

---

## Peripheral financialization and premature deindustrialization: a theory and the case of Brazil (2003-2015)

---

*José Luis Oreiro*<sup>1</sup>

University of Brasília

*Carmem Aparecida Feijó*<sup>2</sup>

Federal Fluminense University

*Lionello Franco Punzo*<sup>3</sup>

Siena University

*João Pedro Heringer Machado*<sup>4</sup>

University of Brasília

**Recibido:** 06/11/2024

**Aceptado:** 29/11/2024

---

<sup>1</sup> Associate Professor at Economics Department of University of Brasília (UnB), Researcher at National Council for Scientific and Technological Development (CNPq), Associate Researcher at Center for Studies of New Developmentalism (CND) of Getúlio Vargas Foundation of São Paulo (FGV-SP) and Researcher Leader of the Group Structuralist Development Macroeconomics at University of Brasília. [joreiro@unb.br](mailto:joreiro@unb.br).

[joapedroheringer@gmail.com](mailto:joapedroheringer@gmail.com).

<sup>2</sup> Full Professor at Faculty of Economics of Federal Fluminense University (UFF), Researcher at National Council for Scientific and Technological Development (CNPq) and Associate Researcher at Center for Studies of New Developmentalism (CND) of Getúlio Vargas Foundation of São Paulo (FGV-SP), coordinator of the Financialization and Development Study Group (FINDE/UFF). [cbfeijo@gmail.com](mailto:cbfeijo@gmail.com).

<sup>3</sup> Full Professor at Department of Economics and Statistics of Siena University (UniSi), Member of the Tourism Sustainability Group at EC/DG Enterprise and Member of the Center for Studies about Inequality and Development at Federal University of Rio de Janeiro (UFRJ). [punzo@unisi.it](mailto:punzo@unisi.it).

<sup>4</sup> Researcher in the “Structuralist Development Macroeconomics” Group at University of Brasília.

## **Financiarización periférica y desindustrialización prematura: una teoría y el caso de Brasil (2003-2015)**

*Resumen:* El objetivo principal de este artículo es discutir el concepto de financiarización en las economías en desarrollo, argumentando que la definición amplia de financiarización —entendida como un papel creciente de las motivaciones, mercados e instituciones financieras en el funcionamiento de las economías nacionales e internacionales— no considera características importantes de estas economías, como la jerarquía de las monedas y la subordinación a los principios del llamado Consenso de Washington. Este último impuso la adopción de un modelo de crecimiento basado en ahorro externo, aplicado principalmente a los países de América Latina. Por lo tanto, el proceso de financiarización en los países en desarrollo se denominará financiarización periférica, ya que está asociado con la dependencia de los flujos de capital de los países desarrollados y con la reducción de la autonomía de sus políticas macroeconómicas, incluso dentro de regímenes de tipo de cambio flexible. La atracción de flujos de capital hacia países con una posición subordinada en los mercados financieros internacionales requiere diferenciales altos de tasas de interés, lo que tiene como efecto secundario una tendencia a la sobrevaloración de los tipos de cambio reales. Esto crea una trampa: tasas de interés altas asociadas a un tipo de cambio sobrevalorado. Esta trampa reduce el espacio de política económica, volviendo procíclica incluso la política fiscal. Además, la sobrevaloración del tipo de cambio real reduce la competitividad en precios de la industria manufacturera, convirtiéndose en el principal impulsor de la desindustrialización prematura en estos países. Se demostrará que el desempeño macroeconómico de la economía brasileña en el período 2003-2015 encaja casi perfectamente en este modelo de financiarización periférica.

*Palabras clave:* Financiarización, Desindustrialización Prematura, trampa de tasas de interés altas y tipo de cambio sobrevalorado.

*Clasificación JEL:* O11, O14, O16.

## **Peripheral financialization and premature deindustrialization: a theory and the case of Brazil (2003-2015)**

*Abstract.* The main objective of this paper is to discuss the concept of financialization in developing economies, arguing that the broad definition of financialization - understood as a growing role of motivations, markets and financial institutions in the operation of domestic and international economies – does not take into consideration important features of those economies, such as the hierarchy of currencies and the subordination to the principles of the so-called Washington Consensus. The latter imposed the adoption of a foreign savings-driven growth model, which mostly applied to Latin American countries. Hence, the financialization process in LDCs will be denominated peripheral financialization, since it is associated with dependence upon capital inflows from developed countries and with the reduction in the autonomy of their macroeconomic policies, even within flexible exchange rate regimes. Attraction of capital inflows to countries with a subordinate position in international financial markets, requires high interest rate differentials which have as side effect a trend to the overvaluation of real exchange rates. This creates a trap, high interest rates with an associated overvalued exchange rate. This trap reduces policy space, turning procyclical even fiscal policy. Moreover, the overvaluation of real exchange rate reduces price competitiveness of the manufacturing industry, becoming the main drive toward these countries' premature deindustrialization. It will be shown that the macroeconomic performance of the Brazilian economy in the period 2003-2015 fits almost perfectly this model of peripheral financialization.

*Keywords:* Financialization, premature deindustrialization, high interest rate-overvalued exchange rate trap.

*JEL-Code:* O11, O14, O16.

## 1. Introduction

In the last two decades a growing interest about the subject of financialization has been observed, also among non-heterodox economists (Mader, Mertens and Zwan, 2020). Although a consensual definition of the term is not to be found in the literature, some economists defining it as the financial face of neo-liberalism (Palley, 2014), others as a process of increasing importance of financial markets and motivations in the working of current economies (Epstein, 2005), there still seems to be a reasonable consensus about a negative impact on the real side of the economy. The main line of reasoning among heterodox economists, sees *financialization* as the main cause of increasing economic inequality and hence of a structural deficiency of aggregate demand and the lower growth rates. Although, in more recent years, some articles have begun to doubt the negative effect, at least for the short and middle runs, of an increased inequality (associated with financialization) onto capital accumulation and economic growth (among others, Setterfield and Kim, 2017; Kapeller and Schutz, 2015), there seems to be no doubt that financialization be associated with a lower share of wages in income and, hence, with greater income inequality.

Another aspect of the discussion about financialization is whether such a concept could be applied to developing economies. Indeed, issues such as the implications of the adoption of a shareholder value-orientation for running non-financial firms, for example, do not seem to be relevant for these countries, domestic capital markets being either underdeveloped or altogether non-existent. Moreover, some LDCs, such as Brazil, have been capable to make noticeable reductions in income inequality in the last two decades with an increase of the wage share in national income. Thus, a traditional concept of *financialization* does not appear to be directly applicable to LDCs.

Thus, in this article, we will argue that the relevant concept of financialization for such countries as Latin American, is to be referred to as *peripheral financialization*, resulting from the *liberalization of capital account* and the adoption of a *foreign saving driven growth model* in a framework of *currency hierarchy*<sup>i</sup>. From the prescriptions of the so-called *Washington Consensus*, the basic idea of the *foreign saving driven growth model* is to grow by attracting capital inflows (i.e. external savings) from developed economies, so as to increase domestic saving rate, hence investment and to raise the rate of capital accumulation. To this end, *capital controls* ought to be eliminated along with any type of *financial repression*, allowing the domestic interest rate to increase up to the level given by the international interest rate, plus the country's risk and liquidity premium. *Currency hierarchy*, however, increases the liquidity premium required, greatly increasing *interest rate differentials* with, as side effect, a trend to the overvaluation of the country's real exchange rate. This worsens whatever effect there might be of the *Dutch disease* type, and hence it creates a *trap: a high interest rate and an overvalued exchange rate*. This trap reduces policy space, making fiscal policy to be *procyclical*. The overvaluation of real exchange rate reduces the price competitiveness of the manufacturing industry, being the main reason for those countries' *premature deindustrialization*<sup>ii</sup>.

*Peripheral financialization* is possible as result of a *class coalition*<sup>iii</sup> between the labor class<sup>iv</sup> and rentiers. A real exchange rate overvaluation is associated with lower levels of inflation and a higher wage share (and thus, higher real wages). In other words, policy makers can adopt a kind of *exchange rate populism* (Bresser-Pereira, 2009, ch.4) to conciliate short-run interests of the dependent classes with those of the rentiers. Indeed, an overvaluation of

the real exchange rate is associated with both high levels of domestic interest rates (above the international level, adjusted for the country's own risk premium), thus increasing financial incomes of the *rentier class*, and with artificially higher purchasing powers of wages. Both workers and rentiers can draw benefits from a real exchange rate overvaluation, at least in the short up to the medium term. In the long-run, however, workers will eventually be damaged by deindustrialization, since high-wage paying jobs are in the manufacturing industry and in the services activities associated with it.

