Brazil’s 36 years-old quasi-stagnation and the interest rate-exchange rate trap

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Summary: Per capital income in Brazil has grown by around 1% a year from 1981; this implies quasi stagnation for a country that is supposed to be catching up. Four historical new facts explain why the investment rate and growth have been so low after the 1994 Real Plan: the reduction of public savings required to finance public investment, and three facts that reduce private investments: the end of the unlimited supply of labor, a very high interest rate, and the long-term overvaluation of the national currency. This interest rate-exchange rate trap, which represents a major competitive disadvantage for the manufacturing industry, is in place since 1990-92, when trade and financial liberalization dismantled the mechanism that neutralized the Dutch disease, while a liberal policy regime turned dominant and industrialization ceased to be viewed as a condition for growth.

Key words: quasi-stagnation, policy regime, interest rate, exchange rate, Dutch disease

JEL Classification: E6, O5

In a 2007 book, this author asserted that the Brazilian economy had been deindustrializing and quasi-stagnant since 1981 – due, first, to the major foreign debt crisis and high inflation, and second, from the early 1990s on, to a macroeconomic trap of high interest rates and an overvalued currency over the long term, which discouraged investment and hampered economic growth.[1] However, when the book was published it seemed to make no sense, in light of the satisfactory growth rates between 2006 and 2010, which were driven by the large increase in the prices of exported commodities (the “China effect”). At that moment, we were being told by distinguished Brazilian foreign economists, whether liberal or developmental, and by representatives of the national and international financial system that Brazil had “resumed growth”, and that it was one of the BRICs destined for grandeur. The country was benefiting only from a boom in commodities, as the low growth rates between 2011 and 2014and a major recession in 2015 and 2016 soon confirmed and . In fact, the Brazilian economy has been quasi-stagnant since 1981. The average rate of per capita GDP growth between 1981 and 2014 was 1.2% per annum; if we exclude an exceptionally negative period (the 1980s, when the country stagnated due to a major financial crisis) and the commodity boom (2006–10), the rate has been even lower: 0.78% per annum.

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What is the explanation for deindustrialization and these low growth rates, which, for a developing country that is supposed to catch up, represent quasi-stagnation? How can an economy that between 1950 and 1980 grew at a per capita rate of 4,5% per year have grown so slowly since 1981?[2] The reason for stagnation in the 1980s is well known: it was the foreign debt crisis, which resulted from the misguided policy of growth with foreign indebtedness ("foreign savings) adopted by the Geisel government (1974–79) and from the high and inertial inflation this crisis unleashed in so far that the government was constrained to undertake two maxidevaluations (1981 and 1983) in an economy that had been formally indexed from 1964.[3] The often-heard alternative explanation – that the exhaustion of the import substitution model explains the stagnation – is just ideological. This model has been exhausted since the early 1960s. It is true that import tariffs remained high after the model was abandoned, but the fundamental point is that, in 1967, Brazil began a highly successful period of growth led by the export of manufactured goods, on which I offer some numbers below.

But why, after the 1994 Real Plan controlled inflation, did the Brazilian economy continue to grow so slowly? Why did the investment and savings rate continue to be so low? To answer these questions we need *historical new facts* that are significant. Four simple and decisive new facts meet these conditions: (*a*) the fall of public savings with the debt crisis, (*b*) the exhaustion of an unlimited supply of labor due to a fall in fertility rates, (*c*) the 1990 trade liberalization that dismantled the mechanism that neutralized the Dutch disease, and (*d*) the extremely high rates of interest since the Real Plan. These four historical facts reduced both public and private investment and pushed the Brazilian economy into long-term quasi-stagnation.

Before the 2015-16 major recession there was already some uneasiness among the Brazilian economic and political elites, who were beginning to realize that they have failed. And there were good reasons for that: an appreciated exchange rate except in the financial crises, when it depreciates; the basic interest rate set by the Central Bank at a very high level; unsatisfactory profit rates in the manufacturing industry; premature de-industrialization; low savings and investment rates; and low growth rates, far from assuring the catching up. . Why are the elites unable to solve these problems? Why don't they frame a development project, which should start by overcoming the macroeconomic trap of high interest rates and an overvalued currency? Essentially for two fundamental reasons: because the elites, along with the people, have lost the *idea of nation* – which makes them accept uncritically the recommendations and pressures emanating from the rich countries – and because the society as a whole is dominated by a high preference for *immediate consumption*. More specifically, I see politicians, businessmen, economists and economic journalists, whether liberal or developmental, whether left or right, refusing to lower the basic interest rate "because it is required to control inflation", and refusing to depreciate the exchange rate because this will cause, in the short term, a temporary reduction in revenues and an increase in inflation. Besides, they have proved unable to increase the state's investment capacity – whether because those on the right see public savings and investments as unnecessary, if not dangerous, or because those on both the left and the right prefer to increase social expenditures that produce electoral dividends.

Brazilians have been object of several economic disappointments since the 1985 transition to democracy.. The first was in the José Sarney administration (1985-1989) just after the 1985 transition to democracy. The collapse of the Cruzado Plan in 1987 was disaster of great magnitude, which demonstrated that the opposition that had fought and won over the military regime lacked a project to promote growth and development. Instead, what we saw was a vulgar Keynesianism, characterized by fiscal and exchange rate populism, i.e., high fiscal and current account deficits,. Besides an economic crisis, the collapse of the Cruzado Plan caused the demoralization of the politicians that had led the transition to democracy and allowed the election of a young and unknown politician, Fernando Collor de Mello, who, following the global pressures of the time (the Washington Consensus) immediately changed the economic policy regime from a developmental regime (in place since 1930, first, under Getúlio Vargas and, later on, under the military) to a liberal or neoliberal one, by opening trade and finance.

