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**Growth
acceleration in
Brazil: obstacles
and knowledge
gaps**

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INTRODUCTION

The main challenge facing the administration that took office in January 2003 was to control the process of inflation acceleration started in mid-2002, in the wake of the exchange rate devaluation. By raising the primary fiscal surplus, tightening monetary policy and keeping a floating exchange rate, as well as publicly abandoning a number of previously held positions, the government was able to appease investors, strengthen the real and bring inflation down. It was helped in that endeavor by an acceleration in world economic growth and the increase in export prices, which boosted export earnings and allowed for a rise in the current account surplus, brushing aside any concerns about a possible default on Brazil's external debt.

Two noteworthy improvements in Brazil's macroeconomic policy and indicators would follow. One was the acceptance of fiscal discipline as an essential, non-partisan feature of good public governance. A similar process took place with regard to monetary policy, with the Central Bank operating in practice with significant autonomy in 2003-06. The other was the improvement in Brazil's external solvency indicators, with a major decline in its net external debt, notably that of the public sector, and a large increase in trade flows. Together with the redemption of almost all the dollar-indexed domestic public debt, this greatly increased the country's, and in particular the public sector's, resilience to external shocks. This resulted, in turn, in a substantial decline in sovereign spreads, which have hovered around a record low 224 basis points in the second semester of 2006.¹

These developments seem to back the relatively benign scenario that the market forecasts for the domestic economy in 2007-10. Inflation, which is down this year to an estimated 3.2%, is projected to stay around 4.1% till the end of the decade. Interest rates are expected to decline, with the nominal SELIC falling to 12.4% in 2007 and 10.5% in 2010. This, in turn, would lower interest payments on the public debt, allowing for the debt to GDP ratio to slide down to 43.4% in 2010. Export growth is expected to decelerate, but the average trade surplus is projected at a hefty US\$ 33 billion in this period, with only a small nominal exchange rate devaluation, which in turn would work as an auxiliary nominal anchor.

Substantial gains were also accomplished regarding income distribution. Between 2001 and 2004 the Gini coefficient for per capita household income fell 4%, from 0.593 to 0.569, reaching its lowest level in thirty years (IPEA, 2006). Five million Brazilians were lifted out of extreme poverty, with the mean income of the lowest income decile expanding 7% p. a., compared to an annual decline of 1% for the national average. The mean income of the lowest income quintile increased twenty percentage points more than that of the highest quintile. The reduction in wage earnings inequality explains half the decline in the Gini coefficient, while transfers programs through the Social Security and "Bolsa Familia" accounted for about a third of the decline. Indications from surveys in the main metropolitan areas suggest that income inequality continued to fall in 2005-06, albeit at a slower pace.

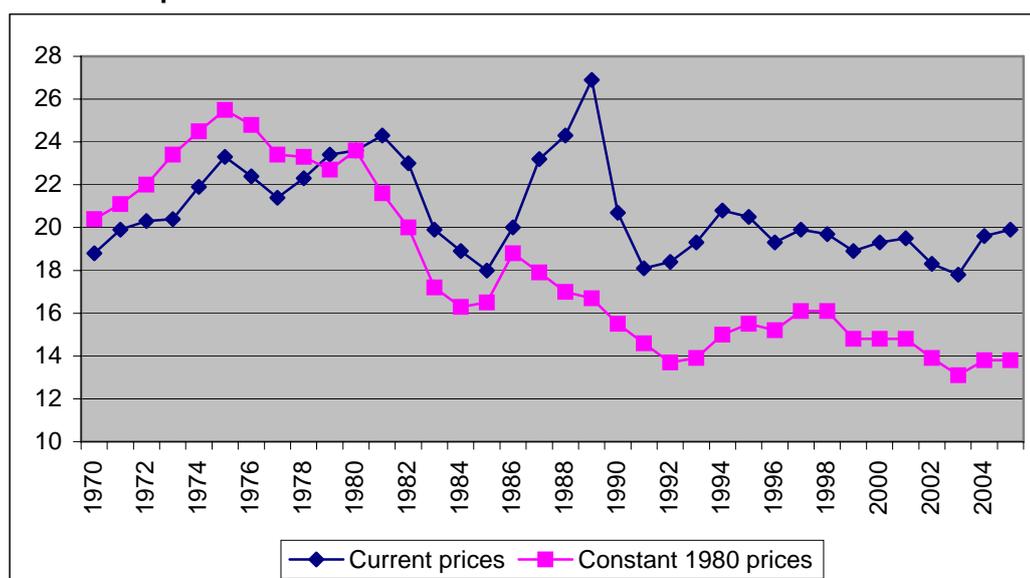
¹ Measured by J. P. Morgan's EMBI+.

Little was accomplished, though, with regards to growth acceleration. In 2003-06 GDP will expand an estimated 2.6% per year, only slightly above the average 2.3% annual rise in 1995-2002. This compares unfavorably with both the performance of other developing countries, including those in Latin America, and the acceleration in world's GDP growth between these two periods. According to the IMF, the GDP of developing countries expanded 7.3% in 2003-06, against 4.9% in 1995-2002; in the LAC region, the corresponding figures were 4.3% and 2.2%. To some extent, this poor growth record also represents a break with historical patterns: for most of last century the rhythm at which the Brazilian economy expanded was largely influenced by external conditions, notably by its ability to meet its external financing needs. It is remarkable, thus, that Brazil has grown so little in a world of abundant liquidity and favorable terms of trade. Last, but not least, this poor growth record also suggests that the structural reforms implemented in the 1990s, including price stabilization, had only a limited impact on potential GDP growth.

In recent years a relative consensus has emerged regarding why Brazil's growth potential has remained relatively stable despite its enthusiastic adherence to structural reforms (Lora, 2001) and its improved macro and external solvency indicators (Pineiro and Giambiagi, 2006; CNI, 2006; FIESP-IEDI, 2006). This consensus highlights that reforms succeeded in accelerating TFP growth, which had actually been negative in 1981-93, but not in stepping up the pace of capital accumulation (Pineiro, Gill, Servén and Thomas, 2005). In particular, the low rate of investment is seen as Brazil's main obstacle to faster growth (Souza Júnior, 2005). This consensual diagnosis also stresses the country's low level of human capital and the fact that, despite recent improvements, it is expanding more slowly than in Brazil's main competitors in world markets (Ferreira and Veloso, 2006; Pessôa, 2006). It further notes that given Brazil's low savings rate, and the difficulty to bring it up to East Asian levels, rapid economic growth may require a further acceleration in TFP growth (McKinsey, 1998).

