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Brazil's Growth Performance

Achievements and Prospects

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Abstract

This paper reviews Brazil's growth performance over the last quarter of a century and discusses the main determinants of a pick-up in growth since the mid-1990s. Emphasis is placed on the policy pay-offs associated with a consolidation of macroeconomic adjustment, which is a pre-condition for sustained growth. Structural reform based on a liberalization of the county's trade and investment regimes have also generated productivity gains that have supported growth. The paper also discusses a number of policy challenges that will need to be addressed in the coming years to ensure that high growth can sustained over the longer term.

Keywords: Brazil, growth, structural reform

JEL classification: O10, O20, O54

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Acronyms

FDI	Foreign direct investment
GDP	Gross domestic product
ICT	Information and communication technology
IPEA	Instituto de Pesquisa Econômica Aplicada
OECD	Organisation for Economic Co-operation and Development
PMR	Product market regulation
PNAD	(Pesquisa Nacional Por Amostra de Domicílios) household survey data
PPP	Purchasing power parity
SOEs	State-owned enterprises
TFP	Total factor productivity

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1 Introduction

Brazil's growth performance is improving in earnest. This paper argues that macroeconomic adjustments since the mid-1990s, anchored in structural reform to liberalize the economy, have laid the groundwork for putting the economy on a sustained growth trajectory. Commitment to the consolidation of adjustment by successive administrations has been essential. Much has been achieved to date, but the agenda for future pro-growth reform remains vast. In what follows, attention will be focused on discussing Brazil's main achievements to date and on identifying policy areas where further action will be needed to lift the country's growth potential in a durable manner.

Brazil's growth track record has been erratic over the last quarter of a century or so. A period of rapid expansion from the mid-1960s to the mid-1970s was based essentially on import substitution underpinned by inward-oriented policies. Macroeconomic disarray, with chronically high inflation and sub-par growth, characterized most of the 1980s and early-1990s. An adjustment programme—the Real Plan—was launched in 1994 on the back of a monetary reform and the introduction of a managed exchange rate regime. Pro-competition policy initiatives throughout the 1990s, coupled with a gradual reduction of barriers to international trade and investment, paved the way for additional structural reform in support of macroeconomic adjustment. The exchange rate regime was changed in 1999 in the wake of the floating of the *real*, a period that was followed by an overhaul of fiscal and monetary institutions. This included the adoption of inflation targeting as the basic framework for the conduct of monetary policy and efforts to strengthen the public finances. Strong export performance, in part due to a favourable external environment, led to a turnaround in the balance of payments. These developments have been instrumental in achieving macroeconomic stability and making the economy more resilient to external shocks.

These achievements should not be underestimated. But, moving forward, the consolidation of macroeconomic adjustment, together with further structural reforms in several policy areas, will be needed for putting growth on a sustainable path over the longer term. Because of successive years of lacklustre growth, Brazil's income gap in relation to the more prosperous countries in the OECD area has widened, although it now appears to be closing again. Concerted policy actions will be required in many areas to reverse this trend in a durable manner. The paper will emphasize the reform areas where Brazil lags the most in relation to OECD best performers; therefore, steadfast progress in these areas is likely to have the largest payoffs in terms of raising—and sustaining—the economy's growth potential.

The paper is organized as follows. Section 2 provides an overview of Brazil's growth trajectory and highlights the main sources of growth on the basis of conventional growth accounting. It emphasizes the fact that growth has been driven essentially by the accumulation of inputs, rather than gains in overall economic efficiency. Section 3 reviews the main aspects of structural reform since the early 1990s and discusses the empirical evidence available to date on how the main axes of reform are likely to have contributed to improving economic efficiency and trade competitiveness. It also briefly highlights the main underpinnings of macroeconomic adjustment. Emphasis is placed on the strengthening of institutions for fiscal and monetary policymaking. Section 4 discusses the main obstacles to faster growth over the medium to long term. Section 5 outlines the main elements of a possible policy agenda for raising potential growth and

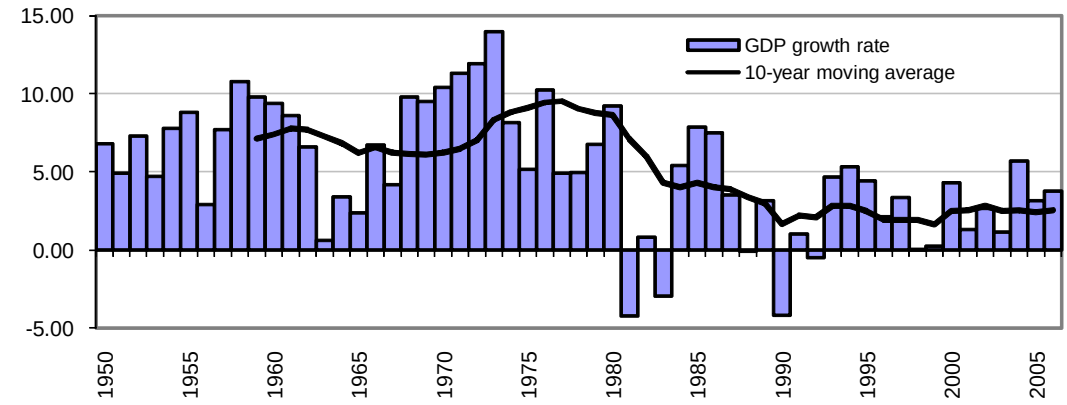
sustaining it over the longer term. Discussions focus on options for consolidating macroeconomic adjustment, boosting human capital accumulation and improving the business environment, Section 6 concludes.

2 Brazil's growth process: An overview

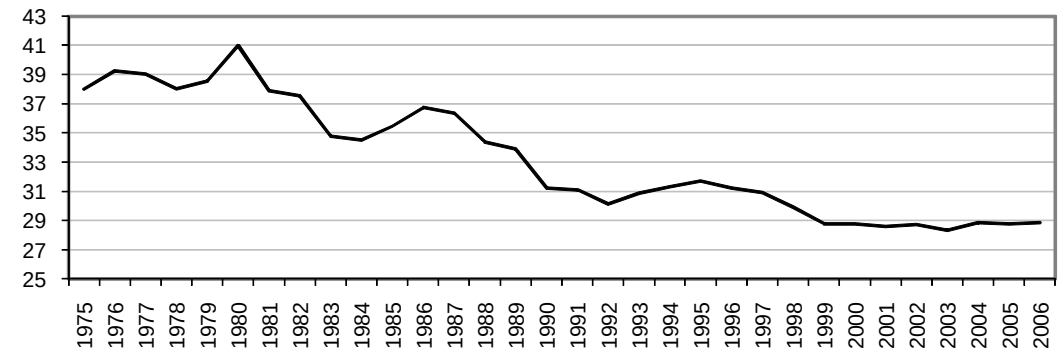
Brazil's GDP growth rate fell drastically after a period of sustained expansion, known as the 'Brazilian miracle', which spanned the mid-1960s to the mid-1970s (Figure 1). During the miracle years, growth was underpinned essentially by inward-oriented policies based on import substitution. Abundant external savings provided much of the financing needed for the accumulation of physical capital. This period of rapid growth nevertheless came to a halt in the early 1980s as a result of the international credit crunch which led to the emerging-market debt crisis. GDP growth slowed to about 2.5 per cent per year on average during 1980–2005, against about 8 per cent during 1965–79. As a result of this slowdown, the gap in Brazil's per capita income (measured at PPP) relative to the OECD average widened from about 60 per cent

Figure 1
Brazil's long-term growth performance, %

A. Trends in GDP growth, 1950-2006



B. Brazil's per capita income relative to the OECD area, 1975-2006[1]

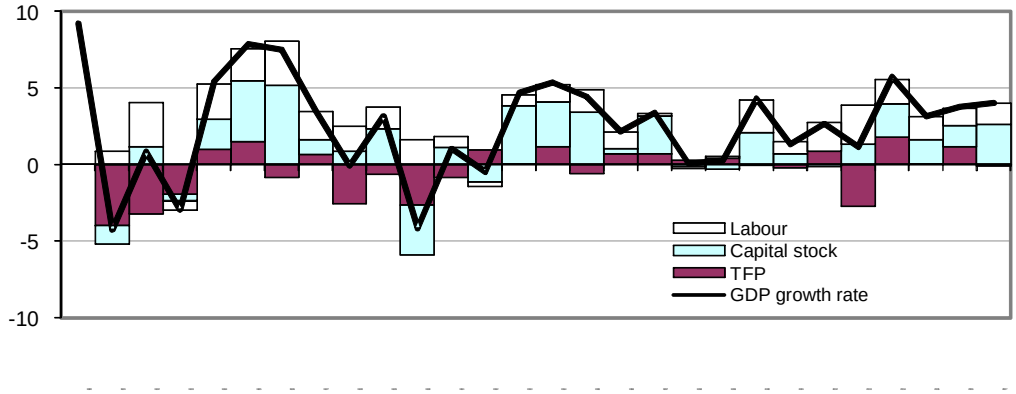


Note: [1] Defined as the ratio of Brazil's income per capita to the average of the OECD countries (excluding Czech Republic, Hungary, Poland and Slovak Republic due to data constraints) in purchasing power parity (PPP) terms.