The *high interest rate-overvalued exchange rate trap* due to *peripheral financialization* may explain the macroeconomic performance of the Brazilian economy in the period 2003-2015. Although in Brazil the *foreign savings-driven growth model* began in the 1990's after the *financial liberalization* occurred during Fernando Collor government, the model got temporarily abandoned in the early 2000's, when the exchange rate crisis of the 2002 produced a sharp depreciation of the nominal exchange rate. Even after the effects of this currency crisis were eliminated in the first semester of 2003, Brazil did not prove capable to get rid of the high *interest rate-overvalued exchange rate trap*. This resulted in a continuous process of premature deindustrialization curbing down long-term growth until 2015, where GDP showed a deep decline and the occurrence of the *Brazilian Great Recession* (2014-2016). Its severity was also the result of the loss of macroeconomic autonomy caused by the same *peripheral financialization* (Oreiro, 2017).

This paper is divided in five more sections. Section two discusses the meanings of financialization; section three discusses peripheral financialization; in section four we present the external saving driven growth model and the logic of financialization; section five discusses the Brazilian financialization process in the 2000s and 2010s. A final section presents our conclusions.

## **2. Meanings, causes and consequences of financialization: the current debate.**

*Financialization* in a *broad sense* is defined as the growing role of motivations, markets and financial institutions in the operation of domestic and international economies (Epstein, 2005, pp. 3).<sup>v</sup>

To certain authors, changes associated with *financialization* could have a negative impact on the macroeconomic performance of capitalist economies (Crotty, 2005). Also, according to Hein (2012), an increase in the GDP share of the financial sector is associated with a drop in the share of wages, as the latter's share in added value generated in the non-financial sector is greater than the wage share generated in the financial sector. With the marginal propensity to consume out of wages greater than the propensity to consume out of profits, the reduction in the share of wages promoted by *financialization* ends up leading to a decrease in consumption and in the level of capacity utilization. If the sensitivity of investment to variations in the degree of use of productive capacity is greater than the sensitivity to changes in profit margins, it follows that the redistribution of income /induced by *financialization* would lead to a reduction in investment and long-term growth. Empirical evidence seems to support.

Thus, the literature<sup>vi</sup> usually assigns to *financialization* a decisive role in (i) lowering the wages share in income<sup>vii</sup>; (ii) increasing the share to financial profits in overall profits; (iii) lowering the rate of economic growth and (iv) increasing levels of public as well as of private debts. However, recent theoretical works on the effects of *financialization* (broadly defined)

have come up with mixed results on the relationship between income distribution and economic growth (or else capital accumulation). Although *it* continues to be seen associated with an increase in income inequality, the effects of income inequality onto capacity utilization and/or on the rate of capital accumulation may turn up to be rather ambiguous (Hein, 2012, ch. 3; Blecker and Setterfield, 2019, ch. 7). Moreover, *financialization* is seen in the literature at times as resulting of private choices but, also, as consequence of policy-making changes related to ideology and politics<sup>viii</sup>.

*Financialization* may of course arise from economic decisions, by such agents as commercial banks, non-financial firms and households. This kind of financialization is discussed in e.g. Hein (2012), Dallery (2009) and Stockhammer (2004), where a theory of the firm is presented where the key role plays the trade-off between profit rate the rate of capital accumulation<sup>ix</sup>. The final decision will depend on a stipulation between managers and shareholders. Shorter-term financial gains via financial realization of assets are often selected, in place of longer-term production goals, the firm choosing a higher profit rate (and a lower accumulation rate) to satisfy shareholder interests [Gabor (2018), Demir (2007), Erturk (2020)]. Therefore, the conflict/cooperation between shareholders and managers turns distribution of profits the top priority, with firms becoming more dependent on banks' loans to finance their investment, for their retained profits are lower.

These two last examples show how *financialization*, by affecting private economic decisions, may harm productive investment and increase financial fragility. It may not necessarily, though, lead to a decrease in the rate of economic growth<sup>x</sup>. The analysis of consumer's debt was first provided by Hein (2012) and Palley (2014) for whom households are induced to take up more debt to cope with their consumption needs in face of lower share of wages, hence due to *financialization*. A lower wage share in income can be the result of an increase in the rentier's desired rate of return on equity and bond which requires an increase in the mark-up rate of the non-financial firms (Hein, 2012, pp. 44-45)<sup>xi</sup>.

The idea of a "consumption driven, profit-led growth" was recently developed by Setterfield and Kim (2017). Their novelty is the introduction of working households who borrow to finance consumption spending in an effort to 'keep up with the Joneses' - that is, pursue a consumption target based on the spending of the more affluent households (Blecker and Setterfield, 2019, pp. 347). The combination of borrowing and emulation-based consumption targeting on the part of households allows the emergence of a "paradox of inequality", whereby transferring income from high propensity to consume workers to low propensity to consume rentiers would raise aggregate consumption. The macroeconomic effects of financialization may also depend on the structure of the labor market and the properties of the investment function<sup>xii</sup>.

Taking up a political/ideological analysis of financialization, Palley (2014, pp. 1) states that:

*Financialization corresponds to financial neoliberalism which is characterized by domination of the macroeconomy and economic policy by financial sector interests. According to this definition, financialization is a particular form of neoliberalism.*

And neoliberalism is both a political as well as an economic philosophy, which views unregulated markets as the best way to guarantee individual freedom, economic efficiency and welfare. An implication of such a view is that inflation and price stability become the sole purpose of economic policy, disregarding the level of employment, macroeconomic stability and economic development<sup>xiii</sup>

Another consequence is that policy makers are more prone to deregulate financial markets, increasing thus financial fragility through two channels. The first one following Minsky's standard model (1982, 1986); the second associated with the increased integration of financial markets. Absent capital controls would lead to a situation where those economies deprived of a convertible currency will face a trend to overvaluation forced by the arbitrage opportunities of interest rates differentials.

In sum, political and ideological drivers of financialization are generally considered to generate economic outcomes by changing the role and the action of the public bodies. Many institutional changes<sup>xiv</sup> can be the result of the political and ideological components of financialization.

### **3. Peripheral financialization**

We use a *narrower* definition of *financialization*. The financialization process is associated-with the rise of rentiers' revenues in total income,<sup>xv</sup> which may lead to stagnation (Keynes, 1936). Since the eighties, with the increasing financial and economic integration in the world economies, *financialization* has become a global phenomenon (Bonizzi, 2017)<sup>xvi</sup>; at the same time, growth rates significantly decelerated in advanced economies.<sup>xvii</sup> Latin American economies, on the other hand, could not see their growth performance improving as a result of the increased financial integration,<sup>xviii</sup> a fact undermining the thesis according that a strategy of growth driven by foreign savings would kick up long-term growth rates.<sup>xix</sup>

Recent literature introduces a clear distinction on how the process has been evolving in developed as compared to less developed economies.<sup>xx</sup> While in the former, the deregulation of financial and labor markets would have allowed increasing short-term financial gains compared to those from production and productive investment, in developing economies the *financialization* process may have started through the integration in the international monetary and financial markets. The core proposition of *financial liberalization*, based on the seminal contributions by McKinnon (1973) and by Shaw (1973), favors *capital account liberalization* as the preferred method to boost growth. Following such basic orientation, the excess of developed countries' capital would be attracted to developing countries as they would be offering higher return rates.

The capital account liberalization and other liberal financial reforms would provide an alternative to increasing domestic savings and investments, generating greater international capital flows through loans to domestic banks, and foreign direct and portfolio investments. In Latin America, financial integration was strongly supported by the so-called Washington Consensus,<sup>xxi</sup> the set of ten liberal policy reforms that were indicated to countries in order to attract capital flows. Reform recommendations were used as conditionalities for highly indebted economies to have access to international financial markets. Such a 'late' form of the *financialization* process has often been denominated *subordinate financialization* (Powell, 2013)<sup>xxii</sup> and/or *peripheral financialization* (Abeles et al, 2018, pp. 16).

The *subordinate character* of the financialization process would have to be linked to the 'original sin' [a term proposed by Eichengreen et als (2002)], e.g. that developing economies were not able to issue public debt denominated in their own currencies. Their access to international financial markets would demand a higher liquidity premium. A *peripheral financialization process*, on its turn, can be linked to the currency hierarchy in international market<sup>xxiii</sup>, where convertible currencies are issued by certain central countries,

while are non-convertible those issued by *peripheral* countries. As central currencies enjoy a lower liquidity premium, in any hikes of degree of uncertainty, peripheral currencies mostly suffer from “flight to quality”, investors then seeking refuge in assets denominated in central currencies. In short, the financialization process of developing, financially integrated, economies have its main drive in their fundamental dependence on capital flows, both for public and private financing. Just like in developed economies, also *financialization* in LDCs increases the power of the rentiers classes and it drives the microeconomic behavior of economic agents towards gains in the financial markets.