There is considerable agreement that growth acceleration will require increasing Brazil's investment rate, but the poor quality of investment statistics make it difficult to estimate by how much. Graph 1 portrays the evolution of the investment rate in current and 1980 prices. The two series tell different stories in recent years. Both indicate that investment went up in the early 1970s and declined in the early 1980s. But in current prices the investment rate recovered and peaked in the second half of the 1980s, came down in the early 1990s and has fluctuated since then in the range of 18% to 20% of GDP. In constant 1980s prices, though, the investment rate fell almost steadily until the early 1990s, recovered somewhat with the Real Plan and the structural reforms, but declined again after 1998, stabilizing in recent years around 14% of GDP.

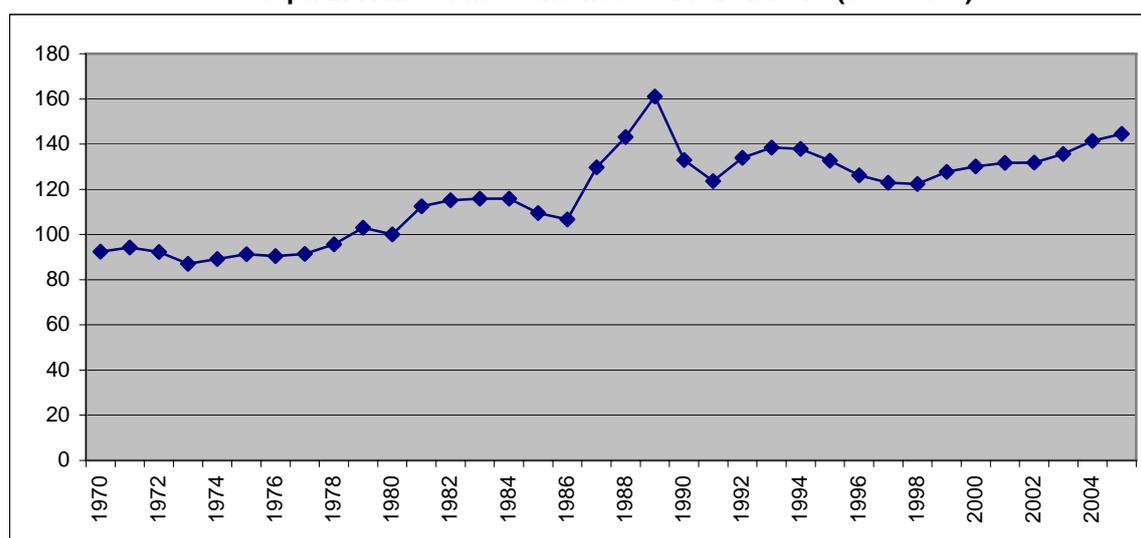
Graph 1: Rate of Investment in Current and Constant 1980 Prices



Source: IBGE.

One way to read these results is that despite the stability in the savings rate (equal to the investment rate in current prices), the rate of capital accumulation declined steadily as a result of a significant rise in the relative price of investment. Graph 2 confirms that this change in relative prices was not small, while Graph 3 shows that it reflected a rise in the costs of both construction and capital goods. This increase took place after two decades of relative stability (since the mid-1960s) and evolved in three stages: an initial rise in the first half of the eighties, a jump after the Cruzado Plan, and a return to relative stability, in a higher threshold, during the nineties.

Graph 2: Ratio of Investment to GDP Deflators (1980=100)

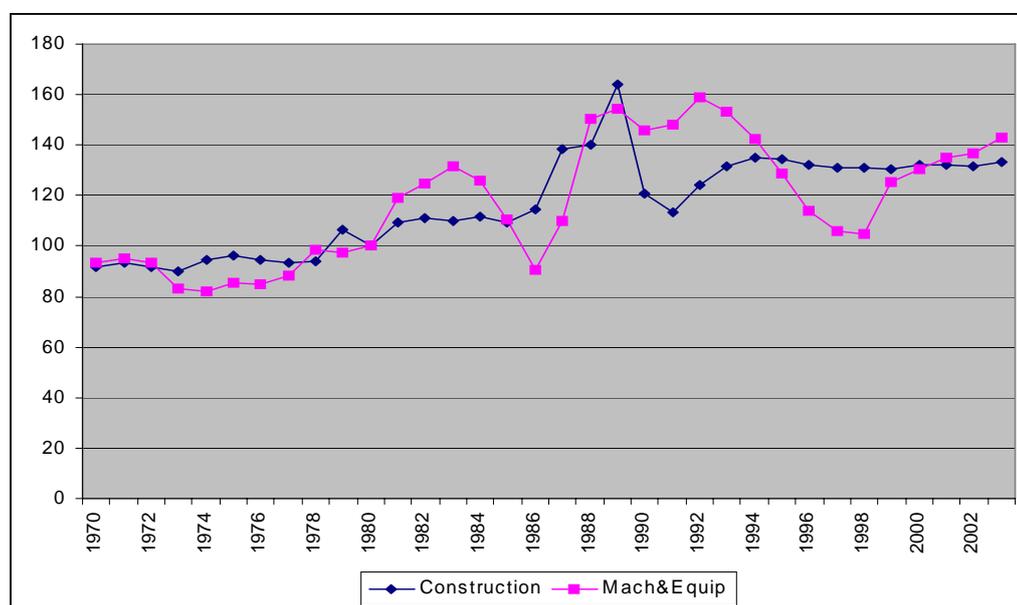


Source: IBGE.

The increase in the price of investment coincided with the acceleration of inflation, starting in the late seventies, and it is possible that the two are connected. But the results for the post Real Plan period show that the lowering of inflation has not brought the price of investment down. Trade liberalization and the appreciation of the real from 1994 to 1998 reduced the relative price of capital goods, but after

the floating of the real in 1999 this price went up again. In particular, note that despite the substantial appreciation of the real in 2003-05, the relative cost of investment rose by 10% in this period.

Graph 3: Ratio of Construction and Machinery & Equipment Deflators to GDP Deflator – 1970-2003 (1980=100)



Source: IBGE.

This change in relative prices is not easy to explain, especially because it contrasts with the stability in the relative price of investment goods worldwide (Bacha and Bonelli, 2005). There is not tested explanation of why this happened, but three possibilities are:

- The contraction in credit, which led to a decline in productivity due to lower scales of (investment) production and longer completion periods, which means greater capital immobilization. Notably in housing construction, which accounts for a third of total investment, this has been an important factor contributing to lower productivity and raising the cost of investment (McKinsey, 1998). Low-income households and small firms were more likely affected.
- Trade barriers in the capital goods sector and market power in sectors such as cement and steel contribute to raise investment costs. In particular, the rise in imports' taxation, with the levying of the PIS/COFINS taxes, may partly explain the recent increase in the relative price of investment goods.
- The increase in the tax burden, from which more formal companies producing capital goods and inputs to civil construction would find hard to evade. This seems to the Government's preferred explanation, as suggested by its focus on reducing taxation on the civil construction and capital goods sectors as the main instrument to raise the investment rate and accelerate GDP growth.