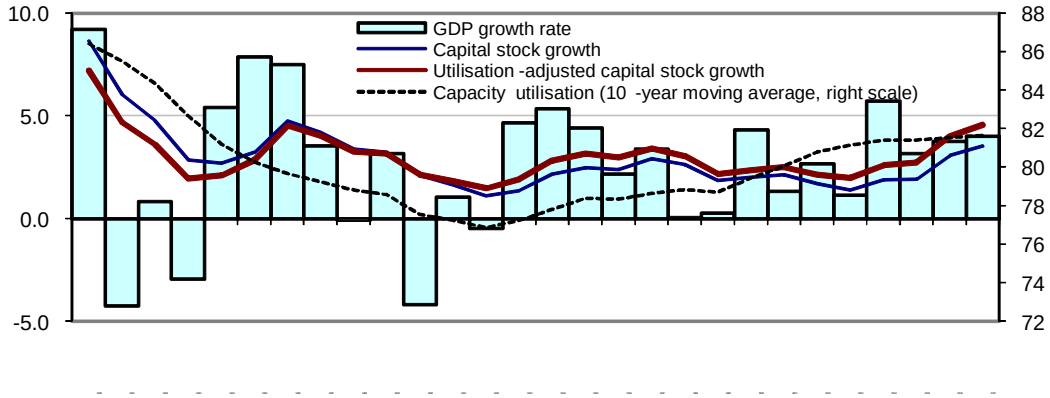
Source: IPEA, World Bank and OECD calculations.

Figure 2
Decomposition of GDP growth, 1980–2007, %

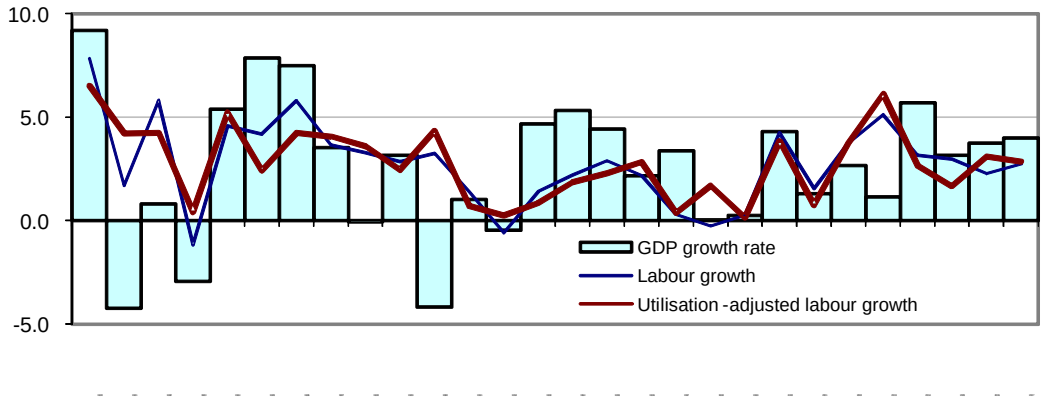
A. GDP growth and its components



B. Trends in utilization-adjusted physical capital



C. Trends in utilization-adjusted labour



Source: IPEA and OECD calculations.

in 1980 to almost 70 per cent in 2005. This deterioration in the country's growth performance was even more pronounced in comparison with emerging-market peers in Asia, especially Korea in the late 1980s and 1990s, China and, more recently, India.

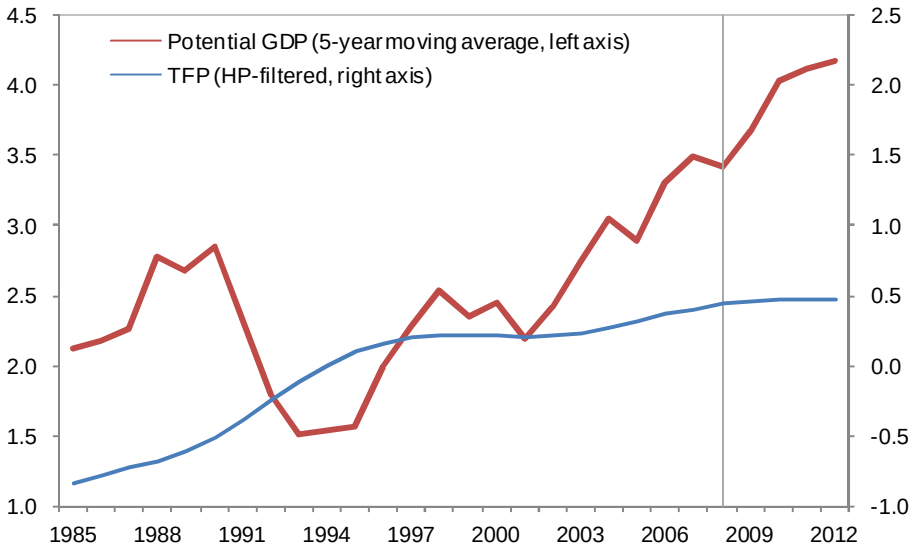
The accumulation of inputs, rather than improvements in total factor productivity (TFP), has been the main driver of growth (Figure 2). Conventional growth accounting (Annex 1) suggests that physical capital accumulation (adjusted for utilization) accounted for the bulk of the expansion in GDP during the brief high-growth spells of

the mid-1980s and mid-1990s. Corrected for cyclical variations in labour force participation and employment, labour utilization recovered somewhat after 1999, having weakened in the 1990s. However, TFP growth often acted as a drag on the expansion of output, especially in the 1980s and early 1990s, before recovering in recent years. This is worrisome, because TFP growth accounts for most of the variation in output growth across countries in the OECD area. Of course, the outcomes of growth accounting exercises need to be interpreted with some caution, especially in periods of chronically high inflation, when the measurement of the capital stock, which affects the computation of TFP, is particularly difficult.

Brazil's potential GDP growth now appears to be rising. On the basis of conventional growth accounting, trend GDP growth averaged less than 3 per cent per year during the 1980s. It fell to less than 2 per cent per year on average in the first half of the 1990s, but has picked up gradually since then to about 4 per cent in 2007 (Figure 3). Based on plausible projections for investment and labour force growth over the medium term, potential GDP is likely to rise to 4–4.5 per cent per year in the next five years. This rate is higher than the average potential growth of the OECD area, currently estimated at about 2.5 per cent per year. This gap in estimated potential growth rates illustrates the speed of convergence in relative income levels that might be expected in the years to come. Accordingly, on the basis of the current differential (about 2 percentage points) it would take over half a century for Brazil to close the income gap relative to the OECD area.[1]

An improved growth performance and a more stable macroeconomy are paying off in terms of poverty reduction and improvements in the distribution of income. The incidence of poverty fell considerably with disinflation in the second-half of the 1990s

Figure 3
Potential GDP and TFP growth, 1985–2012, %



Sources: IPEA and OECD calculations.

