁵⁹ In addition to these two shocks, Brazil also suffered a shortage of electrical power in 2001, which reduced GDP growth in approximately one percentage-point. The causes of the shortage were an unexpected drought in 2001 and the low investment in energy production in the previous years.

⁶⁰ To do this Lula appointed a very orthodox economic team, with no or little connections to the Workers' Party.

⁶¹ The primary-surplus target has been raised to 4.25 per cent of GDP and, since Lula's inauguration, the annual base real interest rate has been fluctuating between 9 and 12 per cent.

public debt. However, during most of the period, interest rates have been so high that the primary surpluses have not been able to stop the increase in the public debt-GDP ratio. Because of this fiscal-monetary inconsistency, and because of the low inflation targets set for the economy, Brazil's Central Bank has been tolerating exchange-rate appreciations, but fighting depreciations, which in its turn can lead to recurrent balance-of-payments problems. So far the increase in commodity prices and worldwide expansion of 2003-04 has compensated the exchange-rate appreciation under Lula.

However, such a speculative growth strategy can, as pointed out in the previous section, quickly turn bad in face of adverse financial shocks from abroad. The other important consequences of the macroeconomic policy of Cardoso and Lula have been an increase in the tax burden and a reduction of government investment in terms of GDP, especially in infrastructure, to compensate for the increase in current public expenditures and meet the increasing-primary surplus targets. The immediate result has been the slowing down the growth rate of productivity, hurting the competitiveness of domestic production, and – again – increasing the risks associated with the speculative position of the economy in relation to international financial markets.

Concerning the main institutional changes associated with the return to a civil government and to the host of stabilisation initiatives, the Brazilian economy also dived into a very busy period. The first round of institutional changes happened in 1985-86, before the *Cruzado* plan, and was aimed to aid the country effort to reduce inflation. On the monetary side, monetary policy was centralized at the Central Bank of Brazil by eliminating the overdraft credit lines offered by that institution to the *Banco do Brasil* (the main federal commercial bank). On the fiscal side, the National Treasury Department was created, within the Ministry of Finance, to centralize the federal budget and debt management. Because of the uncertainty and volatility of the high inflation years, these changes had little impact initially. However, since the creation of the *real*, in 1995, the Central Bank and the National Treasury Department have become the most important centers of power within the federal government. They turned to be the new pilot agency – with a new diagnosis and policy agenda – steering the economy.

The second and major round of institutional changes happened in 1988, when the National Congress promulgated a new Constitution. The main institutional innovations were an increase in the control by state and local governments over the total country's tax revenues, and an increase in public resources to education and to the 'social safety net' (unemployment and social security benefits). The main objectives were a decentralisation of resources' appropriation and an improvement of overall social conditions. The main result was to channel public resources to specific ends, which subsequently led the federal government to circumvent part of the legislation by special and temporary decrees, as well as to create new taxes to recover part of its tax revenue.

Trade liberalisation also started in 1998, with a reduction of tariff and non-tariff barriers to imports, but it did not have an immediate impact on the economy because of the high inflation and low growth of the period. The other major institutional change of the period was the creation of *Mercosul*, a tariff union of Brazil, Argentina, Uruguay and Paraguay, to boost intra-regional trade.⁶² *Mercosul* would be highly effective for the

⁶² The first treaty of integration between Brazil and Argentina was signed in 1988. *Mercosul* was officially created with the inclusion of Paraguay and Uruguay, in 1991.

bilateral trade between Brazil and Argentina in the mid-1990s, when the regional bilateral exchange-rate remained fairly stable and both economies grew. After the Brazilian crisis of 1999 the situation was reversed and, since then, further integration of the two economies has been blocked by exchange-rate misalignments.