- Measurement errors due to improper reporting of price increases, notably in the high-inflation period. Because the rate of investment in current prices – and, thus, the savings rate – is derived from that in constant prices, by multiplying by the corresponding rise in prices, if this is a relevant explanation, then the actual savings rate did not stay as stable as suggested in Graph 1, but actually declined, possibly substantially. In this case, accelerating growth would require a dramatic increase in national savings.

Three main factors explain the low rates of physical and human capital accumulation, as well as why TFP is not climbing faster: an incomplete and low-quality fiscal adjustment, the low efficiency of public spending, and an unfavorable investment and business climate.

The main metric used to gauge the improvement in Brazil's fiscal accounts has been the maintenance of a primary surplus large enough to stabilize the public debt / GDP ratio. But after eight years consistently meeting the primary surplus targets, Brazil's fiscal adjustment process is far from complete. For one, because the public debt remains very high. In countries graded by S&P in the same risk level as Brazil, the mean net public debt to GDP ratio for the general government is 34%, against 49% in Brazil. Countries classified as BBB, the minimum required to be investment grade, have a ratio of 27% (Schineller, 2006). For another, because the real interest rate paid by the government remains very high, demanding a large primary surplus in order for the debt/GDP ratio not to enter into an explosive path. This introduces a high political risk into any medium-term scenario for the economy: the primary surplus is generated yearly based on the micro-management of different demands for higher spending, a task that can only be performed with continuous backing from the President. The fiscal adjustment will not be completed until the debt/GDP ratio falls to a level around 30% of GDP, which in turn would allow for a substantial and sustained decline in interest rates.

The poor quality of the fiscal adjustment hinges on its dependence on a rising tax burden, from a relatively stable 25% of GDP in 1968-93 to over 37 percent of GDP in 2005, and possibly more in 2006 (Graph 4).² At this level, Brazil's tax burden is similar to that of Germany and the UK, surpasses that of the US and Japan, which hover around 30 percent of GDP, and is well above those of Chile and Korea, which are around 20 percent of GDP.³ Ferreira and Nascimento (2006) estimate that this rise in taxes substantially increased the capital tax rate, reducing incentives to invest, and lowered annual GDP growth by about 1.5 percentage point.⁴

The increase in the tax burden exceeded by far the necessary to meet the primary surplus target of 4.25% of GDP. Thus, it also financed a major expansion in public primary spending, which rose continuously as a proportion of GDP in the last fifteen years, by almost 10 percent of GDP from 1991 to 2006 (Table 1). This higher spending did not fall, though, on the kind of items that boost growth, being mostly explained by the 6% of GDP rise in pension payments. Indeed, public sector investment

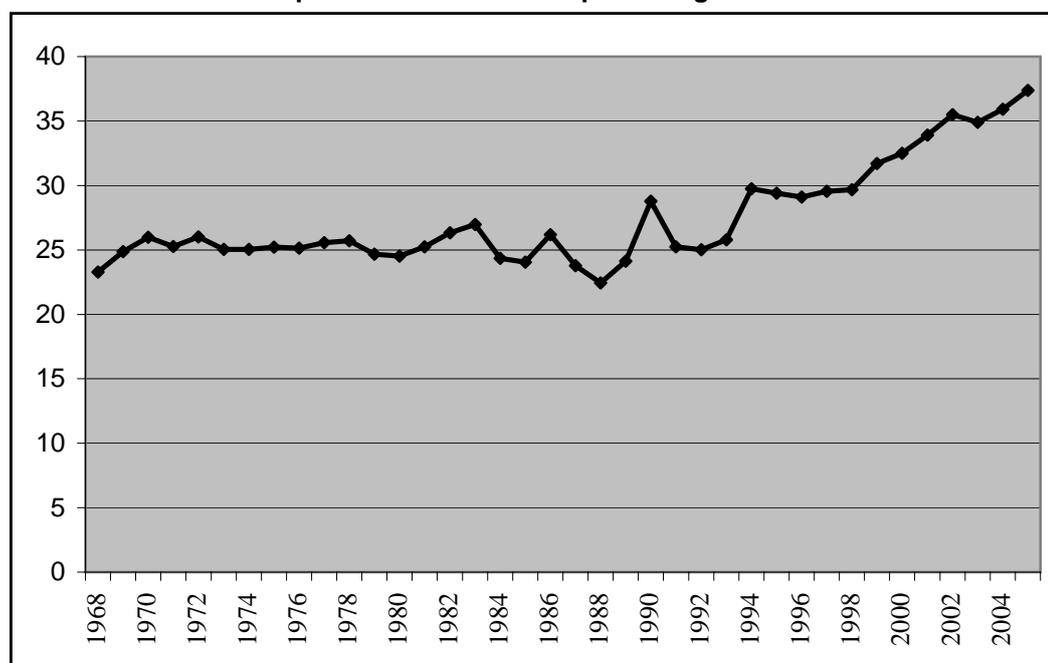
² Another problem is pro-cyclical nature of fiscal policy, due to the earmarking of revenues to specific expenditure items, notably health and education.

³ Data from Khair (2003).

⁴ Using a modified production function with private and public capital as inputs, Blanco and Herrera (2006) obtain large elasticities of output with respect to capital stocks and, in the long run, a negative impact of taxation and public consumption and transfers on GDP.

has fallen almost continuously in this period, with negative consequences for the quality of Brazil's infrastructure. Considering the three levels of government, public investment fell some 0.8% of GDP between the 1990s and the 2000-04 period; compared to the 1970s, the contraction scales up to 1.7% of GDP. Ferreira and Nascimento (2006) estimate that this decline in public investment has annual GDP growth by about 0.4 percentage point.

Graph 4: Tax Burden as a percentage of GDP



Sources: IPEADATA and SRF/MinFaz.

Table 1: Breakdown of General Government Primary Spending, 1991-2006

	1991	1994	1998	2002	2006 (estimate)
Total primary expenses	13.7	16.5	19.5	21.6	23.2
Transfers to states and municipalities	2.7	2.6	3.0	4.2	4.3
INSS (private sector social security)	3.4	4.9	5.8	6.5	7.8
Personnel	3.8	5.1	5.0	5.5	5.0
Of which pensions	0.9	2.0	2.4	2.5	n.a.
Other current and capital expenses	3.9	4.0	5.7	5.4	6.1
Of which investment	1.2	1.1	0.9	0.8	0.7

Sources: Giambiagi (2006 a,b).

