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# **FISCAL ADJUSTMENT: THE CASE OF RIO GRANDE DO SUL**

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MINERVA PROGRAM FALL 2010

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## **Abstract**

The study evaluates economic theories related to a nation's growth and sustainable development, focusing on fiscal policy to achieve these goals, and analyses the case of the Brazilian state of Rio Grande do Sul and how the actual government's fiscal policy has helped the state recover from a fiscal deficit accumulated over three decades. Fiscal policy has proven to be an efficient measure adopted by highly developed countries as well as developing and poor countries, to implement better economic internal conditions, higher standards of living to its population, attract foreign investments, and provide a sustainable condition for development and growth. Rio Grande do Sul state has been able to reverse a public deficit scenario of three decades, by taking severe measures of fiscal adjustment, such as tightening public expenses, refinance public debts, tax collection and surveillance improvement, reduce public investment, restructure of the public sector, modernization of the public pension system, and improvement of the social security model.

## 1. Introduction

Fiscal policy has become an important macroeconomic mechanism to reduce deficits in most emerging markets and low-income countries, basically because of improved cyclical conditions (Fiscal Monitor, 2010). Several advanced economies are also reducing their deficits, in some cases because market pressures have imposed a fiscal exit. However, according to the International Monetary Fund – IMF – projections, published annually among other relevant studies, under the title “Fiscal Monitor”, forecasts indicate a decrease in global fiscal deficit from 6<sup>3/4</sup>% in 2009 to 6% in 2010, and predict broader tightening in both advanced and emerging economies in 2011.

The present paper intends to demonstrate the importance of fiscal policy in the development and sustainable growth of economies, and analyze how the Brazilian State of Rio Grande do Sul, considered for a long time the most developed State in Brazil, deteriorated its Socio-Economic indicators abruptly, and is struggling to recover its position at the top of the Brazilian national rank. The actual Government (2007-2010) has had very successful results by reorganizing the State’s public accounts through a very rigid and consistent fiscal adjustment policy, which is the main subject of this analysis.

The first part contains some major economic theories, such as the Solow model, the Endogenous growth theory, and the Keynesian model, applied to growth. The second part describes the most common measures taken by governments to stimulate economical development, and raise long-run standards of living of its population. The third part approaches how expenditure control and fiscal policies are related to provide economical growth. The fourth part demonstrates an outlook on global fiscal development and IMF forecasts for 2011. The fifth part brings an outlook of the Brazilian macroeconomic current situation. The sixth part briefly analyses Brazilian fiscal indicators and a comparison with the other BRIC (Brazil, Russia, India China) countries. The seventh part introduces some macroeconomic overview of the Rio Grande do Sul state in the Brazilian context, providing several of the State’s major indicators, major economic activities, and the political and geographical context amongst other Brazilian states. The eighth part describes the state’s critical fiscal situation, following a series of cumulated years of deficit. The ninth part contains a brief history of how the state’s fiscal situation deteriorated

during three consecutive decades. The tenth part describes the emergency measures taken to reverse the crisis scenario, as well as the successful steps to achieving the biggest state loan in the history of the country, designated to the state's reconstruction and future development. The eleventh part analyses the new government's mid-term measures taken to reverse the 30 year deficit situation that extinguished all possible sources of financing, and demonstrates the fiscal adjustment impacts on RS primary and operational balances. Finally, the conclusion presents an overview of the present situation and future economic perspectives to guarantee the sustainability of the measures applied.

## **2. Economic Theories Approach to Provide Fiscal Sustainability**

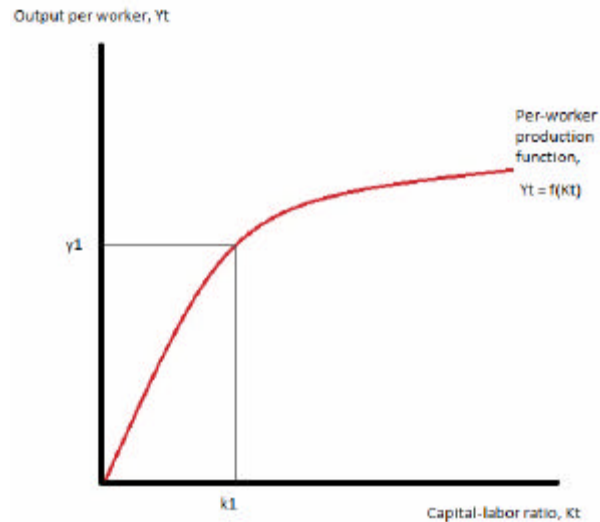
Different approaches to economic growth models helps to understand the role of fiscal policies in a country's context.

### **a. The Solow Model**

This famous neoclassical model of economic growth was developed in the late 1950s by Nobel laureate Robert Solow of MIT, and has become the basic framework for most subsequent research on growth.

The key assumption of the neoclassical Solow growth model is that capital is subject to diminishing returns. Given a fixed stock of labor, the impact on output of the last unit of capital accumulated will always be less than the one before. Assuming for simplicity no technological progress or labor force growth, diminishing returns implies that at some point the amount of new capital produced is only sufficient to make up for the amount of existing capital lost due to depreciation. At this point, because of the assumptions of no technological progress or labor force growth, the economy ceases to grow (Figure 1).

**FIGURE 1: The Per-Worker Production Function**



Source: Abel, Bernanke, Croushore, 2008

The per-worker production function ( $Y_t = f(K_t)$ ) demonstrated in Figure 1 relates the amount of output produced per worker ( $Y_t$ ), to the capital-labor ratio ( $K_t$ ). The per-worker production function slopes upward from left to right because an increase in the capital-labor ratio raises the amount of output produced per worker. The bowed shape of the production function reflects the diminishing marginal productivity of capital.