The third round of institutional changes happened in early and mid-1990s and consisted of reinforcing financial liberalisation and foreign-debt securitization, as mentioned earlier, together with privatisation. The Collor administration started the privatisation programme and the Cardoso administration intensified it. The main goal was to reduce the participation of public enterprises in the economy, especially in the mining, telecommunications, finance, and energy sectors. The neoliberal expectations were that this would improve efficiency, substitute private for public investment, and free resources for social expenditures. Most of the privatization operations were done in 1997-98, when the foreign financial situation deteriorated after the East Asian crisis. In such an adverse situation, many concessions had to be made to private investors, such as special funding by BNDES (which became *the* agent of privatisation), and the indexation of energy and telecommunication tariffs to a foreign-exchange sensitive price index, in order to attract foreign capital. The reinstatement of indexation to public-utility prices made inflation targeting more difficult and costly in terms of output and employment since then.

The final round of institutional changes happened in the wake of the 1999 crisis and consisted basically of instituting inflation targeting as the main objective of monetary policy, as mentioned earlier, as well as an increase in the tax burden and the adoption of strict fiscal guidelines. In 1996 the Central Bank of Brazil created the Monetary Policy Committee (*Copom*) to set its base interest rate.⁶³ With the adoption of inflation targeting this institution became very important and, in the Lula administration, it has been acting pretty independently of the Federal Government. The Central Bank of Brazil is not formally independent though. The President of the Republic can appoint and dismiss the President and the Directors of the Central Bank at any time, provided that the Senate subsequently approves appointments. A council formed by the Ministry of Finance, the Ministry of Planning, and the President of the Central Bank sets the inflation target, and then the *Copom* manages interest rates, exchange rates and reserve requirements to meet such targets. If the targets are not met, the Central Bank has to issue an open letter to the President explaining why that happened and what would be done to meet the targets in the near future.

Also as a consequence of the 1999 crisis, the government instituted the 'Fiscal Responsibility Law' in 2000, which imposed strict limitations on the expenditures of local and state governments, as well as created a set of austere rules to be followed by the federal government.⁶⁴ The most important rule was to set a target for the primary surplus of the whole public sector to avoid an explosive increase of public debt, which in the case of Brazil meant a highly procyclical fiscal policy. The mechanism works as follows: when the macroeconomic situation worsens, the exchange rate rises, the Central Bank raises interest rates to fight inflation, and the National Treasury raises the

⁶³ The *Copom* is formed by the President and the eight Directors of the Central Bank.

⁶⁴ The main points were a strict limit to personnel expenditures on state and municipal governments and the renegotiation of the intra-government debt between the regional and federal administrations.

primary-surplus target to compensate for the higher interest payments. An important caveat here is that, so far, most of the increase in the primary surplus has been done through an increase in the tax-GDP ratio and a reduction in public investment, which tends to reduce the competitiveness of domestic producers.

All together, the institutional changes of 1985-2004 had two main objectives: to control inflation and to reduce the state intervention in the economy. On the one hand, because of the high inflation tax on the poor during the high-inflation years, reducing inflation became crucial for every civil President to obtain political support from the population. On the other hand, given the financial fragility crisis and the overextension of the military development strategy in the early 1980s, reducing the economic role of the state was perceived as a natural complement to the return to democracy. Most important, reducing the economic role of the state was also crucial to implement a liberal stabilisation strategy based on foreign capital inflows, as well as to gather the political and financial support from the Brazilian elite. In fact, since 1985, and especially during the 1990s, the Brazilian economic policy has been dominated by *rentier* interests, with growth, employment and income distribution occupying a subsidiary role.

