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# The BRICS's Economic Growth Performance before and after the International Financial Crisis

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**Abstract:** The aim of this paper is to shed some light on the issue of why some BRICS countries are doing much better than others after the international financial crisis. Although these economies share some common economic historical ground, and collectively had been performing much better than the world average in the last decades, their room to maneuver to administrate short-term economic policy to sustain growth in the context of world recession is not similar. Our main assumption is that their different performances can be explained by the degree of their external vulnerabilities, which basically depend on how cautious they were to embrace the liberal policy orientations that became dominant in the 1980s and 1990s with the so-called new macroeconomic consensus.

**Keywords** BRICS; falling behind; policy space; catching up; structural change

## INTRODUCTION

The construction of the economic forum of the BRIC economies (Brazil, Russia, India, and China) in 2006 arose from the shared consciousness of the economic importance of these economies at the global level in the first decade of the 21st century.<sup>1</sup> Actually, the acronym BRIC (which only after 2011 also included South Africa and became BRICS) first appeared in a Goldman Sachs paper,<sup>2</sup> which based on econometric estimations, concluded that those economies could be a larger force in the world economy in 2050. As mentioned elsewhere (Nassif, Feijo, and Araújo 2015a), this central conclusion was so appealing that the acronym BRICS perhaps became better known in global markets than several regional economic agreements. Indeed, in 2014, the governments of the BRICS countries created an investment bank, the New Development Bank (NDB),<sup>3</sup> which has been acclaimed by supporters as an alternative source of credit flows, aiming for financial stability, growth, and development

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(Sen 2015). In a word, the BRICS economies are getting engaged in international and political negotiations as if they were already an economic regional group.

The economic strength of this new group of countries was put to the test by the 2008 international financial crisis. Although these economies were not immediately as badly hurt as the developed economies (except for Russia), as the world recession has not yet faded away, these economies have started to show their own fragilities. Even so, the degree of deceleration of the BRICS economies differs significantly among them. In the 2009–2015 period, China and India were still fast-growing economies, each one registering an average of 9.8% and 8.4% of GDP growth respectively, followed by 3.7% for Brazil, 1.5% for South Africa, and 0.1% for Russia.<sup>4</sup> These last three countries have shown increasing dependence on the export of commodities and so have been suffering most as a result of the deceleration of world trade after the world financial crisis.

The aim of this paper is to shed some light on the issue of why some BRICS countries are doing much better than others after the international financial crisis in 2008. Although these economies share some common economic historical ground, and as a block have been performing much better than the world average in the last decades, their room to maneuver in being able to administrate short-term economic policy to sustain growth in the context of world recession is not similar. Our main assumption is that policy space—understood as the ability to sustain long-term growth rates—has been widened in economies that were more cautious to embrace the liberal policy orientations that became dominant in the 1980s and 1990s with the so-called new macroeconomic consensus, in particular the opening of the capital and financial accounts. This is so because we assume, following Ocampo and Stiglitz (2008: 4), that the opening of the capital account “is an example of a structural policy that affects both the nature of the shocks the economy experiences and the way the economy responds to these shocks.” In this sense, in our view, the way each of the BRICS economies managed their financial integration in a financially asymmetric world since the 1990s explains the different growth performances after the world financial crises. Our conclusion is that the economies that are lagging behind—Brazil, Russia, and South Africa—are those where the policy space is too narrow to sustain their growth rates, as a consequence of the way they managed the opening process in the 1990s.

In order to develop our arguments, this paper is divided in the following sections. The next section, the longest, presents a critical overview of each of the BRICS countries in relation to their industrialization process, highlighting the role of the administration of industrial policies in different international macroeconomic contexts to accelerate the industrialization process. Given the historical background of the industrialization process and the opening process of each of the BRICS economies, in the following section we argue that after the 2008 financial world crisis, the growth performance of the BRICS economies, notwithstanding their specificities, depends on their ability to efficiently coordinate short- and long-term economic policies. This depends, in our view, on their ability to manage a competitive real exchange rate and to sustain low real interest rates to stimulate capital formation. We conclude that in a financially integrated context only China and India, among the BRICS economies, have succeeded relatively well in sustaining higher growth rates. The final section draws the main conclusions.

## STRUCTURAL CHANGE IN THE BRICS: A HISTORICAL OVERVIEW

One of the few consensuses in economic theory is that technological progress, everything else being equal, is the main driving force to explain long-term economic growth. Yet the central

disagreement is concerned with how a country can generate and diffuse technological progress and, therefore, accelerate economic growth. While the neoclassical approach emphasizes the role of free markets, by efficiently allocating resources to provide the maximum social welfare in the economy, the heterodox approach challenges this belief, questioning the capacity of free markets to provide the best allocation of resources both in static and (mainly) dynamic terms.<sup>5</sup> The main normative implication of this theoretical divergence is that neoclassical economists emphasize deregulation and free trade policies in providing sine qua non conditions for accelerating technological progress and long-term economic growth, while heterodox economists emphasize the role of the state in combining several policy instruments (taxes, import tariffs, subsidies, governmental purchases, long-term finance, capital controls, among others) to influence private markets' decisions and short- and long-term economic performance. In this sense, the heterodox approach supports active industrial and technological policies in developing countries in order to accelerate their catching-up process. The main argument is that a country that is specialized in producing engineering-science and knowledge-based goods tends to reinforce this pattern of specialization, while another whose activities are concentrated on the production of natural-resource-based goods tends to perpetuate its productive structure and pattern of specialization in these activities. Since goods and sectors have different long-term income elasticities of demand, heterodox economic theory clearly supports a combination of selective ("vertical") and horizontal instruments of industrial and technological policies that aim to change the pattern of trade specialization (i.e., promote "dynamic comparative advantages") and to accelerate economic development.<sup>6</sup> As most dynamic industries are part of the manufacturing sector, selective instruments should specially target those with more capacity to generate innovations and spillover effects of technological progress throughout the economic system.

The BRICS countries are examples of historical economic development where state interventionism played a leading role to promote structural change in the direction of fast industrialization and productivity gains. In this sense, the main goal of this section is to present a panoramic view, separately for each country, of the strategies adopted to accelerate economic development. Emphasis will be given to long-term economic policies that contributed to structural change.

The following sections will present some statistical evidence about how the world recession is impacting the BRICS economies. Our purpose is to identify which economies among the BRICS are better equipped to continue the catching-up process and which are falling behind.