Besides clarifying how capital accumulation and economic growth are interrelated, the Solow model is useful for examining three basic questions about growth:

- i. What is the relationship between a nation's long-run standard of living and fundamental factors such as its saving rate, its population growth rate, and its rate of technical progress?
- ii. How does a nation's rate of economic growth evolve over time? Will economic growth stabilize, accelerate, or stop?
- iii. Do economic forces exist that will ultimately allow poorer countries to catch up with the richest countries in terms of living standards?

One of the most striking conclusions obtained from the Solow model is that in the absence of productivity growth, the economy reaches a steady state in the long run. A steady state is a condition in which the economy's output per worker, consumption per worker, and capital stock per worker are constant, thus creating stagnation in the Economy.

### **b. Endogenous Growth Theory**

The traditional Solow Model has proved quite useful, but it nevertheless has at least one serious shortcoming as a model of economic growth. According to the Solow model, productivity growth is the only source of long-run growth of output per capita, so a full explanation of long-run economic growth requires an explanation of productivity growth.

In response to this shortcoming of the Solow model, a new branch of growth theory, endogenous growth theory, has been developed to try to explain productivity growth – and hence the growth rate of output – endogenously, or within the model. An important implication of endogenous growth theory is that a country's long-run growth rate depends on its rate of saving and investment, not only on exogenous productivity growth (as implied by the Solow model).

Endogenous growth theorists have provided a number of reasons to explain why, for the economy as a whole, the marginal productivity of capital may not be diminishing. One explanation emphasizes the role of human capital, the economists' term for the knowledge, skills and training of individuals. As economies accumulate capital and become richer, they devote more resources to “investing in people”, through improved nutrition, schooling, health care, and on-the-job training. This investment in people increases the country's human capital, which in turn raises productivity.

Endogenous growth theory argues that, as an economy's physical capital stock increases, its human capital stock tends to increase in the same proportion. Thus, when the physical capital stock increases, each unit of physical capital effectively works with the same amount of human capital, so the marginal productivity of capital need not decrease.

A second rationalization of a constant marginal productivity of capital is based on the observation that, in a growing economy, firms have incentives to undertake research and

development (R&D) activities. These activities increase the stock of commercially valuable knowledge, including new products and production techniques. According to this R&D-focused explanation, increases in capital and output tend to generate increases in technical know-how, and the resulting productivity gains offset any tendency for the marginal productivity of capital to decline.

In summary, in comparison to the Solow model, the endogenous growth model places greater emphasis on saving, human capital formation, and R&D as sources of long-run growth.

### **c. Fiscal Policy in the Keynesian Model**

The Keynesian model was initially developed during the Great Depression as economists struggled to explain the worldwide economic collapse and find policies to help the economy return to normal. The early Keynesians stressed that fiscal policy – the government's decisions about government purchases and taxes – can significantly affect output and employment levels.

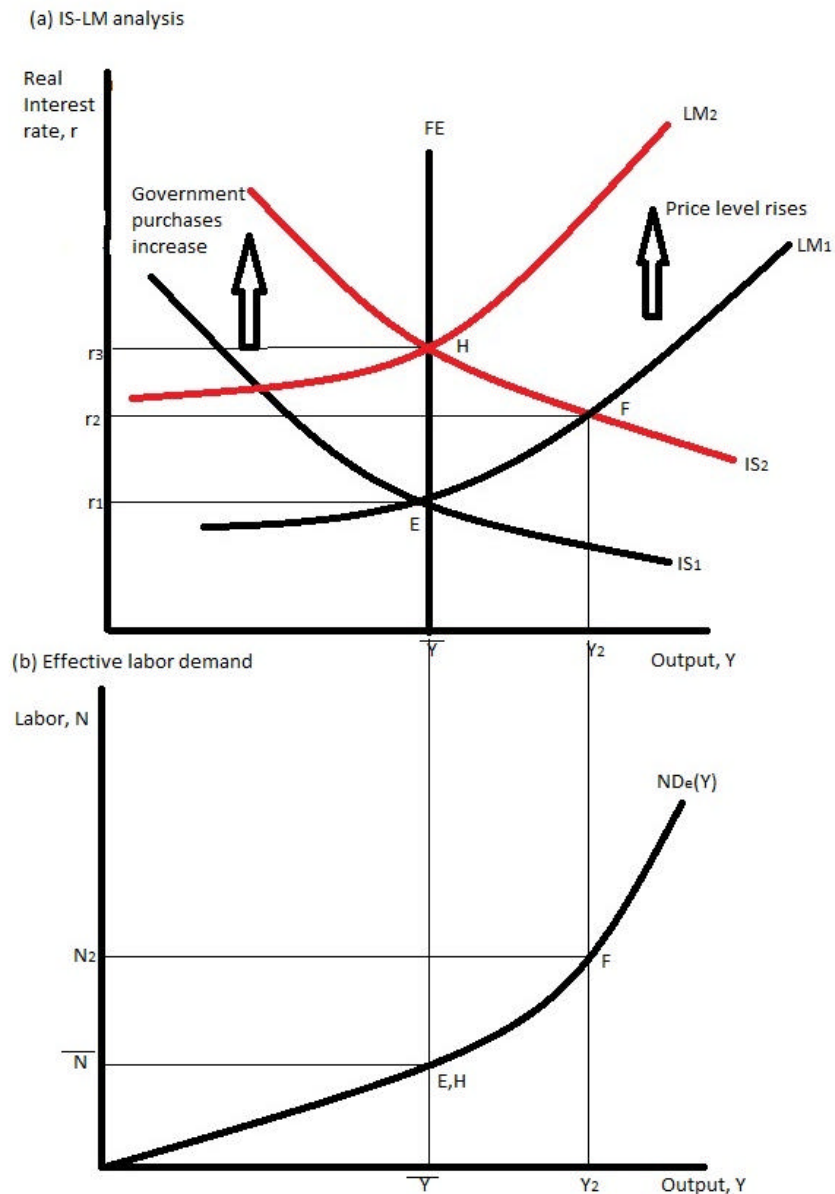
#### **i. The Effect of Increased Government Purchases**

The Keynesian analysis of how increased government purchases affect the economy is shown in FIGURE 2, considering the IS-LM model. This model is originated in two of its basic equilibrium conditions: that investment (I) must equal saving (S), and that money demanded (L) must equal money supplied (M).

