

## **A TALE OF TWO CYCLES AND THE UNDERLYING LONG TERM CHANGES**

**Pedro S. Malan  
Monica B. de Bolle**

*It was the best of times,  
it was the worst of times,  
it was the age of wisdom,  
it was the age of foolishness,  
it was the epoch of belief,  
it was the epoch of incredulity,  
it was the season of Light,  
it was the season of Darkness,  
it was the spring of hope,  
it was the winter of despair,*

we had everything before us, we had nothing before us, we were all going direct to Heaven, we were all going direct the other way— in short, the period was so far like the present period, that some of its noisiest authorities insisted on its being received, for good or for evil, in the superlative degree of comparison only.

*Charles Dickens, A Tale of Two Cities, 1859*

Versão preliminar do trabalho apresentado em seminário em homenagem ao professor Albert Fishlow, em 3 de julho de 2015, no Instituto de Estudos de Política Econômica (Casa das Garças), Rio de Janeiro. Os autores agradecem a generosa ajuda de Carolina Melchert Marques, Valéria Duboc Andreiolo e Carla Emilia Brunet Lopes. Os erros que permanecem são de exclusiva responsabilidade de Pedro Malan.

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## INTRODUCTION

This article is a tribute to Professor Albert Fishlow. The relationships between cycles and longer term structural changes have always been dear to his mind and heart. The title of the paper is, of course, taken from Dickens's justly famous book – and from Fishlow, who wrote the excellent “A Tale of Two Presidents: The Political Economy of Crisis Administration” (1). The point of departure of the article goes back to the PhD dissertation of one the authors, who had Fishlow as his thesis supervisor in Berkeley, entitled “Foreign Exchange - Constrained Growth in Semi-Industrialized Economies” (1977) (2).

In the part about Brazil, the thesis sustains that from the 1940's to the mid 1970's, Brazilian economic growth had, as the (ex-ante) fundamental macroeconomic binding constraint, the balance of payments restrictions – except for an extraordinary growth cycle in the period 1968 to 1973. The present paper shows that the country had to wait for 35 years to experience another, similar, non foreign-exchange constrained cycle of exceptional growth: 2003 – 2008, followed by a major boom year in 2010.

Section I tries to explain why focus on two cycles, and 35 years apart. Section II compares the two cycles in three dimensions: (a) the international "origins" and their reflection on Brazilian balance of payments accounts; (b) the additional domestic "origins" of the cycles, in terms of some key, common elements; and (c) some "consequences" of the policy responses to the different ways in which each cycle came to its end.

Since history never repeats itself, and the two cycles differ, not only for being 35 years apart, Section III focuses on longer term structural domestic changes in Brazil which underlined both cycles, trying to suggest some additional reasons for the recurrent Brazilian "macroeconomic trap" (3). Section IV attempts to take the same longer term view for the external front, with comments on the old case for industrialization, the hypothesis about long run terms of trade deterioration, and the ongoing debates about "de-industrialization" and the so called middle-income and lower-growth traps. Section V presents concluding observations.

### I. WHY TWO CYCLES, AND 35 YEARS APART?

In the last century (1915-2015) the Brazilian economy experienced declines in GDP per capita in 25 years, one in every four. This does not mean that the other 75 years had been marked by strong, sustained expansion of GDP per head, given the significant rates of population increase, (see section III). In fact, there have been about seven

cyclical upswings of duration equal or higher than five years, in the century 1915-2015. Why single out just two, 1968-1973 and 2003-2008?

In what sense they are different from the other many cycles of expansion in Brazil since 1915? Our admittedly bold hypothesis is that Brazilian economic growth over the last 100 years has been, for the most part, constrained by balance of payments : current and/or capital account financing problems, that is to say, growth has been constrained by the terms and conditions of availability of convertible currencies. The two cycles referred to in the introduction to this paper are just the two most flagrant exceptions to this macroeconomic constraint. It is hard to find other upswings with duration of five years or more which have not been in a way or another foreign exchange constrained.

Of course there were supply rigidities, infrastructure deficiencies, logistical problems, lagging technical knowledge and educational skills, institutional inadequacies and all that. But they could, and have, signaled long term investment opportunities. However, sooner rather than later, the foreign exchange constraint imposed itself, either by hard-to-finance flows of current account deficits through the capital account, or by problems posed by the terms and conditions in which the stock of external debt had been accumulated.

Brazil's experience as a legally sovereign country started with a significant external debt burden and sizable foreign loans during the Empire (1822-1889) to cover debt obligations (4). In the first 41 years of the young republic (1889-1930), the federal government took no less than 33 loans from external creditors. In addition, nine states and three major cities issued no less than 25 dollar denominated bonds in the US financial markets, just from 1921 to 1930 (5). Many of those loans, as in the Empire, were contracted to cover deficits (including fiscal), floating debts consolidation, interest and amortization on previous loans.

One could argue that the mere existence of such significant external borrowing in itself does not necessarily mean that the binding constraint, from the macroeconomic standpoint, was the availability of foreign exchange – either earned through exports or borrowed. One may consider whether, ex-ante, the binding macroeconomic constraint could have been insufficient domestic saving (private and public).

But important as it could have been the tapping of domestic saving potential in domestic currency, an inconvertible national medium of exchange (such as the “mil réis”) was helpless in paying for imports of goods and services as well as for debt obligations to be settled in convertible currency. This depends on the rate of exchange which fluctuated during the period, but had a marked trend of depreciation of the “mil réis”. In fact, from 1820 to 1930 the “mil réis” depreciated by around a factor of 10 times. The

ratio of the peak of appreciation in the early nineteenth century and the peak of depreciation in the early 1920's was 15 times. It was clearly a long term trend (6).

This should be seen – together with the significant reliance on foreign borrowing – as clear indication that the demand for convertible currency exceeded by far the supply of foreign currency, either earned or borrowed. In other words, Brazil was from a macroeconomic view point a foreign exchange constrained economy for most of its first century of existence as a legally sovereign country – and, in fact, well beyond 1930.

