For a fair adjustment with shared growth

An agenda of reforms for Brazil

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A. A Path to Prosperity for Brazil

Brazil will celebrate 200 years of independence by the end of the next Presidential mandate. In many ways, its story for past two centuries is one of tremendous progress: from an extractive, slave dependent Portuguese colony to the world's 9th largest economy; from an agrarian backwater, where 50 percent of the population was still illiterate in the 1950s, to an urbanized upper middle-income country with an extensive welfare state and vastly expanded access to all types of social services. Yet, these achievements are clouded by Brazil's inability in the more recent past to achieve sustained economic growth, by remaining deep inequalities, and by recurrent fiscal imbalances, which betray a state besieged by vested interests whose ambition seems to consistently exceed its ability to deliver.

The 2018 general elections in Brazil are probably the most uncertain since the reintroduction of democracy in the mid-1980s. A high proportion of undecided voters, an unusually large field of candidates, together with substantial rejection rates for all leading contenders, reflect a fragmented landscape and the absence of consensus on what Brazil's national project should be. Already today Congress is made up of over 30 political parties making coalition building enormously challenging. Recent corruption scandals have exposed practices of vote buying and influence peddling at the heart of Brazil's way of doing politics, practices that the population is no longer willing to tolerate. The challenges awaiting the next administration are thus considerable. To tackle Brazil's problems, an elected President will require a coherent plan and a strong electoral mandate.

This package of policy notes is addressed to Brazilian society and specifically to the Presidential candidates and their teams of economic advisors in the 2018 election. It provides the World Bank's diagnosis of Brazil's main economic and social development challenges and charts a possible course to address them. The present overview contains a summary of our main arguments. It can be read as a self-standing piece but makes reference throughout to a set of more detailed analyses summarized in a package of 15 policy presentations. The presentations draw and background materials on which they draw can be downloaded from the World Bank's website (www.worldbank.org/brazil-policynotes).

B. Brazil's Three Core Challenges

The point of departure for our diagnostic is that Brazil faces three core challenges. The first is the large fiscal disequilibrium that has developed since 2012 and that now poses an imminent threat to the resumption of growth and the maintenance of macroeconomic stability. Brazil's government debt rose from 54 percent to 74 percent of GDP [1] in just five years and is projected to double again in the next decade without a change in policies.

The second challenge is the absence of sustained growth in productivity, which puts future increases in per capita incomes at risk because of a projected reduction in the growth of the country's labor force. Brazil's output per worker has risen by just 0.7 percent per year since the mid-1990s, one tenth of the rate in China and only one half of the average in OECD countries.

The third challenge is that Brazil's state increasingly struggles to deliver basic public services despite its large size. Brazil raises more taxes than the average OECD country. Yet, a growing violence epidemic,

[1] This is using the Central Bank definition of gross public debt. Using the IMF's definition, the level of debt reached 84 percent in 2017.

stagnation in education outcomes, and the failure to connect millions of Brazilians to sanitation services are just some of the symptoms of state failures that will require fundamental changes in governance.

Brazil's persistent social and economic inequalities, despite notable improvements in the last two decades, lend urgency to all three challenges. Without a resolution of the fiscal crisis, Brazil faces the prospect of a return to inflation which would hurt the poor most of all. Without an increase in productivity, Brazil's aging population will place a growing burden on the young, who are already among the most vulnerable to economic exclusion. And without a more efficient state focused on the needs of the poor, millions of Brazilians will continue to suffer from poor quality services, without the same opportunity to opt out and seek private provision that is open to the better-off.

1. The Fiscal Crisis

Brazil's state spends more than it can afford. For the past two decades, Brazil has experienced a consistent increase in current spending which is now putting fiscal sustainability at risk. In recent years, this was aggravated by the drop of revenues resulting from a deep recession and a large increase in tax exemptions. Brazil's primary fiscal balance has deteriorated by over 4 percentage points of GDP from a surplus of around 2-3 percent in the 2000s to a deficit of almost 2 percent in 2015-17. Gross public debt has consequently increased to 74 percent of GDP, far above the 35-40 percent threshold usually regarded as "safe" for emerging markets. Public spending is not only above what Brazil can afford but does little to support growth as attempts to contain spending in recent years have fallen almost entirely on public investment. In 2017, public investment declined to below 0.7 percent of GDP, around one tenth of the level in fast growing emerging markets.

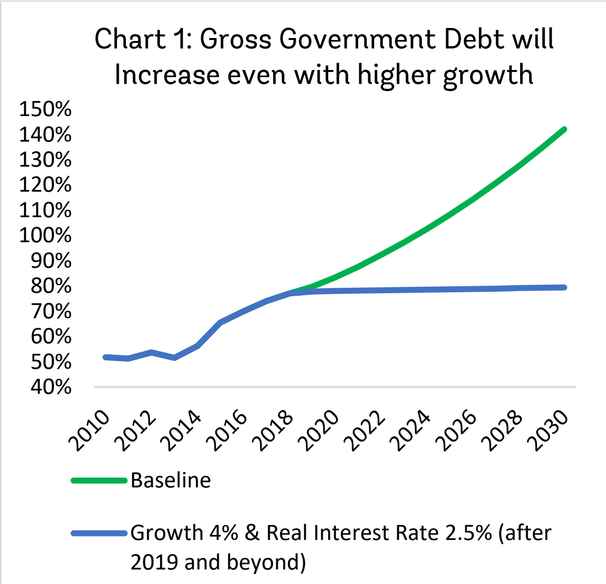
While there is broad consensus on the severity of the fiscal challenge, there is little consensus on how to address it. For some, the fiscal deficits of the past 4 years are merely a reflection of the deep economic recession that Brazil experienced in 2015-16. This, they argue, led to a slump in revenues. Consequently, policy should focus on boosting growth which would largely take care of the fiscal problem. Others believe Brazil's high interest rates are to blame for its negative debt dynamics. With lower rates, the primary surplus needed to stabilize debt levels would be lower. Policies should thus focus on reducing debt service costs.

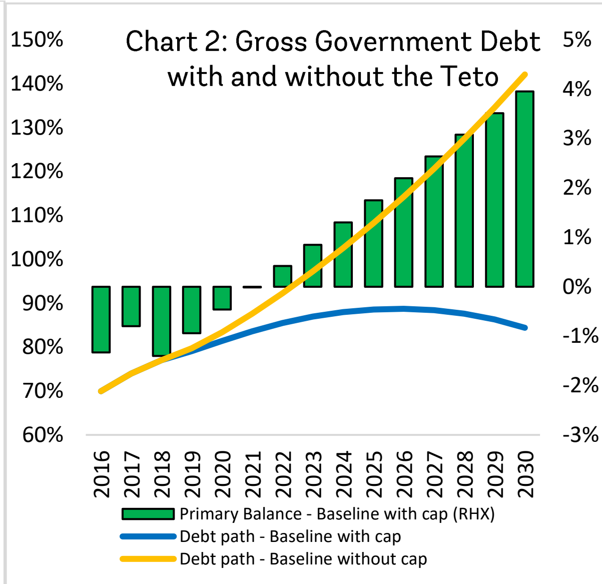
Would a combination of higher growth and lower rates obliviate the need to adjust? This is unlikely. Using a fiscal model, we can make projections for public debt and fiscal balances, taking into account expected GDP growth and other key macroeconomic variables. The conclusion of this analysis is that under reasonable assumptions for GDP growth and real interest rates[2] over the coming decade, Brazil needs an adjustment of around 5 percentage points of GDP in its primary balance to stop debt from growing. Even in an optimistic scenario, where growth averages 4 percent and real interest rates decline to 2.5 percent, the debt to GDP ratio continues to rise, albeit at a very slow rate (Chart 1). To bring debt back down to safer levels would require even higher growth or even lower rates. By any historical standards this is highly unlikely.

Moreover, this exercise ignores the fact that both growth and real interest rates are not economic policy variables but the results of policy choices, including the fiscal stance. In the absence of a government plan to address fiscal imbalances, the likely outcome would be increased not lower interest rates, a decline in investor confidence, exchange rate deprecation and higher inflation, lower not higher growth and thus

[2] We assume growth to average 2.4 percent over the decade and real interest rates to be around 4 percent. Both are in line with the trend over the past 15 years.

rapidly worsening debt dynamics. In other words, we do not believe the next administration can pin its hopes for fiscal sustainability on the resumption of economic growth alone (Policy note 1 on fiscal sustainability).





Source: Simulation based on World Bank fiscal model.

Even if the need for fiscal adjustment is accepted, the question arises what combination of revenue and expenditure measures to use to achieve it and how to sequence it over time, taking into account that fiscal consolidations tend to lower economic output due to the so-called fiscal "multipliers". The current administration has provided one possible answer: the spending ceiling adopted in December 2016 freezes real primary federal government spending at the level of 2016 for at least 10 years. Assuming positive GDP growth, this spending rule will restore primary surpluses by around 2022 and stabilize public debt by around 2026 (Chart 2). The adjustment implied is gradual—around 0.6 percent of GDP per year—but it nonetheless would lead to a reduction of around one quarter in the size of the federal government in percent of GDP, bringing it back to the level of the late 1990s. Critics of this strategy argue that an adjustment only from the expenditure side may affect social spending that is perceived as key to maintaining and expanding progress in poverty reduction and social inclusion achieved over the past 15 years.

We take the view that focusing most of the adjustment on the expenditure side is justified. Our argument is based on two key pieces of evidence. First, international experience suggests that the output costs of cutting spending are generally lower than those of increasing revenues. Second, new evidence for Latin America shows that the costs of a revenue-based adjustment are higher the higher the initial tax burden on the economy[3]. Since Brazil is already a high tax country, further increases in the share of revenues in GDP are likely to impose higher output costs than dealing with the underlying expenditure pressures. Third, our review of federal government spending in Brazil reveals that a significant proportion of it is both inefficient and predominantly benefits the middle and upper ranges of the income distribution. Cutting such spending may have low output costs and would not affect social inclusion goals negatively.

This argument does not mean that we do not see scope for increasing revenues to contribute to the fiscal adjustment, or for reforms to make the structure of taxation fairer. Most advanced countries use the tax

[3] World Bank (2018c).

system to reduce the inequality in final household incomes. In Brazil the incidence of taxes is even less progressive than the incidence of spending, because of a heavy reliance on taxes on turnover and consumption (so-called “indirect” taxes), which affect the poor much more than the rich, since the share of consumption in their total income is much higher, and because the generous tax exemptions on income (or “direct”) taxes predominantly benefit the richest segment of the population. As a result, direct taxes do little to redress the inequities created by the high burden of indirect taxes. For reasons of fairness and equity, as well as to ease the costs of doing business, tax reform is urgent (Policy Note 2 on tax system). We return to this issue in the next section in more detail.

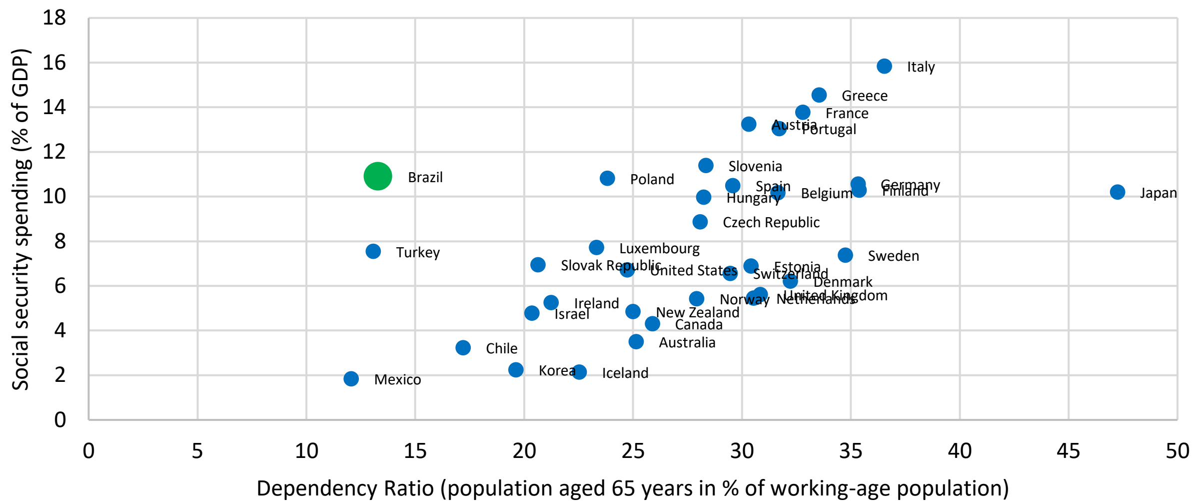
In the remainder of this section, we focus on the scope for spending cuts and reductions in tax exemptions that would improve the quality and fairness of fiscal policy and protect the poor, notably by reducing the huge transfers to the relatively richer Brazilians implicit in (i) the pension system, (ii) the civil service payroll and (iii) the significant amount of subsidies and tax exemptions. All three have implications at the federal and subnational level, which are briefly considered (Policy Note 3 on intergovernmental fiscal issues).