It is assumed that the economy starts at full employment, represented by the vertical FE line. Point E represents the initial equilibrium in both (a) and (b). A temporary increase in government purchases increases the demand for goods and reduces desired national saving at any level of the real interest rate, so that the IS curve shifts up and to the right, from  $IS_1$  to  $IS_2$ . In the short run, before prices can adjust, the economy moves to point F (FIGURE 2), where the new IS curve,  $IS_2$ , and  $LM_1$  intersect. At F both output and interest rate have increased. Because firms meet the higher demand at the fixed price level, employment also rises, as shown by the movement from point E to point F along the effective labor demand curve (FIGURE 2(b)). A

fiscal policy change, such as this one, that shifts the IS curve up and to the right and raises output and employment is an expansionary change. Similarly, a fiscal policy change (such as a reduction in government purchases) that shifts the IS curve down and to the left and reduces output and employment is a contractionary change.

**FIGURE 2: An Increase in Government Purchases**



Source: Abel, Bernanke, Croushore, 2008



## **ii. The Effect of Lower Taxes**

Keynesians generally believe that, like an increase in government purchases, a reduction in current taxes is expansionary. That means that they expect a tax cut to shift the IS curve up and to the right, raising output and employment in the short run. Similarly, they expect a tax increase to be contractionary, shifting the IS curve down and to the left.

The only difference between the tax cut and the increase in government purchases is that, instead of raising the portion of full-employment output devoted to government purchases, a tax cut raises the portion of full-employment output devoted to consumption.

## **iii. The Classical Approach x The Keynesian Approach**

The classical version of the IS-LM model also predicts that a temporary increase in government purchases increases output, but in a different way. The classical analysis focuses on the fact that increased government purchases require higher current or future taxes to pay for the extra spending. Higher taxes make workers (who are taxpayers) effectively poorer, which induces them to supply more labor. This increase in labor supply shifts the FE line (FIGURE 2) to the right and causes output to rise in the classical model. In contrast, the FE line in the Keynesian model doesn't depend on labor supply (because of efficiency wages) and thus is unaffected by the increase in government purchases. Instead, the increase in government purchases affects output by raising aggregate demand (that is, by shifting the IS-LM intersection to the right). Output increases above its full-employment level in the short run as firms satisfy extra demand at the initial price level.

The effect of increased government purchases on output in the Keynesian model lasts only as long as needed for the price level to adjust (However, many Keynesians believe that price adjustment is sufficiently slow that this effect could be felt for several years). In the long run, when firms adjust their prices, the LM curve moves up and to the left, from LM1 to LM2 (FIGURE 2(a)), and the economy reaches general equilibrium at point H, with output again at  $Y^*$ . Thus, an increase in government purchases doesn't raise output in the long run.

### **3. Government Policies to Raise Long-Run Living Standards**

#### **a. Policies to Affect the Saving Rate**

The Solow model suggests that the rate of national saving is a principal determinant of long-run living standards. However, this conclusion doesn't necessarily mean that policymakers should try to force saving rate upward, because more saving means less consumption in the short run. Indeed, if the "invisible hand" of free markets is working well, the saving rate freely chosen by individuals should be the one that optimally balances the benefit of saving more (higher future living standards) against the cost of saving more (less present consumption).

An alternative and perhaps more direct way to increase the national saving rate is by increasing the amount that the government saves; in other words, the government should try to reduce its deficit or increase its surplus.

#### **b. Policies to Raise the Rate of Productivity Growth**

Of the factors affecting long-run living standards, the rate of productivity growth may well be the most important in that – according to the Solow model – only ongoing productivity growth can lead to continuing improvement in output and consumption per worker. Government policy can attempt to increase productivity in several ways.

- i. **Improving Infrastructure:** Some research findings suggest a significant link between productivity and the quality of a nation's infrastructure. However, not everyone agrees that more infrastructure investment is needed. For example, some critics have pointed out that the links between productivity growth and infrastructure aren't clear. If rich countries are more likely to build roads and hospitals, perhaps higher productivity growth leads to more infrastructure, rather than vice versa. Others worry that infrastructure investments by the government may involve political

considerations (such as favoring the districts of powerful members of Congress) more than promoting economic efficiency.

- ii. **Building Human Capital:** Research findings point to a strong connection between productivity growth and human capital. The government affects human capital development through educational policies, worker training or relocation programs, health programs, and in other ways. Specific programs should be examined carefully to see whether benefits exceed costs, but a case may be made for greater commitment to human capital formation as a way to boost productivity growth.
- iii. **Encouraging Research and Development:** The government also may be able to stimulate productivity growth by affecting rates of scientific and technical progress. Most economists agree with this type of policy because the benefits of scientific progress, like those of human capital development, spread throughout the economy.

#### **4. Expenditure Composition, Fiscal Adjustment, and Growth**

A large body of empirical research supports the notion that healthy budgetary balances are, over the long run, good for growth. The effect of fiscal adjustment on growth in the short run, however, remains open to question, as a number of studies have drawn the conclusion that under some circumstances, fiscal contractions can stimulate growth. A central theme in these works is that the composition of fiscal adjustment plays a key role in determining whether fiscal contractions lead to higher growth and are also sustainable over time. These studies show that improving fiscal positions through the rationalization of the government wage bill and public transfers, rather than increasing revenues and cutting public investment, can foster higher growth, even in the short run.