Investment by state-owned companies other than Petrobras also dropped down (Afonso, 2005; Pinheiro and Giambiagi, 2006). Calderón and Servén (2003) estimate that the slower accumulation of infrastructure in Brazil vis-à-vis the East Asian average accounted for 35% of the increase in GDP per worker compared to that region. In another study (Calderón and Servén, 2004), they estimate that if the stocks and quality of Brazilian infrastructure would rise to the level of Costa Rica, the country with

best infrastructure in Latin America, its annual GDP growth rate would rise by 2.9 percentage points. Income distribution would also improve substantially.

Most analysts concur that growth acceleration would require a decline in public current spending, to allow for a combination of lower taxes, more public investment, and a larger primary surplus, so as to foster a quicker decline in the debt / GDP ratio. Table 1 suggests that reforming the social security system would be the most effective way to accomplish this (Giambiagi, 2006b). Brazil spends with its social security system roughly the same as a percentage of GDP as the UK and Spain, more than Japan and the US, and about six times as much as Korea. And Brazil has a much younger population. This means that if the rules do not change, social security spending will continue to expand as the population ages. Yet, neither social security nor other current spending reforms count with political support.

Despite its relatively poor social indicators,⁵ Brazil spends significant amounts of resources in these sectors. In 2004 public social spending amounted to 23.5% of GDP, not much lower than the average 26.2% recorded for the OECD. In the US the public sector spends 20% of GDP with the social sector, in Korea only 11%. It seems, thus, that Brazil is not extracting enough from the public resources allocated to the social sectors. To some extent this stems from the high cost of the social security system, but last year the three levels of government also spent 4.6% of GDP with education and 4.8% with health, against respectively 5.0% and 5.9% of GDP in OECD countries. These figures suggest that although Brazil badly needs to raise its human capital, there is little scope to raise public expenditures with health and education, notably if one considers the need to reduce the tax burden, and that in the absence of reforms health and pension expenditures should rise, as the population continues to age. It is therefore necessary to devise new means to improve the efficiency of this spending or to shift some of the responsibilities to the private sector. The attached summary terms of reference discuss two policy initiatives that may raise the efficiency of public spending in health and education:⁶

- a) Improve the incentives faced by public service providers, linking their remuneration to performance, while at the same time giving them greater operational flexibility. Some state and municipal governments have been using these schemes on a small scale.
- b) Expand the reliance on public-private partnerships (PPPs) in the social sector, in which schools and hospitals are financed by the public sector but operated by private providers.

More public investment in infrastructure, a lower tax burden, and a healthier and better educated labor force would encourage private investment, which accounts for some 90% of total investment in Brazil. Lower taxes would also go a long way to reduce informality, which has been a major drag on productivity growth and human capital accumulation (McKinsey, 2004). Informal companies operate at

⁵ According to Oliveira and Schwartzman (2002, p. 25), as quoted by Pessôa (2006): "Os resultados do SAEB indicam que o concluinte médio da 8ª série domina os conteúdos esperados de um aluno da 4ª série, e o concluinte médio da 4ª série mal sabe decodificar as palavras que lê. Ambos são incapazes de ler e compreender uma notícia de jornal, por exemplo. Conseqüentemente, a esmagadora maioria dos concluintes da 8ª série não possui condição acadêmica para cursar escolas de ensino médio com proveito".

⁶ Another alternative would be to charge students for some of the cost of higher education, which has a very high private return, consumes a significant part of the education sector budget and mostly subsidizes the better-off families. But initiatives in this direction are unpopular and disfavored by the government.

sub-optimal scales and capital intensity, causing both labor and total factor productivity to be low. These companies usually derive their competitiveness from not paying taxes and respecting costly public regulations, which means that they hinder the expansion of more productive and efficient companies, while keeping human, management and capital resources locked into inefficient methods of production. Even efficient informal firms tend not to expand to avoid calling attention from tax authorities. Informality is also associated with a high labor turnover ratio, which discourages firms to invest in training, an important means of human capital accumulation.

Other features of the Brazilian economy also contribute to create an unfavorable investment and business climate. One of these is the many and often inefficient regulations which formal firms have to abide to. Table 2 highlights several areas in which reforms could produce an environment more favorable to investment and productivity growth:⁷

- The number of procedures that entrepreneurs need to go through to start a firm, and the time it takes, are still very large. A similar conclusion follows concerning the operation licenses and, to some extent, registering property.
- Brazil needs a labor reform that allows for greater flexibility in labor contracts and reduces hiring costs.
- There is an absurd bureaucracy involved in paying taxes. This is perceived to be an important reason why small firms remain informal. Congressional approval of the new “Lei Geral das Micro e Pequenas Empresas” should improve matters in this area in the next years.

Three other areas also deserve attention from policy makers. One concerns the establishment of a more innovation-friendly environment for the private sector (OECD, 2006). Brazil spends about 1% of GDP on R&D, less than half the OECD average, only a third of which is done by the industrial sector, with most of the rest being carried out by public organizations and universities. It also performs poorly according to indicators such as the number of patents filed in Europe and the US. As suggested by the OECD, Brazil could benefit from an economic policy that fosters “productivity-enhancing innovation in the business sector”.⁸

⁷ IFC (2006) reveals significant differences across Brazilian states in several of these indicators. In particular, São Paulo was found to have the third worst business climate of the thirteen states studied.

⁸ The OECD estimates that “Brazil’s R&D intensity in the business sector would have to rise by a factor of four merely to reach the OECD average of about 1.6% of GDP illustrates the scope for action in this area.”