As mentioned earlier, the dominant ideology has become the Washington Consensus, with the key offices in the federal government being occupied either by former executives from private or multilateral financial institutions, or by neoclassic American-trained economists that would later, and quite systematically move to privileged positions in financial institutions.⁶⁵

Despite its praise by financial markets and the IMF, so far the record of ten years of the neoliberal strategy⁶⁶ has been, from the developmental perspective, poor. The average GDP growth rate was 2.8 per cent in the high-inflation years (1985-94), and 2.3 per cent since stabilisation (1995-2004). The corresponding per-capita numbers are 1.1 and 0.9 per cent, respectively. Inflation has been reduced, but unemployment rose to double-digit levels in the late 1990s. Informal jobs grew relatively to formal jobs, and the average real wage stagnated. On the fiscal side, public debt rose substantially in relation to GDP despite the increase in the tax burden and the cut in government investments. Interest payments responded for most of the increase. The economy became more open to foreign trade and finance, but it neither increased its participation in world exports, nor reduced its fragility to sudden stops in foreign finance. So far trade liberalisation and slow growth led to a modernisation of industry, but with a small increase in its capacity of production, and very uneven results in terms of technological upgrading.⁶⁷

The main progress happened in agricultural production (agribusiness), with a substantial increase in production and productivity indexes of export products, and in oil production, where the still state-controlled company, Petrobrás, increased its share of

⁶⁵ Or, they would start their own asset management companies.

⁶⁶ These cannot be called institutional innovations but rather, mostly, an institutional *dejà-vu* since all the reforms were about turning back history by fifty years. The big exception here is the des-indexation strategy by means of an indexed *currency* (the opposite of the, until then, overwhelming indexation of prices). This was a major, and successful, *policy innovation*.

⁶⁷ See the Conclusion for more on this issue.

the domestic market substantially.⁶⁸ Also noticeable were the changes in social policy brought by the 1988 constitution. Since then, the average schooling of the population has been increasing slowly, while poverty has been falling gradually. The income distribution remained practically the same though, with a reduction in the income-share of the middle class.

The crucial positive element from the perspective of twenty years of observation and social analysis seems to be the consolidation of political stability and an increase in the transparency and accountability of the government. Since 1985 the country has been able to deal with economic crises without major widespread political disruptions. The crucial negative issue was, of course, the *lost decades* concerning growth, employment and income distribution.

5 Conclusion

From the point of view of a study concerned with the relationships between Institutions and Economic Development, the Brazilian experience in the last half century should leave no doubt about not only its relevance: it is a crucial one: that relationship can be mapped very clearly as we expect to have showed. But also on its direction: it runs *from* institutional change/innovations *to* economic development and economic transformation. *Institutional origins for economic outcomes* would be a synthetic way to phrase it.⁶⁹ Obviously, the economic process is dynamic and, therefore, the relationship is not straightforwardly unidirectional. There is a feedback: institutional change is usually followed by institutional inertia and the latter brings *because of its stabilizing effects*, what Schumpeter termed a constant tension between the capitalist order and the capitalist system, or, in Minsky's phrasing, a destabilizing stability (cf. Schumpeter 1928, 1942: part 2).

When we look specifically to the historical record summarized in the previous sections, some analytical observations emerge. The *first* one is that from a strictly 'manufacturing matters' point of view, the Brazilian growth spurt from the 1930s to the mid 1980s was a huge success. Brazil was one of the fastest growing economies in the world. But this perspective is no good for the years after 1985. It begs the question: why did the growth stop? The answer to this question can be outlined, as we saw, within a Schumpeterian-Minskyan framework, and with an important reference to the dynamics of the Developmental State.

From the Schumpeterian angle, the whole Vargas' period was one of intensive institutional innovation (and state building) where the basis of the Brazilian Developmental State was forged as well as an appropriate institutional landscape for

⁶⁸ It is worth noting to that matter that the agricultural sector was benefited by a subsidized credit line by BNDES, during the Cardoso administration, whereas Petrobrás increased its production through the investment of retained earnings and the discovery of new oil fields. Interestingly enough, both measures were clearly running against the neoliberal textbook agenda.

