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Chapter 10

ECONOMIC STRUCTURE AND GROWTH IN BRAZIL: AN ANALYSIS OF THEIR RELATIONS AND DETERMINATIONS ON LONG AND SHORT-TERM PERFORMANCE

Ricardo Dathein*
Department of Economics and International Relations, Federal University of Rio Grande do Sul, Porto Alegre, Brazil
Pedro Cezar Dutra Fonseca**
Department of Economics and International Relations, Federal University of Rio Grande do Sul, Porto Alegre, Brazil

ABSTRACT

The article approaches the performance of the Brazilian economy from a theoretical base that emphasizes the dynamics of the economic structure as a determinant. Long-term data on value added and occupations are analyzed, differentiating between the modern, especially the manufacturing and non-modern sectors. The crucial role of the state in long-term performance is highlighted, so that the market continues to be "state-driven" in both the short and long term, regardless of the desire of theorists and politicians who criticize such a trend. Then, we evaluate the growth of the 2000s and the current crisis, which has a dynamics shaped in "L" and not "V". It is concluded that this performance must be related to the deficient trajectory of the productive structure in the long run.

Keywords: Economic structure. State. Investments. Economic crisis

* E-mail: ricardo.dathein@ufrgs.br
** E-mail: pedro.fonseca@ufrgs.br

INTRODUCTION

After many years of lower economic performance, in the 2000s (before the international crisis), the Brazilian economy apparently would have resumed a positive trajectory, with its performance based on higher productivity and capital accumulation, which would result in consistently higher growth. At the same time, the possibility of income distribution increased, as a result of distributive economic policy initiatives derived from improvements in the labor market.

However, after the crisis of 2008/09 the Brazilian economy did not resume its previous pace. After the sharp downturn, there was a recovery, but the trajectory became lower, with permanent macroeconomic pressures. And in the recent period there has been a major crisis with low recovery capacity.

The aim of this paper is to evaluate the evolution of the productive structure of the Brazilian economy and the role of the state in this dynamic. It also analyzes the economic performance of the years 2000 to 2018, highlighting the thesis that the dynamics of the economic structure is determinant for the conditions of profitability and, therefore, of investments and growth and, in addition, of its sustainability.

For this, the text is subdivided as follows. The second section presents the theoretical relationship between structural dynamics and economic performance. The third section examines the evolution of Brazil's productive structure over the long term. The fourth section assesses the dynamics of long-term investments and the state's role in determining them. The fifth part studies the Brazilian economic performance from 2000 to 2018 and its relationship with the weak long-term structural dynamics. Finally, the final considerations relate structural dynamics to growth and the economic crisis.

ECONOMIC STRUCTURE AND ECONOMY DINAMIZATION

According to the structuralist view, economic growth is fundamentally a function of the dynamics of the productive structure and the related policies and institutions, which need to be built. According to Cimoli and Porcile (2013), there is a fundamental relationship between technology, growth and structure. According to Ocampo (2005), the essence of development is the ability to constantly generate new dynamic activities, with reallocation of capital and labor for those more productive, higher value-added activities that generate and demand

better occupations and higher wages, and with greater prospects for international insertion. Therefore, growth is a mesoeconomic process, determined by the dynamics of the productive structure1, with strong potential positive effects on living standards and income distribution.2

In this process, the evolution of the productive structure is determined by the interaction between two basic forces, (a) innovations and the learning process; and (b) diffusion mechanisms (complementarities, chains and economic networks), together with the required institutions. In principle, these elements characterize the dynamic efficiency of an economy, being innovations the process engine and diffusion the integrating and transformer mechanism (Ocampo, 2005).

Peres and Primi (2009) propose the term "SES synthesis" for a conception that aggregates Schumpeterian, Evolutionist and Structuralist theories. (Schumpeterian, Evolutionist and Structuralist).3 This "SES synthesis" considers

> "(i) the intrinsic, qualitative and quantitative differences between sectors and among productive activities; (ii) the specificities of knowledge and technology, and their catalyzing role in development processes; (iii) the absence of automatic adjustment mechanisms; and (iv) the role of institutions in shaping the transition to higher levels of development associated with the transfer of human and financial resources to activities with increasing returns." (Peres and Primi, 2009: 6).

[1] Economic structure encompasses the sectoral composition of production and production networks and chains, specialization in international trade, technological capabilities (including labor force capacities), ownership structure, state structures, financial market structure, occupational structure (underemployment, for example), etc. With these structures, combining sectors with increasing and decreasing incomes, virtuous or vicious circles are generated from the dynamics of markets, innovations and finances, and this determines the country's commercial and financial insertion in the international economy. (Ocampo, Rada and Taylor, 2009).

[2] Competitiveness itself involves more than microeconomic efficiency, having essentially sectoral and global (systemic) determination. That is, the problem of low growth may not lie in the performance of microeconomic productivity (efficiency). The problem may lie in the process of inadequate structural transformation, according to Ocampo (2005).

[3] The synthesis, according to Peres and Primi (2009: 6), encompasses the works of Schumpeterian developmentalists such as Chang, Reinert and Stiglitz; evolutionists such as Nelson, Winter, Freeman, Dosi, Soete, Perez, Arthur, and Cimoli; and Latin American structuralists such as Prebisch, Furtado, Pinto and Ocampo, among others.

From Schumpeter's concept of innovation, the creation of new productive structures (or the qualitative change of old ones) should be understood as the most important factor in a process of creation and destruction of companies and sectors (Cimoli and Porcile, 2013; Fonseca and Arend, 2016). Thus, innovations (in this case, new sectors and companies) need and generate more investments, while decaying activities require few investments. So this kind of innovation, structural change, plays an essential role in expanding the economy's average profitability,[4] accelerating economic growth as a function of higher investments.