The International Monetary Fund – IMF Fiscal Affairs Department has published several papers analyzing issues related to Fiscal Adjustment and its impact on short and long term growth. According to Gupta, Clements, Baldacci and Granados (2002), strong budgetary positions and fiscal consolidation are generally associated with higher economic growth in both

the short and long terms. The composition of public outlays also matters: Countries where spending is concentrated on wages tend to have lower growth, while those that allocate higher shares to capital and nonwage goods and services enjoy faster output expansion. Expenditure composition, along with the size of the fiscal consolidation and initial fiscal conditions, affects the sustainability of adjustment.

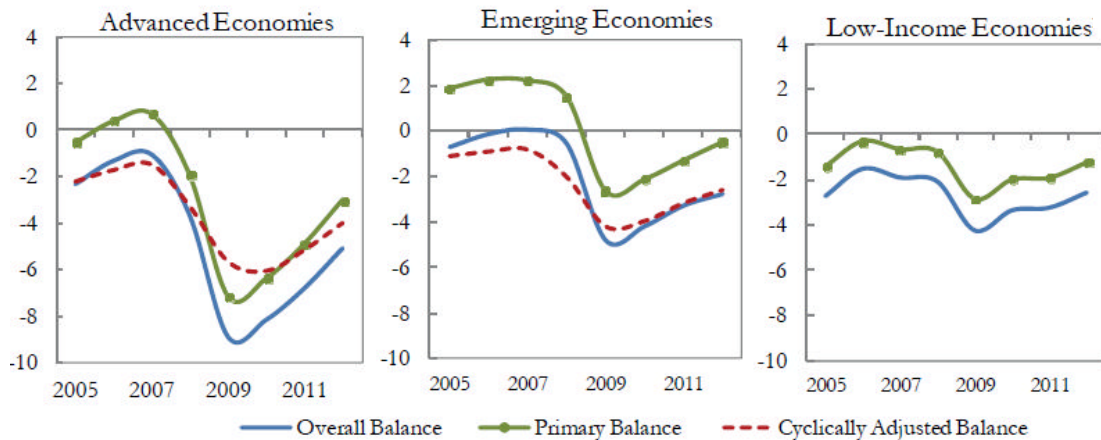
The results of their study confirm that there is a strong link between public expenditure reform and growth, as fiscal adjustments achieved through curtailing current expenditures are, in general, more conducive to growth. Fiscal consolidations tend to have the most positive effects on growth when they lead to a reduction in the domestic borrowing requirement of the government. When public investment is also protected, the positive effect of fiscal adjustment on growth is further accentuated. Fiscal adjustments that protect capital outlays are also more sustainable, that is, less likely to be aborted. The fiscal adjustment-growth nexus is also influenced by a country's initial fiscal conditions – in particular, whether a country has reached a certain degree of macroeconomic stability or not.

## **5. Global Fiscal Development Outlook and Forecasts**

According to the IMF, fiscal deficits have started declining somewhat in 2010, especially in emerging and low-income economies, where economic activity is picking up more rapidly (Fiscal Monitor, 2010). The narrowing of deficits is stronger in Latin America and in some Asian countries, reflecting faster economic recovery and policy tightening. Among the advanced economies, more diverse economic and financial conditions have translated into greater fiscal heterogeneity, with deficits declining in only about half of them (Fiscal Monitor, 2010).

Figure 3 provides an overall view of the impact of the global financial crisis started in the mid 2007 and struggle to recover, of three major economic blocs: Advanced Economies (United States, Euro Area, Japan, United Kingdom, Canada, Others), Emerging Economies (Asia, Europe, Latin America), and Low-Income Economies (IMF, 2010).

**FIGURE 3: Fiscal Balances 2005-2011 (percent of GDP)**



Source: IMF Fiscal Monitor 2010

Among the countries covered in the research, the share of those with a declining deficit reaches 60 percent. This percentage rises to nearly 70 percent among emerging markets.

## 6. An Outlook of the Brazilian Macroeconomic Current Situation

In the last decade, Brazil has recast itself as a global brand and a global power. It is home to the world's fifth-largest land mass and eighth-largest economy and is one of the top global producers of commodities such as animals, vegetables, minerals, sweet water, energy, airplanes, to name a few (Sweig, 2010).

Brazil's ascent coincides with the relative decline of U.S. influence in Latin America and the rise of new centers of power in Asia, and its aspirations are fueled by impressive social and economic gains and diplomatic accomplishments. The country can be considered developed in some aspects and still developing in others. Brazil adheres to conservative macroeconomic principles while pursuing aggressive social programs. It boasts a world-class banking and finance sector, with the third largest stock exchange in the world, but 26 percent of the

population still lives in slums. Massive infrastructure projects are under way, as the state will be home to the World Cup in 2014 and the Olympic Games in 2016.

The favorable scenario surrounding Brazil is largely based on its economic achievements and natural resources. Macroeconomic stability, inflation targeting, a floating currency, manageable and longer term debt, ample dollar reserves, rapid growth, and a climate of political stability catapulted Brazil in the global psyche from just another Latin American debtor nation to an economic powerhouse (Sweig, 2010). A broad-based agreement to invest government revenue in people on the margins has produced a rapid expansion of a domestic consumer class. Initiatives such as Bolsa Familia, a conditional cash-transfer program linked to school attendance and regular medical checkups for children; subsidized loans for housing; and an increase in minimum wage have reduced poverty by approximately 24 percent since 2003 (Sweig, 2010). Brazil is still the third most unequal country in Latin America, but almost 13 million Brazilians have escaped from poverty, and 12 million from extreme poverty, in the last eight years.

## 7. Brazilian Fiscal Indicators

Brazilian fiscal indicators show that the presence of the state in the economic context is one of the factors that hold back the country's development and growth (Netto, 2009). The country operates a highly developed country standard of tax burden/GDP (around 38% in 2009), but renders underdeveloped country standard of public service level to the population.

