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Brazil: self-inflicted pain

Cristina Terra*

The Brazilian economy grew 7.5% in 2010, when Mr. Lula finished his second mandate as president with a popularity rate of 85%. Six years later, his successor, Ms. Rousseff, is suspended from the presidency under an impeachment trial, while the economy endures a recession of 3.8% of the GDP for the second consecutive year. In this article I argue that the current economic crisis is the result of ill-advised economic policies. Ms. Rousseff's government altered each one of the tripod of policies implemented by Mr. Cardoso in the 1990s, which had been successful in maintaining macroeconomic stability (namely, the inflation targeting regime, the floating exchange rate and the fiscal austerity). Also, Ms. Rousseff's government greatly expanded the improperly designed industrial policies that were reintroduced in Brazil during the second mandate of Mr. Lula, which created distortions in the economy and a large fiscal burden for the government. The acting president, Mr. Temer faces great difficulties to put the economy back in order, since unpopular measures are required that are very hard to be implemented in the midst of the current political turmoil.

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1. Introduction

The three covers of the newspaper *The Economist*, reproduced here, offer a good representation the trajectory of the Brazilian economy over the past seven years. At the time of the first cover, in November 2009, the country had a growing economy, reaping the result of the previous fifteen years of institutional and policy-making improvement, all in a democratic environment. Things started to change in 2008-2009. Although the country suffered only a relatively mild recession in 2009 following the 2008 world financial crisis, the policy reversals put in place then, when the Christ the Redeemer was taking off, created the conditions for the second cover, from September 2013. Mass protests swept the country as inflation raised and GDP growth dropped, in a hard to swallow 7 to 1, this time not in soccer: over 7% inflation and near 1% GDP growth. In January 2016, third cover, the first anniversary of the second term in office of President Dilma Rousseff, the inflation rate of near 11% beats the president's approval rate, while the economy plunges into recession with a GDP decrease of 3.8% for the precious year.

2009-2016 trajectory of the Brazilian economy illustrated by The Economist

14 November 2009 | 28 September 2013 | 2 January 2016

Let us go back a few years. Brazil is, historically, one of the most unequal countries of the world. During the miracle years of 1968-1973, under the military dictatorship that lasted until 1985, the country experienced very high growth rates, while inequality remained as high as ever. Leaders used to say that we should "first let the cake grow, to share it later"[1]. But the 'later' never seemed to arrive. In 2002, Luiz Inácio Lula da Silva, a former blue-collar worker from the metal industry, won presidential elections, after three previous defeats in 1989, 1994 and 1998. In his first interview as elected president, Mr. Lula said that "hope defeated fear" and that the people voted "without fear of being happy." Effectively, Mr. Lula brought great hope, particularly for the poor. Like millions of Brazilians, he also came from a very poor family, he had known hunger, he did not have much education. He knew, viscerally, what meant to be poor. Those who voted for Mr. Lula expected him to fight poverty, to lessen inequality, and to have a government with no corruption. Mr. Lula finished his second mandate, in 2010, with a popularity rate of over 85%, and he left a country less unequal and with less poverty. According to the *Secretaria de Assuntos Estratégicos*, between 2004 and 2010 19.3 million people left poverty, while 32 million ascended to the middle class, with a monthly income above €330, approximately. The so-called 'new' middle class corresponded to 50.5% of the Brazilian population in 2012, against 35% in 1992. Between 2004 and 2010 they have experienced a 40% increase in their family income, and 68% of them are more educated than their parents.

[1] This quote is attributed to Antonio Delfim Neto, Finance Minister of Brazil from 1967 to 1973.

Six years later, the country is plunged in a deep recession that puts at risk the hard won social gains. Mr. Lula's successor, Ms. Rousseff, is suspended from her presidential functions under an impeachment trial, while Mr. Lula is under the threat of being arrested under corruption charges. What happened? One interpretation is that, tired of having to share airport lounges with the new middle class, the Brazilian elite decided to take matters into their own hands.[2] They would have orchestrated a coup d'état to put things 'back in order', that is, in the old order: less social and more pro-business policies. I am of the opinion that, although it might be true that some of the old elite would prefer less crowded airports, class conflict is not the heart of the matter in the current economic and political crisis.

First, the social advancements in Brazil were not the working of Mr. Lula alone. Inequality and poverty had started to decrease during the previous government, of Fernando Henrique Cardoso from 1995 to 2002, thanks to the economic stability he achieved and the social policies he implemented. Mr. Lula deepened the social policies and, at first, maintained the economic policies that guaranteed stability. After all, a stable economic environment is a necessary condition for social improvement.

Second, the current major economic crisis was caused by ill-advised economic policies, and not by the international environment or government spending on social programs. The economic policies initiated by Mr. Cardoso were abandoned, and the new policies pursued entailed large transfers of resources to selected businesses besides creating deep distortions in the economy. They were intended to boost growth, but the end result was quite the opposite. Finally, the new middle class does not want to return to poverty. They feel their purchasing power decrease with the higher inflation and their jobs disappearing with the recession. More educated and with a greater sense of citizenship, they voice their concerns. Ironically, it is the new middle class Mr. Lula helped to create.

After a brief description, in **section 2**, of the domestic policies that set the conditions for social and economic improvements in Brazil, I analyze the policies that led the economy to the current crisis. **Section 3** examines the new wave of industrial policies in Brazil, while **section 4** analyzes the economic policies implemented by Dilma Rousseff's government. In **section 5** I evaluate the country's current economic and political crisis, while **section 6** presents some suggestions on how to lessen the fiscal problem. Finally, **session 7** advances some reasons for hope, in the midst of this turmoil.

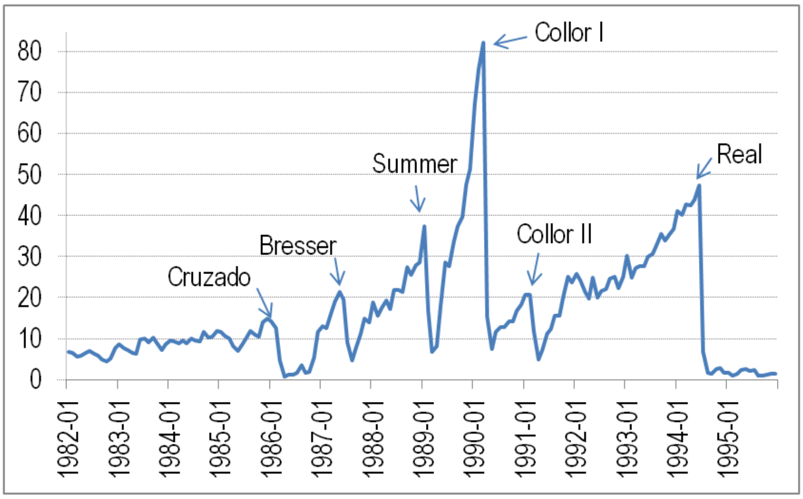
2. From fire-fighting to institution building

Back in the 1980s and early 1990s, Brazil was drowning in deep economic crisis. Monthly inflation was measured in two-digit numbers for most of the period between 1982 and 1995. During that period, the government launched six price stabilization plans (Cruzado, Bresser, Summer, Collor I, Collor II and Real, as indicated in **Figure 1**). All of them (except for the last one, the Real plan) brought inflation down for a few months, only for it to soar up again to even higher levels. At its peak, inflation reached a monthly rate of over 80% in 1990. Years of high GDP growth were succeeded by recession years as plans were implemented and then failed.

The trajectory of annual GDP growth and annual inflation rates, depicted in **Figure 2**, starts with annual inflation of 94% and a recession of over 4% in 1981. On average, per capita income decreased 0.6% per year over the 1980s. Between 1985 and 1995, the country had a succession of five different currencies and a dozen finance ministers.

[2] Early 2014 a professor from one of the top universities in Rio de Janeiro published a post in her Facebook page sarcastically commenting on how a passenger at an airport lounge was dressed, implying he lacked elegance to be there. Her post was fiercely attacked, and the overcrowded airport lounges became the image of the elite's alleged uneasiness with the new middle class' intrusion into their world.

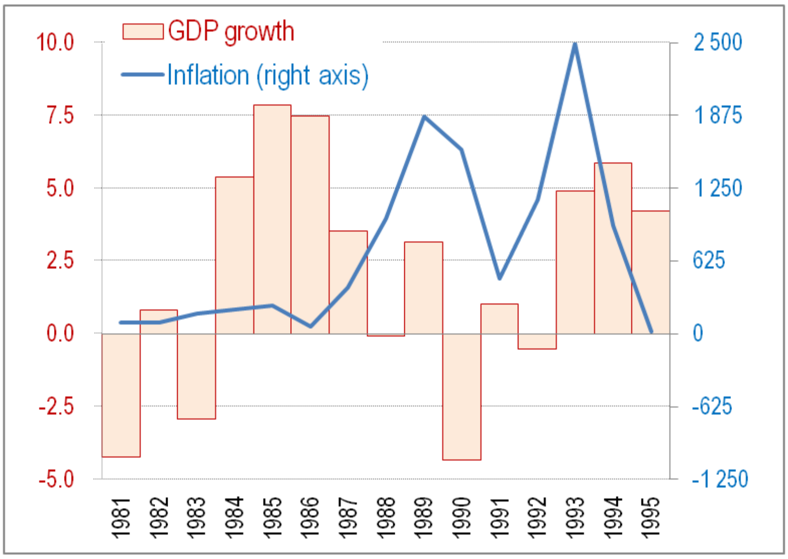
Figure 1
Monthy inflation* and stabilization plans in Brazil
January 1982 - December 1995 (%)



* Consumer price index.

Source: IBGE (*Instituto Brasileiro de Geografia e Estatística*).