From 1930 to the mid-1960's – an additional one third of a century – there were no significant private international flows of capital other than foreign direct investment. For developing countries in particular bond issues and borrowing from private sources were virtually nonexistent (7).

World trade (export plus imports) as a proportion of World's GDP declined sharply from the peak, just before WWI (21%) – a level only surpassed in the early 1970's (22.5% in 1973) (8). As late as 1956, less than half of world trade was conducted on the basis of convertible currencies. In the case of Brazil, the level of imports of 1928 was only surpassed in 1946. Coffee represented well over 2/3 of Brazilian exports in the early 1950's and 3/4 of Brazilian export to the US at the time, its prices increasing 3.5 times in real terms between 1945 and 1954, initiating a cycle of overproduction in the international coffee markets that went till the mid-1960's (9).

The Kubitschek years (1956-1960) were clearly foreign-exchange constrained. The level of Brazilian exports of 1951 was only surpassed in 1968. It is true that 1951 was a peak from the 21-year period from 1947 (US\$ 1,15 billion) to 1967 (US\$ 1.654 billion), the average for the period being below US\$ 1,4 billion with lows slightly above US\$ 1,2 in 1958, 1960 and 1962. In 1960, no less than 30% of Brazilian exports were still to inconvertible currency areas.

But Brazil was able to attract, through a complex set of incentives (including auctions of scarce foreign exchange) new direct foreign investment to Brazil, including suppliers' credits from countries such as Germany and Japan, newly reconstructed and eager to increase their exports of capital goods to countries with promising, potentially large domestic markets. External debt at year end 1960 at nearly US\$ 3.9 billion was over 3 times Brazilian annual exports. Growth continued to be foreign-exchange constrained from a macroeconomic viewpoint till 1967-78, and then it wasn't for about six years till the end of 1973, when Brazil was seriously hit by the near quadrupling of oil prices.

Brazilian growth was again foreign-exchange constrained after 1974, despite a reasonable rate of what Fishlow rightly called “debt-led growth”, since it was only

achieved because of the availability of foreign financing and the accumulation of external debt (10), so much so that the economy collapsed after the “sudden stop” of such financing, due to the combined consequences of the second oil shock and the sharp rise in interest rates under Volcker. From 1981 to 1992 – twelve years – Brazil experienced no less than seven years of decline in GDP per capita: 1981-83, 1988, 1990-92, clearly a period of foreign-exchange constrained growth.

During the period from 1994 till 2002, the Brazilian economy experienced, according to FGV’s CODACE, four relatively mild contractions, averaging 9.6 months, compared with an average of 26 months for the three bigger contractions of the 1980’s (11).

A new, extraordinary cycle of expansion started in the second quarter of 2003 and went through the third quarter of 2008. It lasted 61 months, and deserves to be looked at carefully, compared with the other extraordinary cycle dealt with in this paper, which started, according to CODACE, in the second quarter of 1967, and lasted for more than six years with an elastic supply of foreign exchange (see next Section).

To conclude this already long section: Brazil had other cycles of expansion over the last 100 years – 1915 to 2015. Why single out these two? Once again, because in our view they were – by far – the two most flagrant cases of sustained expansion for more than five years, in which economic growth was not constrained by the balance of payments. In addition, both slowed higher average rates of growth and lower average inflation rates than the previous 10 years.

The other cycles of growth in the last century were, for the most part, attempts to deal through some variant of import substitution or infant industry arguments, with real or perceived scarcity of convertible currencies to finance desired imports, current account deficits and/or service debt obligations. Albert Fishlow has dealt with these efforts in his classic “Origins and Consequences of Import Substitution in Brazil” (12).

But in this section – and the next – we are more interested in the purchasing power of exports, the current account balance, the terms of access to external borrowing through the capital account and the stocks of debt, and of course on the constraints on growth that they may have expressed – or relieved.

## II. THE TWO CYCLES COMPARED

### II.1 The International Conditions and the Balance of Payments Accounts

“The world economy, for the first time in more than 35 years, will grow for four years in a row (2003-06), well over 4%. The last time this happened was in the four-year period 1970-73”. So wrote the IMF staff in its 2006 World Economic Outlook Report (WEO). The 2007 report was even more bullish.

In fact, the average rate of growth of the world economy for the six-year period 2003-08, as reported in later WEO's was 4.5% a year (and 5% for 2004-07!). The volume of world trade growth from 2003 to 2007 increased by over 8% year – an elasticity of over 1.8 with respect to world GDP. For goods exported by non-fuel exporters the elasticity was over 2.

The six-year period prior to 2008 marked the peak years of a longer cycle of expansion which Kenneth Rogoff called “the longer, the strongest and the more widely disseminated cycle of expansion in recent history” (13). *The Economist* writing in July 2013 rightly noted “It will become increasingly clear how unusual the past decade [2003-2013] was”.

Unusual both in terms of expansion of world trade (and commodity prices) but also in terms of access to globalized capital markets. Never before, to paraphrase Churchill, had so many (firms and governments) had such an easy access to so many types of debt instruments at such relatively low costs than in the period 2003/04 to 2007/08.

In fact, one may well argue that all decades are unusual in one way or another – or that things do not always become increasingly clear, but just unclear in a different way. But Eric Hobsbawm may have had a point when he argued that the nineteenth century was the “long century” [from the French Revolution of 1789 to the Great War of 1914-18] while the next century was the “short twentieth century” from WWI to the fall of the Berlin Wall (November 1989) and the collapse of the old USSR in the early 1990's (14).

Historically important as these two events were – and still are – they were not the only key “critical conjunctions” of international events which marked the end of the “short twentieth century”. To these one must add the fact that China, after Deng Xiaoping, had, in the early 1990's, well over a decade of reforms and integration into the global economy and was set to become a key player of global reach .