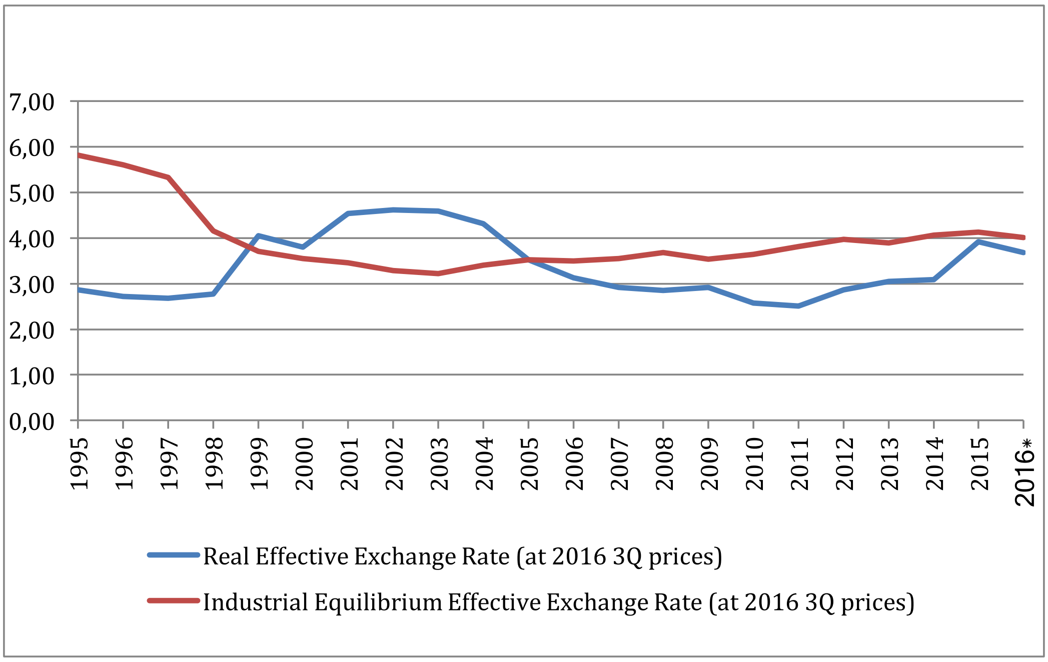
In 2003, after president Collor was impeached and Itamar Franco assumed the presidency, the Real Plan – a heterodox stabilization policy based on the theory of inertial inflation – succeeded in controlling inflation. After this major success, the second disappointment was with the Fernando Henrique Cardoso administration (1995–2002). After the Brady Plan (1990) resolved the financial crisis of the 1980s, and the Real Plan (1994) controlled high inflation brilliantly, we expected that the economy would start to grow fast. But, instead, what there was a second and a third step ahead in installing the liberal economic policy regime, in 1995, by privatizing and denationalizing monopolist public services, and, in 1999, by adopting a liberal-orthodox macroeconomic system where the basic interest rate was kept very high to attract capitals, the crawling peg system was abandoned, the exchange rate has floated and remained highly overvalued, while the state expenditures increased strongly between 1995 and 1998. The outcome of this exchange rate and fiscal populism was a major financial crisis – a currency crisis – at the turn of 1999, while growth rates were mediocre.[4]

The third disappointment was with the government of the Partido dos Trabalhadores (PT), a social-democratic political party that has been in office from January 2003 to April 2016. By criticizing the neoliberal policymaking it created an opportunity for economic development, but this didn't materialize. The PT, which at a certain moment defined itself as "social developmental", was relatively successful with its social commitment, but not with its developmental ambition. It was unable to change the liberal policy regime, failed in forming a developmental class coalition associating the industrial bourgeoisie with workers and the public bureaucracy, and, so, failed to lead the country into resumed growth.[6] Its great merit was to secure social inclusion, which occurred due to the substantial increase in the minimum wage and the expansion of cash transfers to the poor, allowing a significant portion of the population access to mass consumption.

In the thirteen years that the PT was in office the liberal policy regime was not changed. Lula (2003-2010) didn't even try; Dilma Rousseff (2011-2016) tried by reducing sharply the interest rate in July 2011, but a small rise of inflation and a huge protest or rentiers and financiers, who are the major beneficiaries from the neoliberal regime, led her to stop. Thus, the basic interest rate was back to 6 to 7% yearly in real terms, and the long-term overvaluation of the exchange rate was not resolved; on the contrary, it was *aggravated*. In January 2003 the Lula administration inherited a highly depreciated exchange rate from the previous government, R$ 5.30 per dollar (at 3rd quarter 2016 prices)[7] – a consequence of a second currency crisis in the

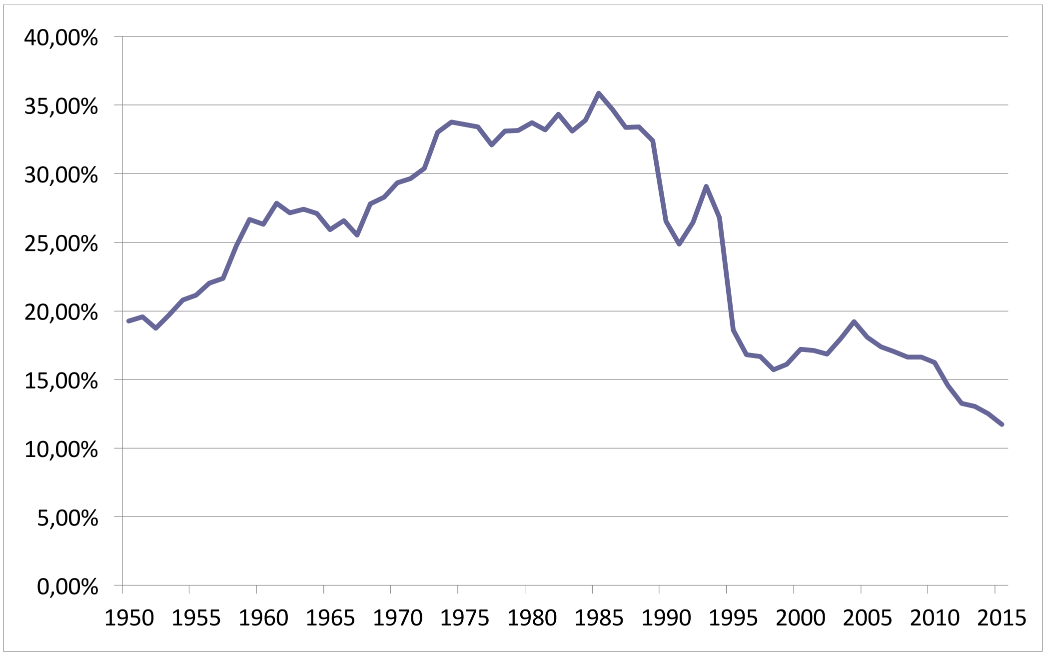
Cardoso administration. Benefited for such highly devaluated Real, president Lula let the national currency appreciate hugely during his eight years in office, which has reached R$ 2.20 per dollar at the end of 2010. Dilma Rousseff achieved some real devaluation, but the Real remained highly overvalued Figure 1 shows the last full exchange rate cycle (2002-2014), where the Real remains overvalued for seven long years, between the second semester of 2007 and the first semester of 2014. In consequence, the manufacturing industry, first, stopped exporting, second, lost to the domestic market to foreign competitors – deindustrialization (Figure 2) and heavily indebted manufacturing companies following. In January 2015 a new financial crisis and a major recession – this time not a currency crisis but a financial crisis of the manufacturing business enterprises – braked out.

Figure 1: Real exchange rate and the industrial equilibrium—1996-2016



Source: Center for New Developmentalism/EESP-FGV. 2005=100.