1 Brazil's potential growth rate is nevertheless considerably lower than the estimates for the fast-growing countries in south and southeast Asia, especially China and India. To a certain extent, lower potential growth is expected, because Brazil's GDP per capita is currently much higher than those of these countries.

and, more recently, with the resumption of growth. About 19 per cent of households were considered poor in 2006, down from 28 per cent in 1995, on the basis of the national poverty line and household survey (PNAD) data. Income distribution has also improved in recent years, especially since the turn of the century, although it remains severely skewed. Several indicators, including the Gini coefficient and income shares, show that the decline in inequality gathered considerable momentum during 2001–06. For example, on the basis of household survey data, the Gini coefficient fell by about 6 per cent during 2001–06, or 0.7 per cent per year, from nearly 0.60 in 1995. Increased emphasis since the late 1990s on income redistribution through targeted conditional transfer programmes has played an important role, but improvement in the distribution of labour income on the back of rising human capital (discussed below) has accounted for the bulk of the decline in income inequality (IPEA 2006; Paes de Barros et al. 2007; Soares 2008).

3 Structural reform and the ensuing recovery of productivity growth

The resumption of TFP growth since the mid-to late 1990s appears to be closely associated with the implementation of pro-competition reform, including the liberalization of the country's trade and investment regimes, and the consolidation of macroeconomic adjustment. Of course, it would be difficult to identify the policy actions that are most closely associated with overall productivity enhancement, especially because of the interdependencies and mutually reinforcing nature of policy initiatives in the course of structural reform. This section therefore focuses on broad policy areas and discusses the empirical evidence available to date on the possible linkages between structural reform and economic efficiency.

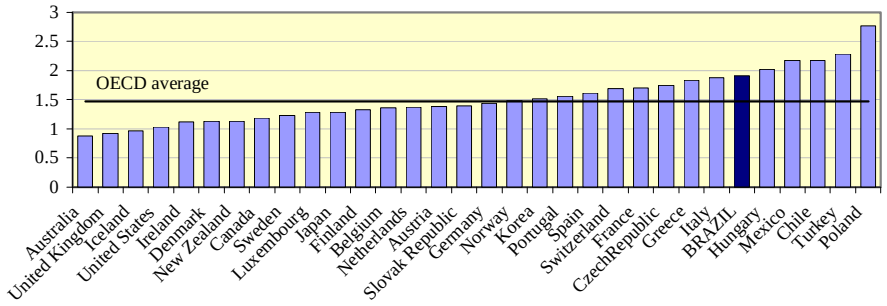
3.1 Pro-competition reform in product markets

Structural reform in the 1990s was characterized by a gradual withdrawal of the public sector from manufacturing, especially in activities that had hitherto been dominated by state-owned enterprises. Divestiture, which accounted for over US$100 billion in assets since 1992, was accompanied by the liberalization of entry into those sectors that had been treated until then as state monopolies, including public utilities and network industries. These reforms are likely to have contributed to raising productivity by exposing producers to competition from abroad and from domestic peers. This is confirmed by empirical evidence for the manufacturing sector, which suggests the presence of a positive effect of entry on sector-level productivity (Pinheiro et al. 2001). Also, Schmitz and Teixeira (2004) show that labour productivity in the steel sector more than doubled in both private firms and former state-owned enterprises (SOEs) as a result of the privatization programme that started in 1989.

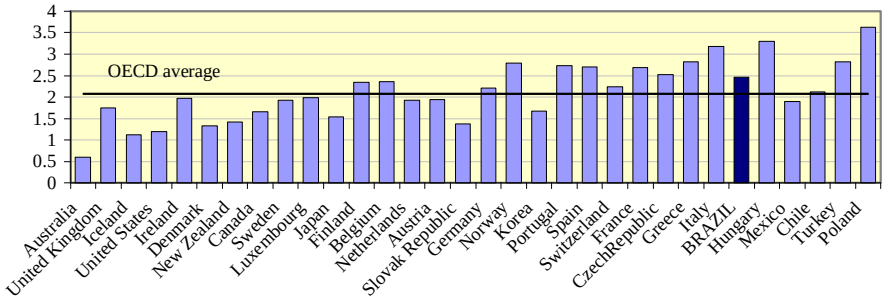
At the same time, the alleviation of trade protection seems to have been particularly important in boosting labour productivity. Trade liberalization took place essentially through the elimination of non-tariff barriers towards the end of the 1980s and a gradual reduction in the level and dispersion of import tariffs in the 1990s, especially during 1988–95. This is particularly the case of capital goods and intermediate inputs, which are important vehicles for embodied technological progress. There is supportive cross-sectoral empirical evidence that the increase in market penetration by foreign

Figure 4
PMR scores: Brazil, Chile and the OECD member countries[1]
Low scores indicate less restriction

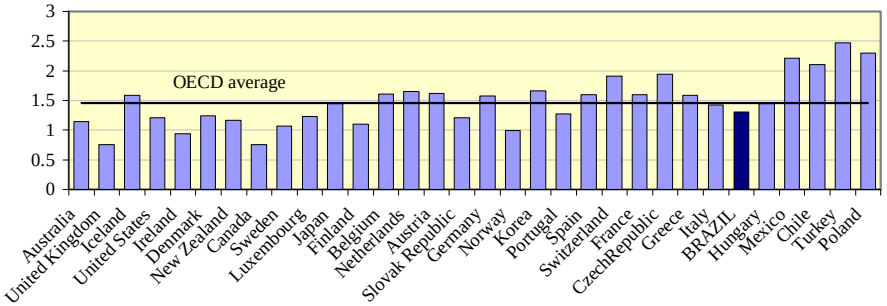
Product market regulation



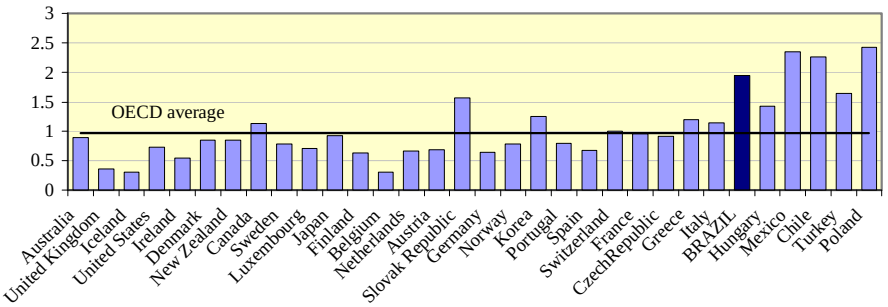
State control



Barriers to entrepreneurship



Barriers to trade and investment



Note: [1] The scores for the OECD countries and Chile are based on 2003 regulations and those for Brazil are based on 2004 regulations.

Source: OECD (2005).

competitors as a result of the liberalization of Brazil's trade and investment regimes appears to have boosted productivity (Hay 2001; Rossi and Ferreira 1999).

Empirical evidence also suggests that the effect of easing tariff protection on productivity was strongest for low-productivity firms (Schor 2004). An emblematic example is that of the ICT industry, which had been protected through high tariff and non-tariff barriers during most of the 1980s. The industry developed fast and posted significant gains in productivity, as well as reductions in prices, following the alleviation of protection in the 1990s. A lack of competition in upstream sectors and impediments to entry throughout the production chain are considered the main culprits for the maintenance of high prices during protection (Luzio and Greenstein 1995; Botelho et al. 1999).

Despite considerable efforts to boost competition, Brazil's product market regulations remain more burdensome than in several OECD countries on the basis of the OECD methodology for gauging the stringency of a country's regulatory framework (Figure 4).[2] They are nevertheless on par with those of the emerging-market economies in the OECD area (OECD 2005). With regard to inward-oriented policies, Brazil fares relatively well in terms of the size and scope of its public enterprise sector, but legal or constitutional constraints remain on the sale of the stakes held by government in these enterprises. Legal barriers to competition, such as restrictions on the number of competitors allowed to operate a business, exist in some sectors. Administrative burdens on corporations and sector-specific administrative restrictions are relatively light. Incidentally, this is an area where progress has been relatively timid in the OECD area, and where there is much scope for further simplifying administrative procedures in most countries. With respect to outward-oriented policies, barriers to investment in Brazil are comparatively low (see below), although average import tariffs remain relatively high, despite the gradual easing that took place over the 1990s. By contrast, the OECD economies on average are more open to trade. Their experience suggests that domestic barriers to competition tend to be higher in countries that have stringent restrictions to foreign trade and investment.