One must add the fact that the European key countries had decided in December 1991 (Maastricht) to launch the Euro no later than January 1<sup>st</sup>, 1999 – as they did. One must note that by 1991 the US net international investment position shifted from positive (since post-WWI) to negative and turned increasingly negative, through growing current account deficits, from the early 1990's to its peak deficits in 2007 (6.5% of GDP) – the last calendar year before its serious crisis emerged.

The combined effect of all these developments, taking place in a concentrated period of time, led to a remarkable expansion of the global frontier of investment opportunities. Foreign Direct Investment in so-called emerging markets doubled every two years after 1990, a rate of increase of slightly over 40% a year.

From 1990 till 2005 it is estimated that around 500 million people became for the first time integrated into the global economy as urban members and urban consumers – with all that this means for the expansion of demand for investment and consumption of goods and services. The six years from 2003 were the peak years of this remarkable cycle.

Brazilian growth was constrained during this period (2000-08) by a host of factors operating on the supply side (see Sections III and IV) but it was surely not constrained by lack of access to foreign exchange which were both earned through net exports and through capital account net inflows.

But there was another, very rare combination of circumstances, “critical conjunctions” to borrow Acemoglu and Robinson's term (15), which had occurred 35 years before (1968-1973), and one would not find another six-year periods as those two during several decades past. Why? What was it so peculiar about the international environment in the years preceding the two booms – and maintained during their six-year duration? Why both came to an abrupt end, one in late 1973, and the other in late 2008?

The years preceding the 1968-73 boom and contributing to its duration were also exceptional and unprecedented. The period from the late 1950's to the early 1970's was, from the point of view of world trade expansion the “golden years” of the Bretton Woods era (1946-1973). World trade grew of an average of nearly 10% a year in dollar terms



between 1959/61 and 1969/70 – and at an amazing 18% a year from 1967 to 1973 (16).

No less important have been the stimuli that European (1959) and Japanese (1964) return to convertibility gave to private international capital movements, which have been dormant, for well over a quarter of a century since the 1929/1930 crisis.

The “Eurodollar” market (dollar-denominated deposits held outside the US) started on the 1960’s. World international reserves which had grown by 2.75% a year from 1949 to 1969, increased by an average rate of 22.7% a year from 1969 to 1974. The system of “reserve creation” through the use of the national currencies of the richest countries, allowed them to expand their loans and investments in the developing countries (17).

Brazil, for instance, experienced an overall surplus in its balance of payments in every single year from 1968 to 1973 leading to a rise in both foreign exchange reserves and foreign debt. In fact it is important to look carefully in the basic similarities and differences between the trade, current account and capital accounts comparing the two cycles, as we do in the remainder of this reaction.

The Tables and Graphs in the Annex allow us to respond to two questions: what was so exceptional about the balance of payments accounts or about the lack of a foreign exchange constraint on growth during the 1968-73 cycle?

Because total exports increased by an annual average of 23.6% (9.4% in prices, 13% in volume) and import prices by 6.2%. As a consequence, the purchasing power of exports (the capacity to import) increased by a remarkable 150% – an average of 16.7% a year, allowing for a volume of imports growing by an average annual rate of 18.5%.

In addition, the accumulated net capital account positive inflows were nearly twice the absolute level of the small current account deficits accumulated in the period, leading to a simultaneous increase in both external debt (from (3.3) billion at year-end 1967 to (12.6) billion at the end of 1973) and in international reserves (from the very low level of 1967 (199 million) to (6.4) billion at year-end 1973).

What about the 2003-08 period? Similar impressive performance: total exports increased on average by 22.3% (12.8%) in price and 8.4% in volume, and import prices by 10.7% a year, on average. As a result, the purchasing power of exports has risen by 79% – an annual average of 10.5% over the same six-year period.

No less important, the net accumulated capital account inflows were more than seven times higher than the accumulated current account surplus of the period, with the trade account showing a remarkable accumulated surplus (differently from the 1968-73 cycle when trade in goods was balanced, although at very high rates of growth of both exports and imports).

What was most remarkable in the 2003-08 period, from the balance of payments accounts ex-post perspective was the accumulation of international reserves – not only borrowed but also earned through net exports, which reached US\$ 190 billion between 2003 and 2007.

The rather impressive balance of payments figures for these two cycles cannot be found in any other period of six years in the last 100 years (or even before that). It is true that the two cycles came to different ends, and the growing euphoria they produced had consequences (see Section II.3).

Be it as it may, it is very unlikely that we will see such an extraordinarily favourable international environment in the near or not so near future. Galbraith noted that it takes less than 20 years for a serious crisis to be erased from the financial mind – the 1930's being an exception, its memory being still alive. But Galbraith wrote just this in 1990. So, the Great Recession of 2007-09 could well be another exception to his “20-year maximum” rule for memories to fade away (18).

Certainly going beyond balance of payments statistics, the growth cycles of 1968-73 and 2003-08 were not just a consequence of a favourable external environment. But they were surely not constrained by lack of access for foreign exchange. There were of course important domestic dimensions of great relevance in both upswings. To some of these we briefly turn in the next section.

## II.2 The Origins: Some Key, Domestic Dimensions of both Cycles

The previous section may have given a reader the impression that the “boom” years of the 1968-1973 and 2003-08 cycles were the

consequence of exceptionally favorable – and elusively temporary – international conditions in the realms of international trade and global finance.

Nothing farther from our view: we are convinced that the boom years depended heavily on “a critical conjunction” of both international changes and of factors operating domestically in Brazil, which mutually reinforced each other.

In this short section we want just to draw attention to some fundamental, domestic factors at the “origins” of the booming years of both periods 1968-73 and 2003-08 (plus 2010): the economic policy choices, macro and non-macro; the role of domestic demand; the cyclical role of domestic supply incentives and last, and by no means less important, on the critical role played by political and institutional changes in the years preceding the upswing of the two cycles.