On the other hand, the capacity to create complementarities, chains and networks is necessary to reduce dualism through the diffusion of innovations, including new productive sectors and the creation of linkages between sectors. This is what determines the macroeconomic multiplier effect. Together with innovations and related investments, they form the essential relationship between economic structure and growth.

In this view, macroeconomic stability and the institutional environment (for information dissemination and coordination), as well as adequate provision of infrastructure, finance, knowledge, education and human resources, are structural conditions, but are not active determinants or conditions sufficient for generate changes in the dynamics of growth. Conversely, structural transformation strongly determines macroeconomic dynamics via its effects on investment and international trade. Macroeconomic instability (in the broad sense) can destroy growth and stability is necessary but not sufficient to generate growth. For this, what matters most is the structural change, which reduces the weight of informal sectors and increases the weight of high productivity sectors.

One of the most important factors differentiating sectoral impacts on growth is that technological progress is not evenly distributed across sectors, with some rates of innovation and diffusion effects far greater than others. According to Cimoli and Porcile (2013: 21), “There is a clear relationship between the aggregate R&D effort in an economy and the weight that it has in technology-intensive sectors such as electro-electronics, pharmaceuticals, aerospace and

[4] According Peres and Primi (2009: 10), “The SES approach recognizes the sectoral nature and characteristics of knowledge, technology and production activities, and their effects on growth and development, concluding that innovation occurs in the context of the expansion or creation of specific sectors and activities. Thus, in this frame, innovation drives structural change, which in turn strengthens the incentives to innovation in a virtuous circle of growth. This process, however, is neither automatic nor spontaneous.”

metal-mechanical parcels."[5] Thus, according to these authors, there is a fundamental relationship between technology, growth and economic structure, forming a macro and microeconomic dynamics of development. First there is the microeconomic level of learning and skills. Second, the level of the productive structure, complementarities and the National System of Innovations. And third, the macroeconomic determinants (Cimoli and Porcile, 2011: 563).

Imbs and Wacziarg (2003) correlate indicators of sectoral concentration of production with per capita income values over time. The result is a pattern of specialization of the U-shaped productive structure. That is, countries diversify their productive structure until they reach a certain level of relatively high per capita income, from which they tend to re-specialize, but now in much higher productivity sectors[6] and generally less intense than in the diversification phase. Carvalho and Kupfer (2011: 620) state that "This fact would lead to the conclusion that countries, in general, only specialize again after achieving a high degree of development."

Similarly, Dani Rodrik, based on the methodology developed by Imbs and Wacziarg (2003), states that "when a country goes from very low income to higher levels, the pattern of production is remarkably diversified and that when income it is quite high, the curve begins to invert, which means that concentration begins to intensify " (Rodrik, 2010: 29). This means the opposite of what the theory of comparative advantage proposes, according to which countries must specialize. That is, according to Rodrik (2010: 30), "… the dynamics that drive growth are not directly related to any kind of static comparative advantage. Rather, it is a dynamic that, in one way or another, leads some countries to gradually diversify investments into a wide range of new activities. Prosperous countries are those that make new investments in new areas; those that stagnate are the countries in which this process does not occur. "

Carvalho and Kupfer state from Rodrik and Imbs and Wacziarg that "if only advanced countries are expected to specialize, it could not have been the specialization that led them to the advanced stage of development, all leading to

[5] In the original: "Hay una clara relación entre el esfuerzo agregado de I+D en una economía y el peso que en ella tienen los sectores intensivos en tecnología, como la electro-electrónica, la farmacéutica, la aeroespacial o partes de la metal-mecánica."

[6] Carvalho and Kupfer argue that "specialization would only be beneficial when carried out in sectors with higher technological content and greater demand dynamism." For example, with the diversification of the export agenda, "the dependence on export revenues of few goods (usually commodities), and thus the volatility of these revenues." (Carvalho and Kupfer, 2011: 622).

the belief that it was on the contrary, diversification." (Carvalho and Kupfer, 2011: 621-2). Thus, "The occurrence of a U trajectory for an undeveloped country could therefore indicate an early specialization of its productive structure, probably triggered by factors exogenous to its economic development process." (Carvalho and Kupfer, 2011: 620).

Analyzing the relationship between economic development and structural change in Brazil, Nassif, Feijó and Araújo (2015) use the Kaldorian theoretical framework and the Thirlwall hypothesis, for which the relationship between income elasticities of export demand and imports determines growth. balance-of-payments constraints and the greater or lesser dynamism of this economy relative to the rest of the world. To increase this relationship between the two elasticities, structural change is required. In this sense, Nassif, Feijó and Araújo state, starting from the understanding that "manufacturing sector dictates the dynamism of aggregate productivity growth" (2015: 1310), that "structuralist economists identify the manufacturing industry as the main industry responsible for disseminating technical progress as as well as the main source of significant static and dynamic returns to scale." (2015: 1309) and that" shifting the composition of their exports from traditional goods (labor intensive and natural resource based) to very diversified goods, especially science-, engineering- and knowledge-based goods, which make up the majority of total exports." (2015: 1311). That is, the structural change promoted by the development of these sectors provides the change in the relationship between the elasticities that allow greater sustainable growth.

Peres and Primi (2009) argue that, as the transformation of productive and organizational structures encounters barriers and costs, state intervention is necessary to address them. This means the creation of asymmetries that promote activities understood as generating long term growth. Similarly, Mazzucatto (2014: 26, 33, 107, 257 and 260) argues that the state is necessary because structural change is a process of innovation with knightian uncertainty, unlike risk, so not calculable in terms of social return and private. The state must create and form markets according to Polanyi's conception. Or, starting with Keynes's conception, the state must do things that would not otherwise happen, promoting structural change. This, for Mazzucato, should occur until uncertainty becomes a risk, when private sector entry would be facilitated.