Pensions

Brazil spends on pensions like an old country, even though its population is still comparatively young. The country has two contributory public pension systems in addition to a non-contributory social pension (BPC). The general social security system (RGPS) collects contributions from 67 million private sector workers[4] and their employers and covers around 30 million beneficiaries, of which around 10 million are rural workers with minimal past contributions. The roughly 5.5 million civil servants at the federal, state and municipal level are covered by the RPPS, whereby each government jurisdiction maintains its own contributory system. The federal and subnational RPPS together fund pensions for around 3 million retirees. Both the RGPS and RPPS offer retirement by length of service, set statutory retirement ages that are low by international standards, and offer replacement rates that are relatively high. As a result, total federal pension spending (including the RGPS and the federal RPPS) was around 12 percent of GDP in 2016, much above spending levels in countries with a similar age structure (Chart 3). Because only formal workers make pension contributions and receive benefits, and because benefits are larger than cumulative contributions, pension spending benefits mostly the richer part of the population.

[4] Since some workers do not make regular contributions, the average number of contributors each month is only 52 million.

Chart 3: Brazil's Spends on Pensions like an Old Country



Source: World Bank staff calculations based on United Nations population statistics, OECD and Brazilian Ministry of Finance data.

Pensions already account for close to 50 percent of federal government spending. The RGPS ran a deficit of around 2.5 percent of GDP in 2017, while the combined deficit of the federal and subnational RPPS were estimated to be close to 2 percent. Both figures are projected to rise as the number of retirees relative to contributors increases, although the 2003 reform of the RPPS implies that RPPS deficits will peak around the mid-2030s whereas RGPS deficits are projected to increase to over 16 percent of GDP in the next 50 years. Pension liabilities of their RPPS regimes have brought several Brazilian states to the verge of insolvency, with more expected to follow in the coming three to five years. Brazil’s pension system is thus completely unsustainable and puts overall government finances at risk. We offer the following key recommendations to address this challenge (Policy Note 4 on pension reform):

- Pension reform is best addressed as a package of measures affecting all workers both in the RGPS and RPPS. There is little justification for maintaining different benefits in the private and public sectors, to the extent that the resulting fiscal deficits are covered by general tax revenue. From this perspective, the deficits in the RPPS, associated with generous civil service benefits for those hired before 2003 deserve special attention.

- The reform proposed by the current administration in 2016/17 (eliminating length of service pensions, raising the minimum retirement age and gradually merging benefit rules in the RGPS and RPPS) is a big step in the right direction[5]. The incidence of the proposed reform falls proportionally more on contributors with higher wages, largely eliminating the net transfers they receive from tax payers. In this sense, the reform is progressive.

- However, the proposed reform will only reduce projected future deficits in the RGPS by half (and will therefore require additional reforms in the future). To further limit future RGPS deficits would require gradually reducing benefit levels relative to wages. At present minimum benefit levels are high relative to earnings and around 50 percent of workers contribute with amounts that are actuarially insufficient to guarantee the minimum pension. Since poverty rates among the elderly

[5] Excluding rural pensions, which are best considered as part of social transfers rather than social security, RGPS deficits would decline from a projected 14.5 percent of GDP in 2067 to around 7 percent as a result of the reform.

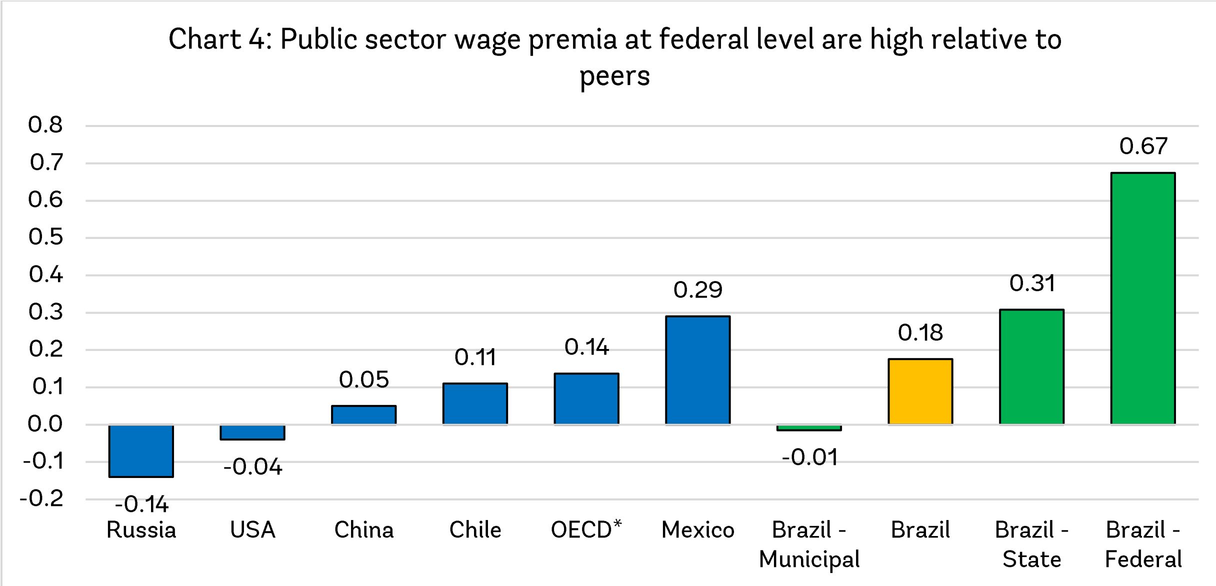
are less than half the national average and the minimum pension is equivalent to seven times the threshold used to determine eligibility for Bolsa Familia, there may be scope for a revision of minimum benefit levels in both the contributory and in the non-contributory programs (like BPC). Such measures should be considered together with a review of all social transfers in order not to undermine incentives to contribute to the RGPS. Nevertheless, any adjustment in minimum pension benefits would rightly be perceived as highly inequitable unless generous benefit levels in the RPPS are addressed first.

- The biggest shortcoming of the 2016/17 reform proposal is the limited impact of changes it introduces to the RPPS, whose deficits are expected to increase rapidly in the next couple of decades. The proposal provides for long transition periods and leaves in place the special regime for the military, which accounts for a large share of pension liabilities in the RPPS at federal and state levels. Moreover, the reform does not touch civil servants that entered before 2003, for whom the gap between contributions and benefits remains huge. With a large cohort of civil servants hired in the 1980s and 1990s expected to retire on these benefits in the coming 15 years, RPPS deficits are projected to grow substantially, aggravating the subnational fiscal crisis.
- A reduction of RPPS benefits for pre-2003 civil servants still in active service would dramatically improve the fiscal sustainability and fairness of the social security system and could thus help increase the reforms' overall acceptance. This would likely not close RPPS deficits completely and should be combined with a revision of other civil service benefits and tighter management of payroll (see below).
- In addition, the intergenerational fairness of the RPPS would be improved by reducing the high level of benefits enjoyed by current pensioners (which are being paid for by current workers, even though they themselves will never be able to enjoy a similarly high level of pension benefits). Under current rules the only feasible way to create greater equity would be to substantially raise income taxes on pension incomes above the INSS threshold.

The above reforms, even if completely implemented, may still not be sufficient to eliminate all pension deficits. For the poorer segments of the population enrolled in the RGPS, some transfers paid from general taxation may be necessary. For civil servants in the RGPS, it may be necessary to revisit the Constitutional protection of "acquired rights", as was done in Portugal in 2013. Acquired rights that precipitate subnational government insolvency or can only be funded by large transfers from younger generations could be questioned.

Payroll and Human Resource Management

Brazil's public sector wage bill is high by international standards, at around 13 percent of GDP. However, this is not because the public sector employs large numbers of people, but rather because public sector wages in Brazil are relatively generous. Controlling for work experience and educational background and taking comparable careers in the public and private sector, we estimated that salaries are on average 96 percent higher at the federal level and 36 percent higher at the state level than the comparable private sector jobs (Chart 4). Municipal salaries are, on average, in line with private sector equivalents. We also estimated that reducing the average federal wage premium to bring it down to the level of the state administration could save around 1 percent of GDP.



Note: *OECD average for available data includes: Canada, Chile, Estonia, Finland, Germany, Greece, Ireland, Italy, Luxembourg, Mexico and USA. Premia are calculated in logarithmic terms. The actual percentage premia are thus higher, as mentioned in the text.

Source: World Bank staff calculations based on Worldwide Bureaucracy Indicators, World Bank Bureaucracy Lab., and PNAD continua.

The above obviously masks considerable variation across career streams. Some public sector jobs such as teachers pay relatively little and may have trouble recruiting talent as a result. In other careers, such as in the judiciary, total remuneration, including benefits and gratifications, may considerably exceed the constitutional limit. Public sector doctors on average earn 4.5 times more than the top 10 percent of the income distribution, well above comparable benchmarks in OECD countries. It is therefore important that the analysis of public sector employment and remuneration practices goes beyond the headline news of *super-salarios* and high average wage premia.

Nevertheless, given the large share of public spending that goes to payroll, no fiscal adjustment will succeed without controlling public sector wage growth. The challenge is to do so in a way consistent with attracting qualified candidates and encouraging strong performance (Policy Note 5 on state reform).

Specifically, we make the following recommendations:

- Brazil presently has an unwieldy system of managing public sector employment. Aspiring civil servants sit a demanding entrance exam (*concurso*), based on which they are selected into one of more than 300 public sector career streams. Each stream negotiates its own salary progression and benefit levels. This greatly complicates setting consistent remuneration policies, creates significant ratchet effects from one career to another, and limits the mobility of civil servants across careers thus reducing the flexibility of the public administration. We recommend a civil service review with the aim of streamlining public sector careers and consolidating wage negotiations around a much smaller number of salary groups. This could also include consideration as to whether some careers (such as doctors) necessarily need to be civil servants.

- Some public sector careers currently operate outside the budgetary control of the executive. Salaries of the judiciary and legislative are set by self-regulation with budgets apportioned ex ante as a fixed share of revenues. These tend to be the public sector careers with the highest remuneration. Moreover, transparency around the remuneration packages outside of the executive is limited. These include generous housing benefits, the ability to collect multiple pensions, and numerous smaller gratifications, leading to perceptions of wide-spread abuse. Any reform of the civil service that leaves out such practices will suffer from reduced legitimacy and would be highly inequitable.

- Positive performance incentives are limited. Automatic and relatively rapid grade progression in many career streams implies that civil servants often reach the maximum remuneration level in their career at relatively young age. Devoid of further wage growth opportunities, remuneration policies provide few incentives for civil servants to continue to perform to the best of their abilities. Where positive performance incentives have been introduced, results have often been encouraging (Vinuela and Zoratto, 2016), but difficult to sustain in the light of growing fiscal constraints. Professional progression should be spaced out more to span an entire career, with key upward steps linked to objective competencies and criteria and contingent on good performance determined by individual evaluations.

- It is virtually impossible to sanction poor performers. *De facto* civil servants have job security for life. While performance reviews exist, the criteria employed are largely subjective, and civil servants dismissed on performance ground thus can easily get dismissals revoked in the labor courts. A fundamental review of performance criteria as well as associated jurisprudence is required to create a stronger performance culture in the civil service.

- At the same time, the public bureaucracy is under close watch by both internal and external audit institutions and the consequences of compliance failures can be severe. This has helped to uncover malpractices but, in the context of few positive performance incentives, it breeds risk aversion among the many honest civil servants. Accelerating the shift from compliance to results and value for money in external and internal audit could contribute to creating incentives for improved performance.

- Additionally, civil service employment rules may need to be revised to allow adjustments of the workforce in the face of budget pressures. Hiring practices should limit *concursos* to jobs clearly identified as part of long-term workforce planning. For jobs with declining needs over time, governments could shift to temporary contracts to make the public administration both more agile and efficient.

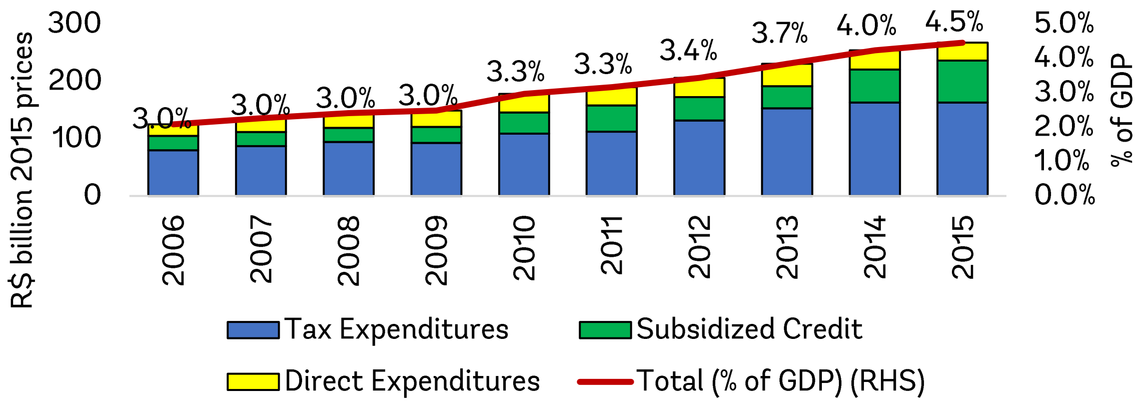
- While federal civil service rules impose some constraints on the administration of payroll at the subnational level, there is considerable variation in remuneration and management practices across states and municipalities. Significant payroll costs are associated with local rules and benefits which are not regulated by federal legislation. Imprudent management of payroll today creates additional pension liabilities tomorrow. Hence a tighter management of wage progression at the subnational level is a necessary condition to keep states and municipalities solvent.