What were the key changes? Here, we could do no more than to list them: first, for the years prior to 2003-08, secondly for the period pre-1968-73. We hope to give the reader a sense of why the international environment, important as it may be, needs domestic developments – and domestic actions. As one of the authors of this paper put it: “the truly fundamental battles for economic and social development are fought and lost, or won, in the domestic front.”

Here is the list, including battles won and battles still going on:

- The success of the Real Stabilization Plan, which defeated decades of high and rising inflation (from 3-digit levels in the early 1980’s to 4-digit levels in the late 1980’s /early 1990’s, bringing it to a single digit average rate from mid-1995 to mid-2002. At its twenty first anniversary (longer than the military rule) the single digit, on average is still there and needs to move further down from the high single digits.
- The privatization process which started in the early 1990’s and acquired speed and magnitude after the Constitutional Reform of the mid-1990’s, which allowed the private sector – domestic and international – to participate in investments in basic sectors such as oil and gas, telecommunications and infrastructure in general – a battle still going on.

- The successful restructuring of Brazilian external debt with both private and official creditors in the early 1990's allowing for more market contestability from imported goods.
- The de facto although not de jure operational autonomy of the Brazilian Central Bank in conducting monetary policy.
- The successful implementation of the Program of Incentives to the Restructuring and Strengthening of the National Financial System (Proer) and of the Program for Reducing the State Public Sector in the Banking Activity (Proes) in the mid 1990's.
- The successful restructuring of debts of 25 (out of 27) states and about 180 municipalities in the mid to late 1990's.
- The adoption of a floating exchange rate regime in January 1999. The adoption of an inflation targeting monetary regime in June 1999. The approval of a Fiscal Responsibility Law in May 2000.
- The change in the Petroleum Law in 1997.
- The effects, post-2002 of a well-managed transition from FHC 2 to Lula 1 (2002-03).

This last point was very important because it conveyed the observers of the Brazilian scene, including international investors, the impression that the country was becoming increasingly more mature from a political and institutional point of view and more rational from the point of view of the macroeconomic debate. In fact, despite legitimate, democratically decided victory of the opposition in October 2002, the macroeconomic policy followed during most of Lula 1 was essentially the same established during the Cardoso Administration. It helped him reap the benefits of the strongly favourable winds of the world after 2003.

- The formal creation of the Central Bank of Brazil (after twenty years of Superintendência da Moeda e do Crédito - SUMOC - as its embryo) in 1965.
- A new legislation for the Brazilian capital markets, corporate law and the formal creation of Comissão de Valores Mobiliários (CVM), the Brazilian equivalent of the US Securities and Exchange Commission (SEC) in 1967.
- The creation of an open market for Treasury bills and bonds in the late sixties/ early seventies.

- The creation of formal credit facilities and institutions for financing the building and the purchase of residential construction, as well as for consumer durables.

The truly outstanding performance of the Brazilian economy in terms of GDP growth, over 10% a year on average in the period 1968-73, could only be achieved because of (a) previous endogenous developments of a cyclical nature (the expansion of 1956-61 and the contraction-with-inflation of 1962-66) ;(b) the key set of institutional modernizing legislation in the monetary, fiscal and capital and credit markets; and (c) the extraordinarily favourable international environment.

Of course, there was a pragmatic economic policy, able to explore this combination, to maximize the rate of GDP growth without falling, till year-end 1973, in the recurrent Brazilian macroeconomic trap of increasing inflation and balance of payments disequilibria (see Sections III and IV).

### II.3 A Note on Policy Responses to the Way Cycles End: The Recent Boom-Bust

Common to the two cycles of extraordinary growth was the positive shock of commodity price increases and relaxation of external financing constraints. One could argue that, under these circumstances, policies became increasingly lenient, leading to a sharp rise in aggregate economic risk that ultimately resulted in full-fledged macroeconomic disarray. The idea is akin to Hyman Minsk's theory of endogenous financial fragility: during periods of prolonged economic booms, overall risk aversion falls – be it on the part of financial institutions or policymakers. Declining risk aversion, in turn, sparks riskier choices culminating in rising endogenous fragility.

During the 2003-2008 cycle and its aftermath, these dynamics can be clearly identified. The unrelenting rise in commodity prices and capital flows instilled a sense that structural problems underpinning the economy could be largely resolved by continued growth. Hence, there was little effort in advancing the infrastructure agenda, reforming taxes and expenditures, addressing rigid labor laws, and improving the overall business environment. Rather, the government chose to institute a minimum wage indexation rule whereby labor costs would rise unabatedly over time. Moreover, in view of constitutional rules and entitlements, social benefits linked to minimum wages would also place

undue strain on the budget in the coming years. Policy complacency on the structural front, therefore, would come to a head in 2011, when the commodity cycle ended.

Once external conditions turned less favorable for Brazil, policymaking deteriorated. Though the government was cognizant of the fact that it would no longer be able to count on the benign scenario characteristic of the previous years, it failed to recognize that policy shortcomings were also largely responsible for Brazil's growth woes. This led to a series of unorthodox policy measures under the broad umbrella of the "New Economic Matrix" that culminated in a serious macroeconomic crisis starting in 2014.

### III. THE LONGER TERM UNDERLYING TRANSFORMATION (I)

#### III.1 Urbanization, Demographics: Deep Tectonic Shifts

Brazil is the fifth largest country in the world in terms of both population and territorial extension. Brazil is the fourth in the world in terms of urban population. Brazil is the third in the world (after China and India) in terms of the absolute increase in the number of people that became urban dwellers since 1950: well over 150 million people in the last 65 years – more than the US in the period. We moved from an urban population of just 1/3 of 51 million in 1950 to over 85% of a 204 million population today. A major sequence of deep tectonic shifts with far-reaching implications: past, present and future.

In fact, the two cycles referred to in the previous sections may be looked as relatively minor episodes in the wider scale of the longer term deep – and related – changes in demographics and urbanization. Their combined effect, the equivalent of major tectonic shifts in the last 75 years, is becoming increasingly recognized for their fundamental implication for the next decades: the fact that the country is getting older much faster than it is getting richer is only one among them.