In this sense, the State can assume different roles, as regulator, as direct producer, through the government procurement mechanism and/or as a financing agent or investor, always aiming to promote projects considered strategic by their

impacts on productivity or for the absorption of labor. All these forms of action fulfill the role of increasing the rate of return on private investments. Given that systems and individuals are resistant to change and that technical change is sector specific, and considering that certain structural changes are a condition for other changes, Peres and Primi (2009: 23) argue that industrial policies need to be selective, prioritizing sectors with potential strong technological and productive impacts.

EVOLUTION OF BRAZIL'S PRODUCTIVE STRUCTURE IN THE LONG TERM

The productive structure plays a key role in productivity dynamics and economic growth, as well as income distribution and poverty. A productive structure that has evolved to greater skill diversification and knowledge-intensive skills increases its productivity (Cimoli et al., 2017; Medeiros, 2016). In addition, the economy becomes more competitive in domestic and foreign markets, and growth tends to be more persistent and stable (Foster-McGregor, Kaba and Szirmai, 2015). This tends to increase the average return on capital of this economy, so that investments are stimulated and greater economic growth occurs.

On the other hand, the capacity for structural change plays a key role in combating income inequality and poverty. Increasing social spending and direct income distribution (which is dependent on institutional factors for equality) are key, but sustainable egalitarian improvements require structural shifts towards more knowledge-intensive productive sectors that sustain growth and employment in the long term (Cimoli et al., 2017).

The degree of modernization of the productive structure can be verified in terms of added value of economic activities and in terms of occupational structure. From Groningen Growth and Development Center data7, Next, we examine the evolution of these indicators for manufacturing, the modern sectors8

[7] Available data are from 1950 to 2011.

[8] The modern sector is made up of manufacturing, mining, electricity, gas and water, construction, transportation and communication and finance. These are sectors with the characteristics of the economy's "engines" (industrials: manufacturing, mining, electricity, gas and water and construction; and internationally tradable services: transport and communications and finance) (Lapova and Szirmai, 2014: 12).

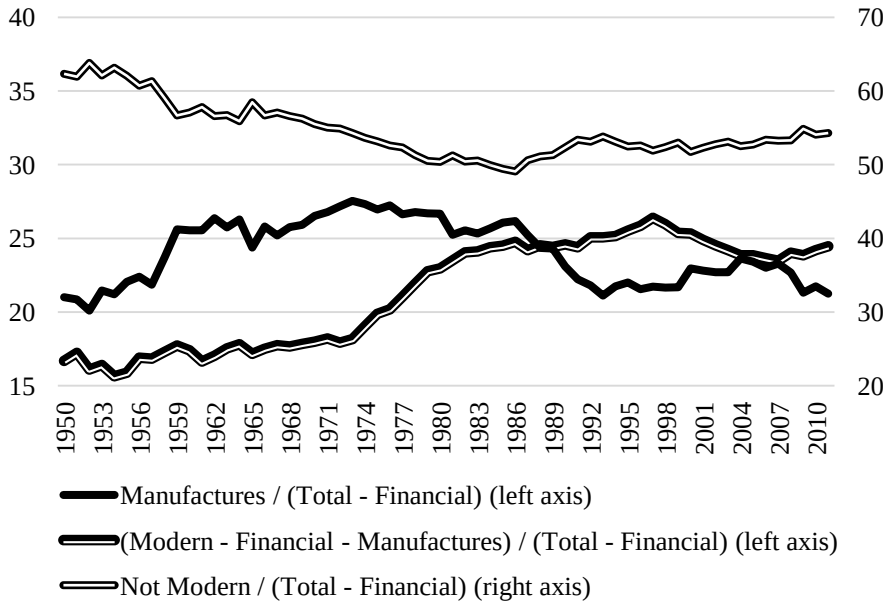
and non-modern9.As one of the objectives of the research is to examine the impact of manufacturing on other modern and non-modern sectors, the manufacturing sector itself is excluded from the modern sector. In addition, the financial sector is excluded.10.

In terms of value added (Figure 1), the manufacturing sector evolved positively or remained at a high level from the 1950s to the 1980s. During this period the modern sector increased its share, while the non-modern sector had its share decreased. It is important to note that even in the 1980s, after decades of positive progress, the non-modern sector remained dominant. That is, the characteristics of an underdeveloped economic structure continued. From the 1980s, one can clearly see in the charts the elimination of the previous trend of decreasing the non-modern sector and expanding the modern sector. During this period, the decline in the participation of the manufacturing sector is related to a change in the trend of the non-modern sector, which increased again and then remained at a more or less constant level. Since 2003, the Workers Party governments have failed to bring about positive structural change. In contrast, the weight of manufacturing declined (from 19.4% of value added in 2003 to 17.6% in 2011) and the non-modern sector grew back in share. For the modern sector, the share of mining, electricity, gas and water and construction grew, but the share of the financial sector grew much more intensively (from 14.7% of value added in 2003 to 17.4% in 2011). (Groningen Growth and Development Center, 2018).

[9] The non-modern sector is composed of the agricultural, trade, government services, and social and personal services sectors. Its characteristic is to have, on average, lower average level of productivity and to have lower potential for technological innovation. Of course, this classification is insufficient and the ideal would be to subdivide each of the ten sectors. However, given the lack of disaggregated data, as a second best solution, Lapova and Szirmai (2014: 12) consider that the characteristics of 'modern' and 'non-modern' predominate in each of these sectors.

[10] The financial sector was excluded from the indicator for Brazil due to its specificity of financialized sector, with low connection to production and productive investment (IPEA, 2010: 317), and due its high weight (in terms of value added) compared to other countries, which demonstrates its condition as an inflated sector. In addition, high inflation in the 1980s distorts financial sector data (Dathein and Fonseca, 2019).