Despite methodological differences and coverage of policy dimensions, these findings are by and large consistent with the *Doing Business* indicators reported by the World Bank (2005). Based on the most recent edition of the indicators, Brazil fares particularly poorly in comparison with OECD countries on average in matters related to the ease of opening and closing businesses. Brazil also ranks unfavourably on the basis of the indicators related to administrative burdens to pay taxes and to fulfil foreign trade procedures, which are not taken into account in the OECD scoring system.

A liberalization of Brazil's FDI regime over the years is also likely to have contributed to productivity enhancement. Consistently with the adoption of pro-competition regulations in the course of structural reform, Brazil's FDI regime has become progressively more investor-friendly. Ownership restrictions have been phased out in several sectors, notification requirements have been abolished or simplified, and minimum national input clauses have been scrapped or eased. Nevertheless, on the basis of the sectoral coverage and aspects of legislation taken into account in the OECD

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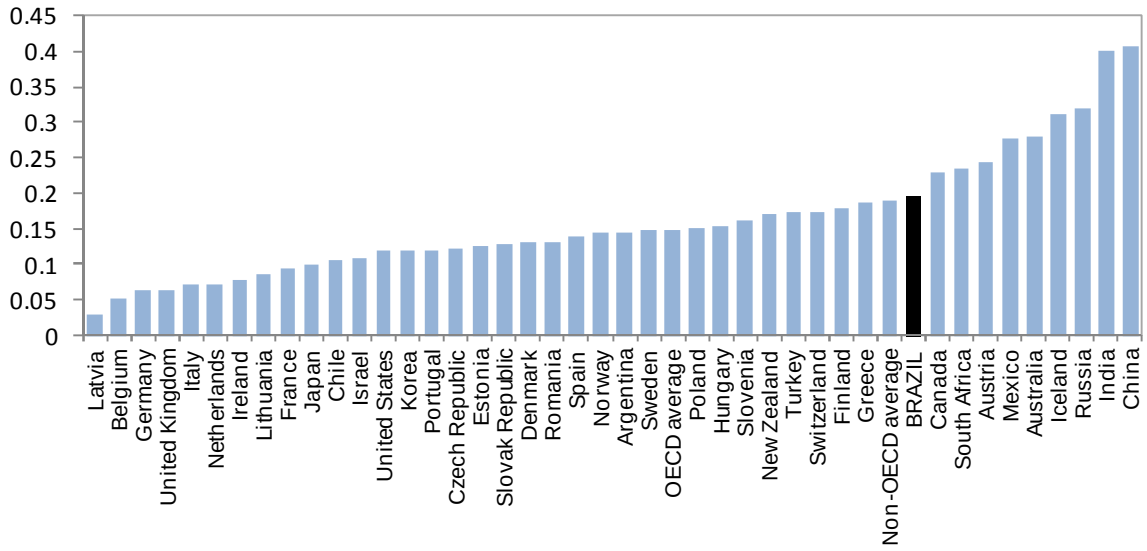
2 See OECD (1999), Nicoletti et al. (1999) and Conway et al. (2005) for more information on the OECD methodology.

Figure 5
FDI restrictiveness scores: OECD and non-OECD countries, 2006

Low scores indicate less restriction



Source: OECD (2006a).

methodology for assessing the restrictiveness of a country's FDI regime, the Brazilian legislation is still somewhat more restrictive than in several countries in the OECD area (Figure 5).[3] For example, equity ownership caps are typically higher in such sectors as finance and transport than in most OECD countries, and notification requirements are typically more burdensome, including through the need to demonstrate the economic benefits of investment when foreign investors apply for a license. Brazil's FDI regime is nevertheless more flexible than those of other large emerging-market economies, such as China, India, Mexico, Russia and South Africa.

3.2 Macroeconomic adjustment

The pursuit of macroeconomic discipline has been the single most important contributor to the ongoing improvement in Brazil's growth performance. The main tenets of macroeconomic adjustment have been the strengthening of public finances and the adoption of a monetary regime combining inflation targeting and a floating exchange rate since the abandonment of an exchange rate peg in January 1999.

3.2.1 Fiscal adjustment

Rapid disinflation following the launching of the Real Plan in 1994 exposed the fragility of public finances.[4] The ensuing fall in inflation tax revenue and an increase in spending on debt service put a burden on the budget at all levels of government. At the same time, new expenditure commitments were created in the early 1990s, especially in the

3 See OECD (2006) for an update of the scoring exercise and more information on the methodology used and sectoral coverage.

4 See de Mello (2008) for a review of public finance trends following stabilization, as well as empirical evidence on fiscal sustainability since the mid-1990s.

area of social protection for rural workers, the elderly and the disabled, which affected the central government budget particularly adversely. A hike in the minimum wage by about 30 per cent in real terms during 1994–2000 (or over 100 per cent during 1994–2007) not only put financial strain on the social security budget, given the indexation of the minimum pension to the minimum wage, but also raised payroll expenditures at the local levels of government, where most of the lower-waged civil servants, whose compensation is linked to the minimum wage, are concentrated. As a result of these developments, public finances came under considerable pressure in the second half of the 1990s, calling for far-reaching policy action to restore fiscal sustainability in a low-inflation environment.

The main element of institutional reform towards fiscal sustainability was the enactment of the Fiscal Responsibility Law in May 2002. The law imposed hard budget constraints on all levels of government, tightened the requirements for the creation of new expenditure commitments and strengthened budget reporting standards, among other provisions. It built on and consolidated previous legislation introducing ceilings on government spending on personnel and debt service in relation to revenue. The consolidation of fiscal adjustment also built on previous initiatives to restore the sustainability of subnational indebtedness through restructuring programmes under the auspices of the national treasury. Enactment of the Fiscal Responsibility Law was therefore the culmination of a long process of institution building in the fiscal area and is considered a landmark in Brazilian public finances (Afonso and de Mello 2002).

3.2.2 Monetary policy

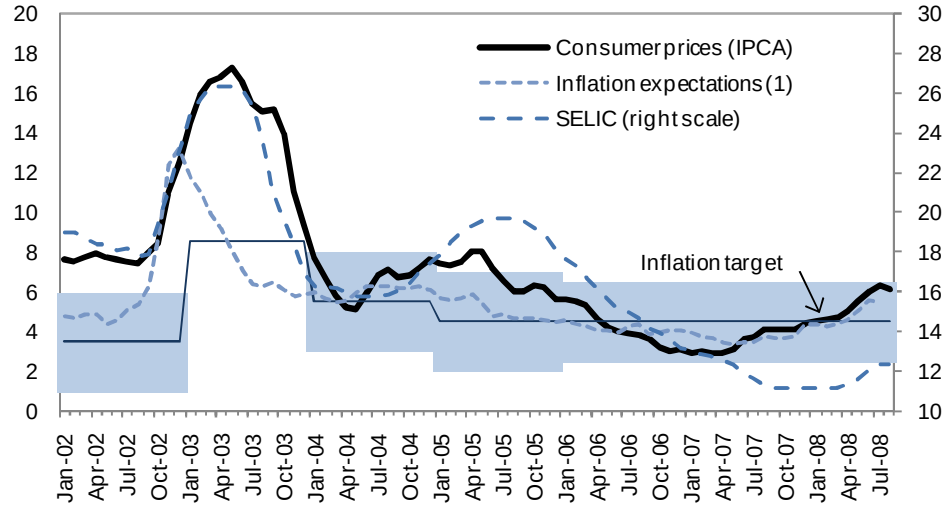
The abandonment of the exchange rate peg in January 1999 called for an overhaul of the institutional framework for monetary policymaking to lay the groundwork for the introduction of inflation targeting in July. The regime is thought to be working well: despite a few breaches of the end-year targets, essentially as a result of adverse external supply and confidence shocks, inflation expectations appear to be well anchored (Figure 6).[5] The central bank is perceived to be *de facto*, although it is not *de jure*, independent.