Table 1 brings the BRIC (Brazil, Russia, India, and China) countries, and some comparative indicators of factors that delay growth, amongst a total of 131 countries, according to the World Bank's annually report entitled "The Global Competitiveness Report".

TABLE 1: Factors that Delay Growth

	<b>Brazil</b>	<b>China</b>	<b>India</b>	<b>Russia</b>
Extension and effects of taxation	131	47	29	97
Governmental regulation	128	35	79	118
Interest rate spread	127	36	47	77
Primary education quality	123	48	88	46
Practice of hiring and firing	121	41	102	15
Average	126	41	69	71

Source: The Global Competitiveness Report 2007-2008

When analyzing the ranking above, what worries most is the fact that all indicators are directly related to government policies. As Brazil's direct competitors are ranked in the top half of the classification, Brazil is located at the bottom, and effectively last in terms of "extension and effects of taxation".

The combination between the heavy tax burden/GDP with the high inefficiency of the public sector allocates Brazil as one of the heaviest states in the world, which is one of the most important factors to delay the speed of Brazilian economic development.

On the other hand, the same World Bank Report, classifies Brazilian private sector as a highly competitive sector, as shown in Table 2.

TABLE 2: Factors that Stimulate Growth

	<b>Brazil</b>	<b>China</b>	<b>India</b>	<b>Russia</b>
Local availability of machinery and equipment	24	9	17	31
Innovative capacity	29	34	31	54
Financial market sophistication	31	91	33	88
Production process sophistication	36	81	41	79
Quality of research institutions	42	56	22	44
Average	32	54	29	59

Source: The Global Competitiveness Report 2007-2008

In terms of private firm competitiveness Brazil is well ranked together with India, when compared to its close competitors from the BRIC. The combined analysis of tables 1 and 2 indicate that, according to the World Bank's report, the state represents a significant influence on the country's development.

Brazilian's economic growth rate improvement during the last six years (4.1% between 2003-2008, against 2% between 1997-2002) was due to the combined results of state policies to

warm up the economy (such as inflation control, monetary stability, increase in external debt payments, primary result target, amongst others), combined with strong improvements in Brazil`s external situation provided by the world economy.

## 8. The Rio Grande do Sul State Macroeconomic Context in Brazil

Located at the extreme south of Brazil, Rio Grande do Sul State is the fourth largest state economy and the fifth largest in population. The state`s GDP in 2008 reached US\$ 107 billion and represents 6.4% of national GDP. Services represent 61.2 percent of state GDP, industry represents 27.5 percent, while agriculture contributes the remaining 11.3 percent. Economic activity is driven by export sectors, high-productivity agro-business, and a well developed industrial sector. Rio Grande do Sul has a population of 11 million inhabitants, representing 6 percent of the Brazilian population.

Rio Grande do Sul is a well developed state and has high socio-economic welfare standards in the Brazilian context. Per capita GDP was US\$ 9,948 in 2008 the fourth highest in Brazil and 16 times larger than the national average. Social indicators are also well above national averages. In 2009, Rio Grande do Sul`s poverty headcount rate was 17.1 percent, the fifth lowest in the country. Income inequality is also much lower than the national figures. Education and health indicators are also well above national averages (Table 3).

TABLE 3: Rio Grande do Sul and Brazil Socio-Economic Indicators

<b>Indicators (most recent figures)</b>	<b>RGS</b>	<b>BRAZIL</b>
Population (2009-million)	10.9	186.8
Area (million of Km2)	0.3	8.5
GDP (2008 - US\$ billion)	113.0	1,669
GDP per Capita (2008 - US\$ thousand)	9.9	9.1
HDI (2000)	0.814	0.766
Poverty (2007 % population)	17.1	25.6
Gini index (2005)	0.52	0.56
Life expectancy (2000 - years)	72.1	68.6
Infant mortality rate (2000 - deaths /1,000 live births)	17.0	30.6
Illiteracy (2006 - %)	5.2	10.4
Average years of education (2006)	6.7	7.1

Source: Instituto Brasileiro de Geografia e Estatística – IBGE



## 9. The Critical State's Fiscal Situation

Despite the privileged position that Rio Grande do Sul holds in the Brazilian context, economic and social developments have deteriorated since the mid 1990's. RGS's economic growth has been anemic, averaging 2.1 percent from 1994 to 2006, lower than the national economic growth of 3.1 percent in the same period. As a consequence, Rio Grande do Sul's share in national GDP has fallen from 8.9 percent in 1996 to 6.8 percent in 2007.

The state's growth has been very volatile, with large expansions followed by strong recessions. The state's economy is more volatile than the national one. While long run trends are similar, in the short run the RGS growth cycle has a variance two times larger than the national one (Table 4). The RGS economy is highly vulnerable to climate effects concerning water resources (rainfall) and exchange rate movements, which affect export-oriented agro-business and industries.