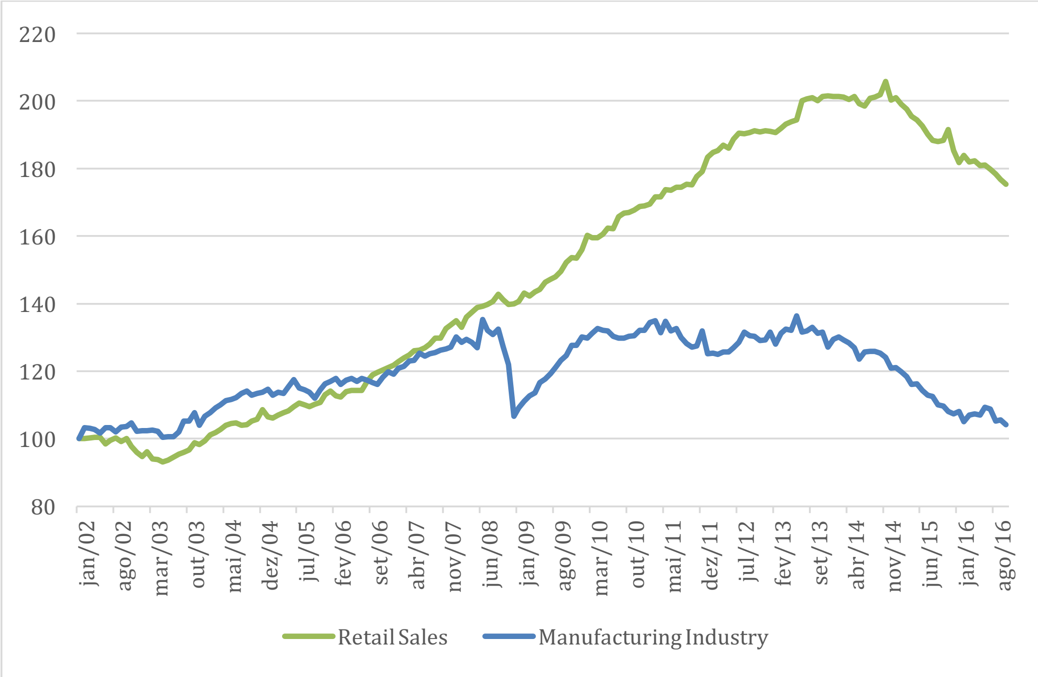
Figure 2: Share of the manufacturing industry in GDP (1947-2015)



Source: IBGE.

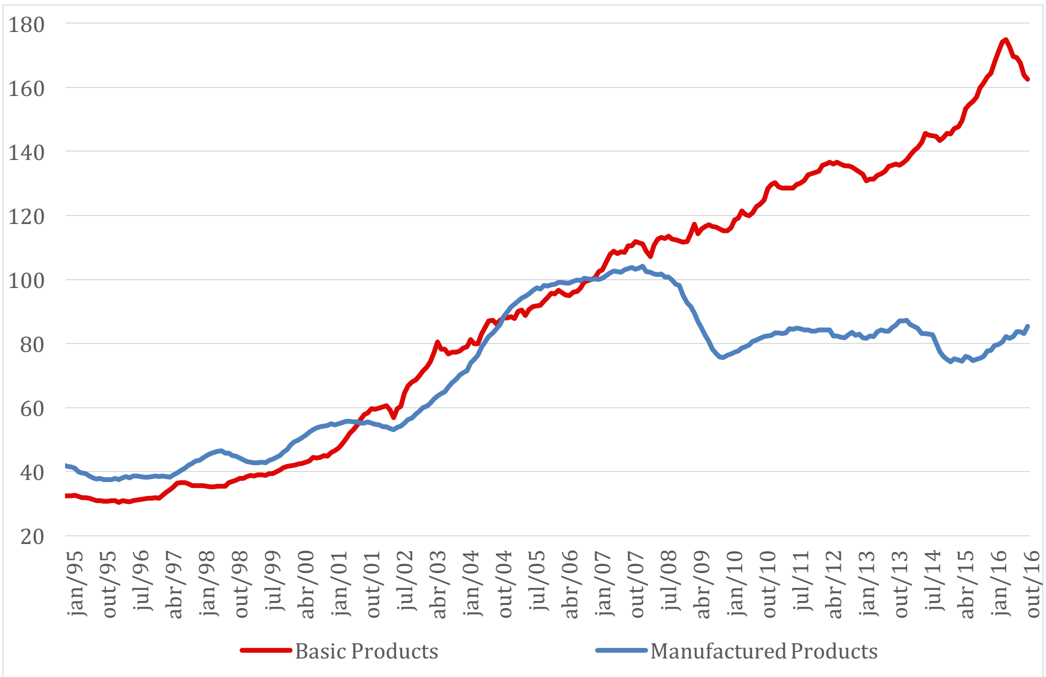
During Lula's administration, there were five years of satisfactory growth driven by the rise in the price of commodity exports (a typical commodity boom), which, combined with a much-needed distribution policies, expanded the domestic market. This involved a trade-off for manufacturing industry: it lost foreign markets due to the appreciation of the Real, but gained a stronger domestic market. This was hailed as an achievement by the developmental defenders of the wage-led strategy. But this kind of strategy only works when the country is closed to imports; it is in an import-substitution case. Since the Brazilian economy is an open economy, supposed to be competitively integrated in global markets, the trade-off had a brief history. Soon importers of manufactured goods got themselves organized (which takes on average three years), and imported goods flooded the domestic market; as a result the Brazilian manufacturing industry lost its domestic market, accelerating the deindustrialization process.[8] Figure 3 demonstrate indirectly such leakage of the domestic markets to imports by comparing physical production of the manufacturing industry and retail sales. Figure 4 shows how exports of manufactured goods stagnated while the exports of commodities continued to increase.

Figure 3: Physical production of the manufacturing industry and retail sales: 2002-2012 (January 2002 = 100)



Source: IBGE – Monthly Industrial Survey and Monthly Retail Survey. Observ: seasonal adjustment.

Figure 4: Exports of manufactured goods against exports of basic products (quantum) 1995-2016



Source: Funcex. Observation: “basic products” include primary goods and the output of the extractive industry.

When Dilma Rousseff assumed the presidency in January 2013, with the real exchange rate at R$ 2.50 per dollar (3rd quarter 2016 prices), she faced an impossible task. She didn’t have power to depreciate more than 50% the Real – to R$ 3.80, the competitive equilibrium. per dollar in this moment, All she achieved was just a 20% depreciation in the first two years of her administration, while the Central Bank lowered the interest rate substantially. But manufacturing business enterprises didn’t start investing. The interest rate required a high expected rate to make investments viable, but the overvalued national currency made the local manufacturing firms non-competitive, their expected rate of profit remaining very low, if not negative. The low rates of growth surprised the government, and the president made a decision of last resort that amounted to a major mistake: she adopted a costly “industrial policy” involving a substantial reduction of taxes for a large number of manufacturing firms.[9] Again, industrial business enterprises didn’t resume investing, because an industrial policy is no substitute for a competitive exchange rate and a reasonable interest rate. The country remained caged in the high interest–overvalued currency trap; manufacturing business enterprises continued without net (of interest) expected profits. Besides, the governing party became involved in a major corruption scandal – the Mensalão. Thus, the industrial entrepreneurs, who since 2003 had been called on by Lula and Dilma to form a developmental class coalition with the workers, gave up and opened the way for the liberal hegemony of the rentier capitalists, including the traditional middle class and financiers who manage the rentiers’ wealth.