Policy initiatives in the monetary area have also focused on strengthening banking supervision, upgrading the payments system, developing capital markets and boosting credit for the underserved population, including individuals and small and medium-sized enterprises. Policy effort has also been devoted to upgrading bankruptcy legislation and strengthening the credit information industry so as to facilitate the recovery of collateral and reduce financial intermediation costs. Of course, a gradual reduction in real interest rates in an environment of low, stable inflation will be essential for policy effort to develop financial markets further to bear fruit. But evidence to date is encouraging: the bank credit-to-GDP ratio is rising steadily, without endangering the pursuit of monetary policy goals, and intermediation costs are falling, although still high.

The conduct of monetary policy has also benefited from improvements in public debt management. Efforts to lengthen the term structure of the public debt stock and to reduce the share in traded debt of securities paying floating interest rates and indexed to

5 See de Mello and Moccero (2006 and 2007) for empirical evidence for Brazil and other Latin American inflation targeters.

Figure 6
Trends in inflation and the monetary stance, 2002–7



Note: (1) Refers to survey-based expectations 12 months ahead.
Source: Central Bank of Brazil and OECD calculations.

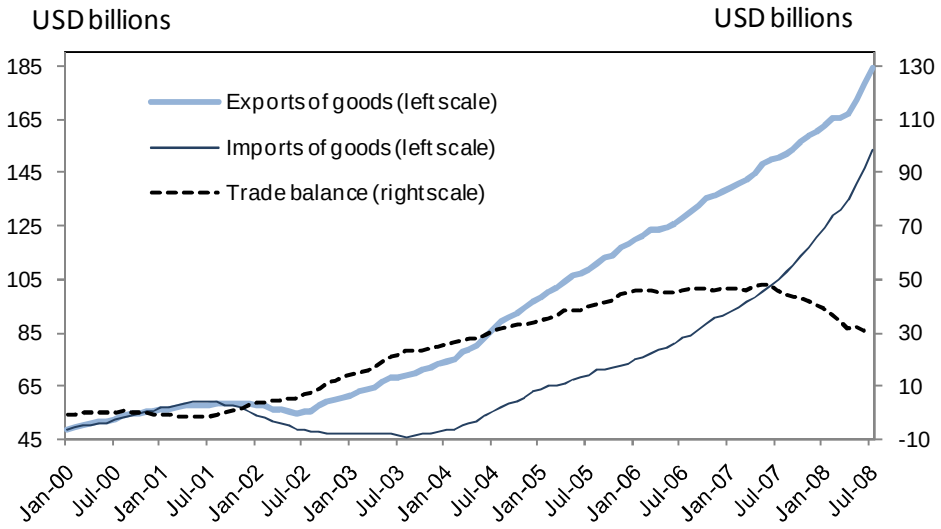
the exchange rate have reduced the vulnerability of the public debt dynamics to changes in the monetary stance and investors' appetite for risk. Progress in this area has mitigated at least in part the 'fiscal dominance' that is alleged to have constrained the conduct of monetary policy in situations of financial distress, such as in the run-up to the presidential election of 2002.

3.2.3 External adjustment

The external accounts have been for many years the Achilles heel of Brazilian macroeconomic adjustment. During the initial phase of adjustment in 1994–9, the current account posted successive deficits of over 3 per cent of GDP per year on average, essentially on the back of trade and budget deficits. Imports rose as a result of a strengthening currency and robust domestic demand growth, and exports lost dynamism due in part to deteriorating terms of trade. Disinflation efforts and rising budget imbalances called for maintenance of a tight monetary stance. Balance-of-payments financing relied increasingly on short-term capital inflows, making the economy vulnerable to sudden flow reversals against a backdrop of a managed exchange rate. Several external shocks, including the Mexican, Russian and Asian crises, put additional pressure on the exchange rate peg.

The abandonment of the exchange rate peg in 1999 brought respite to the external accounts. Maintenance of fiscal discipline and the conduct of monetary policy in a forward-looking manner ensured that the exchange rate depreciation that followed the change in the monetary regime did not fuel inflation. Exports boomed in the following years on the back of improving terms of trade, a supporting global environment and a competitive real exchange rate. Import growth was contained by the pace of domestic demand expansion and the exchange rate. Trade surpluses rose to unprecedented levels since adjustment in the mid-1990s (Figure 7). External vulnerability indicators, such as international reserves-to-imports and external debt-to-exports ratios, improved significantly.

Figure 7
Trade performance, 2000–7



Source: Central Bank of Brazil and OECD calculations.

More importantly, although trade performance benefited from supportive external conditions, the structural reforms since the early 1990s gave Brazilian exports renewed dynamism. Access to imports of capital goods and intermediate inputs embodying more modern technologies brought about by trade liberalization, coupled with efficiency gains due to increased contestability in domestic markets as a result of pro-competition reforms in product markets, is likely to have contributed to bolstering the competitiveness of Brazilian exports. At the same time, a change of culture appears to have taken place among exporters. Exports are no longer perceived as alternatives to domestic sales, but in many cases as a means of securing a presence in dynamic external markets and the insertion of Brazilian firms in global production chains. An increase in Brazilian investment abroad also attests to the growing outward orientation of several enterprises.

4 Obstacles to faster growth

This section discusses the main obstacles to faster growth over the medium to long term. On the basis of the growth accounting analysis outlined above, emphasis is placed on the main factors that are likely to prevent an effective utilization of labour and to discourage investment in physical capital accumulation. To a large extent, these factors also militate against overall productivity enhancement, which keeps the contribution of TFP growth from rising.

4.1 Effective labour utilization: The role of low human capital and informality

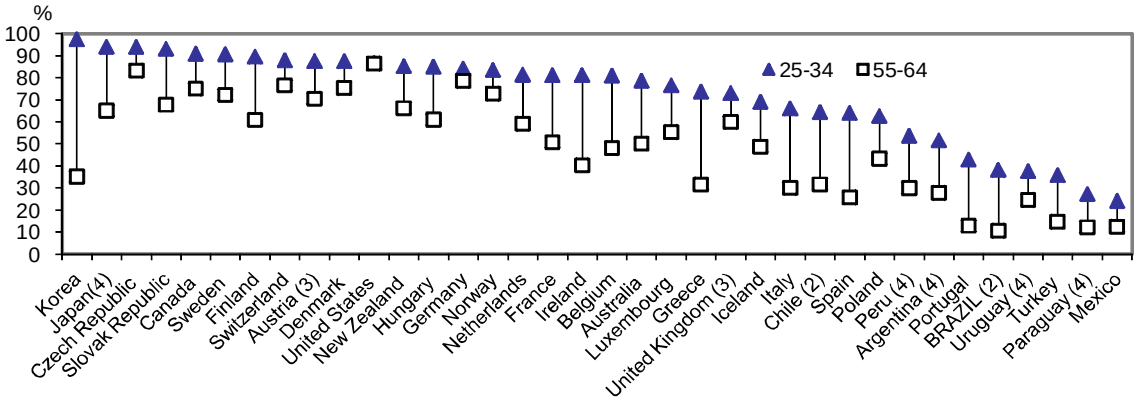
Brazil's labour force participation is on par with the average of OECD countries for prime-age males (aged 25–54 years), but is somewhat lower for females (OECD 2006b). Potential GDP growth, therefore, does not seem to be held back by insufficient labour supply. The country's main problem in this area is that the level of human capital of the labour force is comparatively low, although it has improved over the years. On the basis of the cross-country indicators available from the OECD's *Education at a*

Glance database, educational achievement for upper-secondary education points to a serious human capital deficiency (Figure 8). The quality of education, gauged by student performance in standardized tests, such as PISA, is also low. The progress made since the late 1990s in improving education attainment by facilitating access to education, especially up to the upper-secondary school levels, should be acknowledged. But the current education status of the population leaves ample room for improvement.