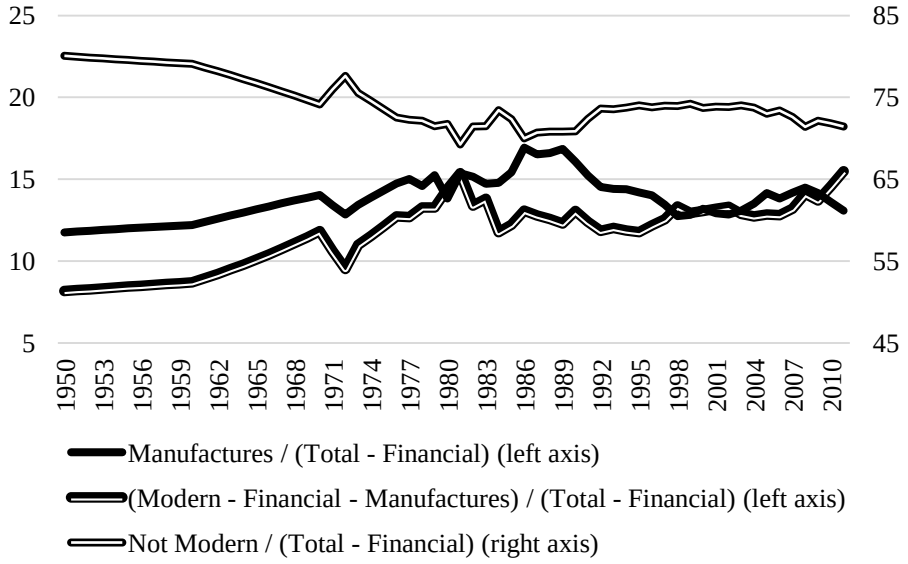
Figure 1- Brazil, Gross Value Added by Manufacturing, Modern and Non-Modern Sector, percentage share, 1950-2011



Source: Groningen Growth and Development Center (2019).

In terms of occupational structure, the dynamics also changed in the 1980s. Before, there was an increase in the participation of manufactures and other modern sectors, and a reduction in non-modern sectors. From the reduction of the participation of the occupations in the manufactures, the non-modern portion grew again. In the 2000s, until 2008, manufacturing and other modern jobs grew, and non-modern ones fell, but after 2008 the weight of the manufacturing sector again diminished. Specifically for the Workers Party governments, from 2003 onwards, manufacturing had its occupation reduced (from 11.9% in 2003 to 11.5% in 2011, but peaking from 13.0% in 2008). For the modern sector, the share of transport and communications and construction has grown, but also in the case of employment much stronger the share of the financial sector has increased (from 9.2% in 2003 to 11.7% in 2011) (Groningen Growth and Development Center, 2018).

Figure 2- Brazil, Occupations in the Manufacturing Sector, the Modern Sector and the Non-Modern Sector, percentage shares, 1950-2011.



Source: Groningen Growth and Development Center (2019).

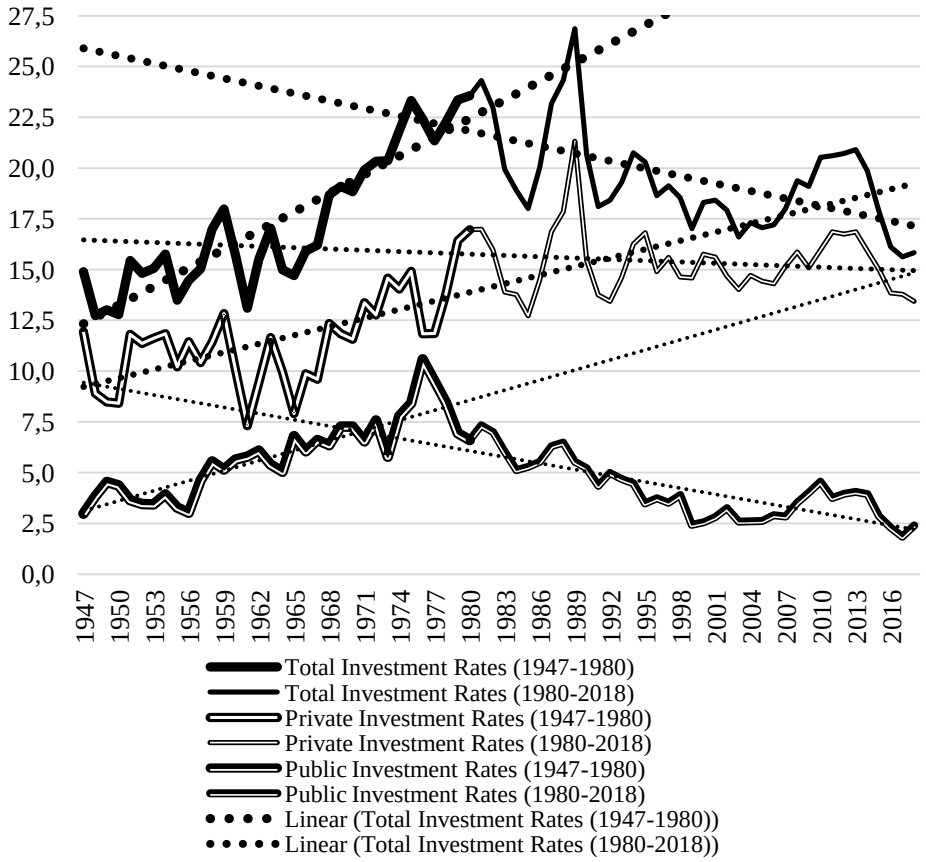
STATE PERFORMANCE AND INVESTMENTS RATE

Brazil's two long periods of progress and structural deterioration can also be examined through the dynamics of total, private and public investment rates. Figure 3 examines their trends, which change from ascending to descending in the late 1970s and early 1980s. For the long-term, in the first phase, public and private investments grow together, adding to the total. In the second phase, after 1980, public investments fell sharply due to the fiscal crisis and the implementation of the liberal project. Private investments were expected to take over public investment space and make total investments grow. What happened as a trend is the concomitant reduction in public and total investments, given that private investments were more or less stable, with a slight downward trend.11 It is

[11] According to IEDI (2019), Institute for Industrial Development Studies, a business research entity, "The main engine that drives (or pulls down) the industry is investment, as it directly benefits heavy construction and the industry of capital goods. Via industry, the other branches of manufacturing itself, as well as the other sectors of

noteworthy that private investment since 1980 has been hovering at around 15% of GDP (15.3% on average between 1981 and 2018), after having risen to 10% of GDP, which was the average standard of the 1950s and early 1960s.