Brazilian population today is around 204 million. We will be about 218 million by 2025, reach a peak of about 228 million by the early 2040's and start declining then, to reach back to 218 million by 2060.

Most important, our demographic window of opportunity: the period in which the active age population (15 to 64 years old) is higher than the inactive (0-14 and over 65 years) will close in by 2030. The already serious problems we face in terms of growing deficits in the social security systems and in the provision of health services will grow much faster with new, increasing age-related expenditures.

The chart below shows the remarkable shifts in Brazilian population dynamics. Measured by 10-year moving averages, but on annual basis (i.e. the rate of growth of population in the decade preceding each calendar year), we moved from a rate of population increase of less than 1.5% a year in the early years of the Republic to over 3% (1908 to 1915) then back to less than 1.5% for most of the 1930's and back to over 3% in the decades ending in the years 1957 to 1964. From then on, there was a gradual, steady decline which brought the 10-year moving average rate to below 2.5% on the late 1970's, to below 2% in the early 1990's and to below 1.5% at the beginning of this century. But note that there are 10-years moving averages. At the time of this writing, the rate of population increase in Brazil is less than 1% and it will be below 0,8% by 2020 and less than 0,5% by 2030.

In fact, in absolute numbers, the population in the age bracket 0-19 had a negative rate of increase, i.e., has diminished in the first decade of the 2000's. At the end of this second decade, the cohort of 0-29 will have declined in absolute numbers. By 2030, the same will happen to the cohort 0-39. By 2040, only the over-60 Brazilians will be growing in absolute numbers – and they will be over 70 million people, more than 1/3 of the Brazilian population (as against about 11% today)

It does not require a big effort of imagination to see the enormous funding and financing problems already contracted, and increasingly casting a shadow of uncertainty about Brazil's future, after the window of opportunities – to make reforms in the social security system – associated to the “demographic bonus” closes, by the end of the next decade. As Giambiagi put it “This is a challenge the dimensions of which have not yet been perceived by public opinion – and what is worse, neither by the government.”

The effects of this very fast demographic transition are already being felt in the supply of labour, employment and growth. According to the best estimates available, from now on, the rate of growth of the population in

active age ensures not much more than just over one percentage point growth in GDP. The remaining percentage point will have to come from increases in productivity, which will depend on the accumulation of physical capital per workers increases in human capital per worker, technological progress and innovation (profitable application of science and technological advances) and of institutional changes in the area of labour legislation and social security reforms – which are both becoming long overdue if the middle income trap is to be avoided.

### III.2 Responses to Growing Demands and Expectations: How “State Intensive”?

The speed and size of the demographic and urbanization changes referred to above posed new and growing demands for expenditures in physical infrastructure (energy, transportation, housing, water supply and sewerage systems) and social infrastructure (education, health services, security) – for an additional over 150 million urban population in the relatively short period of 60 years.

A nearly impossible task, especially for historical reasons, these demands – and the obvious need for governments to respond to them – were and still are seen in Brazil as “state intensive”, that is to say, the state is expected (by the majority of the population) to spend to solve these problems. There is relatively little general awareness that this expected added expenditures requires the state to tax, get into debt, extract forced savings, and promote overall growth and employment. This means increasing its consumption and attempting to increase its investments to try to consolidate past required rights and to ensure expectations of future rights similar as those granted in the past. The growing demands for universal access to education, health and social security are deeply ingrained, showing that most Brazilians have an implicit “welfare state” model or an ideal type being something like the continental European variety – in a country with a GPD per capita some four times lower than the average European equivalent.

When the State, in addition to trying to respond to the physical and social demands posed by the fast and deep urbanization process – on in the process of trying to do it – also attempts to speed up economic growth through national development programs that use extensively and intensively increases in credit expansion by public financial institution,



tax credits, subsidies, selective incentive, increased public sector debt as Brazil has done many times in the past, that may result in the appearance, “encore une fois” of a recurrent macroeconomic trap we have seen so many times in Brazilian economic growth experience. What is this?

Simply put, underlying most of these attempts to speed up economic growth is the expectation that stimuli to consumption and investment (public and private) will, in due course (taken to be relatively short), elicit a response in terms of increased domestic supply (first higher capacity utilization, then new investment in capacity expansion). When domestic supply, for some reason (confidence, supply rigidities, infrastructure bottlenecks, for example) does not respond in the expected time frame, the country faces adjustments which taken the form of higher inflationary pressures and balance of payments disequilibria (growing current account deficits that after some point are seen as hard-to-finance through the capital account due to real or perceived high country risk). The adjustment must come. Usually, the expanding cycle faces its binding foreign-exchange constraint. As it happened in Brazil after 1973. As it happened after 2010.

It is worth remembering that demand does not always generate its own domestic supply, that investment does not always generate its own domestic savings, and that financing does not always generate its own (positive) rate of return. There are often real domestic supply-side problems that may unduly delay supply response. There might be problems of confidence in the sustainability of demand precluding investments in capacity expansion for a while. And there are indivisibilities in the investment process, long gestation periods and so forth.

Even when the concerns are just macroeconomic (which are rarely so), it might not be a binding constraint imposed by a relatively low rate of private domestic savings combined with a negative of public savings – which requires external savings (current account deficits) to finance demand levels of investment. A recent BIS Report (19) argues that an excessive and a bit misleading focus on the current reflects the failure to distinguish between saving and financing:

“Saving, as defined in the national accounts, is simply income (output) not consumed. Financing, a cash-flow concept, is access to purchasing power in the form of an accepted settlement medium (money) including

through borrowing. Investment and expenditure generally require financing, not saving”.

One may well argue that this sharp distinction goes a bit too far, since financing requires a channeling of savings and therefore the latter is required. But the authors have a point in noting that “financial crisis reflects disruptions in financing channels, in borrowing and lending patterns about which the [aggregate] saving and investment flows are largely silent”. Joseph Schumpeter would have agreed. Financing, after all, is far riskier than saving.