There is no easy fix to Brazil's fiscal challenges. The reforms of public pensions and civil service administration are both complex and politically challenging. One area, however, in which faster progress could be made is the reduction of subsidies and tax expenditures. This is discussed next.

Subsidies and Tax Exemptions

According to data from the federal treasury Brazil's federal government currently spends around 6.2 percent of GDP in tax breaks and subsidies of various kinds, of which 4.3 in tax exemptions and 1.9 in fiscal subsidies and credit subsidies (SEAE, 2018). Such benefits include sector specific payroll tax exemptions, income tax credits for health insurance expenditures, tax exemptions on dividend income and tax benefits on a variety of savings instruments enshrined in federal legislation. Of these subsidies and tax exemptions, around three quarters directly benefit private sector firms (Chart 5). This includes the simplified tax regime for small businesses (SIMPLES) that offers a reduced unified turnover tax rate, and the free processing zone in Manaus which eliminates turnover taxes for manufacturing enterprises. In addition, firms benefit from a wide variety of sector specific tax expenditures on turnover taxes offered by state governments to encourage investment in their localities. Direct budget transfers to enterprises have diminished in the last two years, particularly as a result of significant reforms to state directed credit.

Chart 5: The "Bolsa Empresário": tax exemptions, credit subsidies and direct transfers benefiting the private sector



Source: World Bank calculations based on Ministry of Finance data.

Despite their considerable cost there is very limited evidence that these transfers have reached their objectives (policy note 6 on productivity and 7 on credit markets). In several cases, the objectives were never fully defined and the underlying market failures justifying government intervention were not examined. In others, the available evidence suggests limited effectiveness at high cost. Indeed, the conclusion is not entirely far-fetched that a significant number of these benefits is the reflection of rent-seeking activities whereby specific interest groups obtain state support at high cost to society as a whole.

Here we limit ourselves to summarizing our recommendations with respect to the fiscally most costly subsidies:

- The Payroll Tax Exemptions (*Desoneração da Folha*) maintain jobs, but at a cost several times higher than workers' salaries. The government has started to gradually remove this program for most sectors, which would make a substantial and immediate contribution to fiscal adjustment.
- The SIMPLES is expensive (about 1.2 percent of GDP, more than double the Bolsa Familia program) and distortionary, and should be eliminated as part of a general simplification of corporate taxation. There is no evidence of any positive effect of SIMPLES on labor market and firm performance indicators nor that it resulted in greater formalization. The program also has unintended negative consequences on productivity both by incentivizing firms to remain small and, potentially placing medium-sized businesses at a competitive disadvantage.
- The incentives for innovation, research & development provided by the *Lei do Bem* have had a positive impact, but their design could be improved. The performance in boosting research and development (R&D) intensity is significantly below what would have been expected for such a program largely because the design favors established firms and fails to reach most smaller or

newer companies—and because the overall business environment does not sufficiently reward private investment in innovation.

- Tax credits for private health insurance spending should be eliminated. There appears to be no justification for the government to subsidize private health care enjoyed by the relatively richer segments of society, taking into account that Brazil already offers a universal and free public health care system to all its citizens.

A reduction of tax expenditures and subsidies, together with a thorough reform of the public pension system and tighter management of public payroll jointly would go a long way to contain Brazil's spending pressures and restore fiscal balance. If complemented with measures to increase direct taxation on the wealthier segments of the population, Brazil could achieve both a substantial and a fair fiscal adjustment. We end this section with some considerations regarding the appropriateness of the spending rule adopted in 2016 as a strategy to implement the fiscal adjustment and on the looming subnational fiscal crisis.

Fiscal rules and a balanced adjustment

The spending ceiling adopted in 2016 ("teto dos gastos") is not the only rule governing budget execution in Brazil. There is also a "golden rule" limiting new public borrowing to the amount of government investment, multiple earmarks on more than 50 percent of federal revenues, as well as constitutionally set minimum amounts of spending on health and education. Together with legal entitlements for social security, these rules imply that over 90 percent of Brazil's federal budget spending is preset by legislation and cannot be altered through the annual budget. Without removing at least some of these rigidities it will be impossible to keep spending inside the teto or respect the golden rule beyond the very short run.

Even if all rigidities were removed, however, critics have argued that the federal spending rule is a blunt instrument that will make fiscal adjustment unnecessarily costly. As mentioned above, there are several reasons to pursue the adjustment on the spending side. Nevertheless, the expenditure reductions implied by the teto are enormously challenging. Political resistance against cuts in current spending may place the burden on discretionary spending, including public investment and social transfers such as Bolsa Familia. This is clearly undesirable as fiscal multipliers for public investment and social transfers are much higher than for current spending and potentially higher than for tax increases as well. In this situation, calls for a revision of the spending rule may be justified. We offer some options below, bearing in mind that any changes would need to be handled with utmost care to avoid weakening the credibility of the fiscal anchor and thus risking a renewed crisis.

One option would be to introduce modest changes to the spending rule that could safeguard a more balanced adjustment without compromising the underlying fiscal path:

- A first component of such "tweaks" could be to introduce harsher automatic correction measures if the expenditure ceiling is violated. The teto already includes such measures, notably: (i) freezing of nominal wages of the civil service; and (ii) increasing the minimum wage only by inflation. We estimate that these measures would yield savings of around 0.3 percent of GDP annually, or half of the adjustment implied under the teto. Additional automatic adjustment measures would be required to stabilize debt levels by 2026, focusing on pensions and payroll, the key drivers of current spending. By making these adjustments explicit and rooting them in the constitutional rule itself, the risk that they would be contested in the courts could be reduced.

- A second component to ensure a more balanced adjustment could be to exclude public investment spending, in line with the spirit of the golden rule. The decline of public investment from over 1 percent of GDP in 2014 to 0.7 percent of GDP in 2017 demonstrates the risk that without such protection, public investment tends to be the first line of adjustment, with significant potential economic costs. To compensate for the effect of excluding public investment and maintain the fiscal adjustment path, additional disciplines could be introduced along the lines suggested above.

An alternative to such adjustments to the spending rule would be to maintain the idea of a constitutional anchor but replace the spending rule with a pre-set path for the primary balance. Such a shift should only be contemplated once agreement on an initial and substantial package of spending measures (most crucially pension reform) has been reached. A primary balance target would allow revenue increases to contribute to the adjustment. Some revenue measures, such as eliminating tax exemptions for businesses and wealthier households, may have low output costs and there is thus good reason to include them in the fiscal adjustment strategy. The argument made here does not apply, however, to the vast majority of taxes and hence should not be misread as a plea to shift the full burden of adjustment towards higher taxation.

Ideally a primary balance rule should be defined in cyclically adjusted terms. However, given elevated debt levels and associated market risks, such a rule could be risky for Brazil now. Instead, restoring fiscal sustainability quickly needs to take priority. Hence, the primary balance target should be designed to achieve at least the same adjustment path as implied under the current expenditure rule—that is an annual improvement of at least 0.6 percent of GDP (Policy Note 1 on fiscal sustainability).[6] The design of policies to meet the target thereby will need to be conscious of the possible loss in revenue resulting from the potential output costs of fiscal adjustment. The quality of the adjustment measures is therefore critical.

We close with a brief consideration of fiscal adjustment issues at the subnational level. An inherent tension exists between the strength of subnational government obligations to guarantee access to services such as health and education, often enshrined in constitutional provisions, and the strength of their revenue base. The gaps have been closed both by federal transfers and the provision of bank loans, but poor management practices have meant that underlying fiscal imbalances have progressively worsened. Given the looming prospect of insolvency of several subnational governments, we recommend a combination of sticks and carrots to encourage subnational fiscal discipline but prevent economically and politically costly disorderly bail-outs (Box 1.1; Policy Note 3 on intergovernmental fiscal issues).

Box 1.1 Brazil's subnational fiscal crisis

Subnational finances have deteriorated in recent years and several states are either illiquid or insolvent. Even with a recovery of revenues, many states will continue to struggle to pay their staff and other obligations on time. Using a simplified model, we estimate 10 states will become insolvent by 2021 under a baseline scenario of economic recovery, and 17 in case of a renewed recession in 2020-2021.

The main driver of subnational fiscal imbalances has been local governments' inability to control rapid growth in personnel and pension spending, combined with stagnating or falling revenues in recent years. Further, many of the existing fiscal rules for subnational governments reinforce procyclical spending surges, while rigidities inhibit adjustments needed to maintain solvency. The most urgent fiscal pressures arise from the subnational RPPS pension systems. Our analysis suggests that in the next 10 to 20 years, the financing of pensions deficits alone will require as much as 30 percent of net current revenue.

[6] Note that this design would be entirely different from the present primary balance target, which is announced annually and is regularly revised based on actual performance during the year. It would have to be designed in a manner analogous to the teto dos gastos, and envisage even stronger automatic corrective measures in case the rule is violated.

Recent attempts fall short of a sustainable solution to the crisis. In 2016, the Federal Government approved the Regime de Recuperação Fiscal (LC 159/2016) which provides insolvent states temporary debt relief and access to fresh financing in exchange for fiscal adjustment. However, the regime fails to effectively control the wage bill and pension obligations and judicial and political obstacles have prevented the implementation of important adjustment measures. More broadly, federal debt relief may not be a sufficient enticement to reform, even for highly indebted states, and is of little relevance for states with no or low federally guaranteed debt. A stronger combination of carrots (fresh money) and stick (strong adjustment conditionality) is needed, combined with federal legislation to reduce rigidities and thus increase adjustment options.

Problems like the one faced by Brazil have been dealt with by other countries in a variety of ways. The following three approaches could be considered in combination to address the looming subnational fiscal crisis:

1. Establish a federal "fiscal stabilization fund" to provide states with fresh liquidity in exchange for greater fiscal discipline. The rules governing access to the fund are critical, however, to avoid moral hazard problems and prevent reinforcing procyclical spending cycles at the subnational level.

2. Structural reforms (including constitutional changes) to allow states more flexibility to reduce personnel numbers, salaries and pensions.

3. Over the medium-term, access to capital markets could be granted as a reward for the most prudent subnational governments. This could provide market oversight and discipline and thus encourage fiscal prudence, subject to a credible "no bailout clause" and a subnational bankruptcy legal and institutional framework. This may require constitutional changes and would need to be designed in collaboration with the judiciary.

Source: Policy Note 3 on intergovernmental fiscal issues

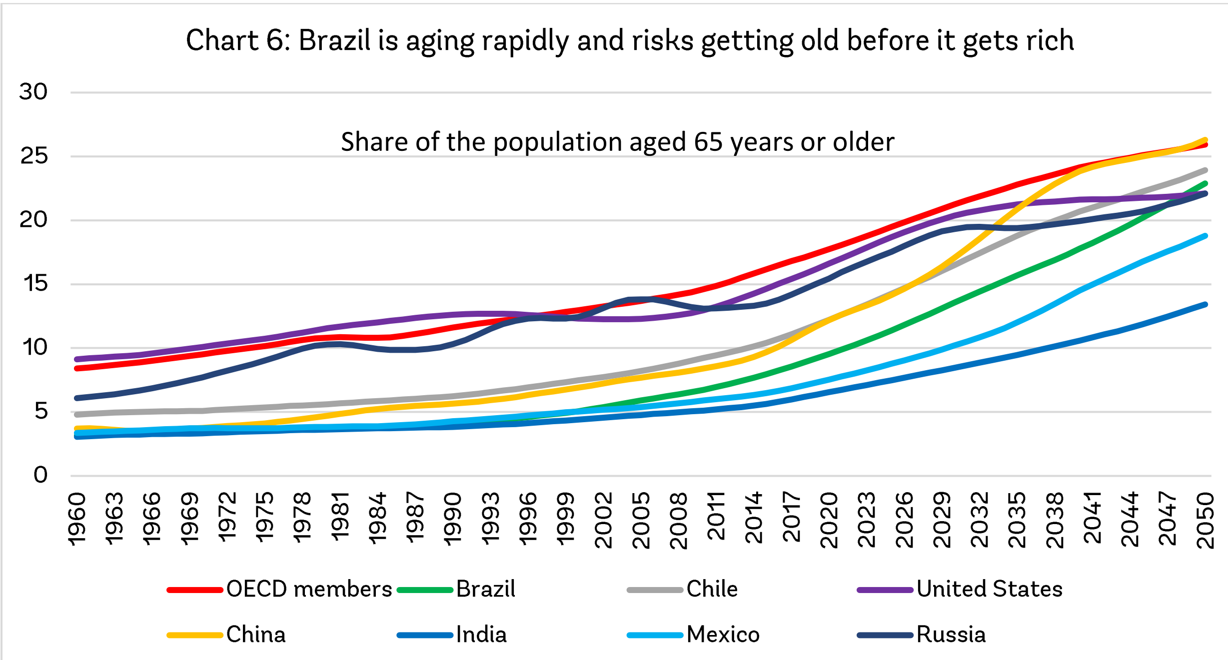
2. *The Growth and Productivity Agenda*

The income of an average Brazilian has not increased by very much in the past four decades, at least compared to per capita incomes in other emerging market economies such as China, India, Korea, Turkey or Chile. In 2017, Brazil's GDP per capita was the same relative to the United States as in 1980. Moreover, half of the increase in GDP per capita over the past two decades has been due to increases in the share of the population that is economically active. This driver of growth will lose force rapidly in coming years. Indeed, Brazil is aging very fast and already from 2030 onwards will experience a declining workforce and rapidly rising old age dependency rates (Chart 6). As such, unless changes are implemented, economic growth can be expected to decelerate. This would make it difficult for the country to sustain let alone expand the gains in standards of living observed during the past two decades.