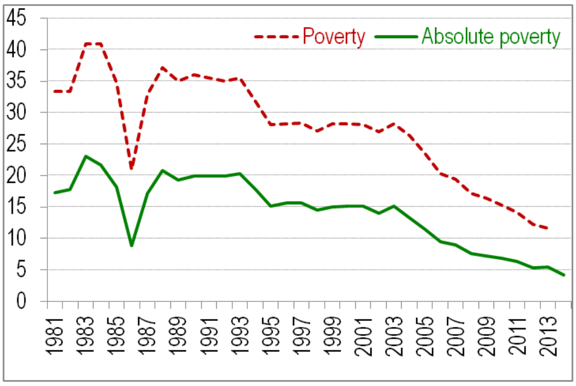
Figure 2
Inflation and GDP annual growth in Brazil
1981-1995 (%)



Sources: IBGE & IPEA (*Instituto de Pesquisa Econômica Aplicada*).

Behind these numbers, there is the deterioration of the quality of life, with all the time and effort to try and curb the corrosion of purchasing power brought by such high inflation rates. Constant trips to the bank to make sure the money is in interest bearing accounts and, for those without bank accounts, the long hours in supermarket checkout lines at payday to make all purchases of non-perishable goods as soon possible. Even more important is the increase in poverty and in violence the country experienced. As **Figure 3** shows, poverty increased to over 40% of households with the 1982 crisis, and remained around 35% until 1995. The only exception was the year 1986, when the Cruzado Plan produced an artificial and temporary income gain for those with lower income.

Figure 3
Poverty* in Brazil
(% of poor households in the population)



* The absolute poverty threshold is defined as the minimum income needed to buy the minimum calories necessary for survival, and the double of that income is the threshold for poverty.

Source: IPEA.

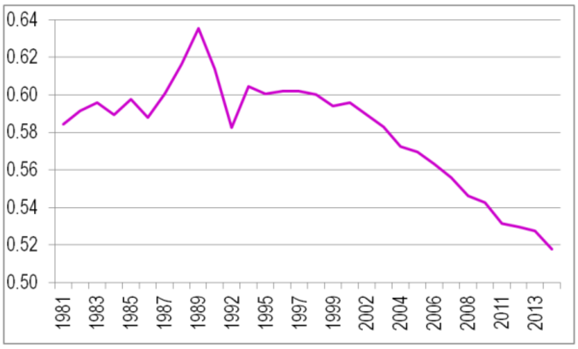
It is fair to say that all the effort in economic policy over the 1980s and early 1990s in Brazil was directed to fighting inflation and achieving macroeconomic stability. Hence, all other problems and fragilities that held up economic growth were not tackled during that period. The era of macroeconomic stability, started in 1994 with the Real Plan and consolidated during the government of Fernando Henrique Cardoso (1995-2002), allowed for important institutional improvements that forged the path for economic and social progress. Five policies pursued by Mr. Cardoso's government are noteworthy.[3]

- The government implemented a strong fiscal adjustment. Since fiscal deficits had been a major fuel of inflation in the past, this policy change was crucial for long lasting macroeconomic stability. To guarantee fiscal stability for the years to come, among other measures, the government enacted in 2000 the *Fiscal Responsibility Law*, which set clear limits to spending and stablished rule for the government accountability.
- The Brazilian Central Bank was given *de facto* independence to pursue the inflation targeting regime then implemented. After some adjustments over the first years, the target is at 4.5% per year since 2005, with a fluctuation band of 2%.
- The exchange rate was free to float. Another major source of imbalances in the past had been interventions in the foreign exchange market that generated over-appreciated exchange rates. Moreover, in order for the central bank to be able to target inflation, it cannot, simultaneously, use its policy for exchange rate interventions.
- State-owned companies, mostly in infrastructure and services, were privatized and regulatory agencies were created to discipline the private provision of public goods.
- Following the banking crisis in 1994-1995, the government implemented a banking reform that was very efficient in dealing with the banking crisis and preventing new ones. A restructuring program ensured depositors, penalized bad management by changing managers and owners of financial institutions, besides making them legally responsible for their acts and freezing their assets. Additionally, state banks were privatized; foreign banks were allowed to enter the market; mergers of institutions made the remaining ones stronger; capital requirements were increased; and risk monitoring by the Central Bank was improved.

[3] For a more thorough description of the main policies implemented from 1990 to 2010, please, see Terra, 2012.

Luiz Inácio Lula da Silva (2003-2010) maintained the tripod of policies implemented by Mr. Cardoso that ensured economic stability (the fiscal austerity, the inflation targeting policy and the floating exchange rate regime), while expanding the social policies based on cash-transfer programs, of which *Bolsa Família* Program is the most successful one. This program, which gives poor families a monthly allowance, serves over 13 million people with a total cost of approximately 0.5% of GDP, being effective in targeting the most in need. As shown in **Figure 3**, the share of poor households decreased 16 percentage points in 10 years: from 28% in 2003 to 12% in 2013. In terms of numbers, 19.3 million people left poverty between 2004 and 2010, according to the *Secretaria de Assuntos Estratégicos*. Also, for the first time, inequality decreased. As shown in **Figure 4**, the Gini index for Brazil dropped from 0.60 in 1996 to 0.52 in 2014. About half of the decrease in inequality in Brazil between 2001 and 2005 is attributed to non-labor income, such as pensions and cash transfer programs (**Barros *et alii*, 2007**).

Figure 4
Gini* index of income inequality in Brazil
1981-2014



* This index ranges from 0 to 1, where 0 means perfect equality and 1 means maximal inequality. For comparison, the average Gini index for OECD countries was 0.32 in 2012.

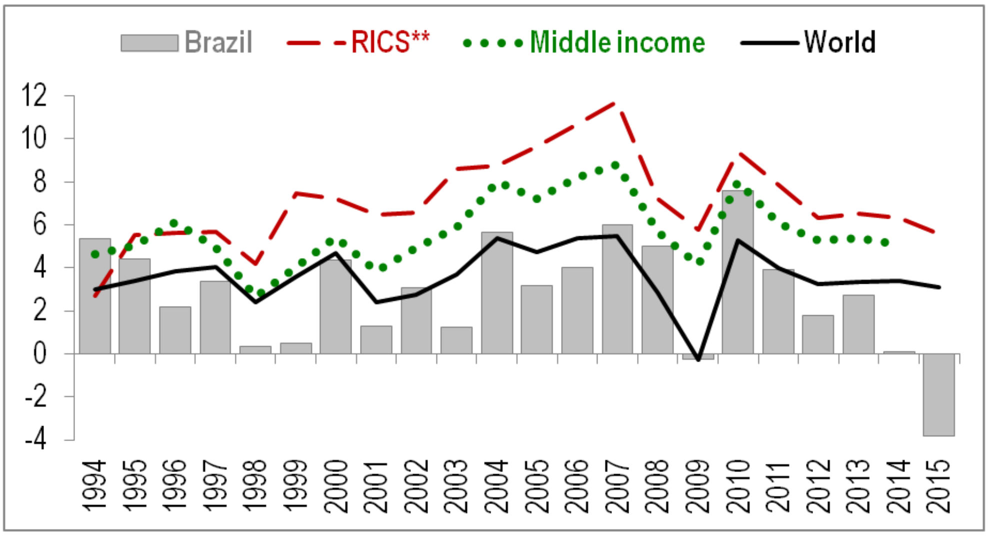
Source: IPEA.

For twenty years, between 1994 and 2014, Brazil experienced low inflation rates and positive GDP growth. It is important to stress that the growth rates in Brazil were not as spectacular as the ones in other emerging economies. They are persistently below the average growth of other BRICS since 1995 (**Figure 5**) Nevertheless, Brazil still looks good in the picture if we take into account the social improvements over the period, notably the decrease in poverty and in income inequality.

Economic policy started changing gears in 2007, just before the world economic crisis, when Lula's government launched the *Growth Acceleration Program* (*Programa de Aceleração do Crescimento*), which focused on government investment in infrastructure, among other measures such as taxes exemptions and credit expansion intended to foster growth. These latter measures were intensified in response to the 2008 world economic crisis, as an attempt to shield Brazil from an economic downturn. Notably, the stock of subsidized loans granted by the BNDES (National Bank for Economic and Social Development) increased from an average of around 5.9% of GDP between 2002 and 2007, to 9.6% of GDP by 2011.

The fiscal expansion put in place at the time might have been the right response to the 2008 world economic crisis. Indeed, the Brazilian economy had a relatively mild recession in 2009, to rebound to an impressive GDP growth rate of over 7.5% in 2011. The problem is that those policies were intensified after 2010, compromising the macroeconomic stability of the country.

Figure 5
Annual GDP* growth
1994-2015 **(%)**



* GDP in PPP (constant 2011 international dollars). ** RICS corresponds to the BRICS without Brazil (Russia, India, China and South Africa).

Sources: World Bank-WDI database and IMF-WEO database (April 2016).

3. Industrial policy: the return of protectionism in Brazil

In the beginning of her first term in office, Dilma Rousseff launched the Greater Brazil Plan (*Plano Brasil Maior*), which set the industrial, technological and international trade policies of the new government.

Starting by the latter, the trade policy changes implemented were based on the view that the country should be present in all the production chain of industrial goods. To promote domestic production, protectionist policies were put in place and local content was encouraged in a number of ways, such as requiring local content in government procurements, offering tax exemptions and access to subsidized credit from BNDES conditional on local content in the production process. As an example, the government increased by 30% the industrial goods tax on vehicles with less than 65 percent of their value added originating in Brazil, MERCOSUR countries or Mexico. Notice that this view of international trade is quite controversial. In fact, the world has become increasingly integrated, with industries functioning within global supply chains. On the one hand, trade barriers and local content requirements render intermediate inputs capital goods more expensive, which harm the very local industry they aim to help. On the other hand, protected from international competition, local firms have less incentive to innovate, thus nurturing a more inefficient and less competitive industry. Moreover, the Brazilian experience of import substitution over the period 1950-1980 has not produced the expected results in terms of increasing competitiveness of the protected industries.