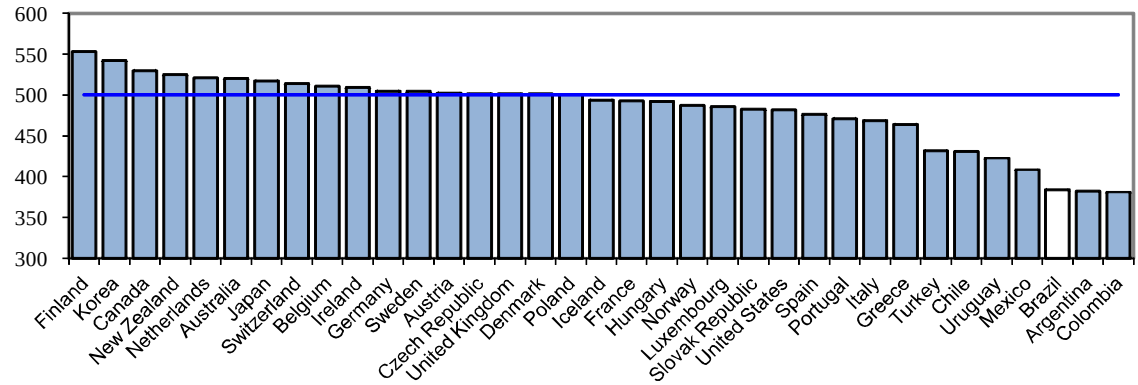
In addition to low human capital, informality in the labour market weighs on effective labour utilization. International comparisons are difficult, because the very definition of informality changes across countries on the basis of labour market institutions and social protection entitlements, among other factors. In Brazil, the conventional definition focuses on social security coverage and the incidence of self-employment. On the basis of this definition, and using the latest wave of the national household survey (PNAD), nearly one-half of the labour force is considered informal. This definition can be considered too broad, since not all self-employed individuals fail to contribute to social security. In any case, international comparisons for Latin America also suggest that informality is comparatively high in Brazil (Gasparini and Tornarolli 2007).

Figure 8
Education attainment by cohorts

A. Population that has attained at least upper secondary education by age cohort[1], 2005



B. Student performance: PISA scores 2006



Notes:
1 Excludes ISCED 3C short programmes.
2 The year of reference is 2004.
3 Includes some ISCED 3C short programmes.
4 The year of reference 2002 (2003 for Japan).

Source: OECD (2008).

An important culprit for labour informality is low human capital. Empirical evidence suggests that educational attainment is a powerful determinant of a worker's probability of obtaining a formal-sector job (Soares 2004). But the design of social protection programmes also affects the incidence of informality in the labour market. In the case of Brazil, the fact that individuals are entitled to a means-tested social assistance pension at 65 years of age that is equivalent to the minimum wage discourages them from contributing to social security, at least for individuals whose earnings are at or close to the minimum wage. The social assistance benefit is not conditional on labour market status, thus reducing the opportunity cost of informality (OECD 2006a; Giambiagi and de Mello 2006). Of course, these social assistance programmes are an integral part of the country's formal safety nets and serve a social protection purpose, but their adverse effects on the incentives facing low-income workers for seeking a formal-sector job should not be underestimated.

Stringent employment protection legislation is likely to discourage labour formalization. The Brazilian labour code does not seem to be overly restrictive, at least as far as gauged by the OECD methodology for quantifying restrictions in a country's labour legislation (OECD 2004). The rigidity of Brazil's legislation is comparable to the OECD average, which is due to a combination of below average rigidity for regular contracts and above average rigidity for fixed-term and temporary work contracts (Figure 9). There are relatively few procedural and practical restrictions on firing workers with open-ended contracts. The Brazilian labour code is more flexible than most OECD countries with regard to large-scale or 'collective' dismissals, imposing no additional constraints in such cases other than those that apply to individual dismissals (OECD 2005). Other indicators, such as the *Doing Business* indicators reported by the World Bank, suggest that hiring and firing costs are comparatively high in Brazil.

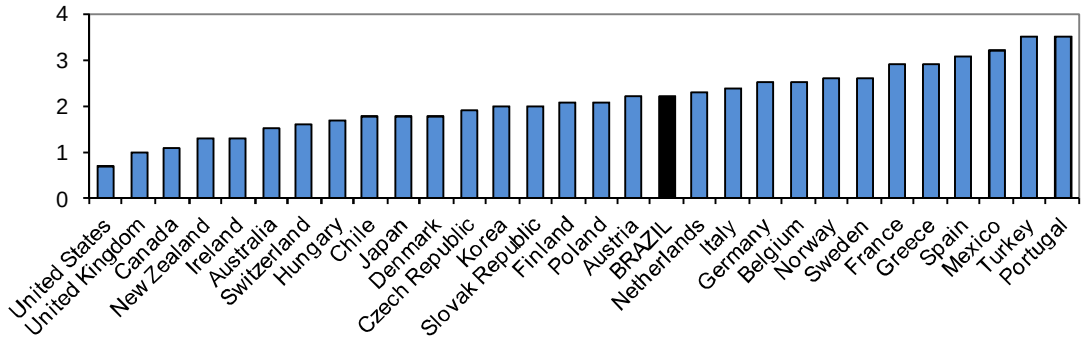
Finally, and perhaps most importantly, the burden of taxes on labour income is believed to discourage labour formalization. At close to 35 per cent of GDP, Brazil's tax take is high in comparison with other emerging market economies (Figure 10). The tax burden on labour income includes not only social security contributions, but also mandated saving and para-fiscal levies to finance labour training programmes.[6] Individuals' willingness to pay taxes depends, of course, ultimately on the perceived benefits of the goods and services provided by the state and financed through general taxation. But onerous levies of payroll do tend to encourage informality as a means of avoiding the tax burden.

Regardless of the root causes of informality, there are important reasons why policymakers should be concerned about the informal sector when designing policies aimed at improving labour utilization. The impact of informality on public finances should not be underestimated, especially against a background of already high spending on social security benefits in a country with a still relatively young population. Informality also creates challenges for the design of tax policy, because it narrows tax bases, resulting in the shifting of the tax burden onto formal enterprises and individuals. Moreover, pervasive informality is an obstacle to human capital accumulation, because the employer may have little incentive to invest in on-the-job training for workers with a

6 See OECD (2005) for more information on the severance pay fund, FGTS, and the para-fiscal levies known as the 'S' system.

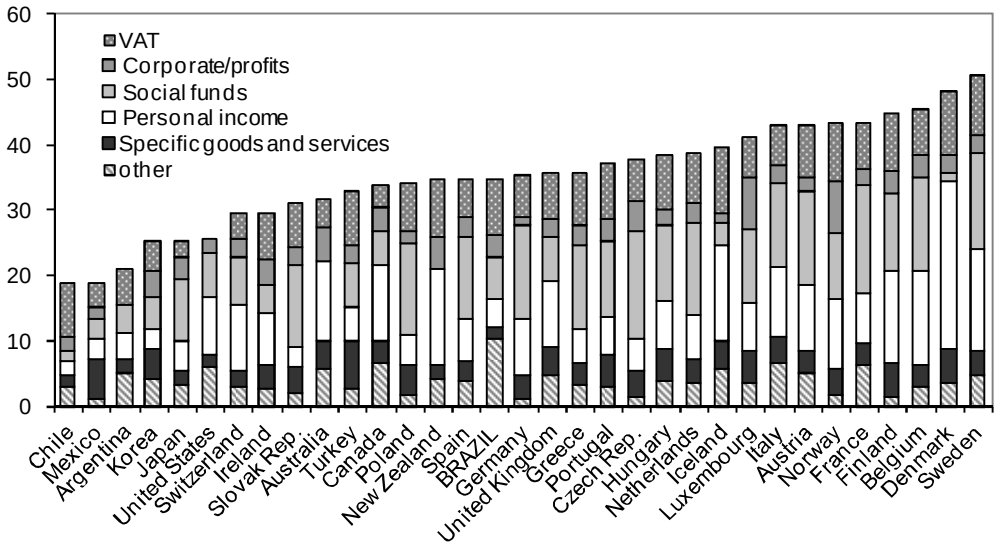
Figure 9
EPL restrictiveness score: Brazil, Chile and OECD countries, 2004

Overall indicator, low scores indicate less restriction



Source: OECD (2005).