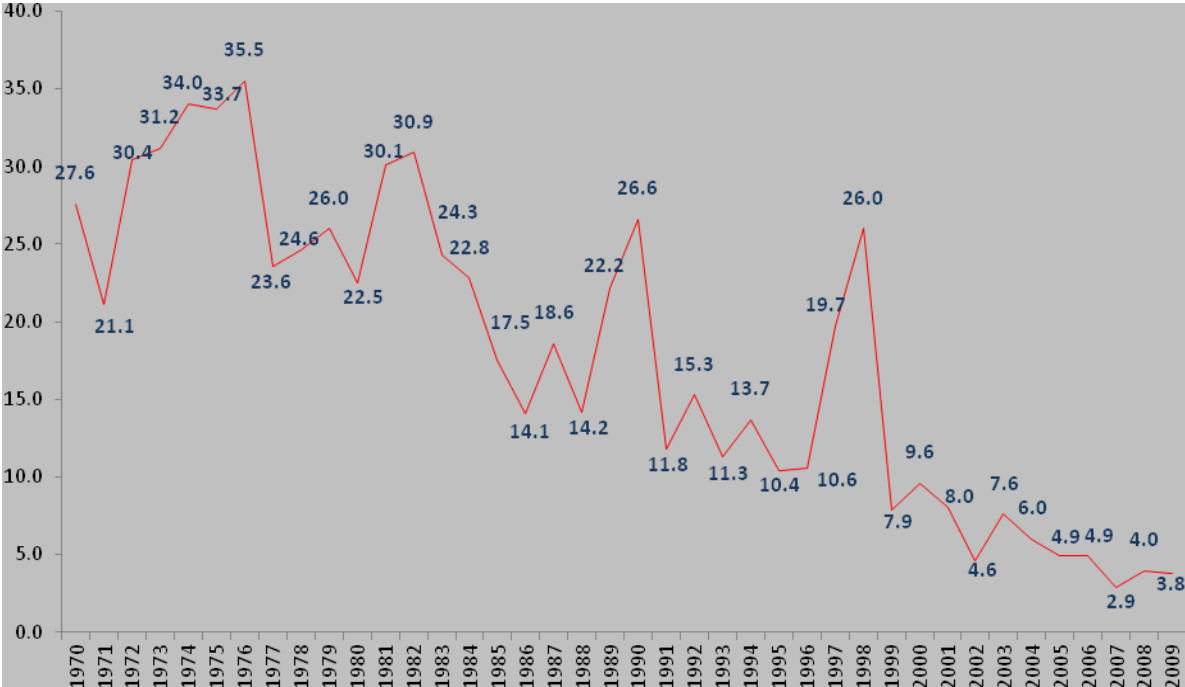
TABLE 4: RGS and Brazil GDP growth rates 1996 – 2009

	<b>RGS</b>	<b>BRAZIL</b>
1996	-0.2	2.2
1997	5.9	3.4
1998	-0.9	0.0
1999	1.4	0.3
2000	4.3	4.3
2001	2.0	1.3
2002	1.7	2.7
2003	1.6	1.1
2004	3.3	5.7
2005	-2.8	3.2
2006	4.7	4.0
2007	6.5	6.1
2008	3.9	5.1
2009	-0.8	0.2

Source: IBGE / FEE

The difficult fiscal situation is behind the recent deterioration in economic and social conditions. Chronic fiscal imbalances have reduced the investment capacity of the state government, harming growth prospects and social development. Continuous fiscal deficits from the seventies to the nineties led to a debt overhang. This, combined with increasing current expenditures (derived from high debt service payments, rising personnel expenditures, and civil service pension deficits), has squeezed the fiscal space for public infrastructure investments. Public investment fell from 30 percent of state government net current revenues in the eighties to less than 4 percent in 2009 (Figure 4).

**FIGURE 4: RS Public Investments (% of Net Current Revenues – NCR)**



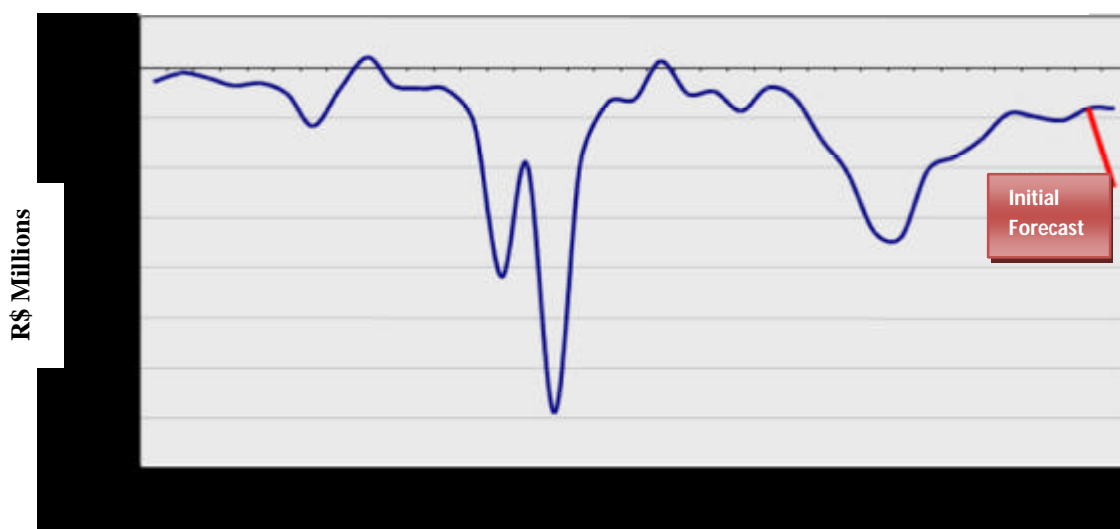
Source: RS Treasury Department

**10. A Brief History of the Crisis**

Rio Grande do Sul currently has the most difficult fiscal situation of all the 27 Brazilian state governments. The fiscal problem of Rio Grande do Sul results from its poor management of

fiscal policy. From the seventies to the nineties, the state was unable to generate positive primary balances. Despite the increasing incompatibility between expenditures and fiscal revenues, RGS used a variety of mechanisms, including debt accumulation, mandating loans from the state bank, the spending of privatization proceeds, and floating debt financing to maintain its level of expenditures. The nominal results have been negative for over three decades, as shown on Figure 5.

**FIGURE 5: RS's Nominal Results 1971 – 2007 (initial forecast)**



Source: RGS Treasury Department

Since 1998, several administrations attempted fiscal adjustments only to see their efforts interrupted towards the end of their four year terms. In most instances, adverse shocks affected state revenues and made the adjustment initiatives more difficult to follow. As the political costs of adjustment were high and the results of the initial measures were not immediate, tight fiscal stances were abandoned by state administrations. Thus, initial adjustment efforts were followed by wage increases to compensate accumulated real salary losses, expenditure expansions or tax reductions. These reversals left increasingly difficult fiscal situations for incoming administrations.