Despite the opposition of the economic elites, Dilma Rousseff was reelected at the end of 2014 with the support of the poor and of the Northeast. However, when she took office in January 2015, the economy was entering a recession, while inflation had risen into 8% a year, the primary surplus had deteriorated from 2% of GDP positive in 2013 to 0.6% negative in 2014, and the current account deficit reached 4.6% of GDP.[10] The recession was triggered by the fall in the international prices of the two major commodity exports (soybeans and iron ore) in the second semester of 2014 and, principally, by a Minskyan financial crises caused by the fall of profits and the high indebtedness of the manufacturing industry after years of a highly overvalued exchange rate and high interest rates.[11] Besides, a second and major scandal, now involving Petrobras, broke up at the end of 2014. In consequence, on assuming office for the second time, in January 2015, President Dilma faced an acute economic and political crisis – a generalized loss of confidence – which was immediately aggravated because the liberal economists that assumed the Finance Ministry in this month didn’t evaluate how deep was the crisis, assumed that it was just a fiscal problem, and engaged in a major fiscal adjustment while the economy faced deep recession. In fact, the increase in expenditures and the tax exemptions in 2013 and 2014 and the major fall of GDP (3.8% in 2015 and around 3.5% in 2016) and the ensuing fall in the state revenues led the country to a large primary deficit. In consequence of the crisis and of her political inability, the president was impeached in April 2016, and the new, radically liberal administration, failed, as its developmental predecessor had failed, to realize which was the real origin of the quasi-stagnation that the country is facing from the Real Plan: the interest and exchange rate trap, and defined the fiscal problem as being “the cause” of the recession, when it was essentially its consequence.

Four new facts

Let me now set aside the short-term adjustment problem faced by the Brazilian economy, and discuss long-term questions. What are the new historical facts that keep the Brazilian economy growing so poorly – that is, quasi-stagnant? Why do financial advisors, whose forecasts are consolidated in the Focus Report of Central Bank, expect GDP growth up to 2018 to achieve a maximum of 2% per year? Of the four explanations that are most often proposed – insufficient household savings, a low level of basic education, lack of strong institutions, and lack of investment in infrastructure – only the last is useful. These problems are of long standing; they are always being confronted and never satisfactorily resolved, but they haven't prevented the country from growing strong in the past. To explain the quasi-stagnation, I propose four new historical facts: (*a*) the reduction of public savings and, therefore, the fall in the state's capacity to invest in infrastructure since 1980; (*b*) the end of the unlimited supply of labor; (c) a very high (though decreasing) interest rate level since the Real Plan; and, last but the more important cause, (d) a large competitive disadvantage that Brazilian manufacturing business enterprises have faced since the trade opening in 1990 that involved the dismantling of the mechanism that neutralized the Dutch disease. These four facts caused the fall in both public and private investment, and explain why the historical per capita growth rate from 1990 on has been a quarter of the rate between 1950 and 1980.

Table 1: Public savings and investments in decades as % of GDP
(Averages from the 1970s to the 2000s,)

	Public savings	Investments
1970s	3.9	21.4
1980s	–1.5	22.1
1990s	–0.8	18.2
2000s	–2.8	17.1

Source: IBGE.

First, public savings. As shown in Table 1, public savings reached high levels in the 1970s (an average of 3.9% of GDP), but plummeted in the 1980s and has remained negative since then; in the 2000s they were negative by 2.8% of GDP. The fall in public savings originates from two misguided policies pursued by the Geisel government in the second half of the 1970s: the use of the prices of the state-owned enterprises to control inflation, and the decision to grow with current account deficits which would be financed by "foreign savings". From the start of the military regime in 1964 the profits of the state-owned enterprises have been used to finance government investment in infrastructure.[12] Ten year later, using their prices to control inflation was a serious mistake, similar to the use of the exchange rate as an anchor to control inflation. This decision reduced the profits of the state-owned enterprises, and public savings fell. Second, the first OPEC oil shock in 1973 led all rich countries into recession. On assuming office in the following year, President Geisel declared that Brazil would nevertheless continue to grow in accordance with his Second National

Development Plan. This goal was pursued by accumulating current account deficits and turning the Brazilian economy indebted in foreign currency[13] – a self-defeating policy, because it appreciates the national currency, involves substitution of foreign for domestic savings, and leads the country to recurrent currency crises. The average growth rate, which in the 1968-1993 Brazilian "miracle" had been 11.3% yearly, has fallen to a still high rate, 6.9% a year between 1994 and 1999, but at the cost of a high increase in foreign indebtedness (the foreign debt rose from US$6.4 billion in 1973 to nearly US$54 billion in 1980), which lead the country to a major financial crisis and stagnation of per capita income in the 1980s. With the second oil shock, in 1979, the United States dramatically raised interest rates, and the countries indebted in foreign currency, including Brazil, broke up. The state was constrained to bail out business enterprises that were highly indebted in foreign currency, which represented a second blow to the fiscal health of the country, besides the loss of revenues derived from the state-owned enterprises. As a consequence of these two mistakes, public savings turned negative and the state's capacity to invest declined, while the country faced for the next ten years a severe currency crisis. From this moment on, the country faced serious difficulties in financing the required infrastructure projects – a difficulty yet to be resolved.

Public savings recovered somewhat in the 1990s, but in the 2000s they deteriorated further, for several reasons: first, the Brazilian government, captive to neoliberal thinking in the 1990s, privatized monopolistic state-owned enterprises, whose profits financed investment; second, since the 1985 transition to democracy governments had given priority to social spending to the detriment of investment in infrastructure; and third, the engineering capacity that a developmental state must have to develop infrastructure projects was seriously damaged by the many years of low public investment. Considering the high economic inequality, I understand the priority that was given to the social state over the developmental state, but this policy change went too far. The tax burden increased from 22% of GDP in 1985 to 36% in 2014, but, of this 14 percentage-point increase in the tax burden, around 11 percentage points were applied in the social area: education, health care, social security, social assistance, and culture, and the rest, to finance the high interest rates that the Treasury pays to rentiers. Social spending is a fair and highly efficient way of increasing indirect wages. In fact, this increase in social spending was a result of a momentous political agreement – the 1977 Democratic Popular Pact – that besides calling for democracy was committed to reducing social inequality. The fact, however, is that public investment lost the priority that it had had in the 1970s, and this is one reason for the subsequently lower investment and growth rates.