## Brazil

Industrialization in Brazil, based on protectionist policies in favor of infant heavy industries, gained a strong push in the 1950s, greatly influenced by Prebisch's center-periphery model. In each step of the Import Substitution (IS) process, governments targeted some industries as priorities of the industrial policy and used both import licenses and high tariffs to protect the Brazilian manufacturing sector. In practice, the import license regime was only eliminated with trade liberalization in March 1990, and until then the economy maintained a very high protectionist structure.

Another characteristics of the Brazilian industrialization process is that it has been dependent of foreign savings, and so the Brazilian economy traditionally has been prone to balance of

payments crisis. Paradoxically, these episodes reinforced government arguments in favor of renewing the use of protectionist instruments and import substitution (IS). Foreign indebtedness had an upsurge after the first oil crisis in 1973, when the strategy of the military governments then was to intensify the import substitution process (with the launching of the Second National Development Plan (II PND), increasing medium- and long-term borrowing from private foreign banks (Castro and Souza 1985). This strategy lasted up to Mexico's external default of 1982, but the external financial fragility was evident: External debt increased from 21.4% of GDP in 1977 to 31.5% in 1982.

Another specificity of IS of the Brazilian process is related to foreign direct investment (FDI). Brazil has always been open to multinational enterprises (MNE), and policies to attract MNEs to Brazil, rather than promote transfer of technology or technological spillover to local firms, were mainly driven by the objective of reducing import dependence (balance of payments issues). A rather protected domestic market has always been the main target of foreigner investors. In this sense, we can say that notwithstanding the consolidation of a large and diversified industrial base, Brazil has not shown strong results as to indicators of technological efforts, especially those related to R&D.

As to the macroeconomic policies, high fiscal deficits and inflationary pressures were also features of the IS period. Until the mid-1960s, fiscal deficits were inflationary financed. In order to develop an efficient market for public bonds, indexed public bonds were created, and the market for public bonds was successfully shaped then. However, as inflation showed a trend to increase after each external shock, indexation of monetary contracts (wages contracts, rents, and so on) became slowly widespread in the economy. In fact, following the Mexican external moratorium of 1982, and the increasing financial fragility of the public sector, inflation became resilient.

High inflation dominated the macroeconomic scenario by the mid-1980s and the beginning of the 1990s, and during this period several anti-inflationary plans had been launched, with no success.<sup>7</sup> In this context, developmental strategies lost space in the economic debate until 2002. In the 1990s, Brazil's long-term policies aimed at opening the economy and concentrated on horizontal instruments to correct market failures. A trade liberalization program started at the beginning of 1990s, to be concluded in 1994. Between 1988 and 1994 most of the nontrade barriers had been banished: The nominal import tariff was reduced from 39.6% to 11.2% (simple average), and the standard deviation dropped from 14.6% to 5.9% (Kume, Piani, and Souza 2003: 11).

Among all economic reforms adopted in Brazil, opening the short-term capital account has probably been the most responsible for not only exposing the Brazilian economy to the instability of the world economy but also reducing monetary, fiscal, and exchange rate policies' contribution to sustained economic growth. In fact, since the early 1990s, governments have been taking measures to reduce domestic financial repression, as well as to liberalize capital movements and bring about greater capital account convertibility.<sup>8</sup> If, on the one hand, the opening of the economy helped to stabilize chronic inflation, on the other hand, it has contributed to the cyclical trend of the appreciation of the Brazilian currency in real terms since then and turned the economy more vulnerable to external shocks. In addition, compared with several other experiences of trade liberalization, Brazil's case can be evaluated as having been concluded at a fast pace with no attempt to follow the ideal sequence to introduce liberalizing reforms.<sup>9</sup> Contrary to the recommendation on trade liberalization in the empirical literature (Krueger 1978; Papageorgiou, Choksi, and Michaely 1990), trade reform in Brazil was adopted

in a macroeconomic environment of fiscal imbalances and real exchange rate overvaluation, along with the liberalization of foreign capital movements.<sup>10</sup>

By 1994, Brazil had succeeded in stabilizing chronic inflation, anchored on the exchange rate, which did not resist the sequence of speculative attacks against several Asian economies in 1997 and against the Russian currency in mid-1998. As a result, Brazilian policy makers were forced to adopt a flexible exchange rate regime at the beginning of 1999.

From a comparison of the long-term performance of the BRICS countries, Brazil's economic development has been showing a definite falling-behind trend since the early 1980s (Nassif, Feijó, and Araújo, 2015a). It is important to stress that Brazilian policy makers have not succeeded in closely coordinating industrial, technological, and trade policies with the short-term macroeconomic policies. Specifically, since 1999, Brazil's macroeconomic policy regime, which combines an inflation and fiscal targets regimes and a floating exchange rates regime, has not been successful in increasing policy space for growth policies. The conservative *modus operandi* of this "tripod" of the Brazilian macroeconomic policy has not been able to either bring the short-term domestic interest rates close to international standards or avoid a cyclical trend of real overvaluation of the Brazilian currency.<sup>11</sup>

## Russia

Back in the 1950s, the USSR, as a centrally planned economy, promoted an accelerated industrialization program based on intense capital accumulation by the state, resulting in a significant structural change, with a large movement of the labor force from agriculture to industry in two decades. In the mid-1970s, the large reserves of labor and natural resources that had fueled the industrialization process at a relatively low cost were exhausted. This resulted in low productivity from the 1970s on, which was the main constraint on economic growth in the next two decades. In this sense, trade liberalization that occurred at the beginning of the 1970s can be interpreted as an attempt of the Soviet authorities to overcome low productivity growth.

Besides trade liberalization, from the mid-1970s until the collapse of the Soviet state in 1991, there were great efforts to move the economy to a capital accumulation regime more intensive in technical progress. These attempts were unsuccessful, as the Soviet authorities faced difficulties in changing both the priorities of the economy and the main characteristics of their production structure as well as the operational system of the centralized economy. From 1985 to 1991, the Perestroika reforms added more uncertainties to the economy. Efforts to transform the Soviet economy to a "market socialism" orientation failed completely, as structural problems such as the relative scarcity of consumer goods, low productivity, and low quality of goods were not solved. In the 1980s, the fall of the international price of oil and the reduction of the supply of credit in foreign markets in the 1980s aggravated balance of payments problems, contributing to the complete disintegration of the planning system of the Soviet economy.