⁶⁹ For more on that issue, from a theoretical point of view but with case studies of Turkey, Syria, South Korea and Taiwan, see Waldner (1999). Of course the reverse causation is not excluded here. There is feedback. The analytical point is only that the causation seems to be stronger in the above mentioned direction.

industrial creative destruction. That ‘wave’ of (imported) creative destruction was what the Kubitschek administration did. The 1956-61 period was both a robust gale of innovation and creative destruction, and a successful catching-up development strategy. The monetary and financial problems of the early 1960s and the institutional mismatch of that time were, according to this view, endogenously created by the previous boom. The following stagnation was a ‘therapeutic’ one and the subsequent wave of institutional innovation under the first military government was a necessary pre-condition for reinstating growth.

As for the development plans of the late 1960s and early 1970s that propelled the ‘Brazilian miracle’, they were, from that same angle, much more ‘industrial capacity-intensive’ than ‘innovation-intensive’ and, therefore, missed a crucial turning point: the technological catching-up with the emerging third technological revolution. From the mid-1980s onwards successive waves of ineffective institutional innovation and policy shifts – including the (partially successful) attempt to destroy the (already financially damaged) Developmental State – plus the technological ‘falling behind’ should be seen as the hard core of the *lost decades*. This, we claim, is not a bad way to interpret the historical evidence at hand, but it leaves an extremely important element out of the picture: finance. It is here that enters the Minskyan approach.

From a Minskyan perspective, the whole financial architecture enabling the Brazilian growth spurt was always a shaky one. From the Kubitschek’s administration inflationary finance-funding scheme (and increasing balance of payments problems), through Campos’s ingenious (but ultimately self-defeating) indexation scheme, towards the reckless management of the country’s increasing financial fragility (both internal and external) by Delfim Netto and the crowd of finance ministers from 1985 to 1995 and culminating, last but not least, in the single-handed crisis-bounded fixed exchange rate policy crafted by the central bank’s President Gustavo Franco between 1995 and 1999 (but completely backed by both Finance Minister Pedro Malan and President Cardoso); the financial structure was, at all times, increasing the propensity towards financial fragility that normally springs from both developed and, *a fortiori*, from developing economies.

In that sense, through Minskyan lenses, the growth spurts experienced by the Brazilian economy since the 1950s should be regarded as both inflation and external liquidity-dependent. It was, therefore financially very fragile. The simultaneous emergence of intractable problems on both fronts, since the mid-1980s, turned the endemic, and ever increasing, financial fragility into financial vulnerability and finally into financial crises. This would explain the halt of economic development in the country, e.g.: the *lost decades*.⁷⁰

A closing comment on the Brazilian development experience from the perspective of 2005: catching-up or falling behind? The simplified answer would be, of course, falling behind, but a more nuanced one should point to a more complex – and open – outlook. Although overall, the industrial tissue did not engage forcefully in most of the third

⁷⁰ Seen from that perspective, the military rule was instrumental in heavy-handed conflict management and in (barely) keeping inflation under control until 1985 and, on the other hand, ‘democratization’ clearly increased the complexity of achieving them.

technological revolution, a lot of organizational innovation and capabilities building⁷¹ were done by the private sector in the last decade. Plus, although the opening up of the economy since the early 1990s came in too fast, and in a poorly coordinated way (with the ensuing foreign competitors wiping⁷² a sizeable part of the already shaken industrial base) it also prompted the surviving firms and sectors to a quick industrial modernisation.

As Castro and Proença (2001) and Castro (2005) have recently shown, a sizeable part of the private sector – and a few public enterprises – is ‘ready to go’ (cf. Castro and Proença 2001). Plus, in a few sectors of the economy (and especially in some leading firms and public research institutions which survived the opening-up) technological catch-up has effectively occurred: aviation (EMBRAER, Aeromot), high-tech oil extraction and refining (Petrobrás), agribusiness (Embrapa,⁷³ Sadia, Perdigão, Cutrale), automobiles (Fiat, Volkswagen, Marco Polo), steel making (Usiminas) mining and logistics (Vale do Rio Doce), telecommunications services (Vivo, Claro, Tim, Embratel) are important examples of firms that are now increasingly producing (and many of them exporting), at the technological frontier and possessing a strong domestic productive base. Will those firms be able to positively contaminate others to engage more forcefully in technological catch-up and in strategic reorientation? This is an open question.