Increases in per capita income result from a combination of investments in physical and human capital and improvements in total factor productivity – a measure of the efficiency with which a country uses its existing physical and human capital to produce goods and services. In this section we examine all three drivers of growth. We focus first on total factor productivity, because Brazil lags behind the majority of its peers in this area (Chart 7). Moreover, the gains from increasing the efficiency with which the country uses its existing assets could be high. Brazil could almost triple its per capita income if it had the same total factor productivity as the United States. For Chile and Mexico, the corresponding gains would be only three quarters and one third respectively. Subsequently, we look in more detail at the role of public and private investment, particularly in infrastructure, and increases in the quality of human capital.

2.1 The productivity challenge

Increases in productivity can result from innovation or the adaptation of new technologies. They can reflect new processes and ways of organizing economic activity. They can also derive from structural changes in the economy, as workers move from less to more productive sectors or firms. Increases in productivity are directly related to improvements in living standards. For example, because of higher productivity of its car manufacturing plants, Toyota can afford to pay its workers in Canada three times higher wages than in Brazil, yet the price of the car these workers produce is twice lower in Canada. Canadian workers need to work six times less to earn a Toyota Corolla than their Brazilian colleagues.



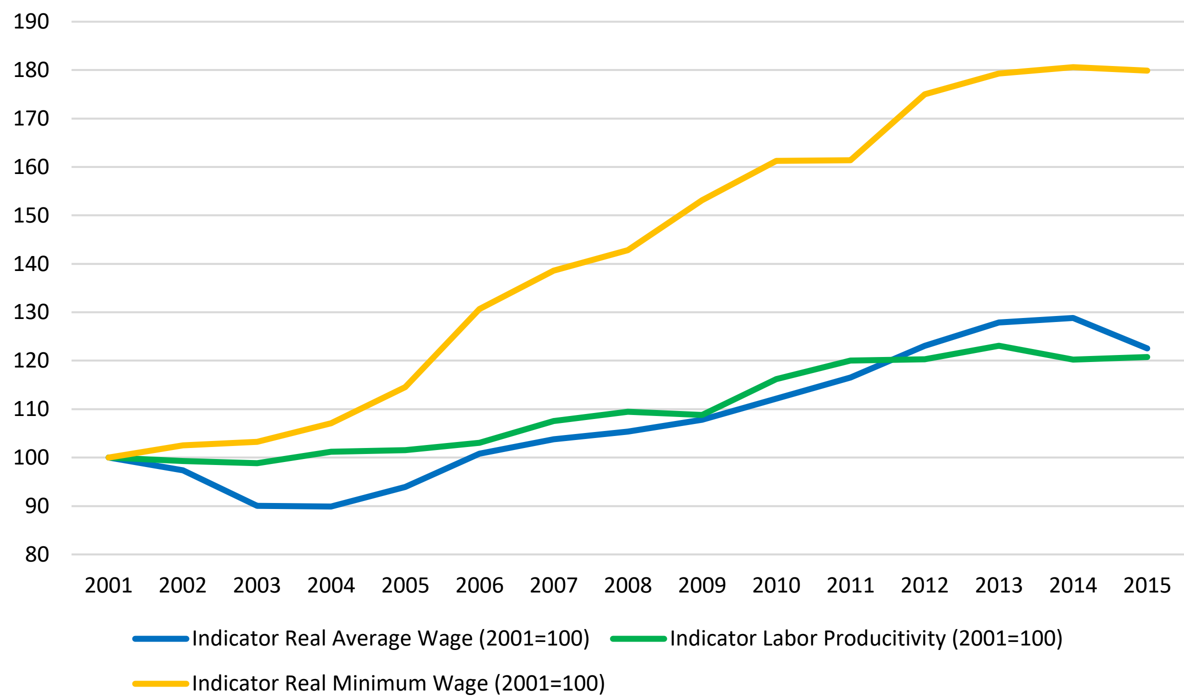
Source: United Nations population statistics

Source: World Bank calculations using Penn World Tables (2016).

Some observers question the focus on productivity as the key driver of improvements in living standards, at least for Brazil. They point to the fact that over the past 15 years limited productivity growth went hand in hand with dramatic reductions in poverty and inequality. They worry that productivity improvements could be achieved on the back of employment reductions, and merely generate profits for capital owners but no welfare gains for workers. They also point out that over the past 15 years, the minimum wage increased much faster than labor productivity, but this did not seem to impede job creation and reduced informality. Indeed, increases in labor earnings associated with the rise in the minimum wage were responsible for two thirds of poverty reduction between 2002 and 2015 (World Bank, 2016a). Why not simply continue the wage valorization policy as a driver of both growth and income gains?

We do not believe this to be a viable strategy for several reasons. First, the increase in real wages needs to be seen in historical context. This shows that real wage gains up to the end of the first decade of the 2000s were merely compensation for past reductions (Chart 8). In other words, businesses were earning extra profits in the early 2000s and there was room for labor costs to increase without threatening business competitiveness. This may not be the case going forward. A sign of this is that the 2015-16 recession was associated with a large increase in unemployment while real wages declined only moderately. The increase in unemployment was particularly pronounced among the youth, for whom the minimum wage could be an obstacle to entering formal employment (World Bank, 2018b).

Chart 8: Brazil wages had room to grow in the 2000s, not anymore



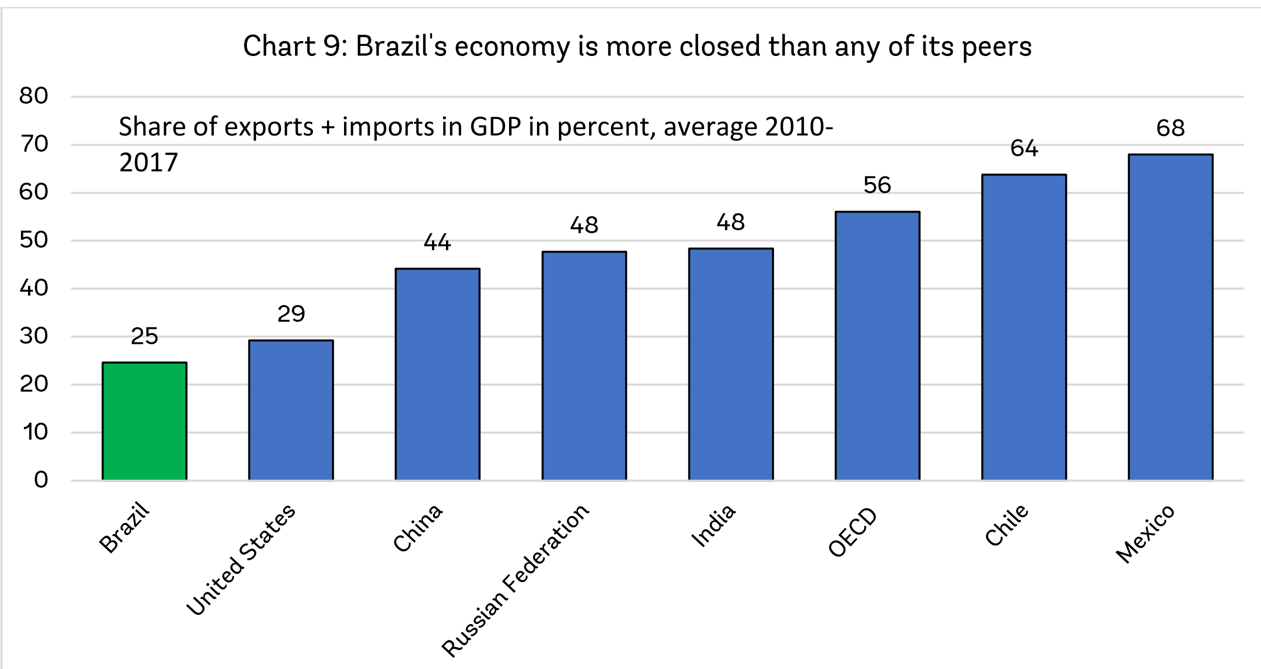
Source: IBGE and PNAD

Second, rapid job creation in the 2000s was associated with a large increase in the demand for services. This was fueled by booming domestic consumption, facilitated by the rapid growth in household credit and the rise in commodity prices, which favored non-tradeable sectors. The demand for low skilled jobs increased particularly fast during this period, raising the bargaining power of lower skilled workers. This allowed the government to raise the minimum wage much faster than the growth of productivity and at the same time increase formalization. The wage valorization policy thus worked in the specific circumstances of the “golden decade”. However, circumstances have changed at least since 2013 if not earlier. Commodity prices have fallen from their all-time peaks, credit has contracted, the real exchange rate has declined and the government’s attempt to lean against these forces with expansionary fiscal policies backfired as confidence in macroeconomic stability was eroded and financial conditions tightened further.

We therefore maintain that boosting productivity will be critical to Brazil's future growth and poverty reduction. Specifically, we focus on three priority areas for structural reforms to boost productivity: (i) trade and competition, (ii) taxes, and (iii) technology and innovation. The changes we propose would lead to a Brazil that is more open, more competitive and gives greater priority to markets over state intervention. Such a shift in Brazil's development model will require firms and workers to adjust. We also consider some of the complementary financial, labor and social policies that could ease the adjustment along the way.

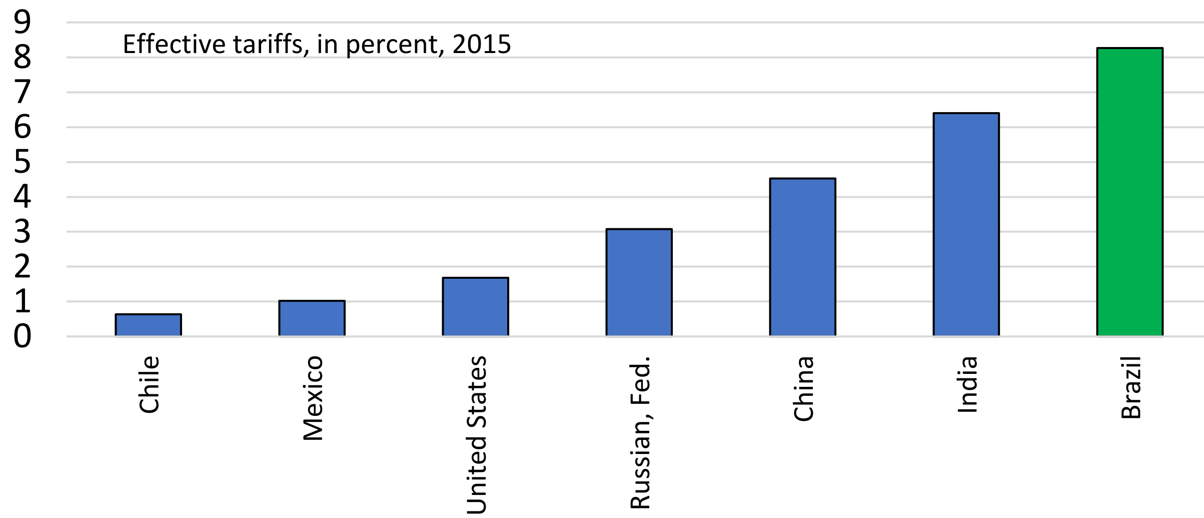
Trade and competition

Brazil's economy is amongst the least open to foreign trade of all the economies in the world, even controlling for its large size (Policy Note 6 on productivity). Tariff and non-tariff barriers are high and Brazil faces difficulties in accessing foreign markets due to a poorly developed transport and logistics infrastructure (Policy Note 10 on transport and logistics). Despite a highly diversified economy, Brazil's export basket has become increasingly concentrated in commodities, and Brazil has lost competitiveness in the manufacturing sector. This is not only because of the entry of China and other Asian countries with abundant supplies of labor into the world economy since the 1990s. It is also because Brazil is foregoing access to modern inputs and technologies, which are key determinants of a country's competitiveness.