Table 2: Compared Doing Business Indicators for Brazil (2006)

		Brazil	Region	OECD
Starting a Business	Procedures (number)	17	10.2	6.2
	Time (days)	152	73.3	16.6
	Cost (% of income per capita)	9.9	48.1	5.3
	Min. capital (% of income per capita)	0.0	18.1	36.1
Dealing with Licenses	Procedures (number)	19	15.4	14.0
	Time (days)	460	198.7	149.5
	Cost (% of income per capita)	179.9	246.2	72.0
Employing Workers	Difficulty of Hiring Index	67	34.0	27.0
	Rigidity of Hours Index	60	34.8	45.2
	Difficulty of Firing Index	0	26.5	27.4
	Rigidity of Employment Index	42	31.7	33.3
	Hiring cost (% of salary)	37.3	12.5	21.4
	Firing costs (weeks of wages)	36.8	59.0	31.3
Registering Property	Procedures (number)	14	6.6	4.7
	Time (days)	47	77.4	31.8
	Cost (% of property value)	4.0	6.0	4.3
Getting Credit	Legal Rights Index	2	4.5	6.3
	Credit Information Index	5	3.4	5.0
	Public registry coverage (% adults)	9.2	7.0	8.4
	Private bureau coverage (% adults)	43.0	27.9	60.8
Protecting Investors	Disclosure Index	5	4.3	6.3
	Director Liability Index	7	5.1	5.0
	Shareholder Suits Index	4	5.8	6.6
	Investor Protection Index	5.3	5.1	6.0
Paying Taxes	Payments (number)	23	41.3	15.3
	Time (hours)	2,600	430.5	202.9
	Total tax rate (% profit)	71.7	49.1	47.8
Trading Across Borders	Documents for export (number)	7	7.3	4.8
	Time for export (days)	18	22.2	10.5
	Cost to export (US\$ per container)	895	1,068	811
	Documents for import (number)	6	9.5	5.9
	Time for import (days)	24	27.9	12.2
	Cost to import (US\$ per container)	1,145	1,226	883
Enforcing Contracts (Determined by following the evolution of a legal payment dispute)	Procedures (number)	42	39.3	22.2
	Time (days)	616	641.9	351.2
	Cost (% of debt)	15.5	23.4	11.2
Closing a Business (time and cost required to resolve bankruptcies)	Time (years)	4.0	2.6	1.4
	Cost (% of estate)	12.0	13.6	7.1
	Recovery rate (cents on the dollar)	12.1	25.7	74.0

Source: Doing Business 2006, World Bank.

Another area is the regulation and finance of private infrastructure projects (Fay and Morrison, 2005). Substantial growth acceleration will require Brazil to raise infrastructure investment by some 2% to 3%

of GDP.⁹ The public sector will have to account directly or through PPPs for some of this increment, but ideally not for all of it. But incomplete and unstable regulatory models, the weakening of regulatory agencies, the increasing judicialization of public policy in this area, and cumbersome and uncertain environmental regulation have discouraged private investment in infrastructure. The latter has also been an important impediment to public infrastructure investment. In particular, the political discourse against privatization weakens the possibility of cost recovery in infrastructure. In 2003-06 the government bet on the PPPs as the means to foster infrastructure investment, but the failure to provide sufficiently good payment guarantees and the aforementioned regulatory problems precluded any actual PPP to be initiated.¹⁰

Regulatory uncertainty is only one manifestation of the climate of legal and juridical uncertainty that discourages investment and productivity growth in Brazil. Cross-country indicators for rule of law show that Brazil is below the world median and has a gap in this area even after controlling for its per capita income level (Kaufmann, Kraay and Mastruzzi, 2005).¹¹ Moreover, a surprisingly large proportion of Brazilian managers distrust the courts to protect contractual and property rights (Table 3). This source of uncertainty is particularly harmful to sectors such as finance and infrastructure.

Table 3: Confidence in Courts

	Share of managers who do not agree with the statement: "I am confident that the judicial system will enforce my contractual and property rights in business disputes."
Brazil	39.6
China	17.5
India	29.4
Russia	63.9
Turkey	28.5

Source: World Development Indicators, 2006.

A third area is trade policy. There is a perception that Brazil needs to further open its economy, which remains as one of the world's most closed ones, as measured by the ratio of imports to GDP. Ideally, tariff reductions in the industrial sector would be exchanged for greater market access in agriculture, but negotiations in the WTO and the FTAA have stalled and the outlook is not bright in either forum. So Brazil should consider a unilateral reduction in trade protection, as announced recently by Mexico.

⁹ There are no estimates in the literature reviewed for this note for Brazil's aggregate investment requirements in infrastructure, thus this is a ballpark figure based on historical figures. Fay and Morrison (2005) estimate that Brazil would need to invest some 6% to 8% of GDP in infrastructure so that in twenty years it would have the same level of infrastructure of present day Korea.

¹⁰ Apparently, the first PPP will be started soon in São Paulo, sponsored by the state government, although it may be suspended once more by a judicial ruling.

¹¹ Kaufmann, Kraay and Mastruzzi's rule of law indicators measure "the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, the police, and the courts, as well as the likelihood of crime and violence".

Reducing the Cost and Improving the Allocation of Investment

A. Justification

One of the main obstacles to growth acceleration in Brazil has been the rise in the relative price of investment goods and services, vis-à-vis the other prices in the economy. Very little is known regarding what caused this rise, even the extent to which it reflects measurement errors or the incidence of more and higher taxes, as suggested by its more recent escalation. The importance of this issue goes beyond mere academic curiosity or a concern for precision in Brazil's accounts. For one, if there is an upward bias in the estimation of investment prices, due to measurement errors, then Brazil has suffered a decline in its savings rate that is not even acknowledged, let alone understood. For another, learning what made investment more expensive is a first step to making it cheaper. In recent years, and more intensely since the October elections, the Government has adopted several measures to reduce taxes on capital goods and construction, but has failed to propose broader initiatives to lower investment costs. This study could provide important subsidies to a broader strategy aimed at that objective.

By the same token, relatively little is known regarding the allocation of investment, beyond its distribution between construction and machinery, on the one hand, and public and private, on the other. Thus, important hitherto untested hypotheses are that the 1990s reforms have discouraged firms to invest on discovering new activities on which they could be competitive (Hausmann and Rodrik, 2003), and on capacity expansion, favoring those that enhance competitiveness.

B. Objectives

The study will have two main related objectives: (i) identify the factors leading to the rise in the relative cost of investment and assess the extent to which investing in Brazil is more expensive than in developed and other developing countries; and (ii) examine the sector profile of investment in the post-reform period to assess whether and how it can be improved as a means to accelerate GDP growth (see TOR of Argentina study and Souza Junior, 2005).

C. Expected output and Methodology

This study will require a detailed analysis of Brazil's investment statistics and a cross-country survey of capital good prices, costs of civil construction and the profile of sector investment. A possible strategy would be to select a few relevant comparators (e.g., Chile, Korea, Mexico, Portugal, and the US) and go into a detailed decomposition of investment costs in leading sectors such as road construction, housing, and industry. The study should also produce and use a taxonomy for types of investment that can later be used to generate regularly updated statistics on investment in Brazil.

The Political Economy of Future Reforms

A. Justification

Although the obstacles to growth acceleration in Brazil are relatively well understood, and there is some agreement with respect to the benefits that could accrue from reducing current public expenditures, one may not but be uncertain about the likelihood of that happening in the short to medium run. To some extent this reflects a fallacy of composition: most people agree on reducing expenditures, but very few accept a cut on those services and transfers that benefit themselves. There is, thus, a common link among the high inflation of the 1980-93 period, the rising public debt of 1994-98, and the expansion in the tax burden in 1994-2005: a need to accommodate the demands of an increasingly urban population, which the return to democracy entitled to services that used to be provided to a minority of the population.