At any rate, it is the dependence on capital flows, given the character of their insertion into the international financial markets, that restricts their autonomy in economic policy: this is the key specificity of the *financialization* process in developing economies. Hereafter, we will explore the macroeconomic consequences of such international insertion of LDCs, as it implies both financial and macroeconomic asymmetries in policy implementation.

First, a financial asymmetry has to do with the international liquidity cycle. During its upward phase, an increasing risk appetite induces a bias in the allocation of agents’ portfolios towards assets with low international liquidity and higher risk. When, however, expectations change, such liquidity cycle is reverted, and the assets denominated in peripheral currencies are subject to a “flight to quality”, independently of macroeconomic fundamentals.

Macroeconomic asymmetry has to do with a lower degree of macroeconomic policy autonomy.<sup>xxiv</sup> At least three situations may illustrate it. In the traditional Mundell-Fleming framework, monetary autonomy is a result expected in a small economy under a floating exchange rate regime and free capital mobility. This is due to the uncovered interest rate parity theory establishing the relationship between monetary policy and exchange rate. Due to the subordinate position of developing economies, the autonomy of their monetary policies is most often reduced: the interest rate is being used to mitigate the exchange rate volatility linked to the procyclical dynamics of capital flows. Indeed, their autonomy (e.g. in setting the interest rate and control aggregate demand) is even more limited whenever the monetary authority tends to accommodate changes in the direction of capital flows with interest rate differentials. As long capital flows continue, expected exchange rate appreciation gets added to yields obtained from the interest rate differentials. And the level of the exchange rate may tend to be overvalued for long periods.

In a second likely setting, i.e. with rising inflationary expectations, the monetary authority may raise interest rates, with the side effect of attracting capitals. There will follow an exchange rate appreciation which will cool off inflationary pressures. Adopting an *inflation targeting regime*, the monetary authority will be even more willing to tolerate a trend towards the appreciation of the exchange rate (while keeping a positive interest rate differential) since the appreciated exchange rate curbs down the inflationary effect that, otherwise, it would have on inflation (Kregel, 1999).<sup>xxv</sup> Hence, developing economies, structurally, have higher real interest rates as compared to central economies, while they face both tendencies, to an overvalued real exchange rate and higher volatility<sup>xxvi</sup>.

Finally, a pattern typically exhibited by developing economies since the Asian crisis in the mid-1990s is the accumulation of large amount of reserves, a strategy to provide a ‘cushion of safety’ whenever currencies are non-convertible. It works as a defensive mechanism to reduce external vulnerability. Management of foreign reserves, however, imposes restrictions on domestic policies, with capital flows to be sterilized.<sup>xxvii</sup>



Summing up, for developing economies, due to the characteristics of international monetary and financial markets, financial integration narrows down policy spaces, increasing the power of the rentiers' classes, thence resulting in slower growth rates.

#### **4. External Savings-driven growth: the logic of peripheral financialization**

We have argued that the essential feature of financialization in emerging economies, and mainly in Latin America, is financial integration within international capital markets, in a context of currency hierarchy. The recommendations of the so-called *Washington Consensus* were adopted by most of these economies, resulting at the end of 1980's into the opening up of their capital accounts and the introduction in the 1990's of some kind of exchange rate anchor (e.g. by countries such as Argentine and Brazil). The capital account opening was deemed to be a necessary step towards the adoption of a *external-savings driven growth model*, whereby foreign savings would increase the domestic saving rates and therefore would allow an increase in the rate of investment and foster growth.

Due to the inflationary history of Latin American countries, the *exchange-rate anchor* was adopted to reduce the inflation rate to historically low levels. Moreover, to attract foreign savings, monetary policies set domestic interest rates on levels high enough to induce international capital inflows, and with it an appreciation of real exchange rate. The exchange rate regime – whether fixed or floating – proved irrelevant for this result. If in the 1990's Latin American countries (like Brazil and Argentine) went for fixed exchange rate regimes, the transition to a floating one in the 2000's was accompanied by adoption of *Inflation Targeting Regimes* (ITR, hereafter). Since the main or solely goal of monetary policy under ITR is to stabilize the rate of inflation at some predetermined target, the logic of foreign savings-driven growth remained intact: monetary policy was to set the domestic interest rate at a level higher than the international (allowance for the country's risk premium). The appreciation of exchange rate will result both in a rate of inflation compatible with the target set by monetary authorities and with an increase in the current account deficit, precisely to the amount of foreign savings desired by policy makers.

The appreciation of real exchange rate combines with the trend to its overvaluation due to a *Dutch disease*. Latin American countries have abundant natural resources. The combination of Dutch disease with the liberalization of the capital account there ends up by generating a tendency to overvaluation of the exchange rate which can only be reversed, though for brief spells of time, by *currency crises*: a sudden and dramatic exchange rate devaluation due to the sudden stop of capital inflows. However, after the most critical moment of the crisis has hit and international markets confidence has restored, capital inflows start once again, driving the exchange rate to appreciate, and restarting an appreciation cycle leading to the next crisis. This is the reason why this phenomenon is described *as a cyclical trend to overvalue the exchange rate* (Bresser-Pereira, Oreiro and Marconi, 2014, pp.71). Such cyclical trend rate is the primary *cause* of premature deindustrialization in most of emerging countries and, therefore, of their inability to *catch-up* (Oreiro, 2018).

The other side of the exchange rate overvaluation is a high level of domestic interest rate relative to the levels prevailing internationally. The interest rate differential to attract

capital inflows, increases the burden of public debt. Sustainability of public debt requires of fiscal policy to aim at primary surplus targets compatible, in the medium term, with the stabilization of the ratio of debt to GDP. A primary surplus target makes fiscal policy procyclical.

As the foreign savings driven growth model results in deindustrialization, falling-behind and procyclical fiscal policy, why does it still prevail in Latin-American economies? The model is supported by a *class coalition* between wage-earners and rentiers. A real exchange rate overvaluation is associated with lower levels of inflation and a higher wage share (and thus, higher real wages). Policy makers can adopt a kind of *exchange rate populism* (Bresser-Pereira, 2009, ch.4). On the other hand, the overvaluation of real exchange rate goes along with relatively high domestic interest rates, increasing *rentiers'* financial income. This means that both wage-earners and rentiers draw economic benefits from a real exchange rate overvaluation (at least in the short to medium term). In the long-term, however, the former will definitely be damaged by deindustrialization (high-wage jobs being in the Manufacturing).

## 5. Peripheral financialization and premature deindustrialization: the case of Brazil (2003-2015)

We will now analyze the Brazilian case during the period 2003-2015 as an instance of *peripheral financialization*. The main feature of financialization in emerging economies, mainly in Latin America, is the adoption of a foreign savings driven growth model. As said, the attraction of capital inflows to countries with subordinate positions in international financial markets, requires huge interest rate differentials and a trend to overvaluation of real exchange rate. This is a *trap of high interest rate-overvalued exchange rate*. Beyond other effects of the trap, the real exchange rate overvaluation reduces price competitiveness of the manufacturing industry and become the main source for their *premature deindustrialization*<sup>xxviii</sup>. *Peripheral financialization* is characterized by a reduction in the *autonomy of macroeconomic policies* as well as by a premature deindustrialization.

In Brazil, the full adoption of the *foreign savings-driven growth model* was only possible in the 1990's after Fernando Collor's government, which started a process of *increasing openness of capital account*. Under Fernando Henrique Cardoso's government, the *external savings-growth model* got converted into official government policy: the successful implementation of *Plano Real* for price stabilization was based upon the introduction of an *exchange rate anchor*, and it required very high levels of domestic interest rates in order to attract foreign capital inflows and drive the real exchange rate appreciation. The anchor was abandoned in January of 1999 when an exchange rate crisis forced the Central Bank to a floating exchange rate regime. In the same year, Brazil adopted an Inflation Targeting Regime with declining targets over the following years. The new macroeconomic regime was completed with the adoption of targets to stabilize primary surplus and subsequently to reduce public debt as a ratio to GDP. The new macroeconomic regime was named *macroeconomic tripod* by the Brazilian policy makers. The adoption of declining inflation targets, from 1999 to 2003, had the same effect over real interest rates as the original external savings driven growth model of the early 1990's: real interest rates were kept at high levels, attracting capital inflows and producing a real exchange rate appreciation. This process

partially stopped in 2002 when a new exchange rate crisis generated a sharp depreciation of the nominal exchange rate and a current account surplus until 2007.