The sources of the structural and entrenched fiscal imbalances are many. They reflect poor revenue efforts, an increasing trend in personnel expenditures, a large structural deficit of

the state's social security system, the state's debt dynamics, and a rigid structure in the provision of a large array of public services.

The slow growth of the state economy, the extensive use of tax incentives to attract investment to the state, and the fact that the exports, the most dynamic sector in the state economy, are exempted from taxation (in line with national legislation), together explain the state's poor revenue performance.

On the expenditure side, the increasing trend of personnel expenditures, which account for approximately 70 percent of state current revenues, has limited the government's ability to promote a strong turnaround in the fiscal accounts of the state. The rigid structure of expenditures has exerted strong pressure on state's finances, and has severely limited the room for expenditure cuts to a small set of discretionary expenses. The increasing deficit in the civil service pension system underpins the state's inability to curb the increasing trend of current expenses. Retired personnel and their beneficiaries (survivors) represent 48 percent of all states servants, and pension benefits consume more than 45 percent of total personnel expenditures. The pension scheme for the public employees of the state of RGS has been running large deficits of above approximately 2.6 percent of GDP over the last few years, or almost 30 percent of RGS current revenue. The large deficit of the Pension System of RGS is a result of the mature nature of the system. The dependency ratio in RGS (the ratio of inactive to active workers) is 65 percent, roughly comparable to the dependency ratio of the pension scheme of the federal executive branch, and is explained by factors such as demographic differences, administrative inefficiencies, and an adverse remuneration incentive structure for specific careers (for instance, rules excessively reward early retirement for teachers).

TABLE 5: RS Macroeconomic Indicators (2006 figures)

INDICATORS	% NET CURRENT REVENUE (NCR)	NATIONAL RANK
Total Wages	67.5	1 <sup>st</sup>
Retirees and Pensioners	31.5	1 <sup>st</sup>
Investments	4.7	27 <sup>th</sup>
Debt Service	12.5	7 <sup>th</sup>
Current Expenses	24.0	18 <sup>th</sup>
Fiscal Result	-6.4	27 <sup>th</sup>
Primary Result	2.2	20 <sup>th</sup>
Financial Liability	61.0	1 <sup>st</sup>
Total Liability	318.0	2 <sup>nd</sup>

Source: Secretaria do Tesouro Nacional – STN - Balanços dos Estados

Other factors leading to increased pressure on expenditures are the growth of the public sector and inefficiencies. The state provides a large array of services and faces growing demand for expanding the network of services. The state has a total of 76 entities, among them 17 ministries (secretaries), 20 foundations, 7 state enterprises, 12 central agencies, 15 joint societies, and another few independent agencies. Most of these are governed by different management and budgetary systems which have become quite unwieldy. This structure, combined with a deficient human resource management system and protective legislation that obstructs labor flexibility, explains much of the increasing pressures on expenditure.

Fiscal pressure also arises from very unfavorable debt dynamics. The state has some costly debt, high debt service obligations and an uneven profile of debt payments. In particular, the state debt profile presents an accumulation of debt service obligations that increases the scale and difficulty of fiscal adjustment. The consolidated debt of Rio Grande do Sul was US\$ 20 billion in December 2007, equal to 254 percent of its net current revenues. Most of the RGS debt (88 percent) is held by the Federal Government, while other domestic debt accounts for 4 percent of the total, the judiciary debt 5 percent, and external debt 3 percent.

## **11. Emergency Measures Taken by the Actual Government to Reverse the Crisis**

Shortly after taking office in January 2007, the newly elected administration introduced emergency measures to reduce the projected deficit for the current year. The package included initiatives to reduce discretionary expenses and increase state tax revenues. On the expenditure side, the government eliminated 20 percent of the commissioned positions; restructured the Executive branch (reducing from 76 entities to 69); issued a decree imposing expenditure ceilings for all the state secretariats and indirect administration entities; mandated a linear cut of about 30 percent in the operating cost of all the state secretariats; and implemented a reduction in planned investment by more than 50 percent.

On the revenue side, government actions were geared toward increasing tax collection efficiency and obtaining quick revenue increases. It introduced new managerial tools to reduce tax evasion (a matrix management model) and embarked on a revision of the system of tax credit devolution to exporters. The state was a pioneer in the implementation of the electronic fiscal receipts, in order to avoid tax evasion in interstate trade (RGS accounted for 60 percent of all fiscal receipts issued electronically in Brazil in 2007).

Regarding the state's public debt, the state authorities entered in negotiation with the National Treasury Secretariat (STN) regarding a potential debt restructuring operation to smooth the very uneven debt profile. As a result of the negotiations, the state approached the World Bank for a US\$ 1,1 billion loan for debt restructuring.

In order to deal with deficits of the civil pension system, the government created a pension fund for new civil servants. Using half of the proceeds from the initial public offering for the state bank (Banrisul, which raised a total of about US\$ 1.2 billion in July 2007), with the approval of the State Assembly to place these proceeds into a complementary pension fund for new civil servants entering the state public sector after 2003. The new servants will be under a new system, which places a ceiling on the state's contributions and benefits. This new arrangement will generate future savings as the complementary fund will be financed by personal contributions in excess of the public ceiling.