Figure 10
Composition of tax revenue: Argentina, Brazil, Chile and OECD countries, 2003
% of GDP



Source: OECD (Revenue Statistics), SII for Chile and SRF for Brazil, and OECD calculations.

precarious attachment to the enterprise. These workers are also often ineligible for publicly-funded labour training programmes.

Labour informality is also closely related to business informality, which has a bearing on the investment climate. Informal businesses have limited, often costly, access to credit, such that informality also constrains their expansion. Informality, therefore, perpetuates segmentation in the labour market and in the business sector, thus barring the diffusion of productivity gains across the sectors of activity. As such, it weighs on long-term growth not only from the point of view of effective labour utilization, but also improvements in total factor productivity.

4.2 Physical capital accumulation: The lack of investment

Brazil's investment rate is low, at below 20 per cent of GDP. The investment rate has fallen considerably since the early 1980s, with a reduction in public investment, especially at the federal level, that was not fully offset by an increase in investment by the private sector and other levels of government (de Mello 2007). But fiscal retrenchment is not the only culprit for Brazil's low investment rate. Private investment has been discouraged by high real interest rates, as well as macroeconomic volatility. There is considerable controversy over why real interest rates have been high in Brazil since macroeconomic adjustment in the mid-1990s, although it has begun to trend down over the last few years, essentially due to falling public indebtedness and enhanced external resilience. Investment tracks the sovereign credit spread closely in Brazil, suggesting that efforts to entrench macroeconomic consolidation should also bear fruit in terms of higher investment to the extent that perceptions of creditworthiness are enhanced.

A scarcity of non-bank financing alternatives, despite improvements in recent years, has also constrained investment growth. Brazilian companies still tend to rely on internal sources and credit from government sources at below market borrowing rates to finance their investment plans. The strengthening of corporate governance, including through initiatives such as the creation of the New Market at the São Paulo Stock Exchange and an overhaul of bankruptcy legislation in 2004, coupled with an improving macroeconomic backdrop, has resulted in an unprecedented increase in equity and corporate bond issuances over the last few years. Nevertheless, Brazil's credit ratio remains rather low, and most of the increase of the last few years is attributed to a more buoyant personal credit market segment. To the extent that financial development promotes investment, further financial deepening will bode well for potential GDP growth.

But there are additional, microeconomic deterrents to private investment related to restrictions in product market regulations, as discussed above. To the extent that a pro-competition regulatory framework fosters entrepreneurship, it contributes to improving the investment climate, which is needed to strengthen Brazil's growth performance and resilience. This is important, because the experience of OECD countries suggests that product market competition is a key driver of productivity in OECD countries.[7]

5 The growth and development agenda for the future

Brazil's ability to raise and sustain its potential growth rate depends on the success of further structural reform aimed at removing existing obstacles to input accumulation and productivity enhancement. The agenda for future reform is vast and, due to space limitations, only a broad-brush summary of the main policy challenges to be addressed in the future will be presented in what follows.

7 See OECD (2002) for empirical evidence on the linkages between the intensity of competition in product markets and productivity performance.

5.1 Consolidation of macroeconomic adjustment

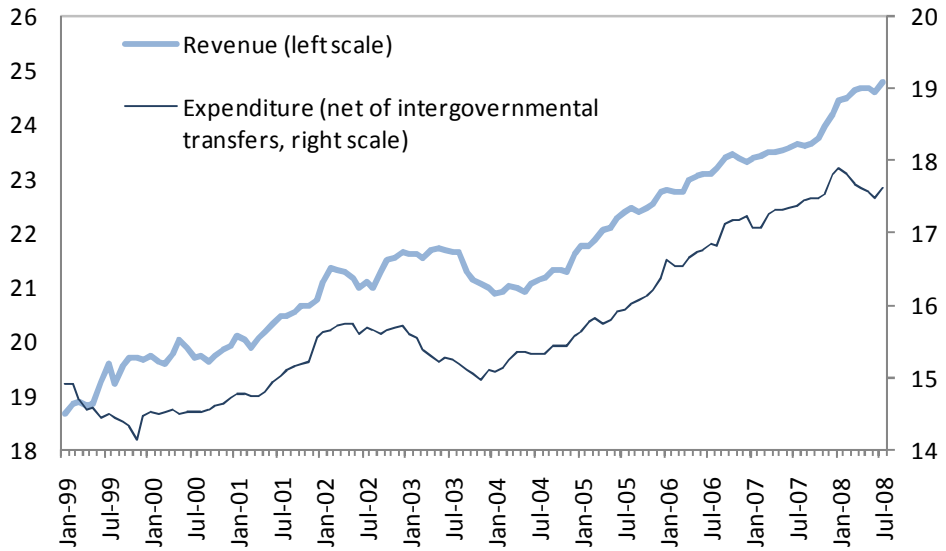
A stable macroeconomy—with low inflation and sound public finances—is an essential framework condition for sustained growth. There appears to be significant consensus in Brazil that more needs to be done to consolidate the achievements to date and to make headway into reform areas where progress has so far been elusive. In particular, comprehensive reform in the fiscal area would contribute to improving the quality of fiscal adjustment, which has until now relied predominantly on revenue hikes rather than expenditure retrenchment (Figure 11). At a minimum, efforts should be made to prevent further increases in the current expenditure-to-GDP ratio so as to stabilize the tax take in relation to GDP and create fiscal space for a recovery of public investment.

An important policy challenge is to stem the rise of government spending on social security benefits. Whereas central government spending on payroll has been relatively stable over time at about 5 per cent of GDP, pension outlays already account for about 12 per cent of GDP (including both social assistance and insurance programmes), a high share for a country of Brazil's demographic structure and income level, on account of the generosity of its pension entitlements. Parametric reforms have been put in place over the years, including a comprehensive overhaul of pension entitlements for private-sector workers in 1998 and for civil servants in 2003, although several provisions of the latter are yet to be legislated. More recently, revenue-enhancing measures have been put in place, including better enforcement and an overhaul of the administration of disability benefits, which had suffered from poor governance and abuse. Robust job creation in the formal sector in recent years on the back of overall economic recovery has boosted the revenue base of the social security system, thereby contributing to a stability of the system's financial imbalances.

But, despite progress in many areas, further parametric reform would be welcome to strengthen the financial sustainability of the social security system over the longer term. To this end, several proposals have been put forward (Giambiagi and de Mello 2006).

Figure 11
Trends in federal spending and revenue, 1999–2007

Cumulative 12-month flows, in % of GDP



Source: National Treasury and author's calculations.

They focus on options for severing the links between pension benefits and the minimum wage and the introduction of minimum retirement provisions, among others. The indexation of the minimum pension to the minimum wage transfers productivity gains accruing to the working-age population to retirees and constrains the government's ability to carry out a minimum wage policy independently of macro-fiscal considerations. Proposals have therefore focused on severing this link, while preserving the purchasing power of the minimum pension by indexing it to a price indictor that best reflects the consumption basket of the retired population. With regard to minimum retirement provisions, while the 1998 reform introduced a minimum age requirement for old-age pensions, there is no such conditionality for retirement on the basis of length of contribution. Extension of the minimum retirement age to this other retirement modality has therefore been proposed as a means of preventing early retirement.

Moreover, there are important policy challenges in the tax area. Of course, until further structural reform has put a lid on expenditure growth, policy action on the tax front should be consistent with revenue neutrality so as to ensure the attainment of high enough primary budget surpluses to secure a sustained reduction in public indebtedness over the medium term. With this constraint in mind, the agenda for reform in this area should aim for further reductions in the tax burden on enterprise turnover and payroll. The conversion of federal turnover taxes (PIS/Pasep and Cofins) into value-added levies since 2002 is a case in point. More recently, the phasing out of the bank debit tax (CPMF) from end-2007 will also likely contribute to making the tax system more efficient, given the adverse effect this levy is likely to have on intermediation costs and financial deepening. There is also considerable room for reforming the state-level value-added tax so as to reduce the scope for predatory horizontal tax competition among the states (de Mello 2007). Because the states have full autonomy to set the rates and bases for the value added tax, they have used this prerogative as an industry policy device, leading to harmful horizontal tax competition. Of course, in a decentralized federation such as Brazil, the political economy of tax reform is complicated by extant revenue-sharing arrangement across and within the different levels of government, as well as by the need to ensure revenue neutrality in the course of fiscal adjustment.