Finally, when will the Brazilian economy finally recover from its long term prostration and revamp?⁷⁴ It is another open question. From the point of view of ‘enabling’ institutional innovations, it is important to notice that important positive changes were done in the last two years and some are still in the making.⁷⁵ But in answering it, finance – debt structures, financial regulation and interest rates – will surely have the final word.

⁷¹ Such as operations management, logistics, industrial rationalization and marketing research

⁷² By way of a wave of mergers and acquisitions but also by pushing domestic firms to bankrupt.

⁷³ A public research laboratory.

⁷⁴ The GDP growth in 2004 was 4 per cent.

⁷⁵ Those include a new, and much more modern, Civil Code, an innovation law, an industrial policy agenda to be implemented under the supervision and financial assistance of the BNDES, and the restructuring of the Brazilian Patent office (currently underway).

Appendix

	Real GDP growth (%)	Annual inflation rate (%)	
		Consumer price index- IPC/FIPE	Trade balance as % of GDP
1950	6.80	3.72	2.7
1951	4.90	11.27	0.2
1952	7.30	27.16	-1.4
1953	4.70	19.23	3.2
1954	7.80	22.57	1.3
1955	8.80	18.44	2.8
1956	2.90	26.46	3.0
1957	7.70	13.74	0.5
1958	10.80	23.36	0.5
1959	9.80	42.70	0.5
1960	9.40	32.20	-0.1
1961	8.60	43.51	0.6
1962	6.60	61.73	-0.5
1963	0.60	80.53	0.5
1964	3.40	85.60	1.6
1965	2.40	41.20	2.9
1966	6.70	46.29	1.5
1967	4.20	25.33	0.7
1968	9.80	25.22	0.1
1969	9.50	22.58	0.9
1970	6.70	17.46	0.5
1971	11.30	20.60	-0.7
1972	11.94	17.46	-0.4
1973	13.97	13.97	0
1974	8.15	33.05	-4.2
1975	5.15	29.26	-2.7
1976	10.26	38.07	-1.5
1977	4.93	41.10	0.1
1978	4.97	39.91	-0.5
1979	6.76	67.19	-1.3
1980	9.20	84.77	-1.2
1981	-4.25	90.87	0.5
1982	0.83	94.63	0.3
1983	-2.93	164.09	3.4
1984	5.40	178.56	6.9
1985	7.85	228.22	5.9
1986	7.49	68.08	3.2
1987	3.53	367.12	4.0

1988	-0.06	891.67	6.3
1989	3.16	1.635.85	3.9
1990	-4.35	1.639.08	2.3
1991	1.03	458.61	2.6
1992	-0.54	1,129.45	3.9
1993	4.92	2,490.99	3.1
1994	5.85	1,172.96	1.9
1995	4.22	23.17	-0.5
1996	2.66	10.04	-0.7
1997	3.27	4.83	-0.8
1998	0.13	-1.79	-0.8
1999	0.79	8.64	-0.2
2000	4.36	4.38	-0.1
2001	1.31	7.13	0.5
2002	1.93	9.90	2.9
2003	0.54	8.18	4.9
2004	4.9	6.56	5.5

Source: Fundação Instituto de Pesquisas Econômicas – FIPE/USP Statistics. (www.fipe.org.br)