The transition of the Russian Federation to a market economy started with the propositions of the "500 Days Plan" (presented in September 1990), before the end of the Soviet Union. This was a very orthodox plan based on stabilizing macroeconomic policies and structural microeconomic adjustments, aimed at accelerating the transition and a quick macroeconomic stabilization.<sup>12</sup> The implementation of the transition plan started in January 1992, with economic opening up and liberalization of prices, including the exchange rate. Price liberalization

led to an inflationary upsurge. Inflation was fuelled by the depreciation of the nominal exchange rate, caused mainly by capital flight, as external capital controls had been removed. In 1995, in order to fight inflation, the Russian government fixed the nominal exchange rate, and in a context of high domestic interest rates, speculative capital flowed to the country increasing its external fragility. In August 1998, the Russian government announced a default on the internal debt, a three-year moratorium on public and private external debt, and the adoption of a floating exchange rate regime. The domestic currency (the ruble) depreciated over 50% in nominal terms in 1998.

In the 2000s, stronger market institutions were perceived as necessary to promote development (as stated in a nonofficial document: “Strategy of Development of the Russian Federation until 2010”). Also, a focus on extremely large companies and on the position of large owners was a feature of the industrial policy at the beginning of the 2000s. Indeed, in the 2000s, the role of big nationalized enterprises in the energy sector greatly contributed to sustaining the investment rate, which was over 20% of GDP on average until the 2008 international financial crisis (Simachev et al. 2014: 402).<sup>13</sup> By the mid-2000s the state began again to play a more significant role in implementing long-term planning instruments and developing sectoral strategies as well as stimulating the formation of a complex of industry-specific “federal target programs” for science and technology (Simachev et al. 2014: 403). However, since the end of the Soviet state, the Russian economy has suffered from weak economic institutions, making the implementation of industrial policies very difficult.

Besides, the main balance of payments problem of the Russian economy centers on the capital and financial account. The degree of private external indebtedness has been increasing since capital flows were opened in the 1990s. Actually, the risks of this dependence for the economy were confirmed by the 2008 financial crisis, when there was a 7.8% downturn in Russia’s GDP. This negative result was the worst among emerging countries and had as main causes the high level of indebtedness of large public and private enterprises and banks, declining oil prices, and massive net capital outflow. The exchange rate depreciated, despite massive market interventions by the Central Bank of Russia (CBR).

In the years following the crisis, Russia’s GDP grew again to an average of over 4% per year, fueling the nationalist project of converging the per capita income to those of other less-developed European economies. However, in 2014 the Russian economy suffered two additional shocks: international sanctions in response to the annexation of Crimea and military interference in Ukraine and a sharp decline in the international prices of oil and other commodities. Both led to an intensification of capital outflows and deep depreciation of the ruble, and an upsurge in inflation.

## India

Since its independence from British rule in 1947 until the early 1990s, India had adopted developmental strategies based on the IS model, and in this aspect the Indian experience of industrial and trade policies shares some similar mechanisms with those of Brazil. First of all, like Brazil, Indian industrialization was guided by development plans. Up to the end of the 1970s, Brazilian and Indian governments targeted specific industries, at least up to the mid-1980s in the case of India. However, unlike Brazil, India has never given up the adoption of long-term development plans (the “five-year plans”), even after the liberalizing economic reforms of 1991.

A particularity of the Indian industrialization strategy is the severe restrictions on FDI inflows from the mid-1970s to the beginning of the 1990s. India has also extensively applied the so-called industrial license regime, a mechanism through which the creation of a new firm, new plant, or an increase in productive capacity required a government permit. Under such protectionist instruments, businesses in India were still much more repressed than in other IS cases. According to Bhagwati (1993), India could be considered one of the most protected economies in the world at that time.

It is common to characterize the enormous innovative and educational efforts under the national innovation system of India—in addition to the structural reforms of the 1990s—as one of the main causes of its current success in the Information and Communications Technology (ICT) industries and even its sustainable economic growth. In fact, efforts toward the creation of a strong national system of science, technology, and innovation go back to India's early industrialization in the immediate post-Independence period.

India also introduced instruments to stimulate exports during the IS period. Bhagwati and Desai (1970) estimated that, by the late 1960s, between 30% and 70% of Indian exports benefited from subsidies of some kind. Paradoxically, Indian export policies were marked by some contradictions, such as the imposition of quantitative restrictions against export of some manufactured products (cotton until 1955, jute until 1958, and tea until 1970) and agricultural goods, and taxes on exports when international prices of some Indian exported goods fell even without any evidence that India had a monopoly power in world markets. As a consequence, India had failed to develop a strong and diversified export base when its import substitution regime and protectionist measures reached an apogee.

Contrary to the Brazilian experience, in the period 1950–1980, India's macroeconomic environment was characterized by relative fiscal stability, low inflation rates, and a moderate tendency to borrow abroad. This last aspect of India's external debt management explains why, although the international financial system remained closed to new capital inflows to Latin American countries throughout the 1980s, India, classified by official and private banks as a low-risk country, could receive a considerable amount of long-term foreign lending in the same period (Krueger and Chinoy 2002).

It was not until the Indian government broke with the relative fiscal conservatism in the early 1980s that the economy could overcome the long-term “Hindu” economic growth path that had prevailed in the previous period.<sup>14</sup> In fact, the rapid expansion of fiscal deficits was the main source of the greater economic growth of the 1980s. The expansionist fiscal mechanisms, combined with the rapid increase in India's current account deficits, suggest that the strongest economic growth of the 1980s is explained mainly by the adoption of expansionary macroeconomic policies.

However, the expansionist policies were not sustainable. In 1991, a severe fiscal crisis and considerable loss of international reserves forced the Indian government to sign an agreement with the International Monetary Fund, which implied the implementation of liberalizing economic reforms. Nevertheless, in comparison to the liberalizing reforms introduced in Brazil, Russia, and South Africa in the same period, India's reforms were implemented in a very gradual and cautious way. Indian governments addressed the problem of sequencing, and the speed of the liberalizing reforms were in tune with recommendations in the literature on trade liberalization experiences. Indeed, in 2002, India still applied tariffs very close to the consolidated tariffs in the context of multilateral agreements negotiated with the World Trade

Organization (WTO) (of around 32.3% for the economy as a whole and 30.8% for the manufacturing sector, against around 10.4% and 10.5% respectively in Brazil in 2004). As 96.8% of all applied import tariffs in India in 2002 were close to peaks approved in multilateral agreements at the WTO (against only 26.8% in Brazil), trade liberalization in India worked, simultaneously, not only as a strategy to redefine and gradually reduce the protectionist structure of the economy but also as a strategy of industrial policy, structural change, and economic development.