Figure 3- Total, Private and Public Investment Rates, Percentage of GDP and Trend, 1947-2018



Public Sector: Central, state and municipal governments + federal state enterprises.
Private Sector: Total Investment minus Public Sector Investment. That is, due to lack of data, includes the investments of state and municipal state companies.
Data from 2016 to 2018 are estimates.

the economy, continue the original impulse of investment. These expenditures, carried out by the state and state-owned companies, were an important lever in the total reversal of the Brazilian economy, a role that has been declining without equivalent compensation from the private sector."

The calculation of the trends takes as cut year 1980.
Sources: Gobetti (2007), Orair (2016), IBGE- Brazilian Public Finance (several years), IBGE-Quarterly National Accounts (2019) and IEDI (2019)

Considering for the period ending trends from 1995 until 2018, to eliminate the disruptive effect of high inflation from previous years, the trend shifts to a practically flat, stagnant pattern with a slight downward trend. Public investment was close to 3% of GDP, private investment close to 15%, and total investment around 18% of GDP, in a 24-year pattern.

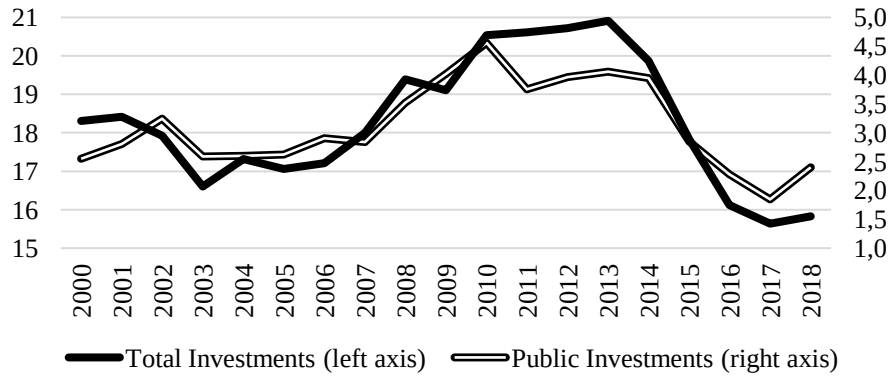
Low and declining investments from the 1980s onwards lead to weak structural change and weak productivity growth, while the negative structural change that causes low investment is fair in a negative feedback process that produces a vicious circle of difficult resolution, except intentionally with a development project.

Figure 4 highlights the period from 2000 onwards, specifically the relationship between public investments and totals. There seems to be a very relevant relationship.12 Thus, a better economic trajectory depends on advances in public investments, as occurred between 2006 and 2010. The policy for public investments after 2010, therefore, must have greatly impacted the economy's performance and was a mistake. For recent years, from 2014 onwards, public investment cuts have been accompanied by reductions in private investments, with the aggregate impacts already illustrated.

One finding about the Brazilian economy seems to be the strong relationship between the performance of private and total investments with state investments. Or the inability of the private sector to take the place of the state when it is absent by crisis or political choice. In contrast, the private sector seems to “follow” the state, waiting for its long-term policy decisions. The same is true for short term performance. Figure 8 on the utilization of productive capacity shows, for the current crisis, the maintenance of low utilization. At the same time, the state cuts its spending and its investments, hoping that the market, through austerity and liberalization policies, via confidence improvement, will resume its investments. The result seems to be prolonged stagnation, with the market "waiting" to "follow" the state when it adopts driving policies.

[12] Relating to industry performance, IEDI (2019) states that “The march of industry is very close to that of public investment, to the point that the peak of manufacturing coincides with the peak of public investment: 20% and 10%. 6% of GDP in 1975. By contrast, in 2018, public investment was only 2.4% of GDP, while manufacturing was only 11.3% of GDP, the lowest percentage in the last 72 years.”

Figure 4- Brazil, Gross Fixed Capital Formation and Public Sector Investments, percentage of GDP, 2000-2018



Public Sector: Central, state and municipal governments + federal state enterprises.
Data from 2016 to 2018 are estimates.
Sources: Gobetti (2007), Orair (2016), IBGE- Brazilian Public Finance (several years), IBGE-Quarterly National Accounts (2019) and IEDI (2019)

One possibility of interpretation of this dynamic is derived from Robert Wade's (1990) theory of the "governed market".13 Wade uses this conception to address East Asian industrialization. However, perhaps it can also be used for Brazil, both in terms of its long-term trajectory and its relationship to development policies and its short-term performance in relation to the occupation of idle capacity. The market seems rationally to follow state decisions, both "down" (with decisions that promote recession and stagnation) and "up" (with reactivating decisions in development cycles and processes). The market also seems to make rational decisions for low innovative investments, for example in a context of structural regression. Thus, Wade's "governed market theory" may be adequate for the analysis of Brazil's long- and short-term economic performance. In the case of Brazil, operating negatively since the 1980s, given the absence of a development project and a Developmental State.