As occurred with high inflation, though, the high current spending–high tax burden situation that Brazil is locked in is a low-level equilibrium. In theory, Brazil could be better off reforming the economy, expanding GDP more rapidly and with the additional income generated in this way compensate those that would lose with the reforms. But this is not an equilibrium solution to the non-cooperative game into which social groups and political players have been engaged since the early 1980s. Is this the result of a skewed income distribution, embedded social conflict or the lack of appropriate conflict management institutions?¹² Who are the main veto players in the different areas of reform? How have other countries escaped this political trap? Will political reform allow Brazil to escape this trap?

B. Objective

This study should analyze what is blocking reform in different areas and produce guidelines on which to base a political strategy to facilitate fiscal adjustment and other growth-enhancing reforms.

C. Expected output and Methodology

IDB (2005) provides an analytical framework against which the main reform propositions can be assessed from a political viewpoint. This could be used as a starting point in the analysis of specific reforms, such as those of the social security and the tax system. It is important that the study leads to practical recommendations, so being specific is likely more promising than covering several areas all superficially. Comparisons with countries that succeeded in pushing ahead with reforms and with those that failed to do so could be especially enlightening.

¹² See Rodrik (1999).

Appraising Brazil's Technological Policy

A. Justification

The development, adaptation and diffusion of technology are critical means through which countries increase their productivity and competitiveness. Brazil has not performed well in this area in recent years, as compared to direct competitors in world markets, such as China, India, Korea and Mexico, despite some localized success, as witnessed by the aircraft manufacturing sector. Brazil spends about 1% of GDP in R&D, less than half the OECD average, a third of which is done by the industrial sector, with most of the rest being carried out by public organizations and universities. Brazil also performs poorly according indicators such as the number of patents filed in Europe and the US. This suggests that Brazil needs a more innovation-friendly environment, or, as suggested by the OECD (2006), an economic policy that fosters "productivity-enhancing innovation in the business sector".

The Brazilian government already has in place a number of institutions and policies, including tax incentives, focused on encouraging innovation in the business sector. Brazilian firms can partly deduct R&D expenses from tax obligations and benefit from favorable credit incentives provided by FINEP and BNDES, as well as from public funding channeled by the Ministry of Science and Technology. What is missing? No one is certain, to a large extent because there has been little evaluation of existing policies.¹³ Most analyses focus on the volume of spending, but there are other possible candidates, such as the overall education level, the security of intellectual property rights, the availability of venture capital, the quality of research institutions, and the kind and intensity of their interaction with the business sector (Bosch, Lederman and Maloney, 2005). Thus, it has been suggested that public spending in science and technology (S&T) be concentrated on a few quality academic institutions, rather than spread out thinly among innumerable institutions; that greater emphasis be given to the teaching of science and engineering; and that business-university ties be strengthened.

B. Objective

The objective of this study will be to assess the quality of Brazil's technological policy, including its impact on the innovation environment faced by Brazilian firms and the efficiency of public spending in S&T.

C. Expected output and Methodology

The study should contain (i) a public expenditure review in the S&T area, focusing on the link between input and output indicators; and (ii) a broad assessment of the country's technological policy, including tax and credit incentives, as well as of the institutions in charge of defining and implementing it. The study should rely on existing literature and data, international comparisons, and interviews with policy makers and business associations.

¹³ See, though, Tironi and Koeller (2006) and Avellar and Alves (2006).

Growth Optimizing Tax Reform

A. Justification

Brazil's high tax burden is a barrier to investment and productivity growth. In addition to distorting relative prices and discouraging financial intermediation, it also burdens firms with a substantial amount of paperwork and bureaucratic obligations and increases investment risk, since tax rules change continuously, to close loopholes and allow for greater collections. The expansion in the tax burden has also been very regressive, for it relied on raising indirect taxes, which fall disproportionately on the poor, which are estimated to pay more on taxes, as a proportion of their income, than the rich (Zockun, 2006). Not surprisingly, the government has elected selective tax cuts as a key means to foster growth.

Little is known, though, regarding what tax cuts would produced more growth and/or greater welfare gains to the poor. The lack of objective and transparent criteria to decide on tax cuts make the government more sensitive to political pressure. At the same time, it reduces possible synergies that could accrue from a well-coordinated program of tax reductions. The same risk is present in the political discussions among the federal and sub-national governments, which usually converge to a zero-sum game of how to distribute tax revenues among the three levels of government. A main issue in that regard concerns what to do with the "contributions", which are perceived to be a lower quality type of tax.

B. Objective

The goals of this study are to assess (i) the best program of tax reductions from the viewpoint of fostering growth and/or improving income distribution; and (ii) whether a further decentralization of revenues and responsibilities that could support a uniform treatment of "contribuições" and "impostos" would improve the efficiency of the tax system.

C. Expected output and Methodology

Both partial and general equilibrium analyses could be used to assess the marginal impact of cutting rates of different taxes. The analysis should also take into account the transaction cost of paying these taxes, as well as the possible gains from a major overhauling of the tax system that enhanced the role played by the states and municipalities.

Environmental Regulation and Infrastructure Investment

A. Justification

Environmental regulations at federal and state level have been blamed for delaying and increasing the risk of infrastructure projects in Brazil. This partly stems from the fact that these projects usually interfere more with the environment than other projects, for they spread through larger geographical areas; and that several institutions have a say on the decision of whether or not to go ahead with an investment project: federal, state and municipal environmental authorities, the judiciary, and the “Ministério Público” at the federal and state levels. Licenses usually take long to be awarded and may be suspended by a court ruling, sometimes immobilizing large volumes of capital. Business and government officials are eager to speed up environmental analysis and reduce the environmental regulatory risk involved in these projects. How to do this without imposing significant sacrifices to the environment? Are the rules adequate, the institutions in charge properly staffed? How best to distribute supervision and regulatory responsibilities among the different levels of government? How best to reduce juridical uncertainty in this area?

B. Objective

The study should organize the discussion and make suggestions of how to streamline environmental regulation, as well as reduce risk, while allowing for sound environmental protection.

C. Expected output and Methodology

A way to shed light on this matter is to make a cross-country comparison of environmental regulation to ascertain whether Brazil’s environmental legislation is excessively complicated. It would be important to assess the extent of overlapping responsibilities among different institutions and how to sequence decisions so as to reduce investor’s risks.