In order to lower production costs, the Greater Brazil Plan reduced labor taxes and taxes on small and medium firms. Moreover, BNDES increased its supply of subsidized credit. A part of it was directed to the so-called 'domestic champions': large companies that could become important players in international markets. The policy of subsidized credit has gained the nickname of *bolsa empresário* (businessman allowance), in reference to the *bolsa família* (family allowance), the cash-transfer program directed to poor families. The government raised funds, paying up to 14.5% in interest rates per year, to lend to businesses at an annual rate of 5 to 7%. This difference in rates implied an estimated cost for the government of R$184 billion (€46 billion), for the credit granted between 2009 and 2015. This value corresponds to over 3% of the GDP. Almeida (2015) points out that a large part of the subsidized credit offered by BNDES was absorbed by already well-established sectors, therefore not promoting the diversification of the Brazilian industry. Furthermore, evidence shows that the BNDES activities had little impact on the Brazilian rate of investment. Since the bank finances projects that would otherwise have access to private financing, there is just a substitution effect of financing sources and, of course, lower cost of capital for firms, but no significant increase in the investment volume (**Lazzarini *et al*., 2015** and **Bonomo *et al*., 2015**).

It is important to note that the Greater Brazil Plan was the most recent piece in the industrial policy puzzle that was initiated by Lula during his first term in office. After being intensively used in the past, industrial policies had not been in the Brazilian agenda since the 1980s. In 2004, Mr. Lula's government created the Brazilian Agency for Industrial Development (*Agência Brasileira de Desenvolvimento Industrial*), whose mission was "to develop strategic industrial policy actions, promoting investment, employment, innovation and competitiveness of the Brazilian industry". At its outset, the Industrial, Technological and Foreign Trade Policies (*Política Industrial, Tecnológica e de Comércio Exterior* - PITCE) launched by the agency focused on "strategic sectors (software, semiconductor, capital goods, and drugs) and future-carrier activities [sic] (biotechnology, nanotechnology and renewable energy)". Given the government's commitment, at the time, with fiscal austerity and inflation control, the extent of the industrial policies effectively pursued were somewhat timid.

The Greater Brazil Plan, on its turn, was able to blossom to its full capacity within a government no longer afraid to defy fiscal austerity and inflation targets.[4] Its policies had two adverse effects on the economy. On the one hand, they represented a significant increase in government spending, putting at risk the macroeconomic stability. On the other hand, they created important distortions in the economy. When a subsidy or a fiscal advantage is given to a firm, this creates a relative advantage for that firm, in detriment of the others. Whether this policy will have positive impact to the economy as a whole depends on who gets the benefit. If benefits are given to firms that are, or will become, highly productive or that yield positive externalities to the rest of the economy, the economy may benefit from the policy. If, on the contrary, less productive firms receive advantages, then the policy will be harmful to economic growth, since the most productive firms will lose market share. When it is the government that chooses who receives the benefits, either by conviction or by pressure from special interest groups, and nothing guarantees that the more productive firms, or those who will become more productive, are the ones receiving benefits.

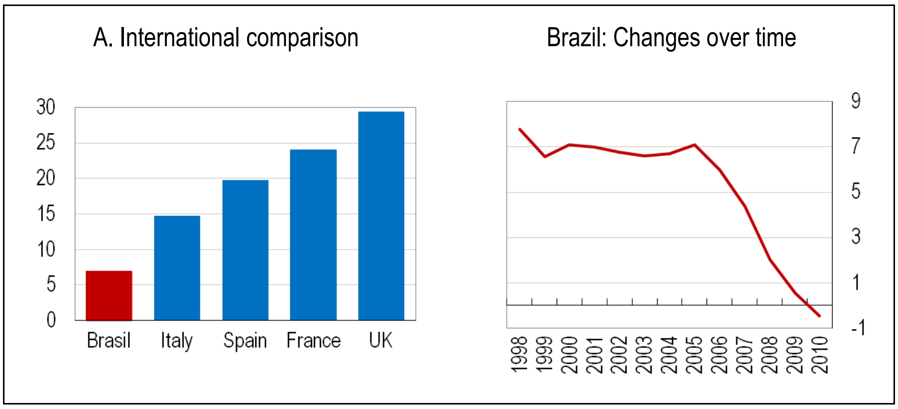
Resources are being efficiently allocated if more productive firms have higher market share. Unfortunately, this does not seem to be the case in Brazil, as indicated by **Figure 6** reproduced from OECD (**2015a**). The measure of allocative efficiency displayed in the figure is the covariance between firm's market share and its productivity. The higher this covariance, the greater is the efficiency, since, on average, more productive firms have higher market share. Panel A in the figure shows that the allocative efficiency of Brazilian industry is much smaller than that of four European countries (Italy, Spain, France and Great Britain) for the period 1998-2009. Panel B shows the evolution of this measure for Brazil from 1998 to 2010, measured and 3-year moving averages. It is striking how the allocative efficiency declined sharply starting in 2005 coincidence or not, just after the resurrection of industrial policies. It means that less productive firms are gaining market share in Brazil. The last figure is actually negative: around 2010, the less productive firms had higher market shares, on average.

Advocates of industrial policies may say that what we see in panel B of **Figure 6** is compatible with the objectives of industrial policy: to let grow firms that would otherwise perish. If that is the case, such policies could eventually be desirable only if two conditions are met. First, the firms that survive and grow thanks to the industrial policies

[4] As we will see in the next section, the Rousseff's government lowered interest rate when inflation was increasing and expanded substantially government expenditures.

should eventually become more productive themselves, or, at least, render the others more productive, i.e., they must have a positive externality on the rest of the economy. Second, the benefit they generate must surpass the cost of the policies put in place to nurture them. It is important to take into account not only the direct cost (the subsidies and/or fiscal advantages given to the firms), but also the indirect losses, in terms of the forgone growth and costs imposed on firms and sectors that were not targeted by the policies.

Figure 6
Allocative efficiency in manufacturing*



How to read this figure: In a given year, the aggregate level of productivity in the industrial sector can be decomposed as the sum of the simple average of firm-level productivity plus a covariance term that reflects allocative efficiency, or the extent to which firms with greater efficiency have a greater market share. If there were no systematic relationship between productivity and the size of firms, the covariance term would be zero, and the higher it is, the larger is the market share held by more productive firms.

*Covariance term from an Olley and Pakes decomposition. The decomposition is based on labour productivity. Panel B is depicted as 3-year moving averages. Data cover 1998-2009, depending on the country.

Source: OECD (2015a, Chapter 1, figure 12).

The Brazilian economy had already experimented with industrial policies in the past. Over the 1970s and 1980s, the government put in place protectionist policies as well as subsidies and subsidized credit to the industrial sector, similar to the ones revisited by Mr. Lula and amplified by Ms. Rousseff. The result was, indeed, a larger industrial sector, but an inefficient industry that decreased the country's productivity in relation to the rest of the world. According to Ferreira et al. (2014), the distortions created by those industrial policies explain most of the decrease in Brazilian productivity relative to the United States since the mid-1970s.

4. Dilma Rousseff and "the new economic matrix"

Besides the greater microeconomic interventionism, Ms. Rousseff's government altered each one of the tripod of policies implemented by Mr. Cardoso in the 1990s, which had been successful in maintaining macroeconomic stability (namely, the inflation targeting regime, the floating exchange rate and the fiscal austerity). It is fair to say that Ms. Rousseff's government represented a change in ideology regarding the functioning of the economy and the role of the government in it. This new set of policies became known as the "new economic matrix" (*nova matriz econômica*). Note that, as discussed in the next section, Ms. Rousseff attempted to change gears at the beginning of her second term in office.

The tripod of the new economic matrix consisted of: (i) low interest rates to foster investment; (ii) depreciated exchange rate to render Brazilian goods competitive internationally; and (iii) "fiscal consolidation friendly to investment and growth" (as put by the then Secretary of Economic Policy, Márcio Holland, in an interview to the newspaper *Valor Econômico* in December 2012), which meant subsidies and fiscal benefits to decrease costs of production and investment, with no special target to fiscal consolidation. Let us look at each one of those policies in turn.

Interest rate policy and price control

The inflation targeting regime, formally introduced in Brazil in 1999, has become quite popular around the world due to its effectiveness in reducing inflation volatility, in reducing the inflationary impact of shocks, and in anchoring inflation expectations, which decreases the cost of curbing inflation. The International Monetary Fund defines this regime in the following way:

“This involves the public announcement of medium-term numerical targets for inflation with an institutional commitment by the monetary authority to achieve these targets. Additional key features include increased communication with the public and the markets about the plans and objectives of monetary policymakers and increased accountability of the central bank for attaining its inflation objectives. Monetary policy decisions are guided by the deviation of forecasts of future inflation from the announced target, with the inflation forecast acting (implicitly or explicitly) as the intermediate target of monetary policy.”

The inflation targeting system is able to control inflation at relatively low cost if it is effective in maintaining low inflation expectations. That is the reason why both the communication of the central bank with the public and its autonomy to do what it takes to control inflation are crucial for its good functioning.