This discussion about the recurrent Brazilian macroeconomic trap important as it was, it is now and may well be in the future, shall not obfuscate the main point of this section: the major underlying shifts in demographics and urbanization are equivalent to significant tectonic plate dislocations with economic, political and social implications. They have already occurred (urban population will most likely not increase much more than its current 85% plus of the total, for example) but the fault lines are still there – and will be there for the next decades affecting future growth cycles in unsuspected ways. But the challenges they pose are increasingly clearer – and will have to be addressed. Even if solutions must be gradual, there are urgencies in gradualism – and the need for policies with a medium and long perspective.

The next section deals with another significant long term underlying transformation – and another trap – not of a domestic nature (such as demography and urbanization), but of an international trade and finance dimension, not of cyclical nature, but also longer term.

#### IV. THE LONG TERM UNDERLYING “EXTERNAL” TRANSFORMATION (II)

##### IV.1 Primary Products, Manufactured Goods, Terms of Trade: The Case of Industrialization

Elsewhere one of the authors of this paper has attempted to show that very significant change in the structure of Brazilian economic growth since the 1930’s was largely the result of attempts to increase the rate of capital accumulation under conditions of a relatively inelastic supply of earned-through-exports foreign exchange and/or limitations to rely on significant, continued external borrowing (20).

The quest for industrialization, for several decades past, has been presented as the appropriate policy response, given the strength with which two related hypothesis were held in many developing countries. One was the Singer-Prebisch-Lewis hypothesis about the long run deterioration of the terms of trade, or relative prices of primary products vis-à-vis manufactured goods (21). The implication: it would be a losing proposition to depend of exports of primary goods for long term income growth. The chart below (or in the Annex) seemed convincing to most people as a confirmation of the validity of the Singer-Prebisch-Lewis hypothesis.

A brief comment on the hypothesis is warranted, given its regained importance in the current debate about “deindustrialization” in Brazil. The comment is based on a fundamental insight by Albert Hirschman, written at the height of the Singer-Prebisch-Lewis influential hypothesis (22).

Hirschman recognized that both were arguments for industrialization but did not see the reliance of a country on primary product exports as necessarily a losing proposition provided it managed to diversify both the composition of its exports (away from the dependence on one specific commodity) and the composition of its imports in the direction of more capital goods and intermediate goods whose prices might be falling in the rich countries due to productivity increases and economies of scale.

One of the authors of this paper has argued elsewhere that what Brazil has tried to do, with remarkable success until the early 1970’s was precisely this attempted diversification. But the recurrent attempts at import substitution under a protected domestic market remained a permanent temptation in Brazil. The recent period is no exception.

The charts in the Annex, while referring to the world as a whole, drew attention to a very important phenomenon, which has been receiving a great deal of attention, given its longer term implications: the prices of manufactured goods (also exposed to the market contestability of potentially imported products) **also** show a long-term declining trend, vis-à-vis primary goods.

In fact, the breakdown of the latter, either by excluding oil (or energy) or by dividing hard and soft commodities, shows a much more blurred picture than the one implied by the first chart on commodities as a whole.

It is not clear that the terms of trade between primary and manufactured goods was so sharply evolving, over the longer term, against primary products and in favor of manufactured goods.

In fact, the relative prices that increased relatively to both primary goods and manufactured goods were the prices of services – mostly made of non tradable, and as such much less exposed to foreign competition with potential imports in the dispute for the domestic market, thereby being able to shift increases in cost to its consumers in a way that industry cannot.

Since the services sector employ nearly four times more people than in manufacturing, its prices are rising faster, its wage costs increase faster than its productivity, the sector is at the center of the debate about deindustrialization in Brazil given that the cost of services undermines the international competitiveness of manufactured production and may have contributed to its declining share of GDP.

This is a long term issue – and another, potential non-macroeconomic trap. Unless one believes, like many in the profession, that there is not much analytical meaning in the idea of a foreign exchange constraint on growth, since this would just be a sign of an overvalued exchange rate, unwarranted government intervention in foreign trade (multiple exchange rates, tariff and non tariff business barriers regulatory import restrictions and other ad-hoc, selective devices) – or simply inconsistencies between the targets of income and export growth.

In other words, many emerging countries “did not adopt export promotion policies designed to make available the foreign exchange required by the higher level of imports of capital goods, raw materials and intermediate goods implicit in their growth target” (23). Indeed, one of the most remarkable aspects of the Brazilian experience of economic development was the attainment of a 7% average growth rate in real terms for several decades prior to 1967 with exports almost stagnant: their yearly rate of increase was only 2.1% between 1947 and 1967 (the level of imports of 1928 was only surpassed in 1947). The slow-growing purchasing power of exports has often been a trap on Brazilian economic growth except in extraordinary periods – and not of long duration – when the balance of payments accounts were extraordinarily favorable, like in the two cycles we singled out.

#### IV.2 The Quest for Modern Industry and Modern Technology: How “State Intensive” is the search for International Competitiveness?

Nicholas Kaldor tersely summarized a very widely held view in the developing world since the 1950's: "...the kind of economic growth that involves the use of modern technology and eventuates in high real income per head is inconceivable without the development of modern manufacturing industry" (24).

The representative quote has been broadly interpreted as a support, and a call, for import-substitution industrialization. The quote does not make clear, but it should be interpreted, with its double reference to modern technology and modern manufacturing as meaning domestically produced tradables, that is to say both potentially exportable production and efficient import-competing domestic production, not just the latter – without the key concern with efficiency – otherwise how to be modern ?

In this respect it is perhaps worth quoting Keynes who wrote in 1930: "Let us call goods which are capable of entering into foreign trade within the contemplated range of foreign exchange rate changes, whether as imports or as exports, foreign trade goods... similarly we could call by the name of home-trade goods all other goods produced at home" (25).