Public-Private Partnerships (PPPs) in Infrastructure

A. Justification

The recently launched Plan for Growth Acceleration (PAC, Plano de Aceleração do Crescimento) places great emphasis on infrastructure investment. There are good reasons for that. The decline in public and state-owned investment in the last two and a half decades has had an especially negative impact on infrastructure, with severe consequences for Brazil's growth potential. Calderón and Servén (2003) estimate that the slower accumulation of infrastructure in Brazil vis-à-vis the East Asian average accounted for 35% of the increase in GDP per worker compared to that region. In another study (Calderón and Servén, 2004), they estimate that if the stocks and quality of Brazilian infrastructure would rise to the level of Costa Rica, the country with best infrastructure in Latin America, its annual GDP growth rate would rise by 2.9 percentage points. Income distribution would also improve substantially.

The PAC foresees an increase in infrastructure investment by the public sector and state enterprises, but also anticipates that the private sector will embark on large projects in the energy, transportation (roads, railways, ports etc.), water and sanitation sectors. Several of these projects are expected to be structured using the PPP legal framework. But in 2003-06 the government had already bet on the PPPs as the means to foster infrastructure investment, with dismal results. For a number of reasons, ranging from lack of government approval of hydroelectric projects to judicial activism and environmental and regulatory risks, very few PPPs were launched in this period, none of which involving the federal government.

B. Objective

This study will examine the potential for overcoming Brazil's infrastructure bottlenecks by resorting to PPPs in the energy, transportation and water and sanitation sectors.

C. Expected output and Methodology

The study should (i) appraise Brazil's infrastructure needs, by identifying the main growth bottlenecks and comparing Brazil to other countries at similar income levels; (ii) identify and rank the main impediments to private and public infrastructure investment; (iii) analyze what hinders a greater use of PPPs in infrastructure at the federal and sub-national levels of government; and (iv) make recommendations of how to overcome these barriers.

Fiscal Institutions and the Decision Making Process behind Public Spending

A. Justification

World Bank (2006) makes a detailed assessment of Brazil's public expenditure policy and examines its effects on economic growth at three different levels. The report starts with an analysis of the aggregate effects of fiscal policy, focusing on the overall economic consequences of public expenditures. It then examines the growth impact of the composition of public spending, including the effect of revenue earmarking on budget rigidity. Finally, it evaluates the quality of expenditure management in the road transport sector. The report identifies a number of areas in which fiscal institutions and decision making could be improved.

One conclusion that follows from the report is that there is a dearth of objective criteria to guide the decision process regarding which expenditures to prioritize and a lack of monitoring and evaluation schemes to assess the decisions ex post. It is often the case that projects are included on the budget based on obscure criteria; and among these, in turn, some are selected to be implemented based on equally ad hoc motives. Frequently this leads to discontinuities in investment finance, causing projects to remain incomplete or at least to be delayed. This process is observed at the three levels of government, but it is likely more problematic for sub-national governments.

B. Objective

This study should build on World Bank (2006) and other relevant literature to analyze what are the main problems with the budgeting and implementation of public spending at the federal and state levels, and draw recommendations on how to improve these processes.

C. Expected output and Methodology

The study will rely on a few case studies, comprising one or two sectors at the federal level and in two states, one with a good reputation in the area and another without it. A possibility is to consider in each case how the 2003 Plano Plurianual de Investimentos (PPA) was elaborated, identify the criteria used to select the projects to be part of the PPA, and examine which were only partially implemented or just disregarded, analyzing the reasons for that.

Improving Public Management Through Incentive Schemes

A. Justification

Despite its relatively poor social indicators, Brazil spends significant amounts of resources in these sectors. Public social spending in Brazil amounted in 2004 to 23.5% of GDP, not much less than the average 26.2% recorded for the OECD (Secretaria de Política Econômica, 2005). In the US the public sector spends 20% of GDP with the social sector, in Korea only 11%, despite both having much better social indicators than Brazil. A large part of Brazil's social spending is directed to cover social security benefits (11.4% of GDP in 2005), but last year the three levels of government also spent 4.6% of GDP with education and 4.8% with health, against respectively 5.0% and 5.9% of GDP in OECD countries.

These figures suggest that there is little scope to improve the quality of social services by simply expanding expenditures, considering (i) the need to reduce the tax burden, and (ii) that in the absence of reforms these expenditures should rise in the next years, notably in health and social security, as the population continues to age. It is therefore necessary to devise new means to improve the efficiency of public social spending (Joumard, Kongsrud, Nam and Price, 2004). A way to do that would be to improve the incentives faced by public service providers, linking their remuneration to performance, while at the same time giving them greater operational flexibility. Some state and municipal governments have been using these schemes on a small scale. What is the potential for improving the efficiency of public education and health service providers through the use of such mechanisms on a large scale?

B. Objective

Assess the extent to which incentive mechanisms are being used in the public provision of health and education, and propose means to increase their efficiency and enlarge their use.

C. Expected output and Methodology

This study will map the ongoing experiences with alternative incentive mechanisms in the health and education sector, assessing whether they have brought efficiency and/or quality gains, the extent to which they offer a viable alternative to improve social service provision on a national scale, and identify the challenges that have to be overcome in order for that to happen. International experiences should also be analyzed to identify successful cases and mistakes to be avoided.

Public-Private Partnerships in the Social Sectors

A. Justification

Worldwide, policy makers have been faced with the challenge to devise cost effective ways to improve the quality of services delivered to their citizens. In more traditional markets, they have responded by resorting to privatization and concessions, depending on whether ownership of existing assets is transferred or not. More recently, governments have also begun to rely on public-private partnerships (PPPs). One of the main advantages of PPPs, vis-à-vis the alternative of public investment / operation, is the greater efficiency of the private sector, which allows for lower costs. It is also often the case that PPPs have a greater potential for revenue generation, by charging service users, which improves allocative efficiency. Thus, PPPs tend to make a smaller demand on public funds for the same amount and quality of services, compared to a purely state-run operation. Several governments, including sub-national governments in Brazil, rely on PPPs, although not with that name, to provide services in the social sectors (Lundsgaard, 2002). In Brazil, a large share of the health services financed with public funds is provided by private hospitals through the SUS. Private not-for-profit organizations have been active in the “Programa de Saúde da Família” and the provision of early childhood education. Anecdotal evidence suggests that these schemes reduce absenteeism, a major problem in the public education and health sectors, and allow for a better adaptation of services to local demands.