Source: World Development Indicators

Chart 10: Brazil also has the highest tariffs among its peers

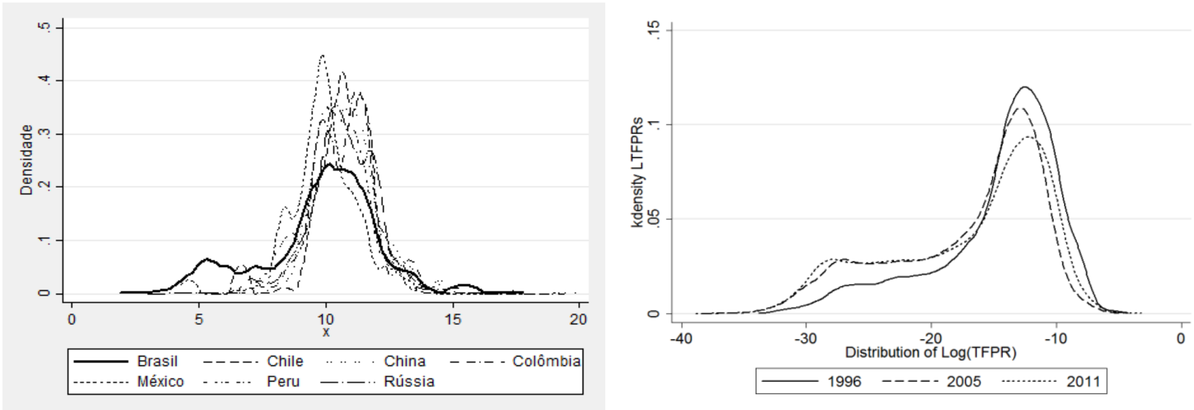


Note: Effective tariffs are calculated taking into account average trade weighted trade preferences. Brazil additionally has non-tariff measures equivalent to 11.8% of import values, bringing total protection to 20%. Comparable data is only available for some countries, including Chile (14.5% total), European Union (12% total), Mexico (6.4% total).
Source: World Bank staff using WDI data.

Brazilian enterprises are not just shielded against foreign competition. Vast distances, poor transport infrastructure, and fragmented regulatory and tax systems among Brazil's 27 states have meant that Brazilian companies also face relatively limited competition in the domestic market. Other factors further reduce the degree of market competition, including state interventions in financial markets to offer subsidized credit to specific sectors or firms, the tax system's vast array of exemptions favoring specific sectors and firms, and other elements of the business climate, which determine the costs of entry, operation and exit.

Overall, trade barriers, market distortions and business support policies have ended up misallocating resources away from the most productive firms, resulting in lower average productivity. This is reflected in the distribution of firms by productivity in Brazil relative to other countries, which shows a large proportion of low productivity firms—as shown by the fatter tail on the left-hand side of the distribution (Chart 11). In competitive markets, low productivity firms tend to disappear—in Brazil they survive thanks to lower competitive pressures. The effects of these distortions on overall productivity are large. Brazil's output per worker could rise more than three times, if all its firms were as productive as those in the United States.

Chart 11: Brazil has more unproductive firms than its peers, and this has worsened over time



Source: Barbosa Filho and Correa (2017) comparison with peers; Vasconcelos (2017) for comparison over time. Calculations based on IBGE enterprise census, excluding informal firms.

Because the agenda of promoting greater competition is complex, the question arises how it should be sequenced. We suggest that Brazil could use a commitment to greater international integration and foreign competition as an anchor for a broader policy program to increase competition in its economy and, through this, the competitiveness of its business sector (Policy Note 6 on productivity). Such a signal could help accelerate the necessary domestic policy changes to support faster productivity growth. We are not suggesting that opening up to trade alone is sufficient. But a credible commitment by Brazil to external integration, even if phased in over several years, could move businesses to support domestic reforms that would enhance their competitiveness in the interim. A gradual market opening would also give those negatively affected time to anticipate and adjust with appropriate government support. The following options could be considered to catalyze such an opening:

- Brazil and its Mercosul partners could agree to carry out a unilateral trade liberalization. For instance, our estimates suggest that a coordinated liberalization—where each Mercosul member unilaterally reduces tariffs by 50 percent with respect to non-Mercosul countries, non-tariff-measures (NTMs) are streamlined among the Mercosul parties[7] and export taxes are eliminated—would increase exports and imports by 7.5 and 6.6 percent, respectively, while real GDP would rise 0.93 percent above baseline projections in 2030.

- Alternatively, still in the context of Mercosul, Brazil could pursue Reciprocal Trade Agreements with the EU and other countries. For instance, we calculated that a reciprocal preferential trade agreement between Mercosul and the EU would boost exports and imports by 5.5 and 4.9 percent, respectively, with a permanent gain to GDP of 0.58 percent. Similarly, a preferential trade agreement between Mercosul and the Pacific Alliance would increase exports and imports by 2.4 and 2.3 percent respectively, while GDP would grow by 0.41 percent (all above the baseline projections by 2030).

- Beyond external tariffs, expanding Brazil's Authorized Economic Operator (AEO) program to more businesses and including all border control agencies could boost Brazil's overall exports and the country's integration in Global Value Chains**.** The benefits include lower customs clearance times, higher predictability, lower logistics costs due to the reduced movement of cargo within logistics

[7] Resulting in a reduction of 15 percent in the tariff equivalents for goods and services.

terminals for all “trusted operators” (certified based on their track record of good compliance) and improved risk management. The expansion of the program is already under way and, given that the top 1 percent exporters (190 firms) represented 72 percent of the Brazilian export value in 2014, reaching a critical mass of firms covered by the AEO program can bring significant benefits.

- Finally, the government could pursue an action plan to reduce transport and logistics costs, including a revision of the regulatory framework for the sector to reduce fragmentation, improve inter-modal planning and coordination, and attract greater private financing for the large program of transport concessions (Policy Note 10 on transport and logistics).

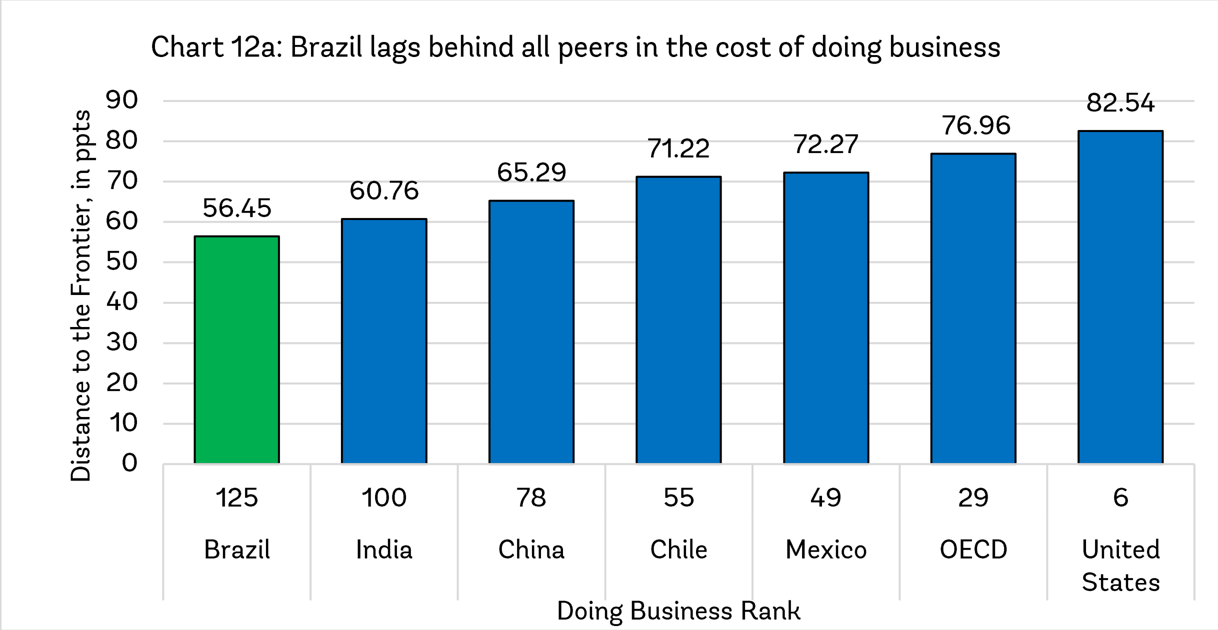
An opening to foreign trade would not just increase competition and facilitate the entry of new technologies, it would also lead to direct improvements in welfare. Model estimations carried out by the World Bank suggest the reduction in prices brought about by reduced trade and regulatory barriers could lift as many as 6 million additional Brazilians out of poverty. This is around one quarter of the poverty reduction achieved during the “golden decade”. An additional 9 million could be lifted above the poverty threshold through the effects of increased domestic competition on prices and employment opportunities.

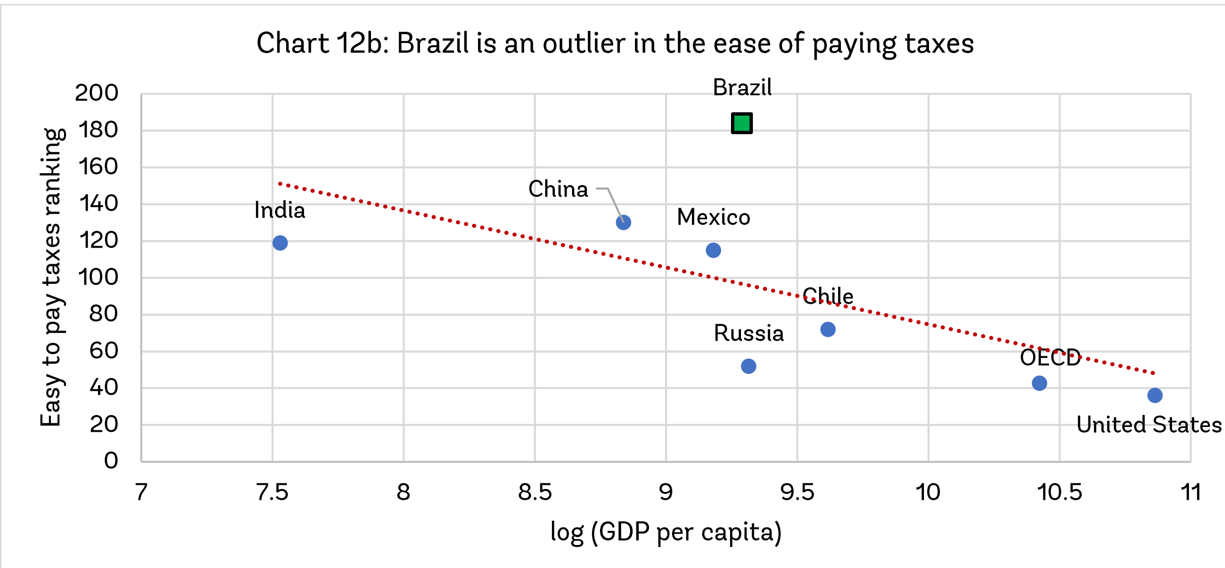
Although there is a broad consensus among economists about the net positive effects of trade opening, critics of globalization nonetheless point out that it can and has negatively affected some sectors and regions, which have lost jobs and whose socio-economic fabric has never fully recovered thereafter. It is therefore important that trade liberalization be combined with two complementary sets of policies. The first is a reduction in the domestic cost of doing business to give domestic producers a chance to compete on equal terms. This is considered next. The second is a change in labor and financial market policies so that they facilitate the mobility of workers rather than protecting existing jobs. This is considered at the end of this section.

Taxes

Brazil’s business environment is not friendly to entrepreneurs (Policy Note 6 on productivity). The country was ranked 125th out of 190 countries in the ease of doing business indicators of the World Bank in 2018 (Chart 12). Brazil has cumbersome registration and business licensing producers, which moreover may vary considerably from one state and municipality to another, making it difficult for firms operating in several locations. Obtaining credit is costly, while lenders face high risks and recover only a small portion of their investments when clients become insolvent. Frequent changes in legislation and judicial uncertainty make it difficult for entrepreneurs to assess and take risks, discouraging innovation and investment. The quality of many infrastructure services is poor. We discuss a number of related issues in the policy notes on infrastructure, labor markets and credit markets.

Brazil’s performance is particularly weak in the ease of paying taxes, where the country was ranked 184th, very close to the bottom of the global distribution. This is why we focus here on tax reform in the context of Brazil’s productivity agenda.