Keynes' observation is relevant in two senses: first because it was, I think, one of the earlier, if not the earliest reference in the literature about a key distinction between tradables and non-tradables. Secondly, and most important for our purposes here, because the implicit focus is on the price elasticities of supply of exportables and importables, not on the traditional Marshall-Lerner condition on the sum of price elasticities of foreign demand for exports and domestic demand for imports. And one should never assume perfectly elastic supplies.

Indeed it is our view that the critical aspects of the debate about the deindustrialization in Brazil should be focused on the problems of the domestic supply of exportables and domestic supply of importables and the relationship of this tradable sector with a very sizeable "services" sectors which, by the way, are not entirely made of "home goods" or entirely non-tradable anymore. Nor it is a sector in which "modern technology" is absent, quite to the contrary, in a significant number of "service sectors".

This means going well beyond the debate about the “right” or appropriate real effective exchange to promote domestic tradable production. Brazil has clear, real supply rigidities associated with precarious infrastructure, low productivity, shortage of “modern skills” adapted to the requirements of modern technology and modern manufacturing, which will not be solved just by exchange rate movements. Everyone agrees that the State must have a set of coherent policies to address the issues above, but how “state intensive” should be the search for international competitiveness ?

It is hard to start trying to answer this question without some notion of the limits to State and state companies actions, specially the limits imposed by the short, medium and longer term fiscal situation. Brazil is not alone in today’s world; many countries – rich and middle income – face serious fiscal constraints in their attempts to respond to growing demand and high expectations of their domestic constituencies, as we have seen in the previous section.

There, we argued that the – understandable - attempt on the part of governments to respond (with different degrees of “intensity”) to the ever growing demands for social and physical infrastructure often contributed to the recurrent macroeconomic trap which Brazil has faced many times in its economic history: inflation, fiscal problems and balance of payments disequilibria.

If, in addition to the demands above, the quest to promoting industrial development (or avoiding “deindustrialization”) is also seen as “state intensive”, with undue regard for international competitiveness, all these joint demands for state action could well be beyond reasonably run public budgets – or at least beyond what a non-irrelevant part of the public considers reasonable taxes to pay for such “services”.

Let us illustrate with a European paradox: ten years ago (2005), well before the crisis of 2008/009 erupted, in a referendum, the French and the Dutch electorates voted against a proposed European Constitution. The no vote expressed opposition to a perceived loss of national sovereignty, a fear of the effects of globalization, of unemployment, of privatization and of potential changes in the countries’ “welfare state” models.

These types of dissatisfaction were and are, increasingly, six and a half years after the crisis – the main political issue for European governments, because such discontent expresses an opposition not only to the precarious overall economic performance of the last several years, but

also – and paradoxically – against the very reforms that could have improved such performance. Many Brazilians will, I presume, feel somehow familiar with the paradox, as we face the most serious domestic economic and political quandary in almost 25 years.

Unfortunately, when critical, short-term macroeconomic problems loom so large as in Brazil today, there is a tendency to overlook three basic, interrelated issues which are crucial in defining whether the country will be able to escape – and how soon – from the middle-income/lower growth traps – as well as from its recurrent macroeconomic trap.

Three quotes on the subject: (a) “Productivity isn’t everything, but in the long-run it is almost everything” (Paul Krugman, 1990); (b) “The long-run engine for growth is technological change” (Arthur Lewis, 1978); and (c) [long-term growth] “is capability expansion through improved education and human development” (Amartya Sen, 1989) (26).

Are they saying different things? No. At the end, almost the same, since all of them assume that in the long run, the way to increase income and consumption per capita, in a sustained way, is through increases in output per worker, i.e. productivity. This depends on physical capital per worker, or human capital per worker (education, skills and capability expansion), and on innovation, which – since Schumpeter-- is the profitable application of scientific and technological advances in the form of new products, new processes, new forms or organization of production and running business, new inputs, new forms of cross border coordination of activities and supply chains.

Open economies, increasingly integrated in the world of trade, finance and investment, could only hope to increase, over the long run, i.e. in a sustained way their income per capita through producing better goods and services which is “just a productivity increase under another name”. Almost everything. A sudden, sharp rise in terms of trade and in export volumes of a cyclical nature will not do, as we should have known by now, after decades of foreign-exchange constrained growth.

## V. CONCLUDING OBSERVATIONS: BACK TO OUR RECURRENT TRAPS?

This article attempted to make the following points:

1. Among the many cycles of expansion (of 5 years or more) experienced by the Brazilian economy over the last 100 years (1915-2015), two clearly stand out as extraordinary, in the sense that they were not foreign-exchange constrained: 1967-1973 and 2003-2008, with a remarkable rebound in 2010.
2. All the other relevant cycles faced balance-of-payments constraints either in the form of insufficient purchasing power of exports (terms of trade times export quantum, which defines import capacity) and /or insufficient inflows of external financing (given previously accumulated external debt stocks and the terms under which it was contracted). For most of the last 100 years this was the macroeconomic binding constraint on Brazilian growth.
3. The paper presents a comparison of the two cycles and of their domestic and international contexts, showing how these two dimensions mutually reinforced each other. Of course, there were many differences, because the cycles were 35 years apart, but there are some relevant similarities in the unprecedented balance of payments accounts and in the interplay of international and domestic forces.
4. The article attempts to go beyond the international scene and note some key common domestic elements in the “origins” of both cycles, in terms of prior reforms and modernization of institutions. A short observation is offered on the implications of the different ways both cycles ended, one in 1973, the other in about 2010. The consequences of the policy responses post-1973 are still the subject of a lively academic debate. Not as lively though as the ongoing debate about the policy choices underlying “the origins and the consequences” of the second cycle.
5. Given the fact that two cycles were about 35 years apart, and that history never repeats itself, the paper gives some attention to key underlying long term structural transformations experienced by Brazilian society (which were taking place well before the first of the two cycles, continued to play in between them, and will continue to play a key role well into the future.
6. The key domestic long term changes in this paper are: (a) the demographic change, or the speed of the demographic transition in Brazil in the last few decades and (b) the rather impressive process of urbanization in Brazil. Only China and India in the world have increased the absolute number of people living in cities more than Brazil over the last sixty five years. The Brazilian urban population increased from about 18 million in 1950, to 173 million now, an additional 155 million people in urban areas in just 65



years! In this period, well above the US, which has the third largest urban population in the world.