There are good reasons why basic social services, notably basic health and education, should be universally available and financed by the public sector, from positive externalities to failure of collective insurance mechanisms due to free-rider problems. But these arguments say nothing with regard to whether service provision should be done by private or public providers. Contracting private providers in these sectors is, though, more complicated than in traditional markets, due to the risk of introducing the wrong incentives. For one, it is necessary to establish independent evaluation schemes to assess the quality of services provided. For another, one needs to prevent the pursuit of measurable dimensions of performance to compromise those harder to gauge (Holmström and Migrom, 1991). What has been the experience of social PPPs, regarding both cost reduction and quality of services? Are they an interesting means to expand and improve publicly financed social services in Brazil? What sort of obstacles needs to be removed to achieve that goal?

B. Objective

Assess the potential for improving and expanding the provision of social services, notably in health and education, through the use of public-funded, private-provided schemes.

C. Expected output and Methodology

The study should review the extent to which the public sector is already resorting to publicly-financed private providers, both for and not-for-profit; assess the results of these initiatives, regarding their importance, efficiency and cost; evaluate the potential and desirability to expand these schemes; and identify the main challenges and bottlenecks in the way of this expansion. To the extent possible, the study should also compare the Brazilian experience in this area with that of other countries.

Segmentation and Directed Credit in Brazil's Financial Sector

A. Justification

There is ample empirical evidence that deep and efficient financial markets lever economic growth (Beck, Levine and Loyaza, 2000; Watchel, 2003). In particular, a more developed financial system fosters investment and productivity growth in diverse ways: it reduces information and transaction costs; it allows for the transference and diversification of risk, stimulating riskier but more productive activities; it allocates resources to the most productive projects; it monitors and controls company managers, mitigating agency problems; it stimulates savings; and it facilitates the negotiation of goods and services by giving access to the payments system (Levine, 1997; Pagano, 1993).

The relative underdevelopment of Brazil's financial sector has attracted the attention of the Government, multilateral institutions and the academia. Most of this attention has been concentrated, though, on improving the quality of information and the rights of creditors and minority shareholders. There have also been some recent studies on the role of public banks (Pinheiro, 2006), but comparatively less effort has been dedicated to understanding the implications of the segmented nature of large parts of the financial sector, notably the leading roles played by public banks in financing the rural sector (Banco do Brasil), housing (Caixa Econômica Federal), and industrial and infrastructure investment (BNDES). And, associated to this, the roles of directed credit in the rural, housing and micro-credit segments, as well as the implications of the compulsory savings schemes that finance a large share of the directed credit operations.

B. Objective

Assess the pros and cons of the Brazilian system of directed credit and contrast it the international experience.

C. Expected output and Methodology

The study should identify the various means through which the government directs financial flows in Brazil, analyze the extent to which these flows are playing the role for which they were created, and discuss whether there are other, more efficient means to achieve the same results. The study should also examine if and how other countries use directed credit as a policy instrument, if any of these has reformed their financial sectors to change the role of directed credit and what have been the results.

The Causes and Consequences of Informality in Brazil

A. Justification

Informality is perceived by some analysts to be one of the main impediments to growth acceleration in Brazil, due to its negative effects on the accumulation of capital, physical and human, and the increase of productivity (McKinsey, 2004). Informal companies operate at sub-optimal scales and capital intensity, causing both labor and total factor productivity to be low. These companies usually derive their competitiveness from not paying taxes and respecting costly public regulations, which means that they hinder the expansion of more productive and efficient companies, while keeping human, management and capital resources locked into inefficient methods of production. Because they keep murky accounts, to evade taxes or because they tend to transact with equally informal firms and workers, they have a limited access to formal financial institutions, including public banks. Even efficient informal firms tend not to expand to avoid calling attention from tax authorities. Informality is also associated with a high labor turnover ratio, which discourages firms to invest in training, an important means of human capital accumulation.

Most studies concentrate on the size, causes and consequences of informal labor contracts, ignoring the many facets through which informality reveals itself. A more comprehensive approach is needed. An example is McKinsey's (2004) definition, which classifies as informal any company that secures a competitive advantage by not complying with some public regulation. This broader definition includes firms that contract informal workers, but also those that do not pay taxes nor obey public sanitary or workplace regulations, for instance.

B. Objective

The objective of this study will be to assess the extent of informality in Brazil, defined in this broader way, and its impact on economic growth.

C. Expected output and Methodology

The study should carry out a literature survey and organize the available evidence on informality in Brazil, ideally on a compared perspective. Data on informality is notoriously difficult to obtain. A start is IBGE's 2003 survey about the "Economia Informal Urbana" and McKinsey's studies about informality in Brazil and other countries. The final report should also contain a discussion about the political economy of informality (e.g., social tolerance) and propose a strategy to address some of the causes of informality in Brazil.

Brazil's Sensitivity to a Downturn in the World Economy

A. Justification

The good performance of the world economy since the second semester of 2003 and the high liquidity observed in international financial markets in this period explain a considerable part of what happened with the Brazilian economy in recent years. Combined with the 1999-2002 devaluation of the real, the substantial expansion in foreign demand caused a boom in exports, generating a large trade surplus and allowing for a substantial decline in Brazil's net external debt, notably that of the public sector. This, in turn, led to the appreciation of the real in 2003-06, which explains a significant part of the fall in inflation and the public debt to GDP ratio. Together with the increase in the risk appetite of foreign investors, this helped to reduce sovereign spreads to record low levels. Moreover, in 2001-05 exports accounted for 79% of GDP growth.

These developments seem to back the relatively benign scenario that the market forecasts for the domestic economy in 2007-10. Export growth is expected to decelerate, but the average trade surplus is projected at a hefty US\$ 33 billion in this period, with only a small nominal exchange rate devaluation, which in turn would work as an auxiliary nominal anchor. Inflation is projected to stay around 4% till the end of the decade. Interest rates are expected to decline, with the nominal SELIC falling to 12.4% in 2007 and 10.5% in 2010. This, in turn, would lower interest payments on the public debt, allowing for the debt to GDP ratio to slide down.

How robust is this scenario to a downturn in the international economy? How much of the current macroeconomic stability and GDP growth depends on the exceptionally favorable external conditions, in both the financial and trade sides of Brazil's relations with the rest of the world? What are the most important external risks faced by Brazil and how significant can be their impact?

B. Objective

This study will try to answer these questions and assess the sensitivity of the Brazilian economy to changes in the world economy in the commercial and financial areas.

C. Expected output and Methodology

The study should assess the contribution of the positive developments in the world economy to the recent performance of the Brazilian economy and examine how the abundant liquidity and high growth of the world economy, notably of commodity starving countries such as China and India, are molding it. It should also identify the main external risks it faces and how external shocks would affect growth, inflation, the fiscal accounts and other relevant economic indicators.

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