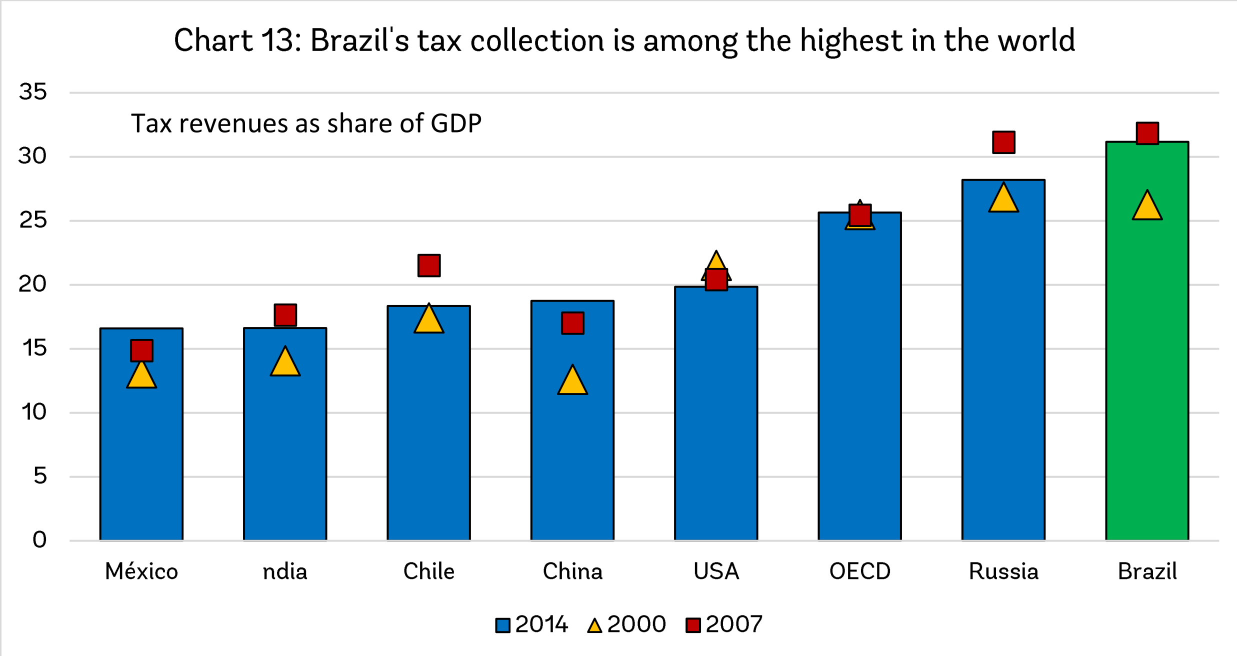


Source: World Bank Doing Business Indicators 2017

Brazil's main challenge regarding its tax system is to make it less burdensome and fairer for citizens and businesses. Brazil already raises more tax revenue than all its middle-income peers and the average OECD country (Chart 13). However, the tax system, in addition to not being very progressive, is extraordinarily complex. Multiple taxes are levied on the same base by federal, state and municipal governments. This is particularly true for Brazil's indirect taxes, including the value added tax on goods (ICMS, accruing to state governments) and services (ISS, accruing to municipalities), which is compounded by ad hoc variations in the many different federal contributions, such as the Contribuição para os Programas de Integração Social (PIS/PASEP), the Contribuição para of Financiamento da Seguridade Social (COFINS) and the Imposto sobre Produtos Industrializados (IPI). While deductions for input costs are possible, in practice refunds are given with considerable delay, hurting firm competitiveness. The cascading effect of multiple turnover taxes levied on the same base may increase the effective tax burden by as much as 2 percent of GDP[8].

[8] Amaral, Olenike and Viggiano (2008).

Firms operating in several states and municipalities or engaged in export operations are particularly affected, in addition to having to deal with multiple tax administrations and practices.



Source:
IMF World Revenue Longitudinal Dataset

A further problematic aspect of Brazil's tax system is that it introduces significant distortions, which undermine the level playing field and result in lower productivity. All taxes have a general regime and a plethora of so-called special regimes. The impact of corporate income taxes, the IPI, PIS and COFINS, payroll taxes and other levies, and the SIMPLES regime, thus differs across similar sectors and firms, distorting market competition and generating large inefficiencies in the allocation of resources.

An emblematic example of this is that Brazil taxes individual entrepreneurs at much lower corporate rates than they would pay if they declared the same revenue as personal income. Many of the liberal professions, such as doctors, lawyers or architects thus benefit from lower effective income taxes. As recent labor market reforms have relaxed conditions for self-employment, there is a risk of further tax leakage from outsourcing of professional positions, undermining the integrity of the social security system (since firms under the SIMPLES program pay a single tax which substitutes also for their social security contributions) and further reducing the equity of the effective tax burden.

Given these multiple problems, tax reform rightly has crept to the top of the policy agenda in Brazil. Several proposals are under discussion[9], which share similar broad objectives:

- To simplify the tax system, the multiple existing turnover taxes should be replaced with a unified federal VAT levied at the point of final sale (destination principle). Such a tax would have significant distributional consequences across subnational jurisdictions. States with a positive trade balance in goods would suffer potential losses and would need to be compensated during a transition period. Any reform to turnover taxes should limit the scope for exemptions, ideally to exports and investment goods only and set one unified rate. The transition to the new system and

[9] Appy (2018); Hauly (2018); Gobetti and Orair (2016).

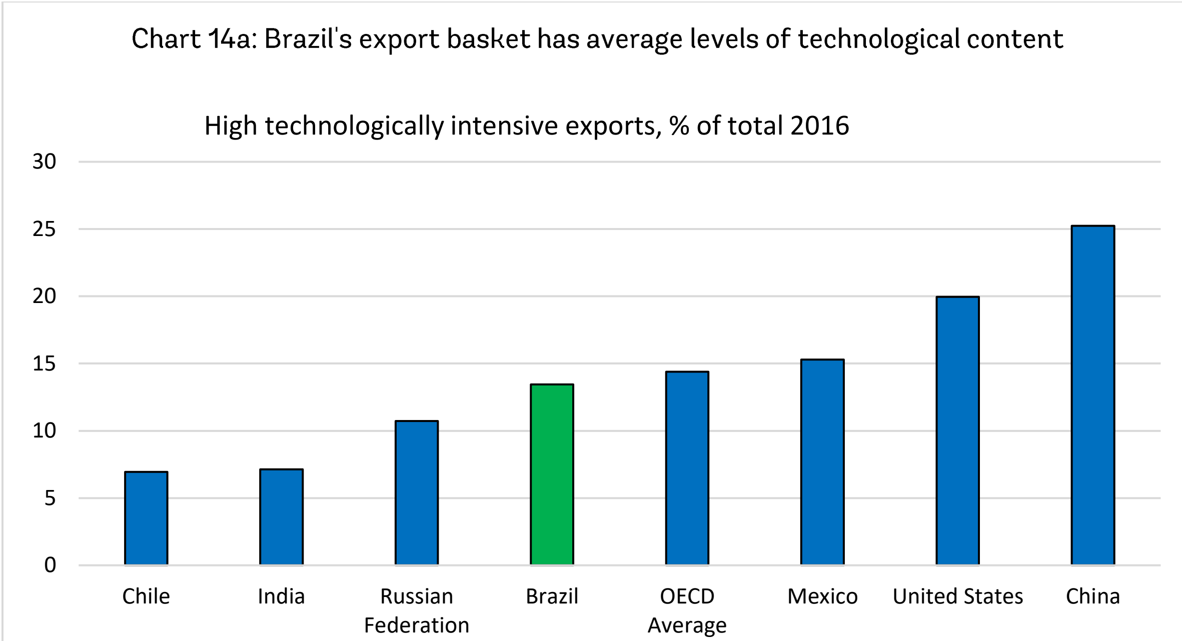
the payment of compensation should ideally be limited to no more than 10-15 years. A longer transition would raise the risk of the reform getting stuck half way. It would also be desirable to simplify VAT tax administration by agreeing on unified electronic filing (using the same templates), such as envisaged under the STEP program currently being rolled out by the federal revenue administration.

- The personal income tax should be reformed, increasing its progressivity by charging higher rates on top incomes and reducing exemptions (on dividend income and other savings) and deductions (such as on private health insurance). Income tax reform should also include closing income tax loopholes resulting from tax arbitrage between personal and corporate income taxes. A dual income tax, such as used in Scandinavia and Chile could be one way to do this. The authorities should also eliminate the distortions introduced by selective tax exemptions on savings instruments, and ideally retain exemptions only for long-term savings.
- Intergovernmental tax sharing arrangements should reflect the distribution of expenditure assignments, as local governments account for the bulk of social service provision. However, it may be time to consider whether Brazil's federative structure, with over 5000 municipalities has become too fragmented. Many local governments do not have the capacity nor the revenue base to deliver the services they are responsible for. Regional development gaps will continue to require federal and state transfers, but these should embody incentives to improve local government performance and to cooperate to achieve greater efficiency (see discussion on reform of the state).

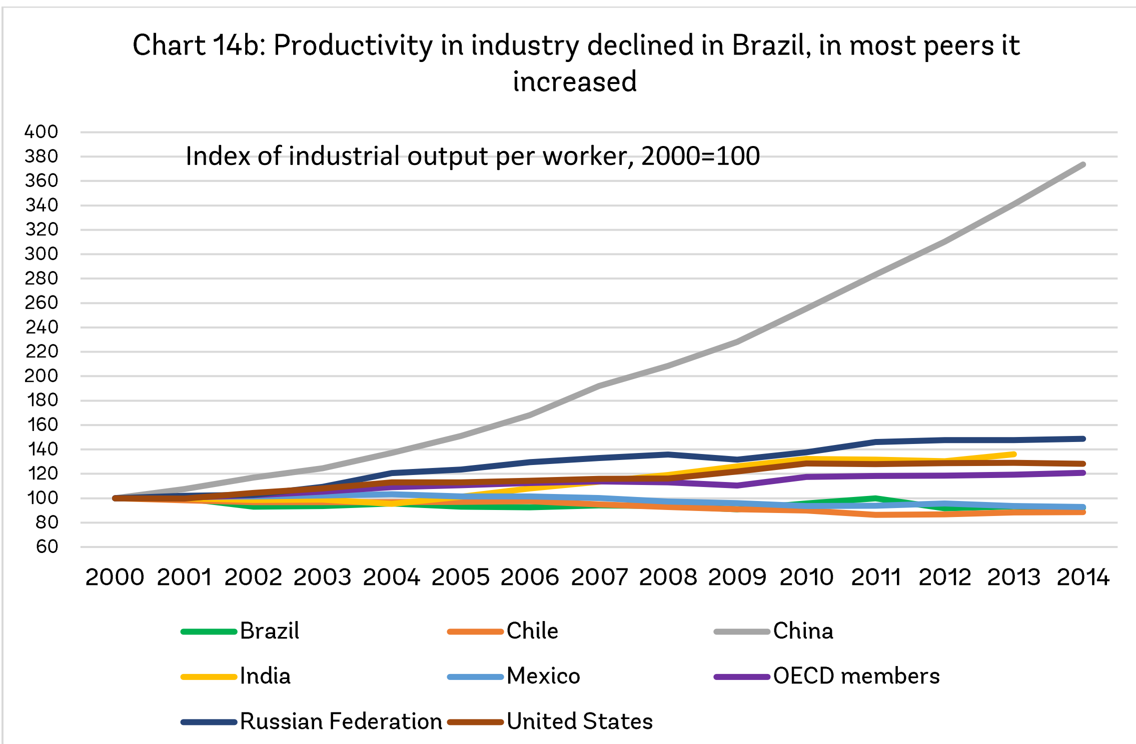
Technology and innovation

A key determinant of productivity growth is the introduction of new technologies and processes. Brazil has traditionally seen the state in a leading role in the funding of technological innovation. This is reflected in multiple state programs to support research and development, entrepreneurship and management training and to fund priority sectors, regarded as critical for technological advancement, with cheap directed credits. Brazil's "industrial policies" have also included far-reaching local content requirements (World Bank 2018a).

However, despite some notable successes in innovation and technology development such as airplane maker Embraer, or the federal agricultural research institute Embrapa, Brazil's poor productivity performance suggests that such policies should be rethought. For instance, Brazil's performance in innovation and the quality of Brazil's enterprise managers are both below what would be predicted by its per capita income. Brazil trades fewer sophisticated goods with the world than some of its competitors such as China or Mexico but more than Russia, India or Chile, although the average masks the fact that the bulk of Brazil's manufacturing exports go to Mercosur countries where they benefit from high levels of protection. Productivity in the industrial sector has stagnated even compared with the OECD and fallen far behind the East Asian economies (Chart 14).



Source: United Nations Comtrade Database



Note: Data for India missing for 2014.

Source: World Development Indicators, staff calculations.

Business support policies need to shift from transacting favors and compensating for high domestic costs to addressing the key constraints to competitiveness—including strengthening firm capabilities for innovation, prioritizing technology adoption and diffusion, while facilitating the adjustment of uncompetitive incumbents. This requires rebalancing public initiatives from their current sectoral focus to broad innovation support—including management upgrading programs, programs that strengthen linkages from local suppliers to international trade, and that facilitate technology adoption. It also requires moving from generic R&D tax incentives, which are costly and ineffective, to target potentially innovative ventures with evidence-based policy instruments. A redesign of state policy to support innovation and the adaptation of technology, in our view, may focus on the following key areas:

- Move away from tax exemptions and local content requirements to focus on facilitating linkage programs between large national firms and local suppliers, and providing support to upgrading quality and capacity of local suppliers.
- Expand and unify programs that directly target productivity and quality improvements (such as programs targeting managerial practices: *Brasil mais produtivo,* SEBRAE and SENAI programs).
- Expand and consolidate the many programs that support technology adoption at SEBRAI, SENAI, EMBRAPII, ABDI, BNDES or FINNEP under one umbrella of technology adoption support.
- Disseminate the demand driven design of PRONATEC -MDIC to the other PRONATEC programs. The results of the PRONATEC-MDIC program confirm international evidence in favor of close collaboration among the private sector in the creation of job training programs. This principle could be used more widely in technical higher education programs.
- Refocus corporate finance provided by BNDES towards SMEs, start-ups and innovators could help overcome imperfections in the credit market related to information asymmetries and risk aversion by commercial banks. Complementing access to finance with management training could facilitate the adoption of new business practices critical for enhanced efficiency.