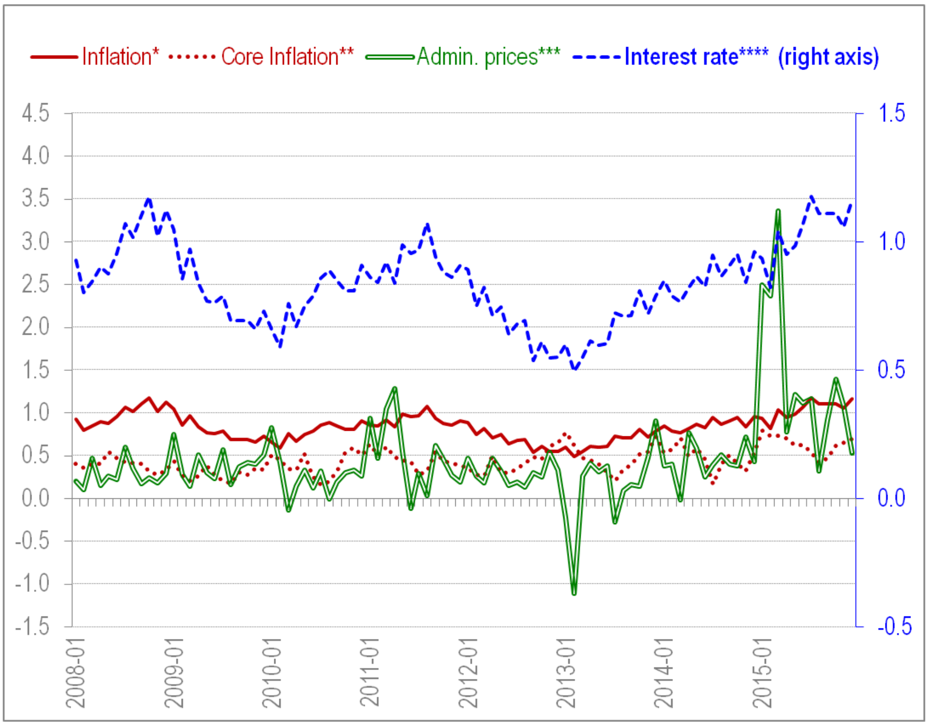
Officially, Ms. Rousseff’s government has kept the inflation targeting regime, but they started tampering with interest rates to stimulate investment. As depicted in **Figure 7**, the target overnight interest rates set by the Brazilian Central Bank decreased between mid-2011 to the beginning of 2013. On its turn, the core inflation, which is the inflation rate the central bank targets, was increasing over 2012. That was a clear sign that the Brazilian central bank was not using monetary policy to control inflation. In 2013, inflation was kept down thanks to the control of administered prices, which increased at a slower pace than inflation, and even decreased in January and in July of 2013. Hence, instead of using the monetary policy to control inflation, the government used price controls, on the prices it could actually control.

There were at least three negative side-effects of those policies.

- First, the central bank abode by government pressure and lost its credibility as the guardian of price stability. Inflation expectations got out of control, and the result is a higher cost to reverse the acceleration of inflation.
- Second, the artificial change in relative prices, due to the control of administered prices, distorted consumption and investment decision. For example, the lower price of gasoline increased its consumption, in detriment of ethanol. In Brazil, consumers can easily substitute between these two types of fuel since approximately half of Brazilian cars are hybrid, using any combination of gasoline and ethanol – the consumer chooses which fuel to use at the pump. The result was higher imports of gasoline, whose price in the international markets was higher than the domestic one.
- This leads us to the third adverse effect: the slower increase of administered prices generated losses to the providers of those goods. According to calculations made by the *Centro Brasileiro de Infraestrutura*, the losses incurred by Petrobras[5] between 2011 and 2015 due to the lag in domestic gasoline price amounted to over US$ 15 billion.

[5] Petrobras (*Petróleo Brasileiro* S.A.), a state enterprise, is the largest Brazilian company with activities encompassing the entire petroleum chain (research, extraction, refining and distribution).

Figure 7
Inflation and interest rate
2008-2015 (monthly change, %)



* The change in prices of a fixed set of goods and services referring to usual expenses of families, including products with administrated prices. ** The change in prices of fixed set of goods and services which is targeted by the Central Bank. *** Prices under government control. **** Overnight interest rate set by the central bank.

Source: Central Bank of Brazil.

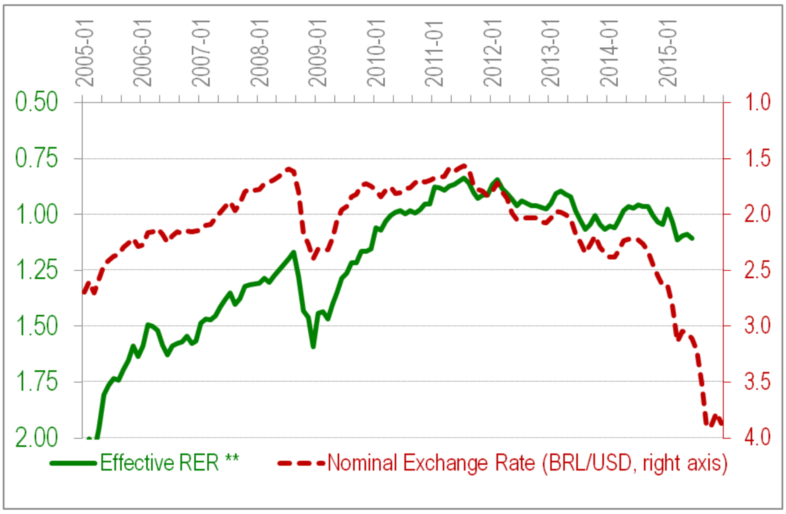
It was obvious that inflation could not be controlled solely though holding down administered prices. Indeed, the Central Bank started increasing the interest rate already in 2013. Administered prices, however, were let to adjust to their true values only after elections, when Ms. Rousseff started her second term in office in the beginning of 2015.

Exchange rate depreciation

The second leg of Ms. Rousseff's tripod was a policy of depreciated exchange rate. The Brazilian currency had been appreciating from 2003 until 2008. After depreciating at the outset of the 2008 global crisis, it went back to its appreciating trend, as shown in **Figure 8**. When Dilma Rousseff took office in January 2011, the real exchange rate was about half its value in 2005. Ms. Rousseff's economic team identified the appreciated exchange rate as detrimental to growth. The relative prices of tradable goods are relatively lower when the exchange rate is more appreciated. In particular, industry would be in disadvantage and less prone to invest and grow, putting in risk the growth prospects of the country since, in their vision, industry would be the engine of growth.

The more expansionist monetary policy described above would have the desired effect on the exchange rate: With lower domestic interest rates, Brazilian bonds become relatively less attractive, decreasing capital inflow and increasing capital outflow. The resulting excess demand for foreign currency depreciates the domestic currency. Effectively, the exchange rate started depreciating by mid-2011.

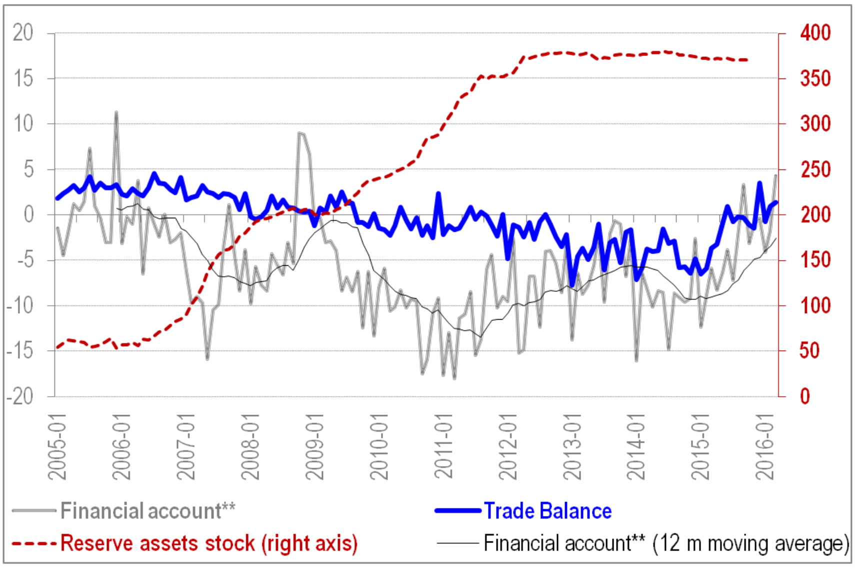
Figure 8
Monthly exchange rates of Brazilian Real
January 2005 - November 2015



* Direct quote. ** The effective real exchange rate is a measure of the purchasing power of the domestic currency with respect to the country's main trade partners. It is measured as the weighted average of the bilateral real exchange rates with the Brazilian's main trade partners, where the real exchange rate is the nominal exchange rate multiplied by the ratio of consumer price indices of the respective countries. The effective real exchange rate is here in index 2010=1.

Sources: Central Bank of Brazil & IPEA.

Figure 9
Stock of reserve assets, trade and financial accounts' balances in Brazil
January 2005 - March 2016 (billion USD)



* Trade balance and financial account balance figures are from the balance of payments of Brazil (established according to the BPM6 classification). ** Financial account balance excludes here reserve assets flows. A negative value indicates a net inflow of capital into Brazil.

Source: Central Bank of Brazil.

Another way of affecting the exchange rate is by direct intervention on the foreign exchange market. The purchase of foreign currency by the central bank, in particular, tends to depreciate the domestic currency. As we see in **Figure 9** the stock of reserve assets[6] increased from 2005 and 2011, indicating that Brazilian monetary authorities were buying foreign assets. During that period, the Brazilian currency had an appreciating trend (except for the period around the 2008 crisis). This means that the Brazilian real would have appreciated even further had the government not increased its stock of reserve asset. Reserve assets continued increasing until mid-2012, and thereafter they remained nearly unchanged.

There was a noteworthy increase in capital inflow in Brazil between 2009 and 2011 (**Figure 9**). From a capital outflow in 2008, the country had an inflow of capital of almost US$ 18 billion in March 2011. To control such large flows, that exerted an appreciating pressure on the exchange rate, the government reinforced prudential policies to discourage capital inflow. These policies included an increase of a tax on short-term capital inflows that had been introduced in 2009, higher reserve requirements for banks' currency trading, a tax on future contracts betting on the appreciation of the Brazilian real, and stricter rules on export financing.

The policies designed to prevent the appreciation of the currency did not last long, though: by mid-2012 the government started reversing them. On the one hand, the capital inflow decreased substantially. **Figure 9** displays the evolution of a moving average of the financial account balance. We can see that there is a clear upward trend of that line between 2011 and 2013, which means less capital inflow. On the other hand, the balance of payments presented increasing trade deficits, which meant a deterioration of the current-account balance. These two factors resulted in a steeper depreciation of the Brazilian real, which had the adverse side effect of feeding inflation that had started peaking up.

To try to control the exchange rate depreciation and its expectations, the Brazilian Central Bank engaged in currency swaps, selling dollars in the futures market. The actual depreciation that followed implied substantial losses for the central bank. Estimates indicate that the central bank losses with currency swaps amounted to approximately 1.5% of GDP in 2015 (*Valor Econômico*, 01-13-2015).