References

- Amsden, A. (2001). *The Rise of the Rest*. Oxford: Oxford University Press.
- Arida, P. and Resende, A.L. (1984). ‘Inflação Inercial e Reforma Monetária’, in P. Arida (ed.), *Brasil, Argentina, e Israel: Inflação Zero*, Rio de Janeiro: Paz e Terra.
- Batista Jr, P.N. (1988). *Da crise internacional à moratória brasileira*, Rio e Janeiro: Paz e Terra.
- Belluzzo, L. and Melo J.M.C. (1982). ‘Reflexões sobre a Crise Atual’, in L. Belluzzo and L. Coutinho (eds) *Desenvolvimento Capitalista no Brasil – Ensaio sobre a crise*. São Paulo: Brasiliense.
- Benevides, M.V.M. (1976). *O Governo Kubitschek – Desenvolvimento Econômico e Estabilidade Política – 1956-1961*; 2nd edn, Rio e Janeiro: Paz e Terra.
- Bielschowsky, R. (1995). *Pensamento Econômico Brasileiro – o ciclo ideológico do desenvolvimentismo*. 2nd edn, Rio e Janeiro: Contraponto.
- Brazil’s Central Bank statistics (n.d.) www.bcb.gov.br
- Bresser-Pereira, L.C. and Nakano, Y. (1986). ‘Inflação inercial e choque heterodoxo no Brasil’ in J.M. Rego, (ed.), *Inflação Inercial, Teorias sobre Inflação e o Plano Cruzado*, Rio de Janeiro: Paz e Terra.
- Burlamaqui, L. (1989). ‘Condicionantes Sócio-políticos e Política Industrial na Coréia do Sul’, *Contexto Internacional*, 10, July-December.
- Campos, R. (1994). *A lanterna na popa – memórias*, Rio: Topbooks.

- Canuto, O. (1994). *Brasil e Coréia do Sul – Os (des) caminhos da Industrialização Tardia*; São Paulo, Nobel.
- Cardoso, F.H. (1977). *O Modelo Político Brasileiro*. Difel.
- Castro, A. (1994). ‘Renegade Development: Rise and Demise of State-Led Development in Brazil’ in W.C. Smith, C.H. Acuña and E.A. Gamarra (eds) *Democracy, Markets & Structural Reform in Latin America: Argentina, Bolivia, Brasil, Chile and Mexico*, Transaction Publishers.
- Castro, A. (2003). ‘El segundo catch up brasileño. Características y limitaciones’, *Revista de la CEPAL*, 90, August.
- Castro, A. (2005). ‘A hipótese do crescimento rápido. Novos argumentos’. Draft, unpublished.
- Castro, A.B. and Souza, F.E.P. (1985). *A Economia Brasileira em Marcha Forçada*; Rio: Paz eTerra.
- Castro, A.B. and Proença, A. (2001). ‘Novas Estratégias Industriais :Sobreida ou Inflexão?’, in J.P. Velloso (ed.) *Fórum Nacional*. São Paulo: Nobel.
- Castro, L.B. (2005a). ‘Esperança, Frustração e Aprendizado: a História da Nova República’ in Giambiagi et al. (2004).
- Castro, L.B. (2005b). ‘Privatização, Abertura e Desindexação: a primeira metade dos anos 1990’ in Giambiagi et al. (2004).
- Dean, W. (1989). ‘Economy’, in L. Bethell (ed.) *Brazil – Empire and Republic 1822-1930*, Cambridge: Cambridge University Press.
- Fausto, B. and Devoto, F. (2004). ‘Brasil e Argentina – Um Ensaio de História Comparada (1850-2002)’, *Editora* 34, São Paulo.
- Franco, G. (1995). *O Plano Real e Outros Ensaio*s, Rio de Janeiro: Francisco Alves.
- Furtado, Celso (1965). ‘Political Obstacles to Economic Growth in Brazil’, *International Affairs*, April.
- Geddes, B. (1990). ‘Building “State” Autonomy in Brazil, 1930-1964’; *Comparative Politics*, 22, 2 (January).
- Gerschenkron (1961). *Economic Backwardness in Historical Perspective*. Harvard: Harvard University Press.
- Giambiaggi, F., Villela, A., Castro, L., and Hermann, J. (eds) (2004). *Economia Brasileira. Contemporânea (1945-2004)*. Rio de Janeiro: Campus.
- Hermann, J. (2004) ‘Reformas, Endividamento Externo e o “Milagre Econômico” (1964-1973)’, in Giambiaggi et al. (2004).
- Hirschman, A.O. (1971). ‘The Political Economy of Import Substituting Industrialization in Latin America’ in *A Bias For Hope – Essays on Development and Latin America*, Yale University Press.
- Johnson, C. (1982). *MITI and the Japanese Miracle*. Stanford: Stanford University Press.
- Lessa, C. (1982). *Quinze Anos de Política Econômica*; São Paulo: Brasiliense.
- Levine, R.M. (1998). *Father of the Poor? Vargas and His Era*. Cambridge: Cambridge University Press.