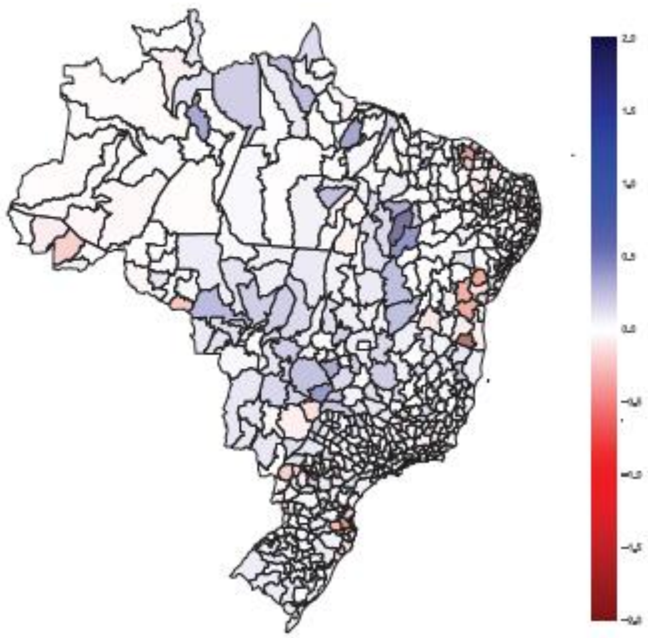
Managing the Adjustment

The changes we propose would create many winners, but also some losers. Workers in sectors and regions that are currently enjoying high levels of trade protection would be negatively affected by the suggested reduction in import barriers. Sectors and firms benefiting from subsidies, targeted tax exemptions of directed credit will be exposed to market competition and not all of them may be up to the task. Higher income households would face a higher tax burden, while the transition to a federal VAT based on the destination principle would negatively affect states with large positive trade balances with the rest of the country. Our conviction, based on economic modelling as well as historical experience, is that the gains far outweigh the losses. However, winners may be dispersed, and losers concentrated and organized, complicating the political task of getting support for this proposed program of reforms. Compensation mechanisms will be critical to ensure the vulnerable are protected and political resistance can be overcome.

Two broad sets of policies would help Brazil effectively manage the adjustment and make it possible to achieve higher incomes for all Brazilians.

First, policies should support structural changes brought about by market forces and not seek to delay them. What this means in practice is that the role of policies to support workers to upgrade or change their skills, to move to locations with better employment prospects, or to start their own businesses should be given priority over policies to support ailing industries. One good example of such a shift would be to redesign the *Abono Salarial* program (which currently provides a wage subsidy to formal workers with a five-year employment history), to turn it into a subsidy for the young or the long-term unemployed to ease their integration into the labor market (Policy Note 11 on labor markets). Expanding demand-driven training programs such as PRONATEC-MDIC would be another route to facilitate the adjustment. Perhaps most importantly, the role of labor offices in helping displaced workers to be matched with a new job is critical. As a general guide, Brazil should aim to shift towards greater balance between active and passive labor market policies. Policies to support household mobility, e.g. with targeted housing subsidies and investments in transport infrastructure could also be considered.

Chart 15: Many regions will gain, some will lose from trade opening
Impact of trade opening on net employment, 20 years later

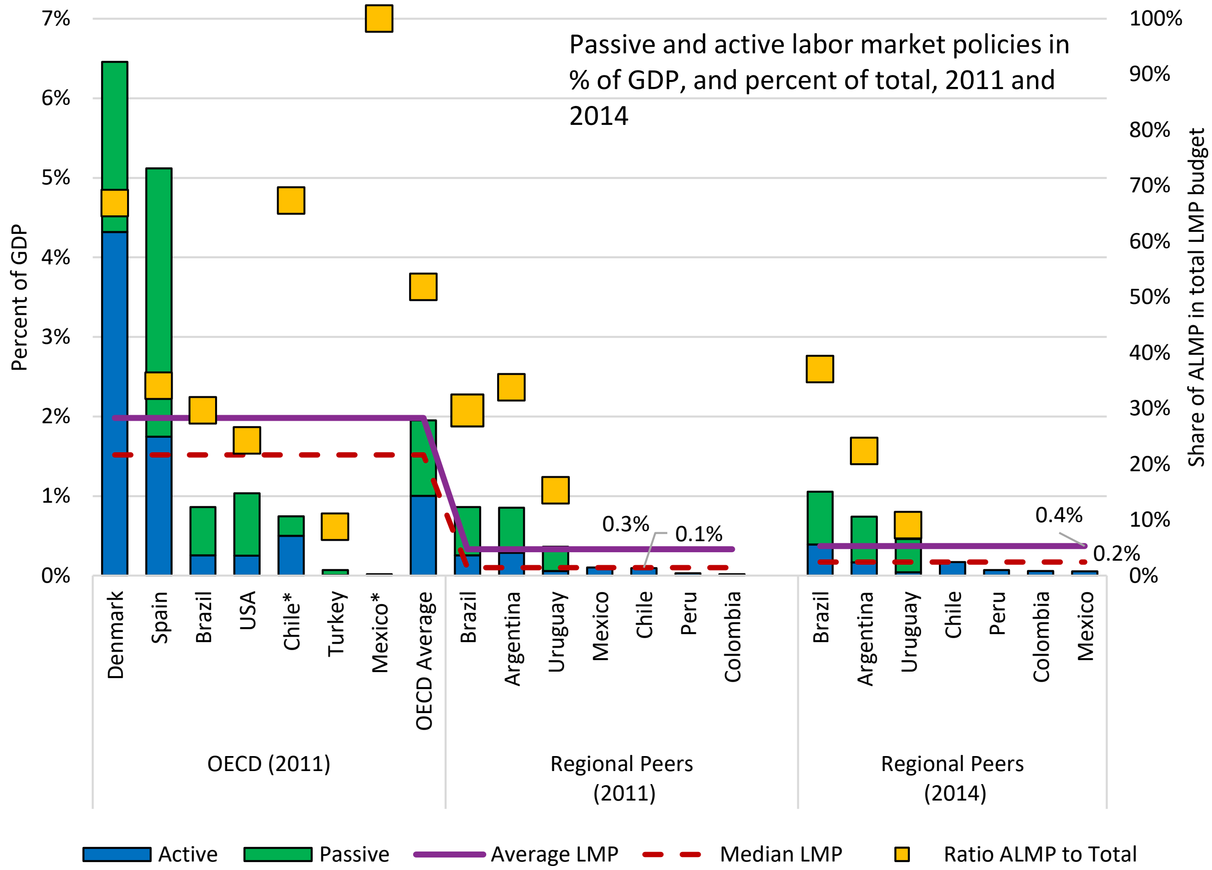


Note: Chart presents the results of a general equilibrium simulation of a complete elimination of all import tariffs
Source: Kalout et al. (2018)

Second, policies to support adjustment and mobility should be complemented with strong safety nets to offer temporary protection from unemployment and an income floor to keep people out of poverty. Brazil could improve in both dimensions. Brazil's social safety nets are relatively extensive, but more than three quarters of all social assistance transfers go to the elderly. Benefit levels in old age are high, lifting the vast majority of recipients well above the poverty threshold. By contrast youth and families with children are at a greater risk of poverty and receive fewer benefits. The Bolsa Familia program is well targeted, offering an income floor to the poorest. However, the program is facing increased demand as a result of the recession, particularly among the "new poor" in urban areas. It may thus require additional resources. These could come from a consolidation of all social transfers and the integration of their administration under one umbrella, to reduce overlaps and improve targeting.

Brazil's unemployment protection for formal workers is generous, but short-lived and poorly designed due to overlapping benefits from the worker security guarantee fund (FGTS) and the unemployment insurance (*Seguro desemprego*). Indeed, the combination of redundancy payments and unemployment benefits means that paradoxically to be made redundant in Brazil can be financially quite attractive for low wage workers, causing excessive turnover, and diverting resources away from the protection of those workers who truly need it. A reform of Brazil's unemployment insurance policies would better protect workers made redundant by structural changes while reducing excessive turnover and thereby support greater productivity of workers in thriving sectors (Policy Note 11 on labor markets).

Chart 16: Brazil spends more than other middle income countries on labor market policies, but only little on activation policies



Source: World Bank calculations based on OECD

2.2: Financing investment and infrastructure

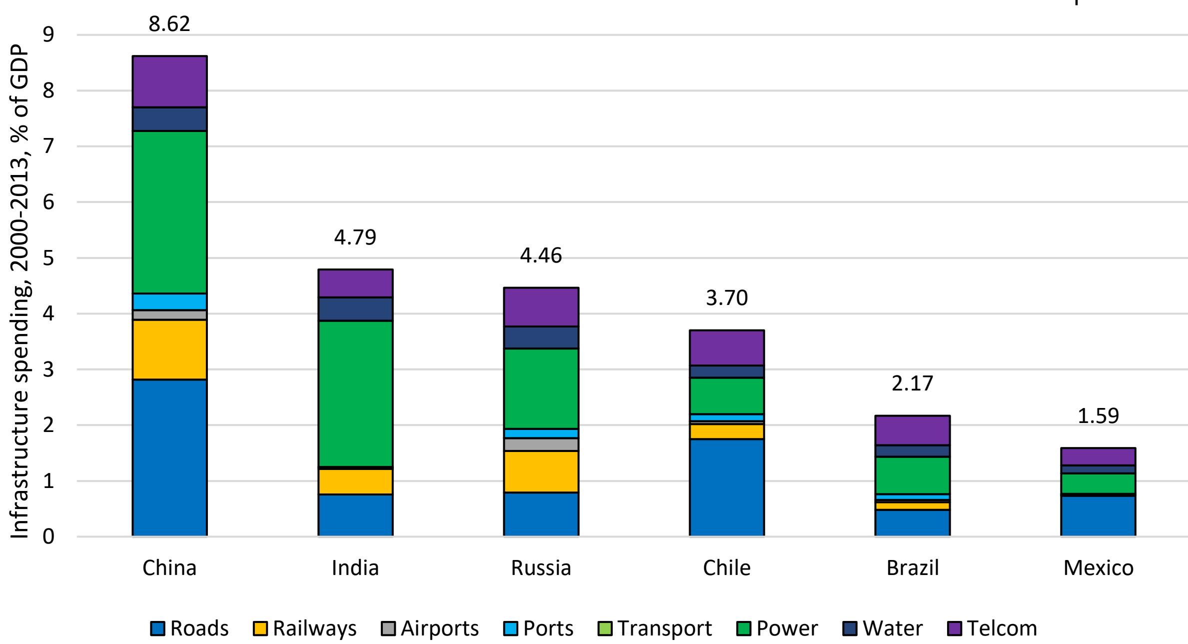
Low levels of investment and the poor status of infrastructure are further reasons for Brazil's growth malaise. Low levels of investment in Brazil are associated with low savings level. This is partly a result of the very generous pensions system, which implies that most Brazilians do not have to worry about saving for old age. In addition, there are significant distortions in the financial sector which contribute to lower returns to household savings (Policy Note 7 on credit markets). Addressing these distortions could help increase domestic savings, although it is fair to say that few countries have managed to successfully boost savings as a result of determined policy efforts.

However, low domestic savings are not the only reason investment rates are disappointing. Given the high costs of doing business, Brazil may be attracting less investment from abroad than possible. Existing savings are also poorly intermediated and allocated by the financial sector. This means that what investment is taking place may not be contributing to economic growth as much as expected. Nowhere is this more evident than in infrastructure (Box 2.1).

Box 2.1: Closing the Infrastructure Gap Requires Better Planning

Since the 1980s, as current government spending has increased, investment in infrastructure has declined from over 5 percent of GDP to just above 2 percent of GDP, insufficient even to cover depreciation (Chart 17). The result is a significant infrastructure gap, whether measured in terms of the physical capital stock or of investor perceptions (Chart 18). Against this background, there has been no shortage of national flagship programs targeting infrastructure. Their impact has been disappointing, however. Neither was Brazil able to substantially raise its total rate of investment in infrastructure, nor did the quality of services improve. Empty stadiums, half-finished refineries, incomplete airport terminals and urban rail tracks, as well as a systemic corruption scandal involving the country's largest construction firms and a significant share of its political elite are potent symbols of the country's failure to effectively manage infrastructure.

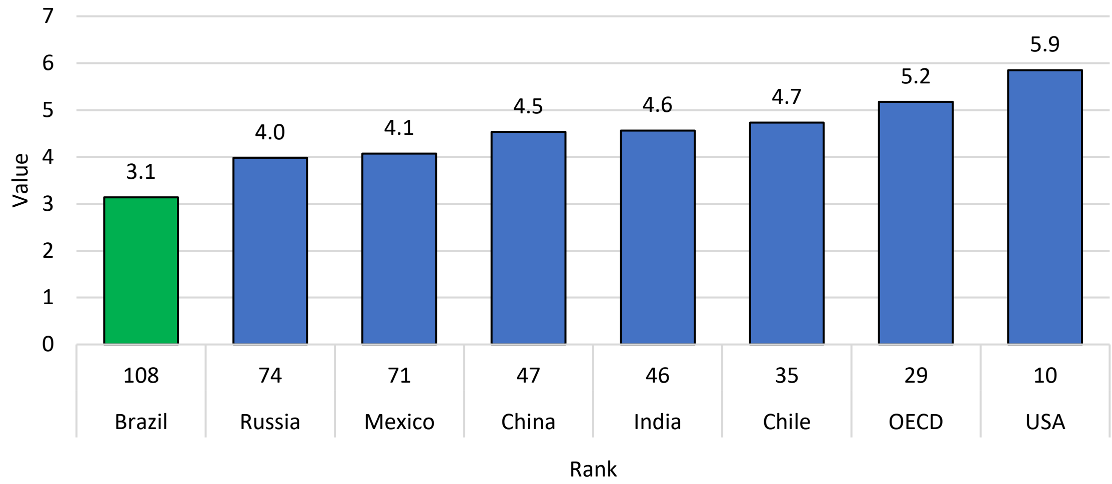
Chart 17: Brazil invests much less in infrastructure than most of its middle income peers



Source: Calderon and Serven (2017); Frischtak (2017)

While public funding will remain constrained by Brazil's ongoing fiscal adjustment, Brazil's relatively deep domestic capital markets could offer an attractive alternative, if project structures can be developed that effectively share risk among sponsors, financiers, users and the government. However, private investment is unlikely to be an effective substitute unless infrastructure governance improves. This includes more government attention upstream, during planning and project appraisal, which presently is mostly outsourced to the private sector. The Program for Investment Partnership (PPI) set up in 2016 under the President's Office could be a platform for improving government planning and project appraisal capacity. The infrastructure governance agenda also includes improved procurement and contract management practices and more efficient permitting and licensing. And it requires much stronger, transparent and most importantly independent regulation, as envisaged for instance in the law bill on regulatory agencies (PL 6621/2016) under discussion in Congress. We return to some of these issues in the final section of this overview.