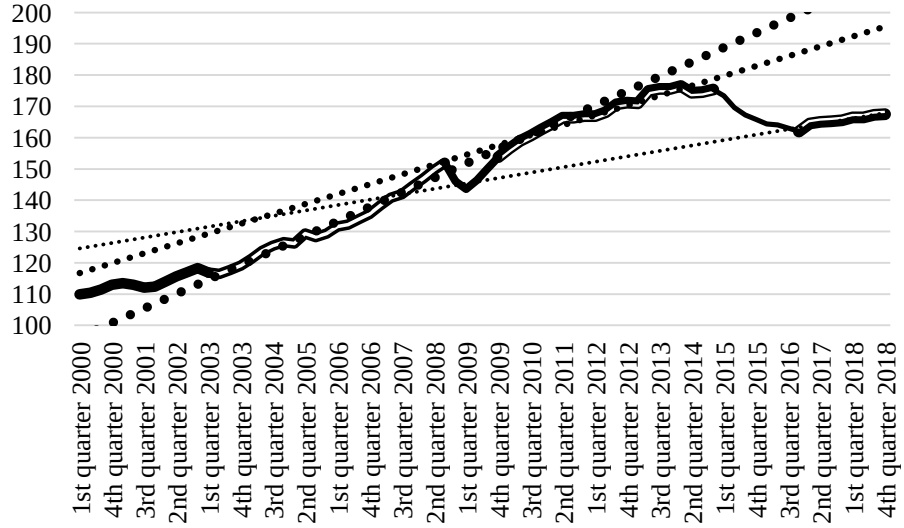
[13] This theory resembles Polanyi's classic conception that the state historically creates and shapes markets.

BRAZILIAN ECONOMIC PERFORMANCE IN THE PERIOD 2000 TO 2018

The national and international economic and political contexts and the set of economic policies produced the results illustrated in next Figures 5 and 6. Between 2003 and 2008 the average GDP growth rate was 4.2%. After the crisis of 2008 and 2009, between 2010 and 2014 the variation was 3.4% on average. Subsequently, after negative variations of 3.5% in 2015 and 3.3% in 2016, growth in 2017 and 2018 was only 1.0% and 1.1%, respectively.

Figure 5 shows a worsening trend in the period 2010-2014 compared to the period 2003-2008, but it is especially emphasized that the losses of the 2015-2016 crisis will no longer be recovered (ie the area between the trend lines of the years 2010-2014 and the end period, illustrated in Figure 5). By the end of 2018, GDP was at the same level as at the end of 2011, past seven years. At the pace of recovery since the fourth quarter of 2016, GDP is expected to grow by 19 quarters (or nearly 5 years) to merely return to the pre-crisis level (fourth quarter 2014). Therefore, this would only occur in 2021.

Figure 5. Brazil, GDP, seasonally adjusted quarterly volume index chained series with trends, 2000/1 - 2018/12 (Base: 1995 average = 100)



Source: IBGE-Quarterly National Accounts (2019)

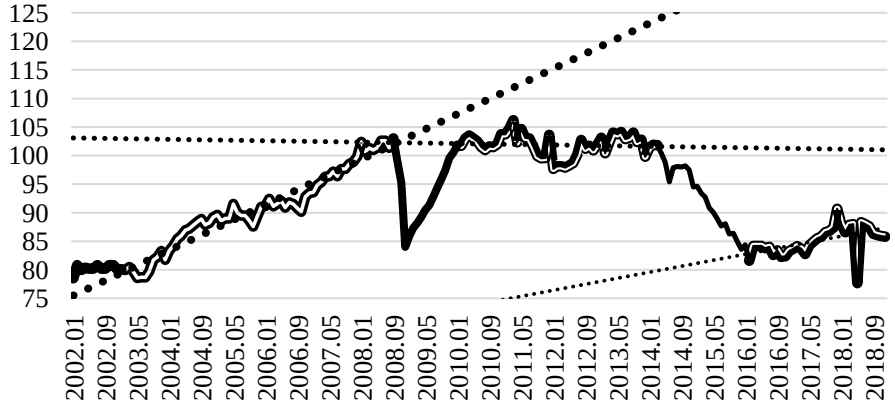
These worsening trends appear much clearer and stronger for the industrial sector. Between 2003 and 2008 the growth rate of industrial production averaged 3.7% per year. From 68 months (almost 6 years) between January 2003 and before the 2008/2009 crisis, the average growth rate was 4.5% per year. In the period 2010-2013 the average rate was 2.6%, but without considering the strong cyclical recovery of 2010 this rate drops to only 0.2%. That is, since 2010, there is already a stagnation installed in the industry. The accumulated performance of 2014 (-4.0%), 2015 (-9.8%) and 2016 (-6.3%) reaches a negative variation of 21.4%. And the 2017 and 2018 growths were 2.6% and 1.0%, respectively.

By the end of 2018 industrial production was at the same level as in early 2004, fifteen years later. The current crisis, therefore, is much worse than the 2008/09 crisis, after which there was a rapid "V" recovery. However, after the cyclical resumption, it did not regain the previous rhythm, becoming stagnant. For the recent period, after the sharp fall between March 2014 and February 2016, and with all existing idle capacity, average growth of only 1.8% per year is very low. At this rate, it would take 12.5 years to only recover from the 2-year drop. That is, would return in 2028 to the 2014 level.

The trend lines in Figure 6 illustrate the worsening performance of industrial production from 2010-2013 over 2003-2008. It is noteworthy that the current economic problems did not arise with the 2014-16 crisis. On the contrary, they may be a consequence (including the political crisis) of the inability to solve the problems that have been coming since 2008. More broadly, the inability to solve the problems of the economic structure, which has continued to deteriorate.14 Regarding the trend line of the recent period, from 2016 to 2018, it can be observed that, unlike the loss of production at the end of 2008, which was recovered in 2009 and 2010, the loss of the current crisis may not be recomposed. In other words, here and even more clearly, this is not a cycle of industrial production, with the resumption of the previous trajectory after the recession, but a major structural crisis of the Brazilian manufacturing industry, which begins in 2008.