The second new fact that had a negative impact on investment and growth was demographic: it was the exhaustion of the "unlimited supply of labor" that exists in developing countries. According to the classical model of Arthur Lewis (1954), it depressed wages but kept them sufficiently high to allow for the transfer of labor from agriculture to the manufacturing sector, which could pay low wages, while the productivity of the country increased. As the business enterprises that benefited from low wages applied the resulting profits to investment and technical progress, economic growth was accelerated. This simple model explains some of the industrialization in developing countries, including Brazil. But fertility rates fell strongly in Brazil after the 1980s, resulting in a strong decrease in the labor supply in the 2000s (when the country reached the "Lewis' point"). This was the main cause of the sharp rise in formal employment that began at that moment, and is one of the reasons why wages began to increase faster than productivity in several industries.

The third new fact that explains Brazil's long-term quasi-stagnation is the increase in real interest rates, which were very low if not negative in the 1970s, but became extremely high from the Real Plan on. It is true that the level of interest rates has been falling throughout the period since 1994, but it is still very high. In June 2015, when this paper was written, it was 6% a year in real terms. What is the explanation for this? "Because high interest rates are required to control inflation", is the usual response. Indeed, when inflation is rising, an increase in the interest rate is the first thing that should be done. But monetary policy does not need to go up and down around a 5% real rate of interest, as it does today; it may very well be practiced having as mid point a 1–2% real rate of interest. The high rates of interest in Brazil reflect the political power of rentier capitalists and financiers, who have a *seigniorage* of around 5–6% over GDP. Since the collapse of the Plano Cruzado (1987), rentier capitalists and financiers have become very powerful in Brazil and their influence only increases in so far as great numbers of industrialists sell their business enterprises to multinationals and become rentiers. When, in 2011, the Central Bank substantially lowered the basic interest rate, President Dilma Rousseff gained the support of manufacturing industry. But the political power of industrialists has long been waning in Brazil, due not only to the process of deindustrialization but also to the process of denationalization: since the 1990s the number of manufacturing business enterprises sold to multinationals has only increased.

The fourth new historical fact explaining Brazil's quasi-stagnation is the *dismantling* of the mechanism that neutralizes the Dutch disease. This occurred in 1990, within the framework of the trade liberalization then realized. This was a major mistake. In the 1990s Brazil no longer had an "infant manufacturing industry", and should have opened its economy and become more competitive; but it quite rightly could not ignore the Dutch disease – a competitive disadvantage for the non-commodity tradable goods sector – which is the major cause of the long-term overvaluation of the Brazilian currency. The mechanism that neutralized the Dutch disease was built *into* Brazil's foreign trade system. In 1990, when the Brazil's average import tariff was reduced from 45% to 12% of GDP and the subsidy to the exports of manufactured goods, also 45% of GDP, was eliminated, the government was not only opening the economy; it was also dismantling the mechanism that neutralized the Dutch disease, without knowing that it was creating a major competitive disadvantage for Brazilian manufacturing firms. For sixty years after the 1930s, the developmental economists who managed economic policy neutralized instinctively or intuitively a Dutch disease whose concept they didn't dominate; multiple exchange rate regimes, or high import tariffs combined or not with export subsidies to manufacturing goods did this job; in one stroke, this neutralization, wrongly understood as protectionism, was discarded, giving rise to a major competitive disadvantage to the Brazilian firms.

The Dutch disease can be defined as a permanent appreciation of the exchange rate and, therefore, as a competitive disadvantage caused by the export of commodities using abundant and cheap natural resources; these commodities can be exported profitably at a significantly more appreciated exchange rate, than the rate necessary to render competitive both existing and potential producers of tradable goods and services that use world state-of-the-art technology. The commodities that generate the Dutch disease set the "current equilibrium" – the value of foreign currency that guarantees the intertemporal equilibrium of the current account – while the value required to render the other competent tradable business enterprises competitive is the "industrial equilibrium". The greater the difference between these two equilibriums, the more severe will be the Dutch disease. In oil-exporting countries like Venezuela or Saudi Arabia, where the cost of production is very low, the disease is very serious, while in countries like Brazil or Argentina the disease is moderate but enough to cause de-industrialization and – more than that – to *prevent* the vast majority of potential industrial projects in Brazil from being realized.

The takeoff of industrialization in Brazil in the 1930s benefited from the depreciation of the national currency caused by the Great Depression and the long-term fall in coffee prices. From the early 1950s, the Dutch disease was neutralized by a disguised tax on commodity exports, mainly coffee at that time.[14] Originally, this export tax was embedded in multiple exchange rate regimes, involving a more appreciated rate for exporters of commodities. What I call the "Delfim Netto model" is the mechanism that, from 1967 to 1990, neutralized the Dutch disease. It was embodied in the Brazilian foreign trade system of high import tariffs and substantial subsidies to exports of manufactured goods. The coffee exporters knew that this was a disguised export tax and called it "exchange confiscation", although, eventually, they paid nothing because they recovered their tax payments through the depreciation of the currency. It was a big tax, amounting to 31% of commodity prices – more than is required today to neutralize the Dutch disease. With this mechanism, the competent manufacturing business enterprises that Brazil was building became competitive, and exports of manufactured goods soared: they accounted for 6% of total exports in 1965 and for 62% in 1991. Today they represent only 36% of Brazilian exports.