Short-term capital flows were not fully liberalized in India. Nowadays, while India freely allows foreign capital flows for investment (both direct and through the stock market), it still imposes high restrictions on foreign investment in treasury bonds and fixed income assets. Indeed, although derivative transactions in India have been allowed, since April 2007 all derivative contracts (especially exchange rate and interest rate derivatives) have been tightly regulated by the Reserve Bank of India (RBI). According to Subbarao (2014: 267), the ex-governor of the Reserve Bank of India (RBI), India has deployed “both price-based and quantity-based [capital] controls.” The legal framework for capital controls is organized with the main goal of managing the exchange rate (Patnaik and Shah 2012: 4). With a lower degree of external financial liberalization compared to Brazil, Russia, and South Africa, India has been one of countries less negatively affected by the post-2008 global crisis.

The regulation of capital flows in India has been giving Indian monetary authorities enlarged policy space to keep stable and competitive real exchange rates. According to the Bank for International Settlements database, since 1994 the Indian rupee has been undervalued in real terms at the margin.<sup>15</sup> In sum, the introduction of liberalizing reforms in India, aside from breaking with strongly protectionist practices, did not imply remarkable discontinuity with respect to industrial and technological policies that had been adopted in the country before the early 1990s.

## China

Chinese transition from a planned economy to a market economy started when Deng Xiaoping came to power in 1978. Since then, Chinese governments have been implementing several economic reforms with the goal of promoting significant structural change and accelerating economic development.<sup>16</sup>

Between 1978 and the early 1990s, the focus of the Chinese reforms were aimed at modernizing the agriculture, manufacturing, science and technology, and military defense areas of the economy. Over this period, China succeeded in transforming its agricultural and traditional economy to a manufacturing-based one (Saich 2011). The first reforms reached the primary sector through which the old commune-based agriculture was “quasiprivatized.” Land was not privatized but leased to farmers through a long-term contract. Based on official targets, small farmers had the right to produce and sell freely under market-determined prices (Huang 2012). These microeconomic incentives, combined with increasing investments in infrastructure in rural areas, contributed to raising labor productivity and real output in Chinese agriculture.

Its industrialization process was marked by the governmental permit to multinational enterprises to establish in the special economic zones (SEZ), located in coastal areas close to dynamic markets. The Chinese strategy of attracting FDI toward SEZs was combined with a

more ambitious long-term goal of creating dynamic comparative advantages through both imitation and mastering of technologically sophisticated goods by reverse engineering and development of indigenous technology by state-owned enterprises (SOEs), nonstate small and medium township and village enterprises, as well as joint ventures between local enterprises (mostly SOEs) and foreign companies (Cesarin 2005; Oliveira 2008).

Since the mid-1980s, the Chinese economy has also benefited from the *Endaka* (1985–1995), through which Japan was forced through U.S. diplomacy to overvalue the yen under the Plaza Agreement in 1985. FDIs were quickly displaced from Japan and the “Asian Tigers” to China.

The SEZs were also supported by the economic and technological development zones (ETDZs), which had a strong mandate to develop technology and partnerships with neighboring countries (Acioly 2005). It is important to stress that, at least until the mid-1990s, multinational enterprises were permitted to produce and sell goods exclusively for external markets, as domestic markets were exclusively reserved for Chinese enterprises, most of them state owned (Inter-American Development Bank 2004). With a very open trade regime for multinational enterprises and domestic firms operating in the SEZs and a very restrictive one for most firms operating in internal markets, Chinese trade policy represents, according to Feenstra’s (1998), “one country, two systems” model.

Between 1992 and the end of the 1990s, selective industrial and technological policies were adopted with the goal of accelerating structural change and economic development. While in the first half of the 1990s, the prioritized sectors were heavy infrastructure industries, especially energy and intermediate goods, in the second half of the 1990s, Chinese public incentives were directed toward economies of scale-based and knowledge-based segments of the manufacturing sector.

Liu (2005) argues that the increasing success of local enterprises in information and communication technologies must be analyzed as China’s specific new model. Given the difficulty and high costs associated with imitating and mastering technology in such areas, the Chinese government has been combining a “strategy based on market-oriented innovation, and technology outsourcing ...” (Liu 2005: 13). That is to say, given the high costs of R&D in ICTs, Chinese enterprises prefer to associate with big foreign companies, from which they learn and catch up, rather than engage in all in-house R&D.

At the same time, before its entry into the World Trade Organization (WTO) in 2001, China had unilaterally begun to dismantle its protection apparatus.<sup>17</sup> Although one could expect that such rapid trade liberalization would have displaced local output to imports, this did not happen due to several factors, such as: (1) most duty-free imports are related to inputs and other intermediate goods demanded by either foreign enterprises established in SEZs or SOEs whose production is partly directed toward exports; (2) lowest tariff imports are selectively concentrated in machines, equipment, and intermediate goods not focused on by the Chinese industrial policy; (3) SOEs are still highly subsidized by the Chinese government; (4) the government continued to maintain rigid regulation of the domestic market against the spread of foreign goods; (5) lowest unit labor costs compared with the largest manufacturing producers and exporters in the world;<sup>18</sup> and last but not least, (6) interest rates and exchange rates in China are “twins” in the sense that these key macroeconomic prices are controlled with the aim of either subsidizing domestic investment or boosting the competitiveness of goods produced in China in the international markets.

The current debate about the Chinese growth strategy is about the structural problems of China’s economy and the current long-term economic responses to sustain economic growth

and assure the continuity of the catching-up trajectory in the next decades. To understand this issue, it is important to stress that gross investment and trade surpluses were responsible for around 45% and 10% of China's GDP respectively by the time of the emergence of the 2008 global crisis. Until the emergence of the 2008 financial crisis, part of the overcapacity generated by additional investments could be absorbed by additional external demand. After the crisis, it became more urgent to China's policy makers that the country should not only reduce its high dependence on external demand for growth but also definitively tackle the structural problem of overcapacity with long-term economic policy responses. It seems that the Chinese government has opted to reduce the ex post saving-investment gap through policies directed toward augmenting household consumption, reducing the overheating of investment in heavy industries, and maintaining public investment in education, health, and physical infrastructure.<sup>19</sup>

## South Africa

Although the recent economic history of South Africa can be broken down into pre- and postapartheid, in some sense, both the structure of the economy and its several social problems still reflect systems inherited from the colonial era and especially the apartheid regime (Faulkner, Christopher, and Markrelov 2013).