[14] For example, the title of Marquetti, Hoff and Miebach's (2016) work is "Profitability and Distribution: The Economic Origin of the Brazilian Political Crisis". And the title of the paper by Bruno and Caffe (2018) is "Determinants of profit and accumulation rates in Brazil: the structural factors of the 2014-2015 economic downturn".

Figure 6- Brazil, Production of Manufacturing Industry, seasonally adjusted quantum index, 2002/1 - 2018/12 (Base: 2012 average = 100)

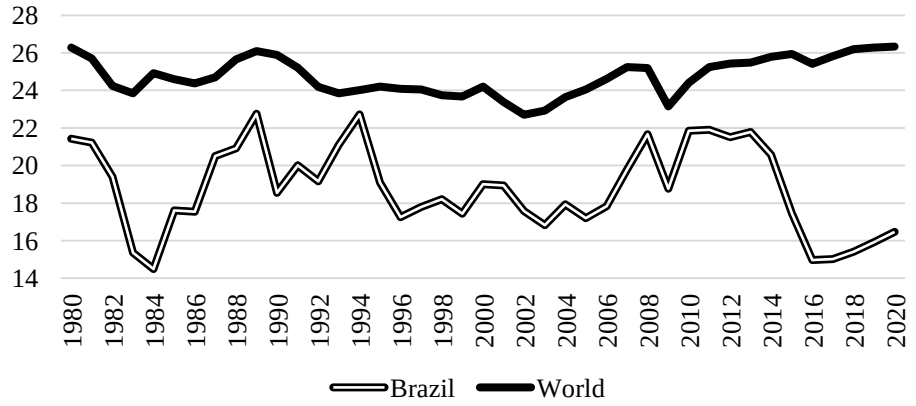


Source: IBGE-Monthly Industrial Survey (2019)

Figure 7 illustrates how Brazil's investment rates have been substantially below world average rates since 1980. Even in periods of growth of this rate in Brazil, such as from 2006 to 2013, they remain below world averages. Moreover, growth does not sustain over time, which must be related to the structural worsening of the economy.15 With industry and public investment performance determining, profitability, business, and therefore aggregate investment, are discouraged. The figure also illustrates the recent sharp deterioration in investment (as opposed to the global average performance) and the weak recovery trend projected by the IMF.

Figure 7- Brazil and World, Investment Rates (Percentage of GDP), 1980 to 2020

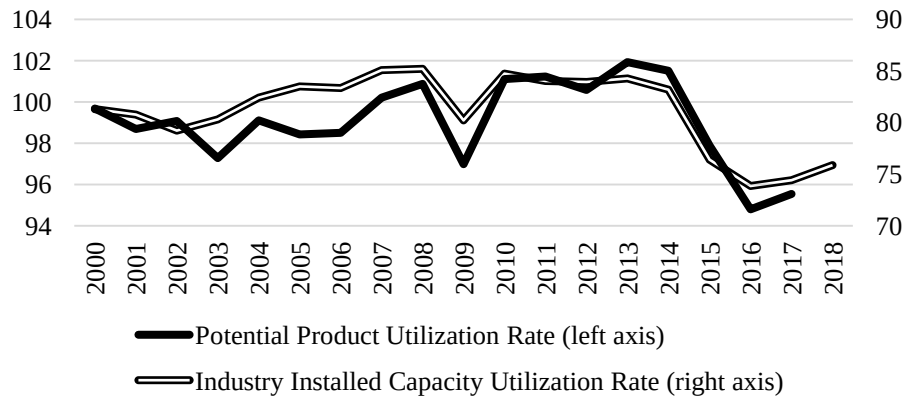
[15] On this topic, the work of Foster-McGregor, Kaba and Szirmai (2015), “Structural change and the ability to sustain growth”, is enlightening.



IMF projections for 2019 and 2020.
Source: International Monetary Fund (2019)

Figure 8 illustrates how growth in 2003-08 was accompanied by occupation of productive capacity and how the 2009 crisis was quickly overcome in capacity utilization. However, the data also highlight how the period after this crisis was different from the previous one. The economy worked in the years 2010-2014 very close to full utilization, or even above potential output. Thus, policies would have to be different from those used in the years 2003-08. Mere Keynesian policies in this context were not effective in counteracting the downward trend in profitability. Finally, the figure also shows how the current crisis is much more intense than 2009, and how slow the recovery is.

Figure 8. Brazil, Potential Product Utilization Rate and Industry Installed Capacity Utilization Rate, 2000 to 2018



Source: IPEA/Conjuncture Group/Dimac (2018) and IPEADATA (2019)

The worsening economic trend in the period 2010-2014 is due to a sharp fall in the profit rate (Dathein and Fonseca, 2019; Bruno and Caffe, 2018; Marquetti, Hoff and Miebach, 2016; Dathein, 2018), even with economy still working with high capacity utilization and maintaining high investments. In this context, tax and cost-cutting incentives had no effect. The pro-market bet of the Dilma 1 government, that this market, with supply incentives (in a context of high demand), promoted the resumption of investments was a theoretical and practical mistake. From 2014, with the deterioration of the international and domestic political contexts, any expectation of recovery, if any, was finally deconstructed. Thus, all determinants of the economy's profitability deteriorated: profit share in income continued to decline, capacity utilization declined sharply and the output-capital ratio continued to decline.

Specifically about the Lula government (2003-2010), from the analysis of Cimoli and Porcile (2013), it can be concluded that there was a positive shock of the terms of trade, at the same time that symptoms of Dutch disease emerged, besides wage increases compared to central countries, due to the effect of exchange rates. This would have resulted in a transitory improvement, but with a structural worsening and a lower learning accumulation, given the commodity boom, as the sectors of higher technological intensity had a smaller weight in the economy.