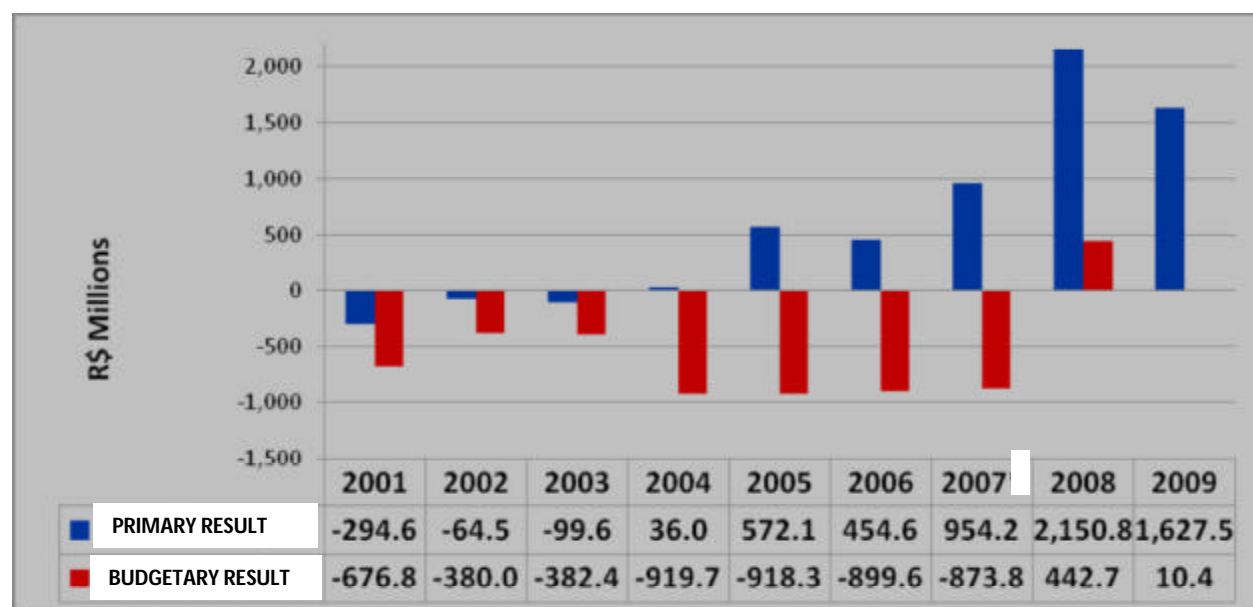
## **12. The New Government's Medium Term Program**

Upon taking office in early 2007, the new administration moved quickly to deal with the fiscal situation of the state. The Government concentrated its efforts on two priorities: (a) the implementation of a strong emergency fiscal adjustment in the short run; and (b) a process of reorganizing and modernizing the state's public administration system. A Multi-Year Plan was developed, designed to: attain economic growth rates above the national average; attract new investment to diversify the state's economy; promote technological innovation; reestablish RGS's leadership position in national education; improve public security; strengthen the health care system; and rationalize the management of water resources.

At the core of the program is a public sector reform agenda. The pillars of this initiative are: (a) the identification of priority (or strategic) programs, managed through results based agreements; (b) the transfer of the provision of non-essential public services to outside partners; (c) the establishment of management contracts for the state enterprises; and (d) an overhaul of the human resource administration system. All of these policies, along with the reform of the social security system, are designed to contribute to the fiscal adjustment and improve the efficiency of the public sector, through the establishment of modern management practices and a capable civil service operating under aligned incentives.

Measures taken by the new government both on the revenue and expenditure sides showed direct impact on the primary and fiscal results, as shown on Figure 6.

**FIGURE 6: Fiscal Adjustment Results**



Source: RS Treasury Department

The effectiveness of the fiscal adjustment measures can be noticed by a reversal of a negative budgetary result tendency that had been impacting negatively the state's public finance accounts since the 1970's and achieved the lowest level in the year of 2004, as shown above in Figure 6.

### 13. Conclusion

There is consensus in the literature on the definition of fiscal sustainability. The concept refers to the future implications of current fiscal policies and, more precisely, to the question of whether the government can continue to pursue its set of budgetary policies without endangering its solvency. A fiscal policy stance can be thought of as unsustainable if over time it leads the government away from solvency. However, solvency is only a necessary condition for fiscal sustainability: it requires that debt be fully repaid at some point in the future, even though present policies may not satisfy the government's intertemporal budget constraint. Even in the case of a country running large fiscal deficits and expected to do so for many years, solvency can be formally reinstated by assuming that very large budgetary corrections will take place some



time in the distant future, without specifying the technical and political economy considerations that would make those adjustments feasible (Croce, Ramon, 2003).

Aiming to achieve fiscal sustainability, the government of the state of Rio Grande do Sul has gone through an impressive fiscal adjustment in the past few years, with significant reduction in expenditures, combined with healthy increases in revenue collection. As a result, the state government presented better figures than usual for its primary balances. Medium-term impacts of the adjustment measures developed by the state in conjunction with the US\$ 1 billion World Bank loan to refinance its public debt are expected to be quite positive and sustainable.

Sensitivity analysis shows that this predicted positive trend depends on continued improvements in the efficiency of tax revenue collection and perseverance in the tight control of current expenditures. Positive prospects also depend on economic growth exceeding population growth, a reasonable hypothesis.

Risk analysis shows that the most important underlying source of vulnerability is the state's high level of indebtedness. High debt service will continue to exert pressure on public finances. The exchange rate constitutes another risk factor for debt sustainability despite the fact that only less than 3 percent of the state's debt stock is indexed but because more than 90% of the state's debt is indexed to the General Price Index (IGP) which is very sensitive to changes in the exchange rate.

Government discontinuity to the adjustment efforts, together with poor revenue performances, high rigidity of current expenditures, and especially difficult debt dynamics represent considerable barriers to fiscal reform. Meanwhile, investment has been cut back drastically, and discontinuous austerity threatens to create additional problems for an already troubled regional economy.

The challenge to turn this situation around is at the core of the actual government's program for fiscal adjustment and reform. Projections for the period 2011-2020 depict a favorable evolution of the main fiscal and financial indicators as the reforms are being implemented as planned. The continuity of responsible fiscal behavior initiated in 2007, in addition to the reforms on the pension system should guarantee the debt sustainability, and either

curtail overall spending, or adjust the expenditure mix. Thus, assuring the growth course and recovering the capacity to invest, providing higher standards of life to the state`s population.

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