Starting in the 1970s until the decline of the apartheid regime, the South African economy was guided by a quasiantarkic economic strategy. Moreover, isolation was seriously aggravated by hard economic sanctions against the apartheid regime by the international community. Even considering that a large closed domestic market might extract some gains from economies of scale, the marginalization of the majority of the population of the consumption markets prevented the economy from expanding production, limiting aggregate productivity growth. Although a diversified manufacturing sector has emerged over time (from traditional industries to either capital-intensive or more knowledge-based), the high level of protection caused excessive entries and survival of a large number of inefficient small and medium enterprises (Faulkner, Christopher, and Markrelov 2013).

Between 1985 and 1994, South African economic growth was sluggish (an average real GDP growth rate of only 0.8% per annum). Despite high rates of unemployment in the period, strong bargaining power of organized labor unions in the formal sector caused real wages to grow faster than productivity. In an effort to avert loss of international competitiveness as well as to respond to increasing social and political pressure against the apartheid regime, the South African government significantly increased public spending in social infrastructure and subsidies to the manufacturing sector. This resulted in large fiscal deficits, an unsustainable growth in public debt, and high inflation rates (Faulkner Christopher, and Markrelov 2013). According to Du Plessis, Smit, and Struzenegger (2007), in the 1985–1994 period, South Africa showed the worst economic performance since the end of World War II. The deterioration of social, political, and economic conditions accelerated the end of the apartheid regime in the early 1990s.

The first decade following the historic victory of the African National Congress in democratic elections was characterized by political and economic stability. Contrary to what one might expect, there was neither a cycle of rapid redistribution nor populist macroeconomic

policies (Rodrik 2006). In fact, with the goal of restoring sustainable economic growth, a Growth, Employment and Redistribution Plan was introduced in 1996, through which the South African government undertook to reduce high inflation, fiscal deficits, and public debt. In 2000, an inflation-targeting regime was implemented (Kaplan 2007), and South Africa experienced a period of macroeconomic stability between 1995 until the 2008 global economic crisis.

A central question is why has such steady macroeconomic growth not yet translated into a sharp reduction in unemployment rates, which are still very high (25% already registered in the first half of 2015), in comparison with other emerging economies. Actually, one of the main South African shortcomings is that (like Brazil) it is suffering from premature deindustrialization.

Hausmann and Klinger (2006) also realized that South Africa has been unable to produce sound structural change in both its productive structure and export pattern. Even in the postapartheid period (1994–2004), when the country's export volumes have shown sustained increase, "South Africa still remains among the poor performers internationally in terms of export growth" (Hausmann and Klinger 2006: 6). Although South Africa is a larger exporter of automobiles, machines and equipment, other transportation goods, and food and leather products, these exports are offset by much larger imports of those same goods. In other words, South Africa has been unable to shift its static comparative advantage from mining and metal to other capital-intensive and knowledge-based goods.

Not coincidentally, the South African government has also been attempting to adopt a more active industrial policy with the aim of intensifying "South Africa's long-term industrialization process and movement towards a knowledge economy" (DTI-South Africa 2010: 10). In 2010, the South African government raised a National Industrial Policy Framework (NIPF) to cover the 2010–2014 period involving 13 strategic programs, such as sectoral strategies, trade policy, industrial upgrading, innovation and technology, industrial financing, and skills and education for industrialization.

However, governmental inability to create dynamic comparative advantage and structural change for sectors with high capacity to generate and diffuse gains from labor productivity in the economy as a whole has several roots. Kaplan (2007: 7) suggests that the main cause, which can also be extended to Brazil, is that these countries have adopted orthodox macroeconomic policies aiming at low domestic inflation. In Kaplan's words "... macroeconomic policies have not brought stability in key prices that matter for investors and particularly for exporters—the interest rate and especially the exchange rate." Indeed, like Brazil, after a quick recovery in 2010, South Africa showed low average real GDP growth rates in the 2010–2014 period.

## GROWTH PERFORMANCE AFTER THE 2008 GLOBAL CRISIS AND THE POLICY SPACE TO SUSTAIN LONG-TERM GROWTH: AN HETERODOX INTERPRETATION

The industrialization process of the BRICS economies, as seen, share common features in the sense that the state, through interventionist policies, guided the process of structural change. However, from the 1990s onwards, following a strong wave of liberalism in the international economy, each of the BRICS countries, at different speeds and by different ways, embarked on a process of economic opening. The consequences of such experience can be evaluated

through the results that these economies have been showing in the context of the world recession, that is to say, the narrowing of the space to manage their monetary, fiscal, and exchange rate policies as a consequence of the way they became financially integrated. Our assumption is that, because capital flows are procyclical, economic opening restricts the management of countercyclical economic policy to respond to booms and busts.

This implies that developmental economic policy proposals, as those responsible for the accelerated industrialization process of the BRICS economies, must care about the fine coordination between the long-term industrial and technological policies and the short-term macroeconomic policies. This is so because the heterodox approach assumes potential output to be endogenous to demand,<sup>20</sup> which implies that the short-term evolution of the economy influences its long-term performance. The connection between the short- and long-term movements is theoretically explained by Kaldor (1970) and his followers through the cumulative causation mechanism, which describes the growth process as a chain-reaction path between demand and supply-side conditions, through a logical scheme of circular and cumulative causation.

This theoretical approach to the process of long-term growth calls for a broader view to economic policies in which long-term economic policies (like industrial, technological, educational policies, and so on) that enhance structural change and short-term macroeconomic policies (monetary, fiscal, and exchange rate policies) that sustain economic growth and stabilizing economic fluctuations can be combined. It is in this sense that the heterodox economics argues in favor of discretionary economic policies, rather than rules-based policies, as more efficient to promote the catching up. This means to say that a macroeconomic policy regime, aiming at sustaining long-term growth, must be able to maintain a countercyclical fiscal policy, a low and stable long-term inflation rate, low real interest rates, and a competitive real exchange rate (that is to say, a marginal undervaluation of the domestic currency in real terms) over time.<sup>21</sup> The capacity of policy makers to maintain the latter three macroeconomic prices around those levels is a *sine qua non* condition for reducing the opportunity cost of investment in both productive and innovation projects and therefore augmenting the possibility that the expected results of the industrial and technological policies are realized.