Our empirical analysis begins in 2003, the first year of Luis Inacio Lula da Silva administration (2003-2010), as it is the first year after the currency crisis of 2002. As it will be argued throughout this section, Brazil was not capable to get rid of the high *interest rate-overvalued exchange rate trap* as created by the peripheral financialization. The analysis will end in 2015, the first year of the dramatic fall in GDP due to the beginning of the Brazilian Great Recession (2014-2016). Its severity is also a result of the loss of macroeconomic autonomy caused by the peripheral financialization (Oreiro, 2017).

From 2003 to 2010 the Brazilian economy experienced a period of high growth with moderate levels of inflation.<sup>xxix</sup> This relatively good macroeconomic performance changed dramatically after 2011<sup>xxx</sup>.

From 2003 to 2005, real exchange rate presented an appreciation of 33.9%. According to studies about exchange rate misalignment, e.g. Oreiro, Punzo and Araujo (2012), Brazil's real exchange rate started to become overvalued in second quarter of 2004.

In 2006, the Central Bank begun sterilized interventions in the exchange rate market, stocking up enormous quantities of reserves and sterilizing effects by selling Treasury bonds in Repurchase Agreements (Repo) operations. International reserves grew at a rate of 50.7% in 2006 and 97.9% in 2007, reaching in excess of US\$ 206 billion in September of 2008, while Repo went from 1.7% of GDP in 2005 to 10.4% of GDP in 2008. This huge stocking of international reserves meant that the free-floating exchange rate regime was *de facto* substituted by a managed exchange rate regime, although without an explicit or even an implicit target for the nominal exchange rate.

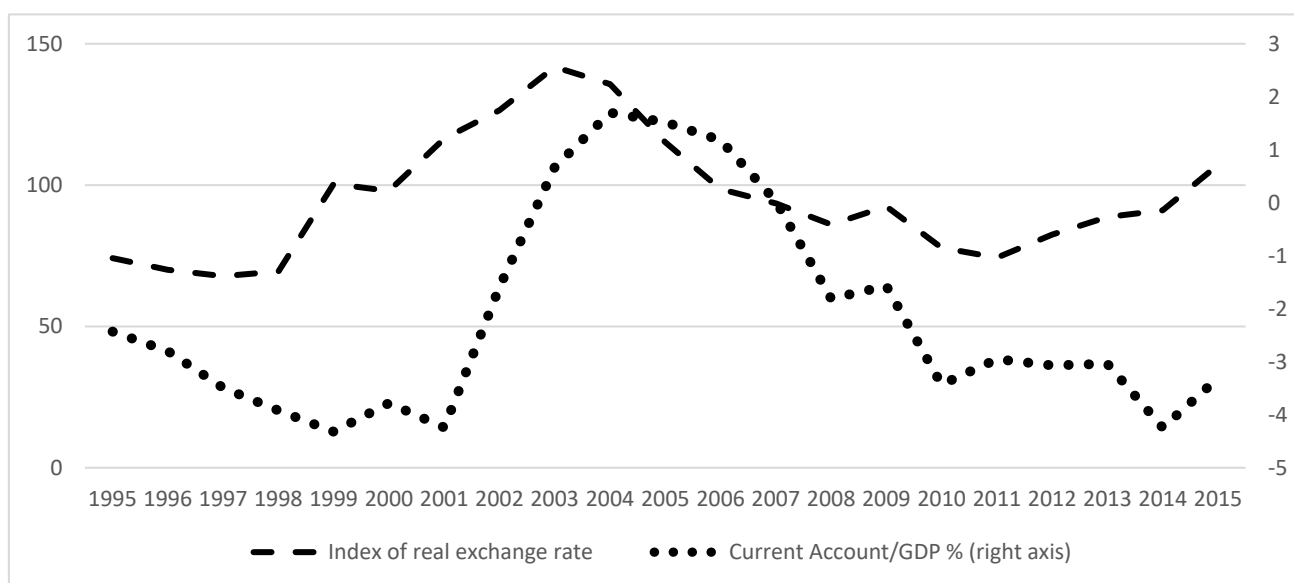
Another important element for explaining macroeconomic performance is *wage policy*, more precisely, policy for minimum wage. Between January of 1999 and February of 2006, the real minimum wage increased on average 4.4% and, from March of 2006 to February of 2008, by 8.4% on an annual basis (almost twice the increase observed in the previous period). This acceleration of the rate of increase in minimum wage was due to a wage rule negotiated by President Lula with the Labor Unions in 2007<sup>xxxi</sup>. The minimum wage policy, together with the appreciation of real exchange rate, also contributed to the increase in real wages.

The implicit objective of such a new rule was to induce a wage share increase with real wages expected to increase faster than labor productivity. This would produce an improvement in income distribution and boost consumption effective demand. Increased consumption expenditures would boost capital accumulation by the private sector through to the conventional accelerator effect. The final result was expected to be an increase in the investment rate, hence an increase of the growth rate of potential output.

The “growth spectacle” from 2003 to 2008, as called by President Lula – allowed a remarkable reduction in open unemployment rate. Indeed, his first term started with an unemployment rate around 13.0%. But, after reaching a peak of 13.8% in January of 2004, open unemployment rate began to fall, around 8.7% of labor force in April of 2008.

Up to the end of 2008, the real exchange rate appreciation did not seem to produce any serious harm to the performance of the manufacturing sector (Figure 2). The world financial crisis had a modest, temporary effect on Brazilian macroeconomic performance. Just after the Lehman Brothers' bankruptcy, Brazil's nominal exchange rate suffered a big depreciation due to precautionary demand for foreign currency by domestic residents (Oreiro and Basilio, 2011). This movement of the nominal exchange rate produced a temporary reversal of the tendency for exchange rate over-valuation observed in the period 2003-2008 (Figure 1). In the third quarter of 2009, however, real exchange rate started to appreciate again.

**Figure 1. Index of Real Exchange Rate and Current Account as a Ratio to GDP: 1995-2015**



Source: Brazilian Central Bank. Author's own elaboration.

Between 2003 to 2008, the real exchange rate appreciation was due to the combined effects of the reduction in sovereign risk premium and to improvements in terms of trade, from the beginning of 2006 on. From 2009 on, the real exchange rate appreciation appeared to be mainly the result of improvement in terms of trade, a clear symptom of Dutch disease.

In order to face real exchange rate appreciation, the Central Bank continued its policy of *intervention* in exchange markets buying additional quantities of reserves. International reserves increased at an average rate of 22.0% annual between 2009 and 2011, reaching a value of US\$ 352 billion at the end of 2011. These interventions on foreign exchange market were not fully sterilized. The stock of Repo in R\$ million and as a share of GDP increased in 2009, but decreased strongly in 2010, showing that the Central Bank had increased the stock of high-powered money to finance the acquisition of international reserves.

These developments were made possible because the world's financial crisis induced an easing of monetary policy which resulted in a sharp decrease in the nominal short-term interest rate. The combined effects of improvement in terms of trade and reserve accumulation allowed to maintain a good average performance in the external fragility indicators. Between the fourth quarter of 2008 to the fourth quarter of 2011 the external debt

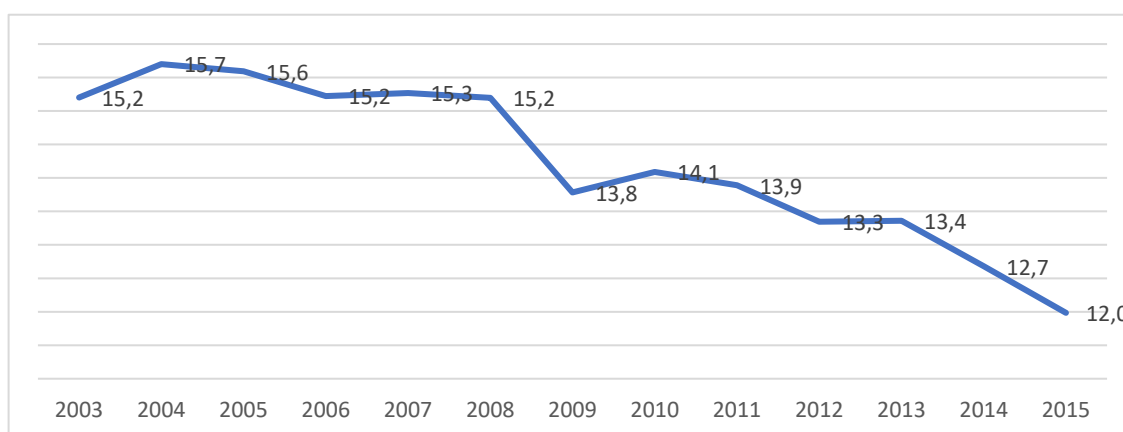
as a ratio of GDP was 12.3%; the external debt on exports was 122.3%; the reserves on external debt was 112.2%, and current account on GDP was only -2.4%. This clearly indicated a situation of solvency in external accounts despite the over-valuation of real exchange rate. International reserves were greater than the external debt, and the Brazilian economy enjoyed a comfortable liquidity position.