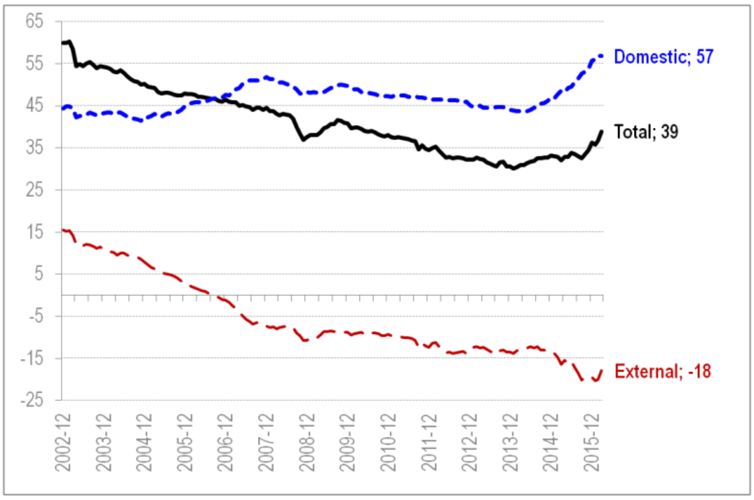
In sum, the government engaged in currency manipulation, first trying to prevent appreciation, later trying to stop the depreciation. Although the flexible exchange rate regime has not been officially abandoned, it did become a mirage. We should note, however, that governments worldwide tend to intervene in the exchange rate market to prevent large short-run swings of the exchange rate, even when they announce floating exchange rate regimes. This practice even has a name: “fear of floating” (**Calvo & Reinhart, 2002**).

Fiscal policy, in “pedaling fashion”

Regarding the fiscal policy, since 1999 the Brazilian government had been committed with a primary surplus of 3% of the GDP (primary surplus is the balance before interest payments), so as to have the necessary resources to pay interests on its debt. Indeed, the total public debt in Brazil as a share of GDP had been declining from 2003 to 2013 (**Figure 10**). It is interesting to note, however, that between 2005 and 2007 the domestic net debt increased while the external sovereign debt decreased. Towards the end of 2006, external debt became actually negative, meaning that the government accumulated external assets, while maintaining a nearly constant domestic debt as a share of GDP.

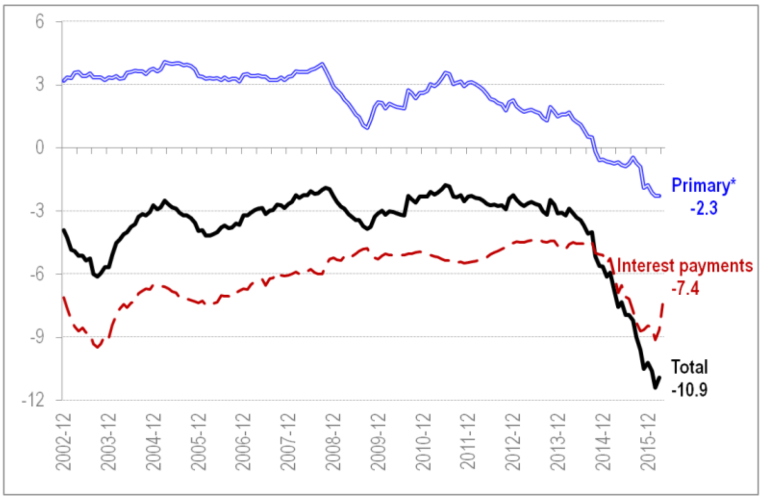
[6] Over 97% of the international reserves in the Brazilian Central Bank are in foreign exchange assets (currency, deposits and securities).

Figure 10
Public Debt in Brazil
December 2002 - March 2016 (in % of GDP)



Source: Central Bank of Brazil.

Figure 11
Fiscal balance in Brazil
December 2002 - March 2016 (in % of GDP)



* Primary surplus is the balance before interest payments.

Source: Central Bank of Brazil.

The accumulation of reserve assets in Brazil followed the trend of other emerging markets, which, after the currency crises of the late 1990s, started accumulating reserves to shield from further crises. From 2000 to 2005, Asian countries accumulated about US$ 1,180 billion (with China accounting for over 55% of that amount), while in Latin America (Argentina, Brazil, Chile, Colombia, Mexico, Peru and Venezuela), reserve accumulation amounted to US$ 83 billion. This policy does not come without a cost, however, since governments from emerging markets, typically, pay for their debt an interest rate higher than the one they receive for their reserve assets. Thus, by accumulating an external credit while maintaining a sovereign debt, the government incurs in a cost equal to the difference between the two interest rates.

Officially, Ms. Rousseff's government did not abandon the fiscal target, but in reality its fiscal policy became the result of the other policies she pursued. Notably, the industrial policy of the Greater Brazil Plan, with its subsidies and taxes exemptions as described above, set the basis for Ms. Rousseff's fiscal policy. The evolution of the fiscal deficit, in **Figure 11**, speaks for itself: After one decade of fiscal deficits below 3% of GDP, it jumped to over 10% of GDP in 2015. The primary surplus of 3% of GDP, in place since the mid-1990s, was definitely abandoned, turning into a 2.1% deficit, that is, a fiscal deficit of R$ 111.2 billion (€ 27.8 billion).

The situation was made worse by the government attempts to hide its overspending before the presidential election that took place at the end of 2014, when Ms. Rousseff was running for her second term in office. The government made intensive use of fiscal embellishment through a great deal of 'creative accounting' to artificially pump up its primary surplus, such as computing future revenues as current ones, transforming new debt into primary surplus (through public enterprises which are beyond the concept of public sector), and delaying payments to public banks (known as 'fiscal pedaling'). Here is one example. In October 2012 the government established that the cost of BNDES subsidized credit would be payable with a delay of 24 months (Portaria nº. 357, October 15, 2012, *Ministério da Fazenda*). That is, the bill for the substantial increase in subsidized credit would be payable only by the next government, which, since she got reelected, ended up being herself. Actually, the cost turned out to be even higher than one might have imagined: those practices are costing Ms. Rousseff her very mandate.

According to the Federal Audit Court, R$ 22.4 billion (€ 5.6 billion) was raised in an "extraordinary and unusual" form in 2012. For 2014, the Court indicated an astounding amount of R$ 2.3 trillion (€ 570 billion) in liabilities not accounted for in the government budget. Regarding the 2014 government budget, Augusto Nardes, Minister of the Federal Audit Court, stated it presented "an expansive spending policy without fiscal sustainability and without proper transparency". Finally, the Ministry of Finance estimated that fiscal pedaling amounted to R$ 57 billion (€ 14 billion) in 2015.

5. The economic crisis: recession and inflation make a comeback

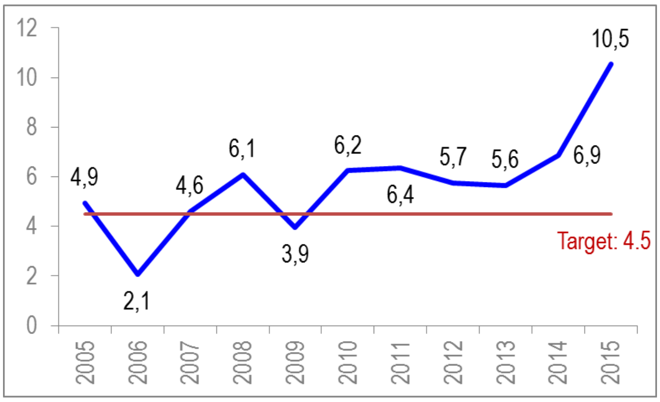
The new economic matrix intended to unleash growth in Brazil. However, things did not go quite as planned: after a stagnant economy in 2014, GDP fell by 3.85% in 2015, as depicted by the bars in **Figure 5**. The IMF expects it to fall by another 3.8% in 2016 and to remain stagnant in 2017.[7] If these prognostics are confirmed, the Brazilian economy will shrink by over 7% over the period 2014-2017. This is the strongest economic downturn since the 1930s.

As the GDP contracts, inflation rises (**Figure 12**).To complete the gloomy scenario, in September 2015 Brazilian sovereign credit rating lost investment-grade rate from Standard & Poors, followed by Fitch in December 2015 and Moody's in February 2016.[8] The country is now perceived as having speculative risk, which increases interest rates on international borrowing for both the Brazilian government and Brazilian firms.

[7] World Economic Outlook, April 2016.

[8] The same month, S & P lowered again Brazilian sovereign long-term rating, from BB + to BB, with a "negative outlook".

Figure 12
Inflation in Brazil, 2005-2015
(consumer price index, %, annual)

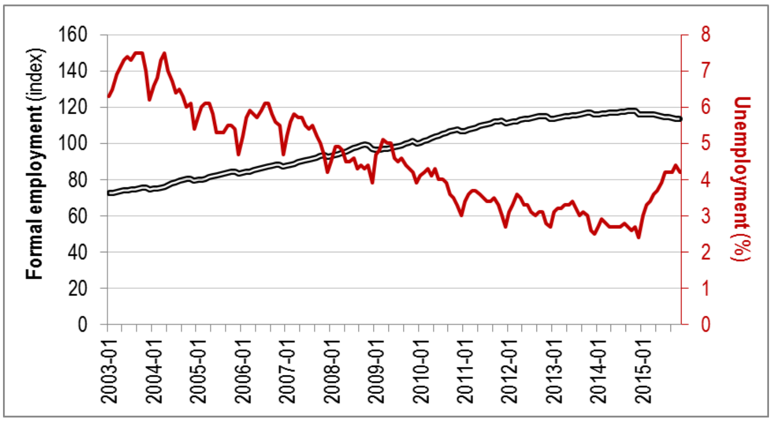


Source: Fundação Getulio Vargas, Conjuntura Econômica.

What went wrong?

The *Greater Brazil Plan*, intended to boost growth, entailed a very steep fiscal expansion, as we saw in the previous section. While the fiscal embellishing prevented it from appearing in the data before 2015, the related fiscal expansion did take place and actually impacted the economy. Fiscal expansion represents higher aggregate demand in the economy. In an economy with slack capacity, that is, with unused production resources, production would increase to meet the higher demand, as preconized by Keynesian theory. The Brazilian economy, however, did not seem to have much slack capacity when the fiscal expansion started. As shown in **Figure 13**, formal employment in Brazil had been increasing and unemployment decreasing since the early 2000. In 2011, unemployment was around 3.5% (this measure refers to the six largest metropolitan areas in Brazil), a very low rate by any standards. It is fair to say that the Brazilian economy was in full employment when the fiscal expansion occurred.