However, it should be considered that in a financially asymmetric world, the opportunity cost of investment for developing economies should take into account that these economies are prone to stronger procyclical swings in financing, which greatly limit their room to maneuver the adoption of countercyclical macroeconomic policies. Hey (2015:1), for instance, in a recent and influential paper, argues that independent monetary policies are possible if and only if the capital account is managed.

Ocampo (2007–2008), among others,<sup>22</sup> presents solid arguments showing that capital flows to developing countries are procyclical and thus “exacerbate rather than dampen both economic booms and recessions” (Ocampo 2007–2008: 83). According to him, capital mobility volatility is nowadays the major source of short-term instability affecting more negatively developing economies in process of catching up. This happens because in developing economies, dependent on external saving and under a flexible exchange rate regime, the autonomy of monetary policy is reduced as the shortage of international liquidity or even a threat of it induces the rise of the domestic interest rate. Moreover, under high capital mobility, the dependence of foreign savings exposes the economies to frequent speculative attacks, which oblige policy makers to keep higher domestic interest rates in relation to developed economies. As a consequence, real exchange rates of developing economies show high volatility and a trend

to appreciate through the flows of the capital account. Ocampo concludes that *financial* asymmetries generate important *macroeconomic* asymmetries, which policy makers in developing economies have to deal with in order to sustain their growth performance (emphasis added).

So, countercyclical economic policies to curb the negative effects of capital mobility and to sustain domestic conditions to stimulate investment imply the widening of policy space in these economies to sustain high growth rates. Ocampo (2011: 21), in reviewing ECLAC's proposals to developing countries to expand their economic policy autonomy to design countercyclical policies, observes that economies that were more successful in recovering after the 2008 global crisis were the ones with lower levels of external vulnerability. Lower external volatility, as it was observed, to some extent showed a different combination of five interrelated factors: (1) smaller current account deficits, (2) competitive exchange rates, (3) ample foreign exchange reserves, (4) low levels of short-term external liabilities, and (5) the regulation of capital flows.<sup>23</sup> In sum, in the view of the heterodox arguments, stabilization policies induce a procyclical pattern of macroeconomic policy that negatively affects investment decision by the private and public sectors and thereby economic growth.

### The Performance of the BRICS after the Financial Crisis: An Interpretation

Comparing with the average growth of the world economy, all the BRICS countries performed above the average during the 2000–2008 period (Table 1). This pattern is not observed in the following years, except for 2011, when again all the BRICS economies have registered results above the world average. From 2012 on, growth rates have been systematically reduced in relation to the 2000–2008 period, except for India, due to the worsening of the international recession following the European crisis and deceleration of the commodities prices. So, after 2011, the differences in the economic growth strength of the BRICS economies have become clearer.

In order to better understand the two moments in the evolution of the growth rates, we start looking at the immediate period following the 2008 international financial crisis (2009–2011). Immediately after 2008, all the economies in general reacted with nonorthodox economic policies to the new international economic scenario. China, for instance, like India and South Africa, rapidly responded to the negative impacts of the 2008 financial crisis. In the case of China, the Chinese government attempted to offset the sharp decrease in its exports by a vigorous fiscal expansion and a relaxing monetary policy, considering that household consumption accounted for only 35% of China's GDP (Yongding 2009). India, in turn, showed an increase in

TABLE 1  
Growth Rates for the BRICS Economies and World—2009–2015 and Selected Periods

	2000–2008	2009–2011	2010–2015	2009	2010	2011	2012	2013	2014	2015
Brazil	3.8	3.7	2.0	−0.1	7.5	3.9	1.9	3.0	0.1	−3.8
Russia	6.9	0.1	1.7	−7.8	4.5	4.3	3.5	1.3	0.7	−3.7
India	6.6	8.4	7.3	8.5	10.3	6.6	5.6	6.6	7.2	7.6
China	10.4	9.8	8.3	9.2	10.6	9.5	7.8	7.7	7.3	6.9
South Africa	4.2	1.5	2.3	−1.5	3.0	3.2	2.2	2.2	1.5	1.3
<b>World</b>	<b>3.4</b>	<b>1.9</b>	<b>2.9</b>	<b>−1.7</b>	<b>4.4</b>	<b>3.1</b>	<b>2.5</b>	<b>2.4</b>	<b>2.6</b>	<b>2.5</b>

Source: World Development Indicators, updated October 14, 2016.

the average growth rate in the 2009–2011 period, and although it did not escape from global contagion, India’s slow pace of economic reform, ironically, in the words of *The Economist* (2008), put the economy in better shape to respond to the world crisis. The South African government implemented a more relaxed fiscal policy for the 2008–2009 period aiming at improving investment in infrastructure and reduced interest rates between December 2008 and May 2009 (Ramcharan 2009). In the Brazilian case, economic relief measures to compensate for the sharp drop in external trade and sudden stop in capital flow came only in 2009 and aimed at boosting domestic consumption. Russia, highly dependent on commodities, was more vulnerable to the sharp drop in the world growth rate and so the one to suffer most the impact of crisis, with sharp devaluation of its currency, in spite of massive intervention of the central bank that lost around 200 billion in reserves from August 2008 to February 2009 (Dabrowsky 2015).

The persistence of the world recession after 2011, however, affects the BRICS economies, reducing their policy space—that is to say, their ability to manage short-term economic policy to sustain growth. One simple way of illustrating this point is observing the movement of the real interest rate comparing the 2009–2011 period and the 2012–2015 period (Table 2), when developed countries sharply reduced their basic rates to fight deflation. Notwithstanding their specificities, for Russia, India, and China, and to a less extent also South Africa, the average real interest rates increased, with relatively little impact on inflation rates. This can be taken as an indication of the narrower policy space in these countries (although the reduction in the interest rates had different causes in each economy).

Brazil is a special case among the BRICS because the level of its real interest rate is among the highest in the world. This is due mainly to the inflationary history of the country. The performance of the Brazilian economy in the 2011–2015 period registered deceleration in growth and acceleration in inflation. The decrease in the average of the real interest rate was the result of the incentives to private consumption to sustain growth. This measure, combined with others, had shown to be short breath, and the economy in 2015 registered a negative result. As a consequence, its policy space has narrowed, and the country is embracing very orthodox economic policies for the 2015 period onwards, besides political instability that increases international capital volatility as well as exchange rate volatility.