The dynamics of the current account to GDP ratio (Figure 1) indicated a clear and growing over-valuation of the real exchange rate. In just two years (2008-2010), the *current account/GDP deficit almost doubled*, going from 1.8% to 3.4% of GDP. Since the increase in the current account deficit followed a huge improvement in terms of trade, this could only be the result of substitution of domestic production for imports in the manufacturing sector. Early symptoms of a *Dutch disease* were appearing.

Comparing 2003 with the 2010, Lula's government was able to reduce the real interest rate, with the nominal interest rate, curbing down inflation and unemployment. The Brazilian economy grew on average more than in the 1990s and increased workers' real incomes, the rate of investment in GDP, and it did achieve the *investment grade* by agencies of sovereign risk rating. Moreover, there was a pronounced decline in public debt as a proportion of GDP. This exceptionally good macroeconomic performance allowed the election of Dilma Rouseff of the Labor Party (Partido dos Trabalhadores) as President of Brazil in 2010, succeeding Lula.

The substitution of domestic production with imports caused a stagnation of manufacturing output, from the beginning of 2011 on. After a quick recover from the effects of the world financial crisis, manufacturing output remained roughly constant at the beginning of 2011, despite the Brazilian economy was still growing at a fast, though declining rate. The manufacturing industry was clearly losing dynamism, due in our interpretation to the over-valuation of the real exchange rate. The Dutch disease was causing a negative structural change in the economy, reducing the manufacturing share on GDP (Figure 2).

Figure 2: Share of Manufacturing Value Added in real terms in total Value Added: 2003-2015



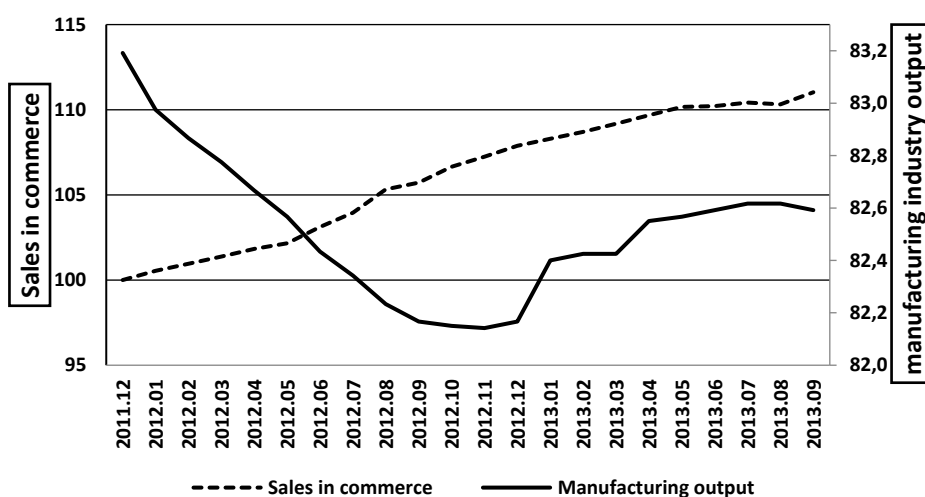
Source: Brazilian Statistical Office (IBGE): Quarterly National Accounts

The decline in the share of the manufacturing in total value added implied that the growth deceleration of the Brazilian economy in the 2010s was not due to a *cyclical downturn* caused by a Keynesian problem of insufficiency of aggregate demand: during this period, the

*output gap* was positive (Oreiro and D’Agostini, 2017), showing that the economy was growing above its *potential* or *natural growth rate*. The problem seemed to be a structural one: the potential growth rate was getting reduced.

One way to appreciate how that deceleration was not due to a fall in aggregate demand, is to compare sales in the commercial sector with output of manufacturing industry. Although manufacturing output was declining up to the end of 2012, sales in the commercial sector were growing at a robust annual average rate of 5.6%, in real terms (Figure 3). Thus, the problem was not *insufficiency of aggregate demand*, but it revealed the incapacity of Brazilian industrial firms *to access effective demand*. This means that the Brazilian stagnation was more likely the effect of real exchange rate appreciation onto the competitiveness of Brazilian manufacturing both on external and domestic markets (Bresser-Pereira, Oreiro and Marconi, 2014, chapter 6).

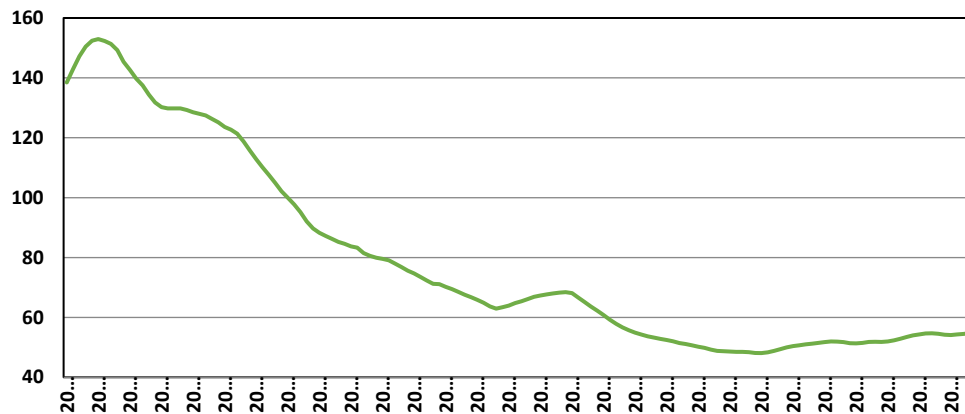
**Figure 3. Manufacturing Industry Output and Sales in Commercial Sector: 2011.12-2013.09.**



Source: IPEADATA. Authors’ own elaboration.

The nature of Brazilian stagnation problem can be seen in Figure 4, where the time series is presented of the 12-month moving average of Real Effective Exchange Rate/Wage ratio from 2003 to 2014. From the beginning of President Lula’s government, Brazilian manufacturing sector was losing external competitiveness and profit margins due to the combined effect of a real exchange rate appreciation and increasing real wages due to the *lighthouse effect* of the growth of minimum wages over the median and average real wages of tradeable and non-tradeable sectors of the Brazilian economy (Neri, Gonzaga and Camargo, 2001). Under President Dilma Rousseff’s government, the appreciation of the real exchange rate slowed down though not reversed, and real wages continued to increase above of the productivity, squeezing profit margins and reducing the profit rate of the Brazilian manufacturing industry<sup>xxxii</sup>. Thus, wage policy in Brazil had an important role in the process of premature deindustrialization, reinforcing the role of foreign saving driven growth model.

Figure 4. Evolution of Real Effective Exchange Rate-Wage Ratio: 2003-2014



Source: IPEADATA. Authors' own elaboration.

The stagnation of manufacturing industry output combined with the strong domestic demand expansion resulted in the continuation of de-industrialization, measured by the manufacturing share on GDP (Figure 2). As the manufacturing industry is the source of static and dynamic increasing returns, such structural change brought about a reduction in the potential growth rate. The de-industrialization of the economy must not be underestimated.<sup>xxxiii</sup>

Facing the deceleration of GDP growth and the stagnation of industrial output after 2011, the Brazilian government responded in the same way as in 2008, with a new round of easing monetary and fiscal policies, to boost aggregate demand. One of the objectives of easing monetary policy was to induce a depreciation of the nominal exchange rate to reduce or eliminate over-valuation of real exchange rate. Monetary policy clearly incorporated as one of its objectives to stabilize the real exchange rate, but without an explicit commitment with a target for nominal or real level of exchange rate.