Figure 13
Labor market in Brazil
January 2013 - November 2015 (monthly statistics)



Sources: Ministry of Labor and Employment of Brazil & IBGE.

The economic theory, supported by extensive empirical evidence, predicts that higher demand under full employment translates into higher prices to balance the markets. Indeed, the government's fiscal expansion produced an inflationary pressure on the economy. As shown in **Figure 7**, the core inflation, which started increasing in early 2012, was kept artificially lower thanks to the control of administered prices.

It is possible to increase production under full employment if productivity increases, that is, if the economy is able to produce more with the same amount of resources. Investment in human capital or in research and development, for example, are bound to increase productivity. The industrial policies behind part of the increase in government spending were intended precisely to stimulate such investment to increase productivity in industry. The problem is that those investments, even when they do increase productivity, they do not do so in the short run. Therefore, the short-run response would still be a pressure on prices.

Nevertheless, even in the case public policies were able to increase productivity, they do not need to entail higher fiscal deficits In other words, productivity enhancing policies do not need to be associated with fiscal expansion. Investment in infrastructure, in education, or in research and development, for instance, are equally effective when implemented under a balanced government budget. Hence, the increase in fiscal deficit was in any case unnecessary.

What we know for sure is that the fiscal deficit increases the government indebtedness, which generates higher debt service in the future. Hence, the primary surplus necessary to equilibrate the budget increases, raising the fiscal effort. It means that the adjustment cost increases as the government postpones it. And adjustment is inevitable. On March 2016, the net domestic debt of the Brazilian government corresponded approximately to 57% of the country's GDP (see **Figure 10**), while the gross domestic debt was over 67% of GDP. That is not so bad since, according to OECD data, the debt over GDP ratio of governments of other countries, such as Belgium, France and the United States, are more than two times that of Brazil. There is, however, one important difference between them: the interest rate the government pays on its debt, which determines its cost, is much higher in Brazil. In those countries, the government pays interest rates around 1% per year, which, discounting for inflation, yields negative interest rates in real terms. In Brazil, on the other hand, the government pays interest rate around 14% per year[9]. Even taking into account inflation, that rate results in a real interest rate around 4% per year. This difference in rates is partly related to the perception of economic agents regarding the risk associated to the government debt: the higher the risk, the higher the interest rate agents demand to continue financing the debt. As we can see in **Figure 11**, government spending on its debt service increased from around 4.5% of the GDP in 2014 to almost 9% in 2016. If the government continues its path of fiscal expansion, government debt will keep on increasing exponentially, thus raising concerns about its sustainability. Investors will require ever higher interest rates to compensate for the risk involved, which, in turn, feeds back into the budget deficit. Eventually, the debt would indeed become unsustainable and the default the only alternative. With no more resources to finance its excessive spending, the government would no longer be able to spend more than it collects in taxes. That is where the Brazilian economy is heading to, if there is no fiscal adjustment.

Before hitting that wall, the central bank would no longer be able to use monetary policy to control inflation, due to what is known as fiscal dominance (see, for example, **Blanchard, 2004**, and **Loyo, 1999**). The fiscal deficit creates an inflationary pressure in the economy. The usual prescription is for tighter monetary policy to lessen

[9] We obtain this number by annualizing the monthly rate from Figure 7. More precisely, the annual interest rate i_a is computed from the monthly interest rate i_m using the following formula: $1 + i_a/100 = [1 + i_m/100]^{12}$.

aggregate demand and cool down the pressure on prices.[10] However, the higher interest rates also have the negative side effect of increasing the debt service paid by the government, expanding the fiscal deficit. When the government debt gets too high, the inflationary pressure exerted by the larger fiscal deficit exceeds the cooling effect from lower private aggregate demand induced by the higher interest rates.

The only way out of this detrimental situation is to restore fiscal austerity, and it is less costly to do so sooner than later. During 2015, the government staged a fiscal adjustment by appointing Joaquim Levy as a Minister of Finance. Pro-fiscal austerity, Mr. Levy got the nickname of 'Scissor Hands' for his proved capacity to cut public spending during his term as Secretary of Treasury over 2003-06. After one year of uphill struggle, Mr. Levy finally resigned on December 2015, to be replaced by Nelson Barbosa, one of the masterminds of the *new economic matrix*.

Ms. Rousseff's government did not believe that the fiscal profligacy was the source of the crisis. Rather, they blamed the lower commodities prices caused by the Chinese slowdown, only made worse by the attempt of fiscal adjustment made by Mr. Levy. If that were the case, other emerging markets would have suffered from the same fate as Brazil. While it is true that growth rates are smaller in 2014-15 compared to the period just before the 2008 crisis, middle income countries and the RICS (the BRICS minus Brazil) still grew by over 4% on average in 2014, when the Brazilian economy stagnated, as shown in **Figure 5**. With its 3.85% contraction in 2015, Brazil beat most countries. According to estimates from the International Monetary Fund (World Economic Outlook Database), only 10 economies are expected to experience a stronger contraction than Brazil in 2015. They are, in descending order of GDP growth: Belarus, Burundi, Dominica, Venezuela, Libya, Ukraine, Equatorial Guinea, Macao, Sierra Leone and Yemen.

In an appealing exercise, Gonçalves (**2016**) challenges the explanation that the decline in commodities prices was the culprit for the Brazilian crisis. With the group of countries whose exports of ores and metals is higher than the world average, he builds a synthetic compound of countries that reproduce Brazilian GDP growth performance before 2012, using the methodology of Abadie et al (**2010**). Interestingly, the GDP growth rate of that compound of countries remains stable after 2012, around 2-3%, even though they are also commodity exporters.[11] If the Brazilian recession were due to the lower price of commodities in the international markets, the other commodities-exporting countries should have also have experienced recessions. The results from Gonçalves (**2016**) suggest otherwise.

Interestingly, the current serious domestic crisis did not trigger an external crisis with capital outflows, as the ones the country experienced in the past. There are two possible explanations for that. One is the very low, and even negative in some cases, interest rates in the developed world. With such low returns for the low risk investment, investors are more willing to take their chances in Brazil, where interest rates are significantly higher, despite the risk of depreciation. Another possibility is the view that Brazil's (self-inflicted) problems have, after all, well known solutions. The country could be put again on the right track, if only there were a government willing to (and capable of) implements them. They wait for to see the next turn of events.

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[10] This is, actually, the main reason for the difference in interest rate between Brazil and Belgium, France and the United States, mentioned in the previous paragraph. Brazilian inflation is relatively high and increasing, whereas in those other countries inflation rates are very low and decreasing. Hence, the Brazilian economy calls for a tighter monetary policy, i.e., higher interest rate to keep inflation under control.

[11] More precisely, the world average of ores and metals exports, as a share of the country's total exports, is 9.1%. Gonçalves (2016) takes all the countries whose exports of ores and metals is above that ratio (roughly 130 countries) and, using the methodology from Abadie et al (2010), he takes the linear combination of those countries that better fit the Brazilian economic performance from 2000 to 2011. He then compares the Brazilian performance after 2012 to the performance of this synthetic compound of countries.

The political crisis: a coup or not a coup?

In the midst of the worst recession since the 1930s, Brazil is also living a major political crisis. Dilma Rousseff, whose mandate was supposed to end on December 2018, is under an impeachment trial. Given the extent of the current political turmoil and its repercussions on the economy, it is important to understand the main elements of the current political crisis.

There have been major popular demonstrations against the government of Dilma Rousseff, especially after the beginning of her second mandate, when it became clear that her campaign allegations of a fiscal balance under control and of no imminent crisis were, in fact, a fallacy. A president cannot be impeached for incompetence, but it is undeniable that the poor state of the economy played a role in the mobilization of pro-impeachment protesters. Nevertheless, the impeachment process has legal grounds and it is following the procedure established by the constitution.

The president of the Chamber of Deputies, Eduardo Cunha, has received numerous demands for the impeachment of the president. The one accepted on December 2015 is based on administrative misconduct. As part of the fiscal embellishing practices of Ms. Rousseff's government, the Treasury delayed transfers to public banks to reimburse them for the payment of social benefits, the so-called "fiscal pedaling". This operation constitutes a violation of the Fiscal Responsibility Law, which forbids the government to be financed by resources of public banks. It is worth mentioning that this demand for impeachment was written by, among others, one of the founders of PT, Hélio Bicudo.

To her defense, Ms. Rousseff claims that previous governments had also engaged in such practices. It is true that there had been delays in transferring funds from the Treasury to public banks during the mandates of both Fernando Henrique Cardoso and of Luis Inácio Lula da Silva. Those delays, however, were occasional and the amounts were never above R$1 billion (€250 million), whereas, during Ms. Rousseff's government, the delays were systematic and they amounted up to R$60 billion (€15 billion). That difference seems to matter.

Following the Brazilian law, a committee formed by deputies from different parties analyzed the impeachment demand, summed it up in a report, and the president presented her defense. On April 17th the lower house Congress voted for the opening of an impeachment process, and on May 11th the Senate voted for opening the impeachment trial. The president stepped out of office for the judgment, which can take up to 6 months. The trial, in this case, is being carried out by the Senate, since it is a crime of responsibility. If two thirds of the senators vote for the impeachment, the vice-president, Michel Temer, replaces the president until the end of this presidential term.