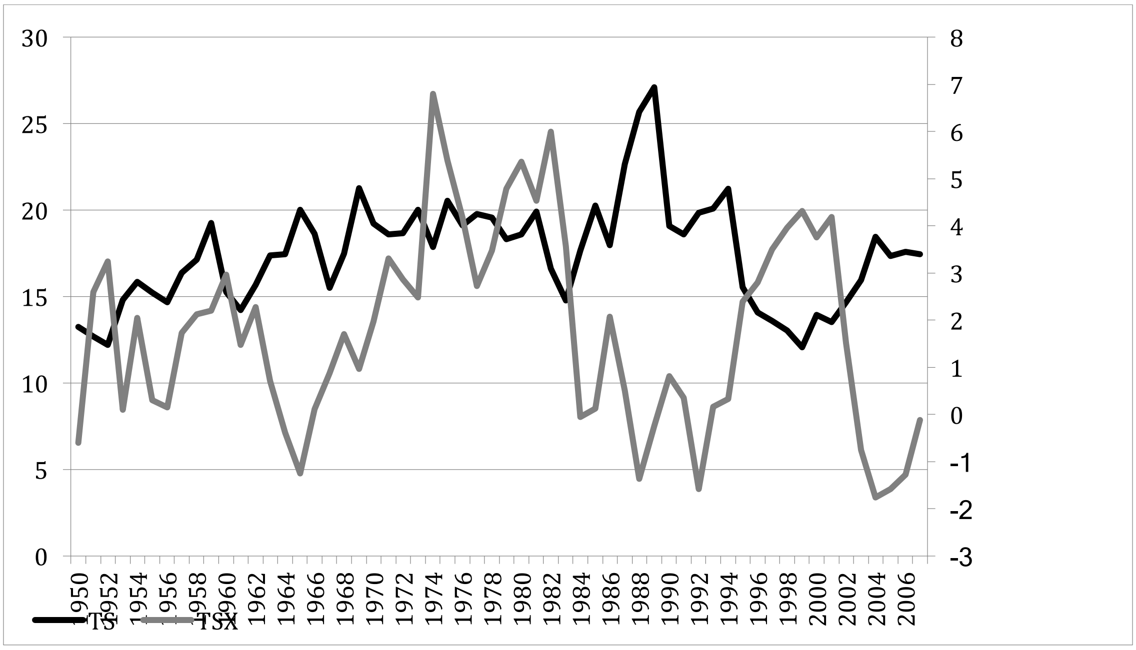
The theory

The last two new historical facts that explain the low investment and growth rates in Brazil since the early 1990s (the high level of interest rates and the non-neutralization of the Dutch disease) may be more clearly understood in light of the developmental macroeconomics that a group of economists have been developing since 2003 within the framework of New Developmentalism.[15] In this paper I use the concepts of this developmental macroeconomics, which is focused on the exchange rate and the current account instead of on the interest rate and the budget deficit.

In short, according to this view, economic development depends on investment, which depends on the expected profit rate and the interest rate; and the expected profit rate, in turn, depends on the exchange rate. The theoretical novelty here is the exchange rate; it is not considered in either Keynesian or neoclassical macroeconomics, because both assume that it is volatile but floats around the equilibrium exchange rate. New Developmentalism drops this assumption and claims that in developing countries the exchange rate tends to be overvalued in the long term in so far as it exhibits the tendency to cyclical and chronic overvaluation. Thus, when business enterprises evaluate their investment opportunities, they take into consideration the ongoing exchange rate, which most of the time is overvalued, and conclude that the investment will not be competitive even if they utilize, or plan to utilize, the best technology available in the world.

The competitiveness of a country depends on the evolution of this equilibrium exchange rate, which, for its part, depends on the comparative index of unit labor costs, that is, the wage rate over the productivity of the country compared with the unit labor cost of a basket of countries. When this index rises, the equilibrium exchange rate goes up and the national currency depreciates so that its business enterprises may remain competitive; when it falls, the exchange rate appreciates with no harm to local business enterprises. Whenever the exchange rate does comply with this expected market behavior, just diverging from it in the short-term (the volatility problem of the exchange rate), we need not worry about it. This is not true when the exchange rate remains overvalued in the long-term as we suppose it does in developing countries due the cyclical and chronic tendency of the exchange rate that we observe in these countries. In this case, investment will stop, and the economy will immediately face deindustrialization and low rates of growth if not stagnation. There are four causes for that, one structural cause – a non-neutralized Dutch disease – and three habitual policy causes: the policy of growth with current account deficits or "foreign savings", the use of an exchange rate as an anchor to control inflation, and the central bank conducting its monetary policy around a high level of interest rate. While the Dutch disease pulls the market exchange rate to the current equilibrium, these other three policies widely used in developing countries, except those East Asian countries that count with competent developmental states, explain the current account deficits. These policies, together with expansive and irresponsible fiscal policies, cause non only low investment and growth rates, but lead the country into increasing indebtedness in foreign currency and into recurrent balance of payment crises.

1) **Figure 5: Current account deficits and foreign debt in the 1970s**



Source: CBB (2010); Bresser-Pereira, Gala and Araújo (2015).

The policy of growth with current account deficits ("foreign savings") to be financed by foreign loans or the investment of multinational companies automatically appreciates the exchange rate. Since there is a direct relationship between current account deficits and the exchange rate – the higher the current account deficit, the more appreciated is the exchange rate, and vice versa – this policy appreciates the exchange rate, discourages domestic investment, and involves a high rate of substitution of foreign for domestic savings: foreign investment does not add to, but rather replaces domestic investment – except when the country is growing very fast and there is already a very high expected rate of profit.[16] In the case of Brazil see Figure 5.[17] As for the exchange rate anchor policy, it means maintaining a relatively fixed exchange rate while inflation continues to occur, which causes inflation to fall. This is a perverse way of fighting the symptomatic evil that inflation is, since it does so at the price of distorting the most strategic price that exists in a national economy, namely the exchange rate. And as for the high level of the interest rate, it makes sense only to the rentiers and financiers usually associated with foreign interests.

Large fiscal deficits are an expression of fiscal populism and vulgar Keynesianism, not of liberal orthodoxy; instead, large current account deficits associated with a long-term appreciation of the exchange rate are a manifestation of exchange-rate populism, whether developmental or orthodox.[18] These two forms of economic populism have always been present in Brazil since the transition to democracy. Exchange-rate populism was present in the Fernando Henrique Cardoso administration; it was even more intense in the Lula administration; and it recurred in the last two years of the Dilma administration. Fiscal populism was absent from 1999 to 2013, but returned in 2014.

Recession

After seven years, 2007 to 2014, of overvaluation of the Real, the last exchange rate cycle ended in the second semester of this last year. Between 2015 and 2016, income per capita has fallen 9.0% and unemployment achieved a all times high of 12%. The sharp fall in the prices of the two main commodities exported acted as a trigger for the recession. As the model of the tendency to the cyclical and chronic overvaluation of the exchange rate predicts, after a long-term overappreciation, the cycle ends with a financial crisis and a sharp devaluation of the national money. This had happened in 1999-2002, and was repeated in 2014, but the financial crisis was not a currency crisis, as usually happens in developing countries, not a banking crisis such as the 2008 financial crisis, but a financial crisis of the business enterprises. It was not a currency crisis, because the country had accumulated huge and expensive reserves in the boom years; it was not a banking crisis, because they are monopolist, counted with favorable government policies, and were well managed. It was a crisis of the manufacturing industry because for seven years they confronted an adverse exchange rate, their profit rates fell sharply, and they became heavily indebted paying a very high interest rate. Thus, the causes of the recession were just an aggravation of the causes of the long-term quasi-stagnation.