In order to avoid a conflict between stabilization of the real exchange rate and inflation targeting, the Central Bank chose to make an informal spreading of the convergence period from one year to the “relevant period for monetary policy to operate”, which means, in practice, that monetary authority did not commit to any definite period for inflation to converge to the center of the target (4.5% annual), although annual inflation must be lower than the ceiling defined by *National Monetary Council* (Conselho Monetário Nacional) (6.5% annual). This means that to make possible an adjustment of real exchange rate, the Central Bank tolerates a higher inflation rate, between 5.0% and 5.5%, instead of 4.5% annual. A higher real exchange rate was being traded for a higher inflation rate.

Along with the easing of monetary policy, the Central Bank tried to continue its intervention in foreign exchange markets buying international reserves. From 2011 to 2012, Central Bank continued to increase international reserves at a rate of almost 20% p.y as it was done after 2006. From 2012 on, however, the rate of reserve accumulation slowed down and then reversed in 2014. The policy of reserve stocking was reaching its limits<sup>xxxiv</sup>. The size of

international reserves together with the cost of REPO operations were making the continuation of reserve accumulation very costly. Due to the increasing fiscal difficulties, intervention in foreign exchange to reserve accumulation were going to be discontinued in 2014<sup>xxxv</sup>.

Regarding fiscal policy, the Ministry of Finance decided that a reduction of the primary surplus/GDP was both possible and required. The reduction of real interest rate due to the easing of monetary policy, reduced the primary surplus/GDP that was required to stabilize (net) public debt as a ratio to GDP<sup>xxxvi</sup>. *Fiscal space* was created, allowing an easing of fiscal policy. Besides that, the growth deceleration after 2011 signaled a weakness of aggregate demand demanding fiscal stimulus. The issue was what form the fiscal stimulus must take. The decision of the then Minister of Finance, Guido Mantega, was to use the fiscal space to promote a semi-permanent round of tax reduction for both productive sector (mainly, the automobile industry) and consumers instead of an increase in Public Investment, as defended by the Vice-Minister, Nelson Barbosa. The impact of such decision over primary surplus was negative. The declared objective of the new macroeconomic regime according to the Finance Minister<sup>xxxvii</sup> was to produce a change in the combination of interest rate and exchange rate towards a lower nominal and real interest rate and a more competitive real exchange rate in order to (i) boost accumulation and growth in the medium term; (ii) to stimulate manufacturing industry and revert the de-industrialization process.

It was the first systematic attempt by a Brazilian government to get rid of the external savings-driven growth model and of the related problem of the high interest rate-exchange rate overvaluation trap since the price stabilization due to *Plano Real* in the mid-1990s.

The attempt failed. Growth nearly stagnated in the period 2012-2013, reaching an average of just 1.7% p.y. Despite deceleration, the output gap was still positive on average throughout, indicating that the Brazilian economy was still growing above its potential but also that this growth potential had been reduced.

The failure of the *new macroeconomic matrix* can be partially explained by the behavior of real exchange rate (Figure 1). The real exchange rate depreciated but *this was not enough to restore real exchange rate at the level observed in the 2006*, when it was probably at a very comfortable level for both the manufacturing industry and the current account. The surprising feature of the period was the revelation of the incapacity of a notably low level of the real short-term interest rate to stimulate economic growth. The Brazilian economy was experiencing a classical situation of *profit squeeze*, with profit rate declining from 16.5% in 2010 to only 4.3% in 2014 (Rocca, 2015), with clear and strong negative effects over the growth rate of capital formation and moderate effect on the Gross Fixed Capital Formation on GDP (Oreiro, 2017).

Finally, it should be added that in the period 2011-2013 the terms of trade remained stable at high levels, sustaining the value of exports, despite the exchange rate over-valuation. At the end of 2013, however, they became to deteriorate, signaling the end of the *commodity boom* that had begun in 2006. This was going to have a negative impact on the Brazilian economy in 2014 and 2015, helping to transform a situation of economic stagnation into a full depression. Strong sharp declines in the variables: the growth rate of GDP, the investment rate, the manufacturing share on GDP and public sector borrowing requirements on GDP.



Open unemployment rose from 6.9% to 13.0% in less than two years. Therefore, the deterioration of the terms of trade induced a sharp depreciation of real exchange rate (Figure 1)<sup>xxxviii</sup>. Due to the increase in the price of tradeable goods caused by exchange rate depreciation, real income per-worker started to decline.

## 6. Final remarks

Throughout this article it was shown that the relevant concept of financialization for developing economies, mostly in Latin America, is *Peripheral Financialization* understood as a process of liberalization of the capital account along with the adoption of the foreign savings-driven growth model. The adoption of such a model took place in a context of currency hierarchy, which increases the interest rate differentials between developing and developed economies, needed to attract capital flows and resulting in a trend of overvaluation of the real exchange rate. This reinforces the effects of a Dutch disease. Thus, *Peripheral Financialization* produces a *high interest rate-overvalued exchange rate trap*, the main cause of both a premature deindustrialization and of procyclical macroeconomic policies. The important feature of the *Peripheral Financialization* is that it can only be supported by a *class coalition* of rentiers and wage-earners: both classes draw economic benefits, at least in the short and middle run, from an overvalued exchange rate.

Brazilian macroeconomic performance in the period 2003-2015 can be interpreted through this model of *Peripheral Financialization*. During such a period Brazilian economy exhibits high levels of real interest rates and an overvalued real exchange rate which together hurt the price competitiveness of its manufacturing industry, being the main cause of the country's premature deindustrialization. Brazil's macroeconomic policy was not capable to get rid of the high interest rate-overvalued exchange rate trap despite government efforts to attenuate the trend to exchange rate appreciation by means of huge reserve accumulation. The procyclical fiscal policy adopted in 2015, during the Brazilian Great Recession (2014-2016), is a clear proof of the reduction of policy autonomy effect of the *Peripheral Financialization*.

## References

- Abeles, M., Caldentey, E. P. and Valdecantos, S. (eds.). 2018. *Estudios sobre financierización en América Latina*, Santiago, United Nations Publications
- Blecker, R. and Setterfield, M. 2019. *Heterodox Macroeconomics: Models of Demand, Distribution and Growth*, Cheltenham, Edward Elgar Publishing
- Bonizzi, B. 2013-14. Financialization in developing and emerging economies, *International Journal of Political Economy*, vol. 42, no. 4, 87-107
- Bonizzi, B. 2017. International financialization, developing countries and the contradictions of privatized Keynesianism, *Economic and Political Studies*, vol. 5, no. 1, 21-40. DOI 10/1080/20954816.2016.1274517.
- Bonizzi, B., Kaltenbrunner, A. and Powell, J. 2020. Subordinate Financialization in Emerging Capitalist Economies in Mader, P., Mertens, D. and Van der Zwan, N. (Eds.), *The Routledge International Handbook of Financialization*, 177-187, Routledge
- Bortz, P. G., Kaltenbrunner, A. 2017. The International Dimension of Financialization in Developing and Emerging Economies, *Development and Change*, vol. 49, no. 2, 375-393

- Bresser-Pereira, L.C. 2015. *A Construção Política do Brasil: Sociedade, Economia e Estado desde a Independência*. Editora 34
- Bresser-Pereira, L.C. 2009. *Globalização e Competição: porque alguns países emergentes têm sucesso e outros não*, Rio de Janeiro, Elsevier
- Bresser-Pereira, L. C., Oreiro, J.L. and Marconi, N. 2014. *Developmental Macroeconomics: new developmentalism as a growth strategy*, London, Routledge
- Bresser-Pereira, L.C. and Gala, P. 2008. Foreign Savings, Insufficiency of Demand and Low Growth, *Journal of Post Keynesian Economics*, vol. 30, no. 3, 315-334
- Cohen, B. J. 1996. Phoenix Risen: The Resurrection of Global Finance, *World Politics*, vol. 48, 268–296.
- Crotty, J. 2005. The neoliberal paradox: the impact of destructive product market competition and ‘modern’ financial markets on nonfinancial corporation performance in the neoliberal era in Epstein, G. A. (ed.), *Financialization and the World Economy*, Cheltenham, Edward Elgar Publishing
- Dallery, T. 2009. Post-Keynesian Theories of The Firm Under Financialization, *Review of Radical Political Economics*, vol. 41, no. 4, 492-515
- Demir, F. 2007. The Rise of Rentier Capitalism and the Financialization of Real Sectors in Developing Countries, *Review of Radical Political Economics*, vol. 39, 351–359
- Eichengreen, B., Hausmann, R., and Panizza, U. 2002. ‘Original sin’: the pain, the mystery and the road to redemption, available at <http://www.financialpolicy.org/financedev/hausmann2002.pdf>, accessed May 26, 2020
- Epstein, G. A. 2005. *Financialization and The World Economy*, Massachusetts, Edward Elgar Publishing
- Epstein, G. 2002. Financialization, Rentier Interests, and Central Bank Policy, *PERI Conference on "Financialization of the World Economy", December 7-8 2001*, Amherst, University of Massachusetts
- Epstein, G. and Power, D. 2003. Rentier Incomes and Financial Crises: An Empirical Examination of Trends and Cycles in Some OECD Countries, *PERI Working Paper*, no. 57
- Epstein, G., Yeldan, E. 2008. Inflation targeting, employment creation and economic development: assessing the impacts and policy alternatives, *International Review of Applied Economics*, vol. 22, no. 2, 131–144
- Erturk, I. 2020. Shareholder Primacy and Corporate Financialization in Mader, P., Mertens, D. and Van der Zwan, N. (Eds.), *The Routledge International Handbook of Financialization*, New York, Routledge, 43-55
- Feijo, C. and Lamônica, M. 2019. Policy space in a financially integrated world: the Brazilian case in the 2000s, *Panoeconomicus*, vol. 66, issue 1, 51-67
- Gabriel, L. F., Ribeiro, L. C., Jayme JR, F. G. and Oreiro, J. L. 2020. Manufacturing, Economic Growth and Real Exchange Rate: Empirical evidence in panel data and input-output multipliers, *PSL Quarterly Review*, Vol, 73, n. 272, 51-75
- Gabor, D. 2018. *Understanding the financialization of international development through 11 FAQs*. Washington, DC: Heinrich Boell Stiftung North America
- Hein, E. 2012. *The Macroeconomics of Finance-Dominated Capitalism – and its Crisis*, Cheltenham, Edward Elgar Publishing