In addition to the impeachment process, the Supreme Electoral Court is judging four processes for the revocation of the election of Dilma Rousseff and Michel Temer. The processes are related to abuse of economic and political power and use of funds diverted from Petrobras to finance the re-election campaign. Dilma Rousseff's situation got more complicated when her campaign chief, João Santana, was arrested on February 2016 for having allegedly received a total of US$7.5m in bribes over the period he was working for the reelection of Dilma Rousseff. Evidence indicates that Grupo Odebrecht, a very powerful Brazilian engineering conglomerate, had paid Mr. Santana with funds siphoned from Petrobras in offshore accounts. Michel Temer tries to get rid of the trial on his own election as vice-president by claiming that he and Ms. Rousseff had separate campaign accounts. If the Electoral Court revokes the election for both of them, the president of the Chamber of Deputies takes over office temporarily, and a new election is held in a maximum delay of 90 days.

In normal times, the president of the Chamber of Deputies is quite powerful. In times of risk of impeachment and revocation of mandates, this power is ever greater, since he risks taking the place of the president, at least temporarily. The president of Chamber of Deputies in Brazil until May 5th 2016, Eduardo Cunha, has been compared to Francis Underwood, the villain from the Netflix series House of Cards, as depicted on the cover of Isto É, a major Brazilian weekly newspaper. Eduardo Cunha is an ultra-conservative evangelic deputy. To have an idea of how conservative he is, he proposed the creation of the Heterosexuals Pride Day (yes, you read it right, no misspelling here), which should be celebrated every third Sunday of December. Like Francis

Underwood, his soulmate, Eduardo Cunha supposedly commonly uses threats and blackmail as negotiation tools.

On March 2016, the Supreme Court officially declared Eduardo Cunha defendant in a criminal process for corruption and money laundry associated to the Petrobras corruption scandal. On May 5th he was suspended from his mandate as deputy and as president of the Chamber of Deputies. Apparently, there is no more risk he will eventually occupy the presidency. However, it is still ironic, to say the least, that he was the one presiding the session where the deputies voted for the opening of the impeachment process, where Dilma Rousseff is being judged for a crime of responsibility. In more mature democracies, such irony would not be admissible. In Brazil, unfortunately, we risk not getting anywhere if we do not allow that sort of “flexibility”.

In another dramatic unfolding of events, on March 4th, 2016, Luis Inácio Lula da Silva was held for questioning and his home raided by the police for crimes also related to the Petrobras corruption scheme. Evidence indicates that engineering companies implicated in the Petrobras scandal paid Mr. Lula, members of his family and the NGO he presides, the Lula Institute, “undue benefits” amounting to R$30 million (€7.5 million). Denying any wrongdoing, he declared he felt like a political prisoner and incited his supporters to back him up on the streets. Mr. Lula left office in 2010, after eight years as president, with record popularity of over 85%. However, in a survey conducted by Datafolha institute on possible candidates to replace Dilma Rousseff in case of revocation of her mandate, Mr. Lula not only would not be elected, but he also had a rejection rate of 47%.

Ms. Rousseff tried to make Mr. Lula Chief of Staff of the Presidency, a position with the rank of Minister that would give him privileged forum. The move backfired when a taped telephone conversation between the two of them made clear it was an attempt to protect Mr. Lula from justice. Not only the authorities heard it, but also anyone with internet access: the judge in charge of the case made public the taped conversations made by the Federal Police as part of their investigations on Mr. Lula. Mr. Lula ends the conversation saying “tchau, querida” (bye, honey), the affectionate way he apparently treats those close to him. This became the slogan of the pro-impeachment demonstrators.

Michel Temer, the acting president, is already under fire. Even if the vast majority of the Brazilian population was not happy with the government of Dilma Rousseff, not all of them are in favor of the impeachment process. Also, those who are pro-impeachment are not necessarily pro-Temer. Hence, Mr. Temer has not been warmly welcomed in the arms of the people. Under this atmosphere, he has to pass some pretty unpopular measures if he is to put the economy back in track.

Let me give two examples of the problems knocking at Mr. Temer’s door. First, to signal the austerity tone of his government, he started by cutting 9 Ministries, thus reducing their number from 32 to 23. In particular, he (almost) eliminated the Ministry of Culture, transforming it into a Secretary under the Ministry of Education. Artists voiced their disapproval so emphatically that Mr. Temer backed off. Thus, the signal backfired: will he have the political strength to carry out his economic agenda? Second, the appointment of Romero Jucá, a politician under investigation in the ‘Car Wash’ operation (a major corruption scandal explained in section 7), as Minister of Planning has raised eyebrows. It turned into a full blown scandal when taped telephone conversations were released, in which he suggested that changing the government was part of a scheme to stop the Car Wash investigations. Only one week later, Fabiano Silveira, Minister of Transparency (!), had the same fate. Mr. Jucá and Mr. Silveira are now out of the government, but the harm is done.

Fixing the economy?

Not only Ms. Rousseff’s government was not committed to controlling spending, but they continued their creative accounting practices to artificially boost revenues. The government’s discourse that went against the facts and their attempts to hide the real state of the fiscal budget had a deleterious effect on the confidence of economic agents. And confidence is a crucial ingredient in decisions to invest, particularly to invest in long-run production capacity. An entrepreneur compares the cost of investment to the potential gain from it on the future. It is true that subsidized credit represents lower cost for investment. But if this subsidized credit creates a fiscal deficit that will produce a major crisis in the future, investing is not necessarily a good idea. Moreover, the government’s hazy accounting practices just add more uncertainty and render entrepreneurs more skeptical. One of the first measures of Mr. Barbosa, the Minister of Finance over the last months of Ms. Rousseff's government, was precisely the increase of subsidized credit.

Very critical of its government's policy, on February 2016 the Workers Party (PT) proposed an emergency plan (*Programa Nacional de Emergência*) to help the economy get out of the crisis. Among the 22 actions, the plan proposes: the use of the international reserves for spending on infrastructure, sanitation and housing; more resources allocated to the *Growth Acceleration Plan*; expansion of subsidized credit; and increasing the monthly allowance in the *Bolsa Familia* program. In sum, the PT wanted the government to double the stakes by intensifying the very economic policies that lead to the crisis.

It is clear that balancing the budget depends on passing through congress quite unpopular measures. Not an easy task for a government lacking popularity and in the midst of a major political crisis. Even the opposition parties, who pledged to implement fiscal austerity if elected, voted against a proposal by Dilma Rousseff to reduce the retirement age, which would help reducing the budget deficit. Ms. Rousseff and her government were not able to get the country out of the economic crisis. On May 12th she was suspended from her presidential powers as part of the ongoing impeachment process, which we will discuss in the next section. Meanwhile, the vice-president, Michel Temer, serves as acting president.

The economic team put together by Mr. Temer has the same spirit, and even some of the same names, of the team from Mr. Lula's first mandate. Just to name two of them, Henrique Meirelles, the new Minister of Finance, was the president of Brazil's Central Bank during the two mandates of Mr. Lula, while the future president of the Central Bank, Ilan Goldfajn, was the director of monetary policy of the Bank from 2000 to 2003. Both economists have had successful careers in the private sector, and proved competency in public positions. The first set of proposals to try and get the economy out if its gridlock, announced on May 24th, goes into the right direction: they focus on stopping the unsustainable path of public finances. According to their new estimates for 2016, the primary fiscal deficit should reach R$170.5 billion (€43 billion), approximately 2.8% of the GDP. If we add to that interest payments on the government debt, this number jumps to R$600 billion (€150 billion), which corresponds 10% of the GDP.

The most important of the proposals, and maybe also the most controversial one, is a constitutional amendment setting a ceiling on the increase of government spending. More precisely, expenditures would not be allowed to increase more than inflation, which means that they would remain constant in real terms. Actually, even without the recent fiscal spree, public spending has had an increasing trend since the re-democratization in the 1980s. As Lisboa and Latif (**2013**) put it, there has been a "democratization of privileges", which resulted in the very high tax burden of 37% of GDP in 2012 compared to 25% in the 1980s. Reversing this trend is essential if the country is to restore fiscal sustainability. Ironically, a version of this measure was proposed by Mr. Lula's economic team in 2005, but it was vetoed by Dilma Rousseff, who was at the time Mr. Lula's Chief of Staff. Had they been successful in passing the law back then, public finances would not be in such a deplorable situation nowadays. It is true that fixing spending may be controversial when one considers that there are still important gaps in the provision of public services in Brazil, notably in education and in health services. Let us leave this discussion to **section 6**.

6. Fiscal austerity with fiscal stimulus

Restoring fiscal austerity in Brazil is not an easy task, even for a government who believes in it. The Brazilian governments has a long history of conceding privileges to specific groups, in the form of subsidized loans, tax incentives, protectionist policies, among others. This practice has been intensified over the past years, particularly in Ms. Rousseff's government. Clearly, those who benefit from them exert political pressure for their preservation. The interest groups that are thus formed create a stronger barrier to changes, which, in a democratic society, needs the approval of congress.

To make the problem harder to solve, the Brazilian law establishes minimum public expenditures on some bills, such as health and education. A least 15% of government's net revenue must be spent on health, according to a new amendment on the country's constitution,[12] and a law from 2014 requires that spending on education, at 6.6% of GDP in 2012, should achieve 10% of GDP by 2024. This makes much harder for the government to 'grow out of' the fiscal deficit. Basically, 90% of the government budget corresponds to mandatory expenses, which leave very little scope for fiscal adjustment. Hence, to get out of this gridlock, the government must change the law, as the new government is proposing.

One major problem is Brazilian public budget is its pension system. According to OECD (**2015b**), Brazil's spending in pension benefits amounted to 7.4% of GDP in 2014. For OECD countries, this share is 7.9 on average, although their share of older population is two times greater than Brazil. At least two measures are essential for the system not to become unsustainable. First, the length of contribution must be increased, to rise the average retirement age currently at 55 years old. Second, the indexation mechanism of the minimum benefit must be revised, which is presently indexed to the minimum wage. The increase in minimum wage in real terms over the past years implied large increases in pension benefits, contributing to the rise in spending on pensions, which increased by 120% from 2001 to 2014.

Table 1
Pensions in Brazil: Key indicators in 2014

		Brazil	OECD
Average worker earnings	BRL	19 312	106 417
	USD	7 267	40 007
Public pension spending	% of GDP	7.4	7.9
Life expectancy	at birth	73.8	80.0
	at age 65	18.3	19.3
Population over age 65	% of population	8.0	16.2

Source: OECD, Pensions at a Glance 2015: OECD and G20 indicators (**2015b**, p.222).