In the last long seven years in which the Real was highly overvalued (2007-2014), the average real effective exchange rate was R$ 2.80 per dollar,, while the industrial equilibrium was going up from R$ 3,80 to 4.00 per dollar due to the deterioration of the unit labor cost in comparison with its main competitors. Considering an average R$ 3.92 per dollar industrial equilibrium between 2007 and 2014, the Real required a 40% devaluation to become competitive. Such huge overvaluation of the currency was not just consequence of the Dutch disease, but also of the three habitual policies that appreciate the exchange rate of developing countries: the practice of a high level of the real interest rate around which the central bank conducts its monetary policy, the growth *cum* foreign indebtedness ("savings") policy, and the use of an exchange rate anchor to control inflation. The depreciation occurred only in the second semester of 2014, but the international market was pressing in this direction before that. The depreciation didn't happen before because the Central Bank had bought back reserves (actually, swaps) from August 2013 to avoid it and the consequent increase of the rate of inflation.

In February 2017, when in am finishing to write this paper, the real exchange rate was around R$ 3.10 per dollar, quite below the industrial or competitive equilibrium, which is around R$ 4.00 per dollar.[19] In the height of the financial crisis, in September 2015, the exchange rate peaked at R$ 4,40 per dollar, but soon, confirming the tendency to the cyclical and chronic overvaluations of the exchange rate, it has re-appreciated to R$ 3.10 per dollar, because the commodity prices have partially recovered, and because the fear of a balance of payment crisis went down. It would have depreciated more, were it not for the real basic interest rate, which, despite the recession, is around 8% a year, what reflects the power of rentiers and financiers in Brazil..

Long-term solution

The present major recession will end sooner or later, but for the long-term quasi-stagnation it takes a long-term solution, which requires the recovery of the fiscal equilibrium, lost from 2014, and the neutralization of the tendency to the cyclical and chronic overvaluation of the exchange rate, which involves the neutralization of the Dutch disease and the rejection of the three habitual policies that lead to the overvaluation of the exchange rate. The severity of the Dutch in Brazil (the difference between the industrial and the current equilibrium) is difficult to measure, because our estimations of the industrial equilibrium are just approximations, and because we don't dispose of a series for the current equilibrium, but we know that it is not so severe as the one in Venezuela, or in Saudi Arabia. Research on the value of the industrial equilibrium suggest that the average severity of the Dutch disease in Brazil is around 15%, ranging from 8% to 25% in accordance with the variation of the international prices of the commodities that the country exports.[20] . When the price rises, the current equilibrium goes down and the Dutch disease worsens; the reverse happens when commodity prices fall, as it happened in the last quarter of 2014, and the Dutch disease had almost disappeared. The solution to the problem – the correct way of neutralizing the Dutch disease – is to levy a variable export tax on the commodities that originate the disease equal to the severity of the disease. As this tax increases the cost of production, exporters will require a more depreciated exchange rate, and since, given the foreign demand, it is the supply of the commodities (not of manufactured goods) that determines the exchange rate, the supply curve will shift to the left as the cost plus reasonable profit fall, and the exchange rate will duly depreciate. If the tax is equal to the severity of the disease, the current equilibrium will become equal to the industrial equilibrium, and the neutralization is complete. In consequence, all technically competitive tradable industries (not only commodities benefiting from Ricardian rents) will be economically competitive.

To explain the chronic overvaluation of the Real we should consider, besides the Dutch disease, the three habitual policies that appreciate it: the growth with current account deficits policy, the use of the exchange rate as an anchor to control inflation, and a high level of the interest around which the Central Bank conducts its monetary policy. The weight of this second type of cause may be huge. When, between 2007 and 2014, the average overvaluation was around 60%, I suppose that the Dutch disease responded for one-third of this difference, while the three habitual policies responded for the remaining two-thirds.

Such long-term overvaluation of the exchange rate since 1990 is more than enough to explain the loss of competitiveness of the Brazilian industry and de-industrialization in motion – the de-industrialization that we see (a) in the fall of the share of manufacturing industry in employment, (b) in GDP, (c) in total exports, and (d) in the increasing trade deficit of the manufacturing industry. De-industrialization was not greater because the "Brazilian automotive regime" that was initiated in 1995 imposed an import tariff on the auto industry of about 35%. Thus, in relation to this industry, which is key to the Brazilian economy, the government fully neutralized the Dutch disease, but only in relation to the domestic market; the competitive disadvantage remained in exports. The rationale for the adoption of the program was the importance of planning the production chain, but its good results reflected the fact that tariffs are a form of exchange rate, and its increase led to the neutralization of the Dutch disease in relation to imports.

To counteract the tendency to the cyclical and chronic overvaluation of the exchange rate and to make the exchange rate competitive, the government must neutralize the Dutch disease and radically reject the three habitual and populist policies. But before that Brazilian economists and politicians should understand what is the Dutch disease and why an export tax proportional to the severity of the disease neutralizes it. This is a serious problem because few economists in Brazil or in other countries are aware of that, in the same way as only a few economists knew what was inertial inflation between 1980 and 1994 – a knowledge that was essential to the price stabilization that the 1994 Real Plan achieved.

Once overcome the knowledge problem we must consider the political problem involved. It is politically difficult to neutralize the Dutch disease, not only because the once and for all depreciation involved causes a temporary but unpopular fall in all real revenues and a temporary increase in inflation – something that Brazilians are not ready to accept -, but also because the powerful commodity exporters, backed by the liberal-orthodox economists who deny that productive sophistication is a condition for growth, will resist the tax, although their net cost will be zero, because what they pay in taxes they will receive back in depreciation. The first problem was solved by the fall in the commodity prices and the financial crisis that happened in the second semester of 2014 and caused both recession and a strong depreciation of the Real. What the administration had to do was just adopt the required policies and non-policies to avoid that the Real re-appreciated. As to the second difficulty there is a solution for this problem: the law establishing the tax may also include a table defining the relation between its international price and the percentage tax for each commodity. Today, as the fall in the international prices was huge, this percentage would be zero. In this way, the commodity exporters will not depend on the will of the government. If the international price of the commodity falls, the tax is reduced up to zero.

But note that an export tax will not assure the competitiveness of the manufacturing industry if the government continues to adopt the habitual policies that appreciate the national currency. This happened in Argentina from 2007 on. In the 2001 financial crisis, a tax (*retención*) was imposed on commodity exports, which neutralized the Dutch disease and for six years allowed the economy to grow at a very high rate. However, in 2007, given the rise of inflation, the government decided to adopt the exchange-rate anchor policy to control inflation. In consequence, despite the tax, the exchange rate has appreciated, industry has lost competitiveness, and the growth rate has fallen, at the same time as the country has failed to earn a current account surplus. This shows that it is useless to neutralize the Dutch disease with an export tax and then adopt policies that appreciate the national currency. In the case of Brazil, after the 2014 depreciation, the export tax remained a proposal "out of the agenda", and the three habitual policies were not changed, and, in consequence, the Real became again overvalued, as we already saw.