5.2 Human capital accumulation

The largest gains from further reform are likely to come from continued human capital accumulation, which is the area where Brazil lags the most in relation to the more advanced countries in the OECD area. As mentioned above, the main achievement in this area is the increase in school attainment since the late 1990s. To a large extent, this is due to an overhaul of the intergovernmental arrangements for financing the delivery of primary and lower-secondary education. Accordingly, a fund was set up in 1998 through the earmarking of municipal revenue to finance provision and the introduction of top-up payments from the federal government to complement municipal spending on the basis of local government expenditure needs. The new financing scheme created incentives for the municipalities to take up service delivery, which many local governments had resisted due to alleged capacity constraints, despite having a constitutional spending mandate in this area. The new arrangement is working well and is now being extended to upper-secondary and pre-school education (de Mello and Hoppe 2005).

Since universal enrolment has by and large been achieved, the main policy challenge for the years to come is to increase the quality of education services. Standardized tests and quality screening devices, such as those included in the yearly school censuses, have been put in place since the late 1990s, allowing the government to monitor trends in enrolment and performance within and across schools. These are important tools for policy assessment, design and implementation. Over 85 per cent of students are enrolled in the public school network (all levels of government), and performance varies considerably across schools. Inter-school performance differentials are common in educational systems where schools discriminate among students at the time of enrolment, but this is not the case in Brazil's comprehensive school network. Policy effort should therefore be placed on reducing these performance differentials.

Improving human capital also calls for enhanced performance at the higher education level. The main challenge in this area is to increase attainment, given that Brazil's fares poorly in relation to regional peers and countries with comparable income levels. Progress in this area is important if Brazil is to improve its innovation potential as a means of raising overall economic efficiency and competitiveness. There is no standardized international test for assessing the quality of higher education, but Brazil's performance on the basis of conventional innovation indicators, such as patent holdings and scientific publications, suggests that there is scope for improvement (Brito Cruz and de Mello 2006).

5.3 Improvement in the investment climate

As discussed above, conventional business-climate metrics, such as World Bank's *Doing Business* and the OECD's product market regulations indicators, suggest that Brazil has much to gain by removing obstacles to entrepreneurship. Policy options in this area are fairly uncontroversial. They focus on reducing the cost and bureaucratic hurdles for business registrations and closures, alleviating the tax burden on enterprises, especially the smaller ones, and making the labour code more flexible. However, implementation requires initiatives that often straddle different jurisdictional boundaries, including across levels of government, business associations and regulatory agencies. The scope for coordination failures and political-economy constraints to reform in this area should therefore not be underestimated. This is especially true in large decentralized federations, such as Brazil, whereas business-related regulations are often under the purview of sub-national governments.

The regulatory framework also needs to be strengthened at the sectoral level. Much has been done since the privatization of public utilities and network industries in the 1990s to set up independent sectoral regulators and competition authorities. But more should be done to strengthen the regulatory regime by ensuring that the sector-specific regulators are effectively independent and financially autonomous from government. Policy action would also be welcome to eliminate regulatory uncertainty in areas where a lack of clarity has been an obstacle to investment. The water/sanitation sector is a case in point, because much-needed investment has been discouraged by a lack of clarity in the assignment of regulatory functions between the local and state governments.[8]

8 See OECD (2005) for a discussion of the regulatory framework in network industries and OECD (2006c) for an assessment of the competition authorities.

The business environment would also benefit from policy efforts to strengthen the judiciary and legal systems. This is essential for improving contestability and therefore competitive forces that underpin efficiency gains. Business surveys often identify weaknesses in the judicial system, such as the length of procedures, as an important source of regulatory uncertainty (Pinheiro 1996).

6 Conclusions

This paper has argued that Brazil's growth performance is improving essentially as a result of ongoing macroeconomic adjustment and structural reforms in several policy domains. Political commitment to policy continuity in many areas has been instrumental in this process, especially in terms of building credibility in the country's institutional framework for policymaking. A supportive external environment in recent years has also contributed to a much needed adjustment in the country's external accounts, making the economy more resilient to external shocks. But, notwithstanding the progress achieved to date, there remains a vast agenda for future structural reform in support of sustained growth.

Further efforts towards increasing Brazil's growth potential should focus on two main areas. *First*, the consolidation of macroeconomic adjustment would fulfil an important framework condition for growth, a lesson that is applicable more generally to emerging market and transition economies. Effort to stem the increase in government spending would create room in the budget for much-needed investment and pave the way for a reduction in the tax take in the future, once the public debt has been reduced further. This is likely to contribute also to a fall in Brazil's high real interest rates. *Second*, effort to close the gap in educational attainment and performance in relation to the OECD area would also put Brazil in a better stead to compete in international trade. Moreover, to the extent that it raises labour productivity, continued human capital accumulation would contribute to improving further Brazil's distribution of income, which remains skewed even by Latin American standards. A less unequal distribution of income would have the additional advantage of making growth more pro-poor.

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Annex 1. Calculating Brazil's potential GDP

This Annex updates the calculations of Brazil's potential GDP provided in de Mello and Moccero (2006) and takes into account the 2007 national accounts revisions. As a first step, total factor productivity was calculated as follows:

$$\ln(TFP)_t = \ln(Y_t) - 0.49\ln(\overline{K}_t) - 0.51\ln(\overline{L}_t), \quad (1)$$

where Y_t denotes real GDP; $\overline{K}_t = \gamma_t K_t$ is the utilization-adjusted capital stock, where γ_t denotes a coefficient of utilization of installed capacity, K_t; $\overline{L}_t = (1-u_t)\overline{F}_t$ denotes utilization-adjusted labour, where $\overline{F}_t$ is the labour force and u_t is the rate of formal unemployment; $\ln(.)$ denotes the natural logarithm; and *t* is a time indicator.

The share of capital in GDP is obtained from the national accounts and is in line with previous literature (Silva Filho 2001; Souza and Jayme 2004; Souza 2005).[9] Due to methodological changes in the unemployment series, the rate of unemployment was calculated as $u_t = (1-E_t)/\overline{F}_t$, where E_t is the employed (formal and informal) population. Finally, potential GDP was calculated as follows:

$$\ln(Y_t^*) = \ln(TFP_t)^* + 0.49\ln(K_t^*) + 0.51\ln(L_t^*), \quad (2)$$

where $\ln(TFP_t)^*$ is the HP-filtered TFP series calculated by Equation 1; $K_t^* = \overline{\gamma}_t K_t$, $\overline{\gamma}_t$ is the HP-filtered series computed for γ_t, proxying for the non-accelerating inflation capital utilization (NAICU); and $L_t^* = (1-\overline{u}_t)\overline{F}_t$, where $\overline{u}_t$ is the HP-filtered series computed for u_t, proxying for the non-accelerating inflation rate of unemployment (NAIRU). Forecasts of $\ln(TFP_t)$, γ_t and u_t using an autoregressive (AR) model were computed for 2008–10 and used to calculate the HP trends in order to minimize the end-point bias associated with HP filtering.

Annual data are used in the calculations for the period 1980–2007. The labour force and employed population series are available from IPEA for the metropolitan regions, the stock of physical capital is also taken from IPEA in billions of 1999 *reais*, the index of utilization of installed capacity is available from the *Getúlio Vargas Foundation*, and GDP is available from IBGE.

9 It can be argued that a capital share of about 50 per cent is high by international comparison. This is due essentially to the fact that Brazilian national accounts treat the income of own-account and informal-sector workers as capital income. A capital ratio of 40 per cent has been used in recent growth accounting exercises (Gomes et al. 2003).