Also, fiscal adjustment in Brazil does not necessarily mean lower welfare or lesser public services. The Brazilian government is quite inefficient. According to the Global Competitiveness Index, computed by the World Economic Forum, Brazil ranks 136, out of 140 countries, in public-sector performance. In wastefulness of government spending, it ranks 133. Not only the Brazilian government is inefficient, but also it has a very complex tax system, imposing high costs on businesses just for complying with it. Brazilian firms spend on average 2 600 hours per year to prepare and pay taxes, according to the Doing Business statistics, from the World Bank. The averages for Latin America & Caribbean and for OECD high income countries are 361 and 177 hours per year, respectively. When Brazilian firms spend so many hours with their taxes, they are devoting effort and resources to an activity that generates no output. It is simply a waste of resources. The set of economic policies put in place by Ms. Rousseff's government added even more noise to the already complex maze of tax regulations and incentives, instead of simplifying them. It went on the wrong direction. Clearly, government spending does not need to

[12] The constitution amendment is from 2000, but the law regulating it was enacted by Dilma Rousseff in 2012.

increase in order for the population to benefit from more and better-quality public services. Important gains could be achieved by changing regulations and by increasing the efficiency in government provision of public goods.

One important example is education. Education has always been a major weakness of the country. According to Barro and Lee (2013), Brazilian adults (above 25 years-old) had an average of only 3.8 years of schooling in 1990, compared to 7.9 years in Argentina, 5.8 in Paraguay and 5.5 in Mexico. In 2012, this number had almost doubled in Brazil to 7.2 years of education, on average. Despite this impressive increase in school attendance, its quality is very poor. International Student Assessment (PISA) survey from OECD ranks Brazil second to last in the three skills surveyed: reading, mathematics and science. Almost 67.1% of Brazilian students surveyed had a score of 1 or below in mathematics, out of the maximum score of 6. Brazil is in 132th place, out of 140, in quality of primary education.

Brazil spends a lot in education, but this spending does not seem to be very efficient. Compared to other countries, Brazil has the highest expenditure per student in tertiary education compared with spending at primary level: in 2012, the annual spending per student in tertiary education in Brazil was 3.8 times higher than the spending per student in primary education (OECD, 2016). For the OECD countries, this number was 1.8, on average.

The Greater Brazil Plan comprises an educational policy based on three federal programs focused on technical education and stimulus to engineering: the National Program for Access to Technical Schools, the National Plan Pro-Engineering, and the Science Without Borders Program. The latter gives scholarships for Brazilian students in hard sciences to study abroad both at graduate and undergraduate levels, significantly increasing the existing scholarship program. The focus on higher education seems misplaced, given the strong deficiencies in primary education. Moreover, students in higher education in Brazil typically come from more prosperous families, so this type of educational policy reinforces inequality. The public money would be spent more efficiently and in a more egalitarian fashion in primary and secondary education, where lies our largest deficiency.

7. Concluding remarks

Between 1995 and 2007 Brazil took important steps towards better institutions, as discussed in **section 2**. The country developed stronger and more resilient economy, and a more equalitarian society. After 2011, we have the impression that the 1980s are back to the future. The Brazilian government took macroeconomic stability for granted and opened the Pandora's Box of industrial policy. Is Brazil stuck in the middle income trap? Is it condemned to alternate periods of prosperity and progress with periods of crisis and reversals?

The economic policies implemented under the new economic matrix have led the economy to the worst recession of the past decades. On top of the ill-advised policies, a great deal of resources has been diverted in widespread corruption, as the results of investigations indicate. With the stable economy they inherited coupled with the excellent conditions in the international markets, Ms. Rousseff's government had plenty of room to play around and try heterodox tricks on the economy. In particular, the high price of oil made Petrobras a great source of resources, for both licit and illicit ends.

The Brazilian experience over the past seven years fits well the 'voracity effect' proposed by Tornell and Lane (1999). According to them, in an economy with a weak legal-political institutional infrastructure and powerful groups, a positive income shock, such as better terms of trade (i.e. higher prices of exports relative to imports), "perversely generates a more-than-proportionate increase in fiscal redistribution and reduces growth". Now the manna is over and there is no more room for wasting resources.

The political crisis the country is undergoing may actually be a sign of the country's more mature democracy. Ms. Rousseff's popularity was very low, and polls by Datafolha from March 2016 indicate that 68% of the Brazilian population was for her impeachment. Nevertheless, several impeachment demands had been rejected for they lacked legal ground. The unfolding of events indicates concern for respecting the rules and complying with the law and the constitution, although Ms. Rousseff and her supporters claims it is a coup d'état. An elected government cannot simply be thrown out of power, however incompetent the population believes it is.

Although corruption is not new to Brazilian politics, apparently it gained a renewed dimension under the Workers Party government. The first term in office of Lula was tainted by the Mensalão scandal, in which congressmen received a monthly allowance in return for their loyalty in voting at the Congress. Presently, the Federal Police are investigating a major corruption and money laundry scandal, nicknamed 'Car Wash', involving Petrobras and the major construction companies in the country. According to the investigations, the Workers Party, who has been governing Brazil for the past 13 years, the PMDB (Brazilian Democratic Movement Party) and the PP (Progressive Party), which are in the Workers Party coalition, appointed members for the board of directors of Petrobras, who were in charge of setting construction contracts involving bribes amounting from 1% to 5% of the projects value. Several politicians from other parties are also under investigation.

The way Sergio Moro, the federal judge conducting the trials in the Car Wash scandal, is handling the affair has proved very efficient. On top of speeding up the processes, Mr. Moro is putting defendants in pretrial detention, with no bail, a practice that gives them the right incentives to cooperate with the investigations. "For the first time in the history of Brazil", paraphrasing Lula, the rich and powerful are being put in jail. On November 2015, for the first time ever, a senator was imprisoned: Delcídio do Amaral. While in prison, he denounced the corruption schemes around Petrobras. André Esteves, a banker ranked #628 in Forbes World's Billionaires, spent one month in jail at the end of 2015 before being put in house arrest waiting for trial. He is accused of collaborating with Delcídio do Amaral in the obstruction of the Car Wash investigation. Marcelo Odebrecht, former CEO of Odebrecht, Latin America's largest construction conglomerate, was sentenced to 19 years in prison for corruption, money laundering and criminal association in the Car Wash Operation. And now Lula is the centerpiece of this scandal.

These events demonstrate the separation of powers that reigns in the country and the independence of the Federal Police to carry on their investigations. As much as Ms. Rousseff's government would have wanted to, they were not able to bar the investigations that involve many of their important members, including their utmost leader, ex-president Lula. Although it looks bad during the cleaning up, this process gives hope that these huge corruption schemes that distort the economy and gives the wrong incentive to economic agents will come to an end, at least at such large scales as we witnessed over the past years.

One may wonder why corruption became so pervasive under the Workers Party government. The simplistic answer would be that that is the modus operandi of that party. Another possibility is that the institutional changes made by previous governments altered the political game. Brazil has a very fragmented party system and relatively low degrees of party loyalty and discipline. In such an environment, it is not easy for the president to form a legislative coalition. Pork-barrel politics was the traditional tool used to circumvent this problem (for an empirical assessment of distributive politics in Brazil, see **Rodden & Arretche**, **2004**). The fiscal responsibility law enacted in 2000 imposed important constraints on the government budget and limited the possibility of distributing favors to coalition parties and members through legal channels. Straightforward corruption, apparently, was the solution found by the Workers Party. If that is the case, getting the Workers Party out of power will not solve the problem, for the incentives for corruption would still be impregnated into the Brazilian political game.

On March 13, 2016, 3.6 million people went to the streets to protest against corruption and for the impeachment of Dilma Rousseff. In the greatest manifestation of the country's history, Brazilians voiced their concerns and their wishes in a peaceful way: sign of a maturing democracy. Even more striking was what happened during the vote in the Chamber of Deputies for the opening of the impeachment process. To increase the chances the "yes" would attain the required minimum of two thirds of the Congress, Mr. Cunha, the Brazilian Francis Underwood, established that each deputy would be called and he or she would have a maximum of 10 seconds to orally state his or her vote. The votes would be counted on an electronic scoreboard. All this on a Sunday afternoon. The cunning Mr. Cunha figured that, given the very low approval rate of Dilma, this procedure would incite deputies to vote for the impeachment in order not to be punished by voters next elections. On that Sunday afternoon, families sat in front of their televisions to watch the voting and cheered at each 'yes' or 'no' vote. An unsuspecting alien would think that the Brazilian soccer team was playing a final match in the World Cup, only that the scoreboard was counting votes this time, instead of goals. Brazilians are, or rather, *were* very little concerned with politics. It may be partially explained by the fact that during the 20 years of military dictatorship, ended in 1985, political implication was, at best, useless and, often, dangerous. Hence, a vote in congress being as popular as a soccer match is really impressive, and it may be a sign of change.

"Laws are like sausages, it is better not to see them being made," said Otto von Bismarck. Brazilians watched from the first row the working of their politicians, and it looked very much like a sausage factory. Most of the deputies dedicated their votes to their families and to god, and very few of them mentioned the basis for the impeachment process. One extreme-right deputy praised a well-known torturer from the military dictatorship. Outraged, another deputy, who got elected after becoming famous in the Brazilian version of the reality show 'Big Brother', spat on his face. A deputy exalted her husband for his good deeds as mayor of a small town. The next day his arrest on corruption charges was on the evening news. The five-hour voting session was a great reality check for Brazilians.

As Joseph de Maistre put it, "every nation gets the government it deserves." I would like to believe that we Brazilians deserve better than what we are getting.

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Author

Cristina Terra is professor at ESSEC Business School as well as associate researcher at CEPII and THEMA (cristina.terra@essec.edu).

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Editorial Director: Sébastien Jean

Editor -in-chief: Deniz Ünal

Press contact: presse@cepii.fr

CEPII
113, rue de Grenelle
75007 Paris

+33 1 53 68 55 00

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