Subsequently, in the first Dilma government (2011-2014), there was a negative shock of demand and learning stemming from the worsening international situation. This resulted in a lower income multiplier and a lower

learning multiplier, with loss of sectors and technological capabilities. Moreover, over time the income elasticity of export demand decreased and the income elasticity of import demand increased, which, according to the Thirlwall model, tended to produce lower economic growth (ECLAC 2018: 71). Therefore, there was a negative structural change (Cimoli and Porcile, 2013; Nassif, Feijó and Araújo, 2015; Arend and Gramkow, 2011; Arend, Singh and Bichara, 2016; Rossi and Mello, 2016).

The 2011 public investment cuts probably reversed the positive private expectations from earlier. Exchanging these investments for tax breaks was a bad countercyclical policy. The fiscal cost was high, damaging the public accounts and thereby deteriorating expectations or trust / credibility, as the unsustainability of the measures was perceived. However, the government was led to this too to curb inflation. This again demonstrated the importance of the state as a leading agent in the economy. When the government decided or was forced not to perform this function (by cutting investments, for example), the market stalled, contrary to what was erroneously expected (ie to take the lead in investments with stimuli granted). Industrial policy (Plano Brasil Maior), on the other hand, did not adequately fulfill the stimulating role, as it was conceived or transformed into a mere countercyclical policy (cost reduction against falling profitability, attempt to contain high inflation and compensation against the appreciated exchange rate).16

The “watchwords” of the Economy Minister Paulo Guedes's economic policy are “disivestment” (of state capital) and “savings”. For an economy to grow, on the contrary, it needs investment and spending, even to generate savings. Then the market receives the government's objectives and, responding rationally, cuts private investment and tries to “save” (reducing spending, demanding more and more cuts in labor rights, social security rights, requiring more gains from state interest etc.) to resist economic depression.

Previous data show that the current crisis has been linked to (a) economic trends since the 1980s and (b) the difficulty in resolving the change trajectory after the 2008-09 crisis. Therefore, this crisis occurs in a long-term context of worsening economic structure of the country. The 2008-09 crisis has apparently been quickly overcome. However, the data show how previous trajectories were not retaked. The present economic crisis is not a traditional economic cycle in which, after the recession, the previous trajectory is retaked, but a structural one. The crisis has a trajectory in the form of an “L” (see the four previous figures) and

[16] It should be remembered that several development policies of this period were in the plan of intent as they were not implemented.

not a “V”, as would be the case of a recessive crisis. That is, the losses are not recovered. Thus the crisis has the characteristics of a depression.17

FINAL REMARKS

Several attempts have been made over the last decades to overcome the worsening trend of the productive structure. After inflation stabilized from 1994 onwards, the focus could be on long-term issues. The Fernando Henrique Cardoso government (1994-2002) tried to stimulate productivity through trade and financial openness and the diminishing role of the state (privatization), with poor results. The governments of the Workers' Party (2003-2016) tried to stimulate innovation through industrial and technological policies. It is important to emphasize that in the petista governments the commercial and financial openings were not reversed. Therefore, they could continue to cause the expected positive effects. In fact, there was an intense inflow of foreign direct investments and a strong expansion of foreign trade during this period. The results were not as expected either, in the sense of reversal of the structural trend, either because industrial and technological policies were insufficient, or because they were contradictory to the priority macroeconomic policies. However, perhaps its biggest problem was the lack of business demand for them.

Analyzing the three components of the profit rate - (a) profit sharing in income, (b) the occupation of productive capacity; and (c) capital productivity - it can be seen that the policies of governments 1994-2016 sought to affect the productive structure through the third component, in different ways, but without success. In the Temer (2016-2018) and Bolsonaro governments18, this attempt to increase capital productivity has apparently been abandoned, and also without acting positively on the second component in view of policies austerity, focusing as its main objective to act on the first component. That is, increasing the rate of profit through concentration of income (with the strong “easing” of labor and social security laws) and through transfers of property and state incomes (with privatization and the state spending limit for twenty years), which appears to be a process of primitive capital accumulation.

[17]See, for example, the work of Sicsu (2019), "Brazil: It's a depression, it wasn't just a recession."

[18] At least until the time of writing this chapter, August 2019.

However, Minister Paulo Guedes also aims to expand economic openness abroad, with the expectation of generating greater productivity. The proposal is risky because it means persisting in the bet on a policy that has been going wrong since the early 1990s. The reason for its non-functioning as a productivity driver is precisely the fact that it tends to worsen the economic structure, resulting in specialization exactly in productive and exporting sectors that cause the maintenance of underdeveloped structures.

One expectation in the debates about the impact of the international economic crisis in Brazil in 2008 and 2009 was that Brazil would have easily overcome it. The evidence presented here reinforces an opposite interpretation. In fact, the 2010 recovery was very intense and rapid, but fleeting, not guaranteeing a consistent resumption. On the contrary, one might even speak of a structural break, or a return to the traditional behavior of incompatibility between growth and income distribution. The period 2004 to 2008 may have been a brief interregnum, determined mainly by the favorable international environment. In the following context, mere countercyclical cost-cutting measures, without positive structural change, did not guarantee consistent growth.

Even with social advances, in terms of inequality, Brazil has not changed its position as one of the worst income concentrations in the world. In addition, the question of the sustainability of social advances emerges in a less favorable international context, on which the relatively small increase in productivity was dependent. In this context, social spending would tend to decline as balance of payments performance worsened and fiscal austerity measures. Also, employment and wages would be reduced with the crisis. In other words, redistribution policies cannot be disconnected from policies for productivity growth through changes in the productive structure, but must be understood as a necessary condition to maintain increases in social spending, building a more egalitarian and dynamic economy. Therefore, it is considered that the trajectory of the economic structure is decisive for the maintenance of growth, and that the unsustainability of the positive economic performance of the years 2004-2010 is largely due to this factor. Thus, Brazil is going through a long-term structural crisis, in view of the inability of positive structural change. Thus, it suffers another lost decade.

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