The average real interest rate of South Africa had shown a small increase (0.38 percentage point) between the two periods, but as inflation rates on average have not decreased, the country is implementing also very orthodox economic policies from 2013 onwards (Lipton 2013).

TABLE 2  
Average of the Real Interest Rate and Inflation Selected Periods

	<i>Real interest rate %</i>		<i>Inflation rate %</i>	
	<i>2009–2011</i>	<i>2012–2015</i>	<i>2009–2011</i>	<i>2012–2015</i>
Brazil	32.25	25.55	5.52	6.74
Russian Federation	–0.73	3.67	8.98	8.80
India	3.29	5.51	10.58	8.11
China	0.97	4.19	2.67	2.17
South Africa	3.13	3.51	5.46	5.52

*Source:* World Development Indicators, updated October 14, 2016. NB: Real interest rates are from the World Development Indicators. Inflation rate measured by the Consumer Price Index.

South Africa's high degree of openness and its high need for external financing has exposed the country to the risk of capital outflows, and not by chance, South Africa, like Brazil, are the economies that have shown large increases in their foreign reserves as share of their GDP among the BRICS economies.<sup>24</sup> As well discussed in the literature (see, for instance, Ocampo 2007–2008), since the Asian crisis in 1997, emerging economies are demanding reserves as a safeguard instrument against capital volatility.

The behavior of the real exchange rate is another way of addressing the policy space in the BRICS economies. The structuralist literature advises that the worsening of the balance of payments problems in emerging economies after the liberalization reforms in the 1990s has shifted the burden of managing current account problems to the exchange rate. This is so because nowadays interventionist instruments to mitigate balance of payments problems employed in the past, such as trade and capital regulations, are much less used. However, the exchange rate is not the most appropriate countercyclical tool (Ocampo 2011), among other things, because of its volatility that impacts negatively the allocation of long-term resources and so structural change. Truly, the BRICS economies have been dealing in different ways in relation to their exchange rate policy, and in this sense, they have shown different degrees of autonomy to manage countercyclical economic policy.

For China, for instance, the real exchange rate is a relevant instrument of macroeconomic policy, continually used by Chinese policy makers to accelerate structural change and economic growth. This is well expressed by Subramaniam (2010) when the author argues that it is hard to believe that the Chinese government, by implicitly combining an import tariff with an export subsidy, will suddenly give up renminbi undervaluation as an economic policy strategy, which has been one of the most powerful instruments to boost China's international competitiveness, spectacular structural change, and long-term economic growth.

In the case of India, where short-term capital flows are not fully liberalized, moderate appreciations have been episodic and far from showing a chronic and cyclical trend of overvaluation. In June 2014, the real effective exchange rate of the rupee against a basket of 36 currencies of India's foreign partners indicated approximately a 10% undervaluation.

Brazil, Russia, and South Africa, on the other hand, have been suffering most with the volatility of capital mobility and its impact on their real exchange rate.<sup>25</sup> In our interpretation, this is a direct consequence, despite the specificities of each economy, of the more open way they embraced liberal reforms, in particular the opening of their capital and financial accounts. A major implication of the exchange rate fluctuations generated by capital account fluctuations (appreciation during capital account booms, depreciation during crises) is that they reinforce those generated directly by fluctuations in the cost and availability of financing and consequently increase the degree of uncertainty in the evaluation of debt ratios, making the economies more vulnerable to changes in the humor of the financial markets.

One of the consequences of the persistent misalignment of the real exchange rate, as recognized by the literature, is that, being a strategic price to inform investment decisions, it can lead to early deindustrialization. Table 3 shows the evolution of the share of the industry in total value added for the BRICS economies since 1990. Except for India and China, which could increase the share of their industrial sector in total value added comparing 1990 and 2014, all the other countries registered a significant decrease. The Russian Federation is the economy to show the greatest loss in industrial share in total value added comparing 2014 and 1990, followed by Brazil and South Africa.

TABLE 3  
Percentage Share of Industry in Total Value Added for the BRICS Economies 1990, 2007, 2014

	1990 (1)	2007	2014 (2)	(2) – (1)
Brazil	38.7	27.1	24.0	-14.7
Russian Federation	48.4	36.4	32.1	-16.2
India	26.5	29.0	30.0	3.5
China	40.9	46.7	42.7	1.8
South Africa	40.1	29.7	29.5	-10.6

Source: World Development Indicators, updated October 14, 2016.

The differences in the weight of the industrial sector in the economy can explain the differences in growth dynamics among the BRICS countries. According to Kaldor (1966, 1970), the manufacturing sector (the more important sector in total industry), with a strong presence of static and dynamic economies of scale, is the “engine of growth.” From this perspective, differences in growth performance are related to, among other things, the productive structure of the economies.

In sum, we started this section arguing that the more open the economy, the narrower its policy space to sustain long-term growth policies. This is a new challenge faced by developing economies financially integrated because under the heterodox analytical perspective, the fine coordination between short-term and long-term economic policies is strategic to promote the catching up. According to our interpretation, in an asymmetric financially world, policy space to sustain long-term growth should avoid real exchange rate volatility and misalignment, keep inflation rate and real interest rate at low levels, and use fiscal policy countercyclically. However, because capital flows are procyclical, developing economies, among them the BRICS economies, have been performing relatively poorly after the world financial crisis.

We chose a few indicators to illustrate our argument that China and India, because they have been more cautious to open their economies, are performing relatively better than the other BRICS economies after the world financial crisis. Although all the BRICS economies are operating with relatively higher real interest rates, the degree of exchange rate volatility and the appreciation trend have increased for all of them, in our interpretation, because China and India still preserve some instruments of capital control, they do not show signs of deindustrialization. This means that they have a wider space for the administration of countercyclical policies, as these economies have been managing the integration with the world economy more cautiously. A wider policy space implies greater autonomy to implement developmental policies and continue the catch-up process. Brazil, Russia, and South Africa, on the other hand, are losing policy space and in this sense are economies that are falling behind.