Conclusion

In this paper, I have used the ideas of new developmentalism and the developmental macroeconomics models to explain the quasi-stagnation of the Brazilian economy. In short, after the mechanism that neutralized the Dutch disease was dismantled with the 1990 trade opening, the exchange rate appreciated chronically, varying the overvaluation from 8 to 25%, except in the cyclical moments of financial crisis when it sharply depreciated. In addition to this structural cause, I identified three habitual (and equivocated) policy causes: growth with current account deficits ("foreign savings") policy, an exchange rate anchor policy to control inflation, and a high level of the interest rate both to attract capital and to control inflation. The non-neutralization of the Dutch disease and the three habitual policies have reduced the productivity and the competitiveness of Brazil's manufacturing industry in monetary terms and also in technological terms, because the lack of investment hinders the modernization of machines and equipment. Second, the interest-rate level has remained very high since the Real Plan. Third, from the late 1970s public savings became negative, which substantially decreased the investment capacity of the Brazilian state and so rendered the infrastructure obsolete. Finally, in the 2000s the country reached the "Lewis point" in so far as the unlimited supply of labor ended.

Of these four policies, the first two, which raise interest rates and result in a currency that is overvalued over the long term, are the most important causes of Brazil's low investment and growth rates. They represent a serious problem, but neither the liberals nor the developmental economists have conducted a serious debate about this macroeconomic trap. The political economy causes for this are as clear as burdensome. The necessary exchange rate devaluation displeases both groups. The developmental macroeconomics' models on the Dutch disease and on the critique of the growth with foreign savings remain generally unknown. Therefore, instead of discussing how to carry out devaluation, what the economic and political obstacles to doing so are and how to overcome them, they immediately argue that devaluation is either unnecessary, or unfeasible, or both. Independently of whether they are developmental or liberal, they reject the required initial and once-and-for-all devaluation because, so they claim, in the short term it would reduce wages (which it would) and would increase inequality (which it would not, because it would reduce not only wages but all kinds of income). Indeed, the attempt to reduce the extreme inequality in Brazil through the exchange rate makes no sense. The correct way to reduce it is through progressive taxation, a minimum-income policy, low interest rates and an expanded social state. Progressive taxation explains, for example, why Sweden has a much more civilized distribution of income than the United States. The Gini index pre-taxation is almost equal in the two countries, but post-taxation it is very different. While taxation is progressive in Sweden, it is not in the United States.

Liberal economists also reject devaluation, both because it temporarily increases inflation and reduces the real interest rate – which is unacceptable to the rentier capitalists – and because it would create difficulties for companies indebted in dollars and therefore for the creditor banks. Like the developmental economists of the left, right-wing liberals display a holy horror of currency devaluation – which, to the left, implies inaction, and, to the right, implies fiscal austerity, which will achieve an "internal devaluation" as unemployment grows and wages fall while the incomes of rentiers will remain untouched. In so far as they focus only on the difficulties associated with the proposed policy, they have abdicated responsibility for defending the temporary reduction of incomes and the temporary increase in inflation, which devaluation involves. Because of the economic elites' *active omission*, society is uninformed about the real causes of the stagnation of the Brazilian economy since the early 1990s. Government is paralyzed, no matter which political party holds office. Economists, businessmen and politicians fail to understand, and seem uninterested in understanding, the fundamental role of the long-term overvaluation exchange rate and the ensuing competitive disadvantage suffered by the non-commodity tradable industries in the growth process and in catching up.

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[1] *Macroeconomia da Estagnação [Macroeconomics of Stagnation]* was the name of the 2007 edition; in English it was published two years later with the title, *Developing Brazil* -

Overcoming the Failure of the Washington Consensus (Boulder: Lynne Rienner Publishers, 2009).

[2] Between 1930 and 1980 the per capita growth rate was 2,8% a year.

[3] Inflation turns "inertial" when economic agents index their prices and wages to previous inflation formally and informally, and inflation turns independent from demand. On the first works on inertial inflation see Mario Henrique Simonsen (1970) and Felipe Pazos (1972); on the fully developed theory see Bresser-Pereira and Nakano (1983) and Rezende and Arida (1984).

[4] Note that the Real Plan was successful because it was the outcome of a heterodox economic theory (the theory of inertial inflation) developed by Brazilian economists.

[5] In to the 2010 PhD dissertation of senator Otávio Mercadante, at that time leader of the government at the Federal Senate.

[6] On the failure of the attempt to form a developmental class coalition see Armando Boito Jr. (2012); Bresser-Pereira and Eli Diniz (2016); Armando Boito Jr. and Tatiana Berringer (2016); Bresser-Pereira (2017).

[7] All exchange rates in this paper are expressed in real terms, in 3rd quarter 2016 prices; and they are the "effective" exchange rate, which considers 16 currencies instead of just the dollar.

[8] On the deindustrialization of Brazil see Bresser-Pereira (2007), José Luis Oreiro and Carmen A. Feijó (2010); André Nassif (2011).

[9] Previously she had already failed to undertake a fiscal adjustment when, in the second semester of 2011, the Central Bank firmly lowered the interest rate.

[10] The explanation for the rise in inflation is given in the previous note. A substantial reduction in the interest rate must be accompanied by a fiscal adjustment.

[11] On the Minskyan financial crisis, see Renato Resende (2016).

[12] In 1964 the liberal and highly competent Planning Minister, Roberto Campos, nationalized the foreign companies to incorporate them in two major state-owned enterprises, Telebras and Eletrobras, and, immediately increased their prices to the consumers – a policy that allowed the two companies to self-finance their much needed investments.

[13] See Bonelli and Malan (1976); Bresser-Pereira (1990); Ronald V. Coes (1995).

[14] Coffee planters called this disguised tax, "confisco cambial" [exchange rate confiscation].

[15] On new developmentalism see Bresser-Pereira (2010, 2016); Bresser-Pereira, Marconi and Oreiro (2014).

[16] For the theory, see Bresser-Pereira and Gala (2007). There is a large empirical literature on "savings replacement", which demonstrates empirically this key new developmentalism's model on the substitution of foreign for domestic savings.

[17] For the case of Brazil, besides Figure 5, see Bresser-Pereira (2007: chap. 7: "Overappreciation and foreign savings"); Bresser-Pereira, Araújo and Gala (2014).

[18] Liberal orthodoxy is closely associated to exchange-rate populism in developing countries in so far that their economists see positively current account deficits, which, in most cases, finance consumption.

[19] I arrived at these figures on the industrial equilibrium at December 2015 prices in the research on the theme that Nelson Marconi and myself have been conducting at the Center of New Developmentalism of the São Paulo School of Economics of the Getúlio Vargas

Foundation. Studies made by Nassif, Feijó and Araújo (2013) and Oreiro, Basílio and Souza (2014) came to similar numbers. For the method we adopted, see Marconi (2012).

[20] For the estimate of the industrial equilibrium see Marconi (2013), Nassif, Feijó and Araújo (2013), Oreiro, Basilio and Souza (2014).