- Kaltenbrunner, A. 2018. Financialised internationalization and structural hierarchies: a mixed-method study of exchange rate determination in emerging economies, *Cambridge Journal of Economics*, vol. 42, Issue 5, 1315-1341
- Kaltenbrunner, A. and Paineira, J. P. 2016. International and domestic financialisation in Middle-income countries: the Brazilian experience, FESSUD – Financialisation, Economy, Society and Sustainable Development, working paper series 146, February, available at [http://fessud.eu/wp-content/uploads/2015/03/FESSUD\\_Working-Paper-Series-146-Financialisation-Brazil-AKJP.pdf](http://fessud.eu/wp-content/uploads/2015/03/FESSUD_Working-Paper-Series-146-Financialisation-Brazil-AKJP.pdf), accessed May 27, 2020
- Kapeller, J. and Schutz, B. 2015. Conspicuous consumption, inequality and debt: the nature of consumption-driven profit-led regimes, *Metroeconomica*, vol. 66, Issue 1, 51-70.
- Keynes, J. M. 1936[1973]. *The General Theory of Employment, Interest and Money*, The Royal Economic Society [1973]
- Kregel, J. 1999. Was there an alternative to the Brazilian crisis?, *Brazilian Journal of Political Economy*, vol. 19, no.3, 23-38
- Krippner, G. R. 2005. The financialization of the American Economy, *Socio-Economic Review*, vol 3, 173-208
- Mader, P., Mertens, D. and Van der Zwan, N. 2020. *Financialization: an Introduction*. In Mader, P; Mertens, D; Van der Zwan, N (Eds.), *The Routledge International Handbook of Financialization* (pp. 1-16), New York, Routledge
- Marconi, N., Araujo, E. C. and Oreiro, J. L. 2016. Taxa De Câmbio, Elasticidades-Renda E Mudança Estrutural: Fundamentos Teóricos E Evidências Empíricas, *Anais do XLIII Encontro Nacional de Economia [Proceedings of the 43rd Brazilian Economics Meeting] 105, ANPEC – Associação Nacional dos Centros de Pós-Graduação em Economia [Brazilian Association of Graduate Programs in Economics]*
- Martins, G.K; Skott, P. 2020. Macroeconomic Policy, Inflation and Deindustrialization in Dual Economy. *Working paper*, University of Massachusetts Amherst.
- Mckinnon, R. I. 1973. *Money and Capital in Economic Development*, Washington, Brookings Institution
- Mishel, L., Bivens, J., Gould, E. and Shierholz, H. 2012 *The State of Working America*, New York, Cornell University Press
- Minsky, H. P. 1982. *Can it happen again?*, New York, M. E. Sharpe
- Minsky, H. P. 1986. *Stabilizing an Unstable Economy*, New Haven, Yale University Press,
- Nassif, A., Feijo, C. and Araujo, E. 2015. Structural change and economic development: is Brazil catching up or falling behind?, *Cambridge Journal of Economics*, vol. 39, Issue 5, 1307-1332
- Neri, M; Gonzaga, G; Camargo, J.M. 2001. Salário Mínimo, “Efeito Farol” e Pobreza. *Brazilian Journal of Political Economy*, vol. 21, no,82.
- Oreiro, J. L. 2018. Estratégias de Desenvolvimento e a Escola Novo-Desenvolvimentista Brasileira, *CADERNOS DE CAMPO (UNESP)*, vol. 24, 13 - 41
- Oreiro, J. L. 2017. A Grande Recessão Brasileira: Diagnóstico e uma Agenda de Política Econômica, *Estudos Avançados*, vol. 31, no. 89, 75 - 88
- Oreiro, J. L. and D’agostini, L. 2017. Macroeconomic policy Regimes, Real Exchange Rate Over-Valuation and Performance of Brazilian Economy (2003-2015), *Journal of Post Keynesian Economics*, vol. 40, Issue 1, 27-42
- Oreiro, J. L., Punzo, L. and Araujo, E. 2012. Macroeconomic Constraints to Growth of Brazilian Economy: diagnosis and some policy proposals, *Cambridge Journal of Economics*, vol. 36, Issue 4, 919-939.

- Oreiro, J. L. and Basilio, F. 2011. Exchange rate derivatives, Financial Fragility and Monetary Policy in Brazil during the World Financial Crisis in: Arestis, P., Sobreira, R and Oreiro J. L. (Org.). *An Assessment of the Global Impact of the Financial Crisis*, London, Palgrave Macmillan, 236-260
- Palley, T. 2013. *Financialization: The Economics of Finance Capital Domination*, London, Palgrave MacMillan
- Piketty, T. 2015. *The Economics of Inequality*, Massachusetts, Harvard University Press
- Powell, J. 2013. Subordinate financialisation: A study of Mexico and its non-financial corporations, SOAS, University of London, available at <https://core.ac.uk/download/pdf/19090664.pdf>, accessed May 26, 2020
- Rocca, C. A. 2015. Ajuste Fiscal e a Recuperação do Investimento *Presentation at 14<sup>o</sup> Seminário CEMEC de Mercado de Capitais*. São Paulo, available at <http://cemecfipe.org.br/wp-content/uploads/2018/02/14%C2%BA-Semin%C3%A1rio-CEMEC-%E2%80%93Ajuste-Fiscal-e-a-Recupera%C3%A7%C3%A3o-do-Investimento.pdf>
- Rodrik, D. 2016. Premature Deindustrialization, *Journal of Economic Growth*, Vol.21, Issue 1, 1-33
- Setterfield, M. and Kim, Y. K. 2017. Household borrowing and the possibility of 'consumption-driven, profit-led growth', *Review of Keynesian Economics*, vol. 5, Issue 1, 43-60
- Shaw, E. S. 1973. *Financial Deepening in Economic Development*, New York, Oxford University Press
- Skott, P., Ryoo, S. 2008. Macroeconomic Implications of Financialization, *Cambridge Journal of Economics*, vol. 32, issue 6, 827-862
- Stockhammer, E. 2004. Financialization and the slowdown of accumulation, *Cambridge Journal of Economics*, vol. 28, no. 5, 719-741
- Thirwall, A. P. 2002. *The Nature of Economic Growth*, Aldershot, Edward Elgar
- Williamson, J. 1990. What Washington means by policy reform, in Williamson, J. (ed.) *Latin American adjustment: how much has happened*, Washington, Institute for International Economics, also available at: <https://www.piie.com/commentary/speeches-papers/what-washington-means-policy-reform>, accessed June 6, 2020

---

<sup>i</sup> With this concept, we follow the "particular principles" proposed by Mader, Mertens and Zwan (2020, introduction, p. 8): "1) limiting, in the sense of helping us recognize what is financialization and what is not; 2) mechanism-oriented, in the sense of clarifying the linkage of cause and effect; and 3) contextual, in the sense of making clear what contexts they claim validity for."

<sup>ii</sup> About the effect of overvalued exchange rate on manufacturing share of a sample of countries, see Gabriel et al (2020).