- Lopes, F. (1986). *O Choque Heterodoxo - Combate à Inflação e Reforma Monetária*, Rio de Janeiro: Campus.
- Kregel, J (1997). 'Margins of Safety and Weight of the Argument in Generating Financial Fragility', *Journal of Economic Issues*, June: 543-8.
- Malan, P.S., Bonelli, R., Abreu, M.P., and Pereira, J.E.C. (1980). *Política Econômica Externa e Industrialização no Brasil (1939/52)*; Rio de Janeiro, IPEA/INPES.
- Minsky, H. (1982). *Can 'It' Happen Again? Essays on Instability and Finance*. New York: Sharpe Books.
- Minsky, H. (1986). *Stabilizing an Unstable Economy*; Yale University Press.
- Modiano, E. (1988). *Inércia, Inflação e Conflito*, Rio de Janeiro: Campus.
- Pastore, A.C. (1990). 'A Reforma Monetária do Plano Collor' in C. Faro, *O Plano Collor - Avaliação e Perspectiva*, Rio de Janeiro: Livros Técnicos e Científicos.
- Resende, (1990). 'Estabilização e Reforma – 1964-1967', in M.P. Abreu (ed.) *A Ordem do Progresso – Cem anos de Política Econômica Republicana – 1889-1989*; Rio de Janeiro: Campus, chapter 9.
- Schneider, B.R. (1999). 'The Desarrollista State in Brazil and Mexico', in M. Woo-Cumings (ed.) *The Developmental State*. Cornell University Press.
- Schumpeter, J.A. (1951 [1928]). 'The Instability of Capitalism' in *Essays of J.A. Schumpeter*. New York: Addison-Wesley Press.
- Schumpeter, J.A. (1994 [1942]). *Capitalism, Socialism and Democracy*. London: Routledge.
- Schwartzman, S. (2001). 'Um Espaço para a Ciência – A Formação da Comunidade Científica no Brasil', Brasília: Ministério da Ciência e Tecnologia.
- Skidmore, T. (1972). *Politics in Brazil, 1930-1964: An Experiment in Democracy*. Oxford: Oxford University Press.
- Solnik, A. (1987). *Os pais do Cruzado contam por que não deu certo*; Porto Alegre: LPM.
- Suzigan, W and Villela, A. (1997). *Industrial Policy in Brasil*. Unicamp Press.
- Velloso, J.P. (1986). *O Último Trem para Paris – De Getúlio a Sarney: milagres, choques e crises do Brasil moderno*. Nova Fronteira.
- Vianna, Sergio B. (1987). *A Política Econômica no Segundo Governo Vargas (1951-1954)*. Rio de Janeiro: BNDES.
- Villela (2004). *Dos Anos Dourados de JK à Crise não Resolvida (1956-1963)* in Giambiaggi et al. (2004).
- Waldner, D. (1999). *State Building and Late Development*. Cornell: Cornell University Press.
- Wirth, John D. (1970). *The Politics of Brazilian Development 1930-1954*; Stanford: Stanford University Press.
- Woo-Cumings, M. (ed.) (1999). *The Developmental State*. Cornell University Press