7. A major implication of these remarkable changes in demographics and urbanization has been, especially over the last half century, exponentially increasing demands for urban infrastructure, both physical (energy, transportation, housing, sewerage and water systems) and social (education, health services, security). These demands have traditionally been seen in Brazil as "state intensive", i.e. requiring Government and State enterprises leading role. The pressure is for increased spending, increased taxation and increased indebtedness at the Federal, State and local governments. The (legitimate) dream is for a sort of Brazilian "welfare state" modeled upon the European social democratic experience.

8. The paper notes that these (ex-ante) plans, desires and attempts to increase public and private consumption and investment, expect that domestic supply will respond properly. When it doesn't, the country faces its recurrent "macroeconomic trap", as we have seen many times over the last 100 years: growing inflationary pressures, fiscal problems and growing balance of payments disequilibria on current account – up to the point that they could be financed through the capital account, without undue increase in external debt. A recurrent trap, in part due to recurrent attempts on the part of incumbent policy makers to speed up the rate of growth. But also recurrent because longer term structural changes (domestic and international) generate the need for policy responses – and not just short term – on the part of successive administrations.

9. The two cycles dealt with in this paper allowed the foreign exchange constraint to be relieved, for a while, but a sudden upswing in the purchasing power of exports, combined with easy access to external financing does not affect (but are affected by) longer term processes of change such the forces of demography, urbanization, and the determinants of our international competitiveness (other than exchange rates) in the long run. In this respect, the three observations mentioned in the previous section (Paul Krugman, Arthur Lewis and Amartya Sen) are all correct and remain as valid today as ever. Like Schumpeter's "creative destruction is the essential feature of capitalism". In the medium and longer term, "almost everything" if not everything depend on them.

10. Whether focusing on the current (2015), painful downward phase of the cycle we are in now, or focusing on the underlying long term changes that will continue to go on, Brazilians should recognize – as Fishlow would have reminded us, through his research – that both cyclical and structural elements of our quandary could reinforce each other, for good or for worse. And that for this

reason, both require mutually consistent policy responses, which do not seem to be in place now.

11. “The bias for hope in this situation is that pressures of an intensifying economic crisis are bound to concentrate the country’s minds, energies and political ingenuity. The record thus far is not altogether reassuring. However, it is important to recognize that significant changes are already taking place as both government and society try to sort out what went wrong in the past, to cope with the harsher realities of the present – and to look towards the future with some broadly shared sense of purpose and direction. As we have seen, this was attempted in the [past]. If Brazil is to consolidate both democracy and an open, modern economy, it will have to be tried again”.

12. The entire previous paragraph was written about 25 years ago. It was the very last paragraph of an article by one of the authors of the present paper, written in the dire conditions of 1990 in Brazil (27). The country rose to the task and gave support to fundamental changes, especially after the success of the Real Plan in 1994. We conclude this article with the same observation – it will have to be tried again. With due consideration to the interactions between the cyclical and the underlying long term changes. As Fishlow would expect us to do. And he gave us examples (28).

## FOOTNOTES

1. See Fishlow A. "A Tale of Two Presidents: The Political Economy of Crisis Management". In: Stepan, A. (ed.) "Democratizing Brazil". New York, Oxford University Press, 1989. pp. 83–119. The two Presidents were Geisel and Figueiredo, the last two Generals of the 21-year military cycle in Brazil (1964-1985). It is tempting to apply the subtitle of the excellent Fishlow's essay to the "telling of the tale" of the cycle of two other Presidents, Lula and Dilma.
2. See Malan P. "Foreign Exchange Constrained Growth in Semi-Industrialized Economies: The Brazilian Experience 1946-1976". PhD dissertation, University of California, Berkeley, 1977.
3. See Lara Resende, A. "Os Limites do Possível: Além da Conjuntura", Chapter 18: "A Armadilha Brasileira". Portfolio-Penguin, 2013 – for a brilliant presentation of the "trap" with a solid theoretical basis, pp. 251-277.
4. Normano, J.F. "A Study of Economic Types". The University of North Carolina Press, 1935. The author notes the origins of Brazil's long external debt journey: "... the Portuguese loan of £1.500.000 in London in October 1823 was charged, in 1825 to Brazil, as part of 2.000.000 indemnity of the mother country from the former colony", p.153.
5. Normano, J.F., op. cit., p. 230. The States were SP, RS, MG, RJ, SC, PR, PE, CE and MA. The Cities: Rio de Janeiro, São Paulo and Porto Alegre. About half of the 25 loans were made in the three-year period of 1928-1930, to cover interest and amortization on previously issued bonds.
6. See Normano, J.F., op. cit., pp.198-201, for the rates of exchange "in Rio de Janeiro on London" in pence per mil réis, 1812-1930.
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  11. CODACE – Comitê de Datação de Ciclos Econômicos, Fundação Getúlio Vargas, IBRE – Instituto Brasileiro de Economia, São Paulo, 03/02/2010.
  12. Fishlow, A. “Origins and Consequences of Import Substitution in Brazil. In: “International Economics and Development: Essays in Honour of Raúl Prebisch”, (ed.) L. Di Marco. New York, Academic Press, 1972.
  13. See Rogoff, K. “The Silver Lining in High Commodity Prices”, 2008. <http://www.project-syndicate.org/commentary/the-silver-lining-in-high-commodity-prices> .
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  17. Malan, P. and Bonelli, R., op. cit.
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  19. BIS, Working Papers N° 457, “The International Monetary and Financial System: A Capital Account Historical Perspective”, August 2014, by Claudio Borio, Harold James and Hyun Song Shin. (BIS Monetary and Economic Department).
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