<sup>iii</sup> The term *class coalition* is due to Bresser-Pereira (2015) and refers to a political (implicit) alliance between groups that belongs to different social classes that aim to reach some political and economic goals. Class coalitions are possible because social classes are not homogenous, but they have internal divergences regarding goals. Such divisions allow the occurrence of political coalitions between groups that belongs to different social classes.

<sup>iv</sup> In this paper we consider labor class a broad class of workers including blue collars, white collars and workers in the informal market.

<sup>v</sup> According to Skott and Ryoo (2008) the following events can be associated with it: 1) Price stability as the central or sole focus of monetary policy; 2) Substantial increase in the flow of capital between countries.

Increased household indebtedness; 3) Change in corporate governance to align the interests of corporate management with the interests of shareholders through remuneration based on stock options; 4) Increasing influence of financial institutions and institutional investors in the economic and social life of countries.

<sup>vi</sup> Palley (2013), Hein (2012), Mishel et al (2012), Piketty (1997), Stockhammer (2000), Krippner (2005), Epstein & Power (2003) among others.

<sup>vii</sup> According to Hein (2012) this is due to the fact that financialization causes markets to be more monopolistic (therefore, enabling higher mark-ups, which lowers the wage share) and also because the financial sector has a lower wage share than other sectors of the economy.

<sup>viii</sup> These different aspects of financialization are summarized by Cohen (1996).

<sup>ix</sup> That is, a higher profit rate means a lower accumulation rate of capital and vice-versa.

<sup>x</sup> A common place in Heterodox macroeconomics is that the relatively rapid growth of the US economy in the 1990-2007 period owed, in large part, to the willingness and ability of less affluent households to borrow in order to offset the otherwise negative impact on their consumption of increased income inequality. "(Blecker and Setterfield, 2019, p. 346)

<sup>xi</sup> In Hein's own model, however, an increase in the desired rate may have positive or negative impacts on capacity utilization and economic growth, depending on the parameter values in the investment and saving functions. A low propensity to save out of rentier's income, a low responsiveness of investment with respect to distributed profits and a high elasticity with respect to capacity utilization would allow for a positive effect of increasing rentier's rate of return on the equilibrium rates of capacity utilization, profit and capital accumulation (Ibid, p. 52).

<sup>xii</sup> E.g., Skott and Ryoo (2008) developed a macrodynamic Stock-Flow Consistent model with alternative *closures* for the labor market and alternative specifications for the investment function.

<sup>xiii</sup> Skott and Ryoo (2008) and Epstein and Yeldan (2008).

<sup>xiv</sup> Such as labor market deregulation worsening the income position of wages; or financial markets deregulation increasing financial fragility; the abandonment of full employment as a (monetary or fiscal) policy objective; the introduction of inflation targeting regimes where price level stability as the sole, or main goal of monetary policy.

<sup>xv</sup> Stockhammer (2004, p. 719), argues that one of the key processes of financialization is the rise of financial profits and incomes. In his words: "The past decades have witnessed at the same time a rise in investments in financial assets and a slowdown of accumulation of physical assets". The phenomenon of financialization, in his view, is the result of the increased power of the shareholders that have changed management priorities of non-financial firms, reducing aggregate growth rate of developed economies.

<sup>xvi</sup> Bonizzi (2017) defines a policy regime sustained by financialization as 'privatized Keynesianism'.

<sup>xvii</sup> As an illustration, according to the IMF outlook database, the average growth rate of advanced economies since 1980 until the introduction of the euro in 1998 was 2.9% per year and decreased to 2.0% per year from 1999 to 2019.

<sup>xviii</sup> Growth rates for Latin America and the Caribbean decreased from 2.7% per year during 1980-1998 to 1.7% per year during 1999-2019, according to the IMF outlook database.

<sup>xix</sup> For a critical view on the strategy of growth with foreign savings, see Bresser-Pereira and Gala (2008), among others.

<sup>xx</sup> For a survey on financialization on developing economies, see Bonizzi (2013-14) and Bonizzi, Kaltenbrunner and Powell (2020).

<sup>xxi</sup> See Williamson (1990).

<sup>xxii</sup> Powell (2013, p. 3) uses the term subordinate financialization to describe "...the subjugation of domestic monetary policy to the imperatives of international capital".

<sup>xxiii</sup> Kaltenbrunner (2018) and Kaltenbrunner and Bortz (2017) .

<sup>xxiv</sup> For a discussion on the reduction on policy space with reference to the Brazilian economy, see Feijo and Lamônica, (2019).

<sup>xxv</sup> It is interesting to note that Epstein (2002, p. 5) elaborates the argument that the use by central banks of inflation targeting reinforces financialization and rentier interest. In relation to developing economies, the author says: "(...) The spread of capital account liberalization and financial liberalization. ....has confronted policy makers, especially in the debtor developing countries, with the dilemma of how to satisfy their creditors' demands in order to keep the foreign credit coming into their countries, and keep their foreign exchange reserves from fleeing through capital flight. In their search for a way to successfully integrate themselves into the world

capital markets, they have been increasingly convinced that inflation targeting, central bank independence, or some other form of neo-liberal central bank structure will be necessary.”

<sup>xxvi</sup> It should be added that a higher interest rate, aiming at avoiding capital flight, will lead to higher interest payments on public debt and consequently, higher nominal deficits when the public debt is indexed to the short-term interest rate. In this sense, the monetary policy translates into high debt servicing, reducing fiscal space to public spending that strongly influences long-term private investment.

<sup>xxvii</sup> The higher is the rate of interest, the greater the cost of sterilization. Kaltenbrunner and Paineira (2016) develop the argument that reserve accumulation is a channel through which financialization of banks occurs in developing economies.

<sup>xxviii</sup> According to Rodrik (2016) premature deindustrialization can be defined in two ways. The first one is the idea that premature deindustrialization occurs when the share of manufacturing employment and output started to decline at a level of per capita income lower than the one observed in advanced economies. The second way is to define premature deindustrialization as the structural change that have detrimental effects over economic growth. In this article we will use both definitions.

<sup>xxix</sup> Average growth rate of GDP was 4.06% p.y and the average rate of CPI growth was 5.79% p.y.

<sup>xxx</sup> Average growth rate was reduced to 1.59% in the period 2011-2014, a reduction of almost 61% in average growth compared to the previous period. At the same time, inflation accelerated to 6.17%.

<sup>xxxi</sup> According to this rule, the rate of increase in minimum wage from one year to the other will be equal to the rate of inflation observed in the last year plus the growth rate of real GDP observed two years before. In Brazil, the minimum wage works as a ‘headlight’ in the wage bargain of other categories of workers.

<sup>xxxii</sup> See Martins and Skott (2020) for a similar, although not equal, mechanism for generating deindustrialization in dual economies.

<sup>xxxiii</sup> The re-primarization of exports signaled for a clear reduction in the growth rate that is compatible with the equilibrium in the balance of payments (Thirwall, 2002). This was another channel by which over-valuation of real exchange rate was reducing the potential growth rate of the Brazilian economy. For an empirical analysis of the impact of real exchange rate over income elasticities of exports and imports see Marconi, Araujo and Oreiro (2015) and Nassif, Feijo and Araujo (2015).

<sup>xxxiv</sup> From 2011 to 2012, reserve accumulation required a large increase in REPO operations to prevent a decrease in short term interest rate greater than desired. At the end of 2013, REPO operations were near 10% of GDP, representing almost 20% of gross government debt.

<sup>xxxv</sup> Another problem was the resilience of inflation near 6.0% p.y in the period 2011-2013. If average inflation was 5.15% in the second term of President Lula, in the period of 2011 to 2013, average inflation rose to 6.08% p.y. After the popular protests of 2013, the political conditions in Brazil made impossible for the government to tolerate greater inflation acceleration, making Central Bank to give up the attempt of adjusting real exchange rate to a more competitive level.

<sup>xxxvi</sup> This combination was called as *new macroeconomic matrix*. For financial markets and many economists this was the official announcement of the end of *macroeconomic tripod*, even in its more flexible version that arose after 2006.

<sup>xxxvii</sup> See <http://jornalggn.com.br/blog/luisnassif/o-primeiro-ano-da-nova-matriz-economica-por-mantega>.

<sup>xxxviii</sup> The depreciation of real exchange rate occurred from 2015.Q2 on seemed to be more the result of the political crisis that erupted in Brazil after the beginning of President Dilma’s second term and the downgrade of Brazil by rating agencies in the second semester of 2015. The previous class coalition did not hold any longer.