## FINAL REMARKS

Although the BRICS economies had emerged as an articulated economic group in the world scenario, the prolonged world recession has put in evidence larger differences in their ability to continue to sustain their long-term growth. China, with the higher rates of growth before and after the world financial crisis, deals with world recession by still maintaining severe control by the government over all markets. In India, the second-most-dynamic economy

among the BRICS, liberalization reforms in the early 1990s were adopted in a cautious way, when compared with Brazil's, Russia's, and South Africa's, which were implemented quickly and without a fine coordination with short-term macroeconomic policies. Not by chance these economies are the less dynamic among the BRICS and are falling behind after the financial crisis as their short-term and long-term vulnerabilities increase. We conclude that, although all the BRICS economies had taken their chance to promote structural change in the past, only China and India nowadays show enough vitality to continue in this path, despite the world recession.

## NOTES

1. The first meeting of foreign ministers of the BRICS occurred in 2006 in New York, and since 2008 its leaders gather every year to discuss issues of global importance.

2. According to Wilson and Puroshothaman (2003).

3. This bank was announced at the sixth annual summit of the BRICS countries in Fortaleza, Brazil, in July 2014.

4. World Development Indicators database (accessed November 13, 2016). This date applies to all further references to this database.

5. Lavoie (2011: 9–10) defines orthodox economics “as the dominant paradigm, the mainstream or neoclassical economics, and heterodox economics as “not the dual tone of classical economics, but an alternative to it.”

6. Some of these policy instruments are constrained by multilateral agreements under the World Trade Organization (WTO). Ocampo, Rada, and Taylor (2009: ch. 9) advocate credit policies by developmental banks, as a powerful instrument still not constrained by multilateral trade agreements, to promote structural change to reduce the technological gap.

7. This occurred with the Cruzado Plan (February 1986), Bresser Plan (July 1987), Summer Plan (January 1989), and Collor Plan (March 1990). The Real Plan (July 1994), finally ended the high inflation.

8. Ferrari Filho and de Paula (2006: 194).

9. For instance, compared with South Korea's trade liberalization reform, Brazil's was relatively rapid, but in comparison to India's, which took more than 10 years to have average nominal import tariffs close to Brazil's, the Brazilian trade liberalization can be considered excessively rapid. For the case of South Korea, see Moreira (1994) and for the case of India, see WTO (2002).

10. Even McKinnon (1991), a great defender of capital account convertibility, has always alerted policy makers to the need of respecting the optimum sequencing for the implementation of liberalizing programs. His principal recommendation is that the liberalization of the capital account should be not only the last step of economic reform but also a step that should occur after fiscal deficits have been eliminated. See also Stiglitz (2002b: 73–78).

11. For a critical analysis of this sui generis macroeconomic policy regime as well as a proposal to change its modus operandi with the goal of structurally reducing short-term interest rates and maintaining competitive real exchange rates, see Nassif and Feijo (2013). For a discussion about the trend to overvaluation of the real, see Bresser-Pereira, Oreiro, and Marconi (2015: ch. 4).

12. As observed by Stiglitz (2002b: 136): “Seldom before had a country deliberately set out to go from a situation where government controlled virtually every aspect of the economy to one where decision occurred through markets.”

13. Serrano and Mazat (2013: 869–72) argue that in spite of the real exchange rate appreciation in the 1999–2008 period, the increase in public expenditure and domestic investment more than compensate for the leakage of income through imports.

14. Stiglitz (2002a) and Rodrik and Subramanian (2004) showed sound empirical evidence to support this hypothesis.

15. <http://www.bis.org/statistics/eer/> (accessed on August 13, 2015).

16. Still today the Chinese economy is severely controlled, and so it is hard to regard it as a market-oriented economy. See Inter-American Development Bank (2004).

17. As Shafaeddin (2002: 97) pointed out, the Chinese government anticipated the required conditions to be accepted as a WTO member, especially the obligation of liberalizing “its imports significantly during the early years of the accession.”

18. In 2010, China's unit labor costs were only 60% of those in the United States and less than 50% of the Euro Zone's (Artus, Mistral, and Plagnol 2011: 21).

19. As for the public investment on education, data from the World Development Indicators show that China's expenditure on education was 14.5% of total government expenditure in 1998. This is a relatively high figure, close to the one registered in India (14.8%), but much lower than South Africa (20.5%). Brazil and Russia registered the lowest figures: 11.6% and 9.0% respectively. In relation to the public investment in health, figures for China have been improving as well as for the other BRICS's economies, except for Russia. Public investment in health in China was 1.8% of GDP in 1995 and increased to 3.1% in 2014. In percentage points China was the economy to increase most its public expenditure in health, relatively. Brazil comes next, increasing its share from 2.8% in 1995 to 3.8% in 2014. South Africa, that registered the second highest share in 1995 in relation to the other BRICS economies (3.4%), increased its share to 4.2% in 2014. India had in 1995 the lowest share (1.1%) and registered 1.4% in 2014. Russia registered the highest share of public investment in relation to GDP in 1995 (4.0%) and reduced it to 3.7% in 2014.

20. Léon-Ledesman and Thirlwall (2002: 441), for instance, presented an estimation of the sensitivity of the natural rate of growth to the actual rate of growth for 15 OECD countries over the 1961–1995 period and concluded that the former is not independent to the latter. According to the authors, “Our results ... bring to the fore the importance of focusing on demand as well as supply for an understanding of long-run-growth rate differences between countries.”

21. Extensive empirical literature shows that an overvalued currency in real terms for a long period of time tends to reduce economic growth. As to the role of a marginal real undervaluation of domestic currency in accelerating long-term economic growth, see Rodrik (2008), Williamson (2008), and Berg and Miao (2010).

22. See also Ocampo and Vos (2007) and the bibliography quoted on the issue of policy space in developing economies.

23. In addition to this debate, see Araújo (2015), who comments on how the international debate has changed in relation to the management of capital flow after the 2008 financial crisis.

24. According to the statistics of the World Development Indicators, comparing with the level in 2005, the share of reserves as percentage of GDP increased from 6.0% in Brazil and 8.0% in South Africa to 15.5% and 14.0% in 2014 respectively. China increased its reserve from 36.6% to 37.6% of GDP in the same period.

25. See, for instance, Nassif, Feijo, and Araújo (2015b) for a study about recent behavior of real exchange rate in Brazil. In relation to South Africa, Kumo, Rialander, and Omilola (2014: 4) relates that the rand has been losing value in relation to the dollar since 2011. In Russia the government has been using the country's reserves to offset exchange rate movements.

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