Chart 18: Brazil lags all peers in the quality of its infrastructure



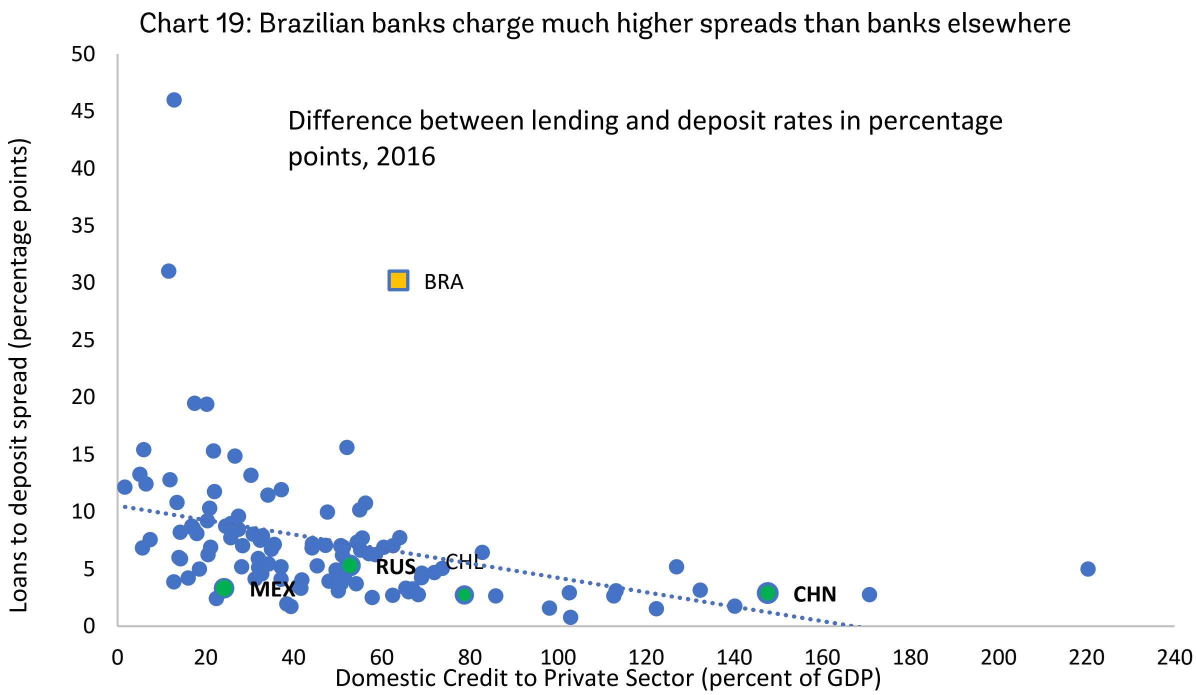
Source: World Economic Forum, 2017

With appropriate policies, institutions and regulation in place, substantial gains in infrastructure performance could be achieved simply as a result of efficiency gains. We estimate such gains to be 1.4 percent of GDP in transport and 0.7 percent of GDP in water and sanitation – equivalent to around twice the amount invested in both sectors in recent years. Greater efficiency would raise investment returns and make infrastructure much more attractive to private investors.

Source: Policy Note 8 on infrastructure

Beyond the specific example of infrastructure, the inefficiency of financial intermediation in Brazil remains a key obstacle to higher and more sustainable growth. Brazilian lenders charge much higher spreads than any of their peers in other countries, a phenomenon reflecting a combination of past inflation, high operating costs, elevated credit risks but also deep credit market segmentation. By reforming the allocation and pricing of directed credit to infrastructure and the industrial sector, the current government has already taken a critical step to improving the functioning of credit markets. However, significant shortcomings remain, which should be addressed by (Policy Note 7 on credit markets): (i) increasing competition among financial institutions including by promoting new providers such as Fintechs; (ii) improving the insolvency framework, as proposed in draft law 10220/2018 currently under debate in Congress, (iii) reducing the risk and cost of providing credit by improving the registration and enforcement of collateral, and (iv) focusing public interventions in the credit market on reducing the risks for private investors, increasing access for small enterprises and poorer households and promoting public goods. With recent positive steps in corporate finance, efforts could now shift towards housing and agriculture sectors.

Such measures would ensure that young and innovative enterprises have access to affordable credit to allow them to grow and create new employment opportunities. They would help family farms integrate better into production chains and adopt low carbon agricultural technologies, and they would increase household mobility by improving the functioning of the housing market. All this would contribute to boost investment and productivity. It would also make Brazil's economy more flexible and more agile, and thereby better able to adjust to a more competitive economic environment.



Note: 11 countries with a negative spread have been excluded.

Source: IMF, International Finance Statistics

2.3: Boosting the quality of human capital

The role of human capital as a key driver of development progress is increasingly recognized (Kim, 2018). Investment in education and lifelong learning in turn are central components of improving a country's human capital. Recent technological developments, with the loss of many low and medium skill intensive jobs to automation make it even more important that countries invest in education to ensure the benefits of economic growth can be shared. Better educated workers are also much better equipped to benefit from and adjust to changing economic opportunities resulting from opening up the economy and increasing competition. The quality of education therefore contributes to economic growth both directly and indirectly, by ensuring other policies to boost productivity are more likely to succeed.

Against this background, education outcomes in Brazil remain disappointing. Despite significant increases in access since the mid-1990s and improvements in quality during the first decade of the 2000s, Brazilian students on average still perform below most participating countries in international comparable tests of mathematics and reading proficiency (Chart 20a). Functional illiteracy remains high even among those with completed secondary education, and many, particularly kids from disadvantaged backgrounds, do not reach that stage.

Some argue that the continued gap in education outcomes confirms that Brazil still devotes too few resources to investment in education. It is this concern that originally motivated the earmarking of 25 percent of revenues at state and municipal level to spending on education, subsequently complemented with a spending target of 10 percent of GDP. However, we argue that the quality of education will not improve simply by spending more money. At 6.6 percent of GDP, Brazil already spends more on education than the average OECD country and much more than many middle-income countries, including China, Russia and Chile with far better outcomes. The fact that some of the best performing municipalities in education are located in the poorer parts of Brazil, such as Ceará or Pernambuco, confirms that other factors matter more than levels of spending (Chart 20b). These need to be brought into the policy focus, if Brazil is to close its human capital gap with middle income and high-income peers.

Some of the critical policy challenges in this regard include (Policy Note 9 on education):

(i) insufficient enrollment in and quality of Early Childhood Education (ECE), which negatively affects retention and quality of learning at later stages of education;

(ii) outdated curricula particularly at secondary level, that do not provide the necessary skills and lead to student disengagement;

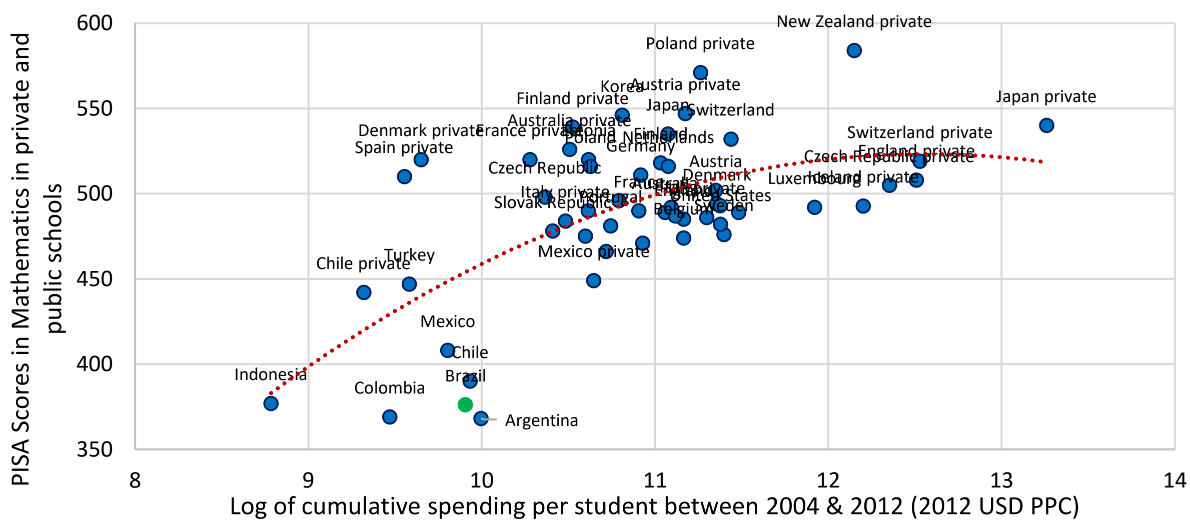
(iii) poor pre-teacher training and teacher selection processes and weak in-service teacher support and accountability that lead to low quality of teaching – perhaps the single most important factor affecting learning outcomes;

(iv) ineffective school governance and accountability that does not reward performance, and weak institutional capacity (including an often politicized process of selection of school administrators) of states and municipalities in running their education systems;

(v) budget rigidities (‘*vinculação*’) and an imperfect use of existing equalization transfers which generate spatial and income inequalities. Notably the constitutional obligation of municipal and state governments to spend 25 percent of net tax revenues on education leads to increases in education spending that are unrelated to student needs—as a result, they do not translate into increased learning, and instead generate inefficiencies.

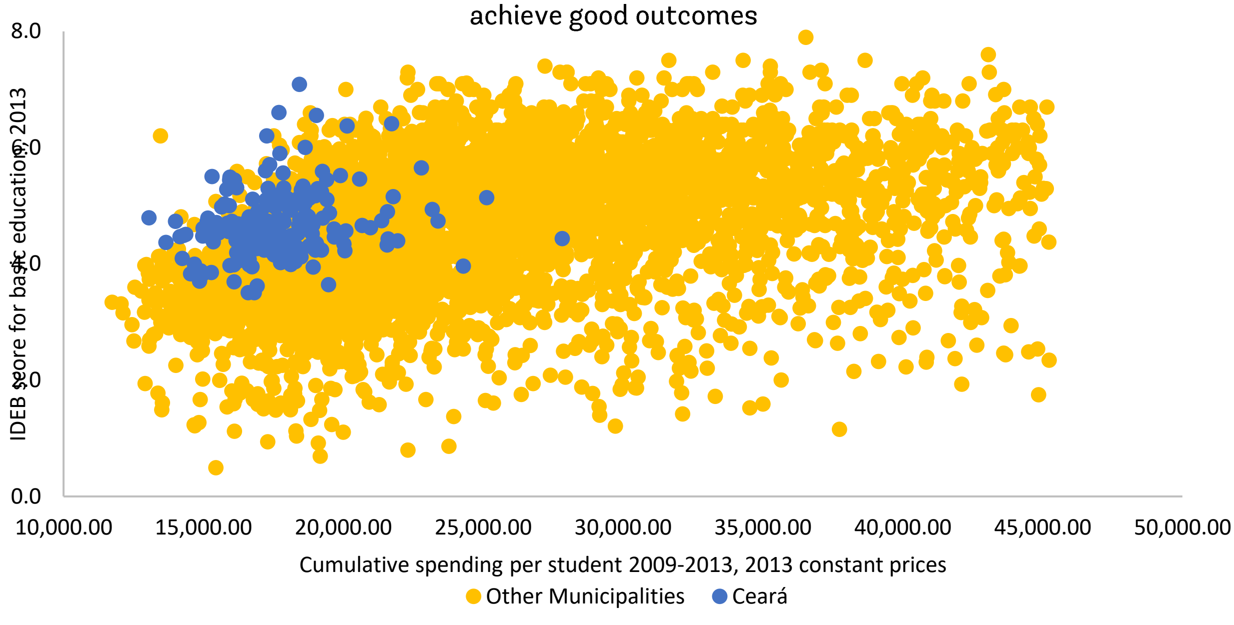
Some of the above challenges are being addressed in an ambitious secondary education reform passed in late 2017. Its implementation should remain the focus of government policy. In addition, states and municipalities need to learn from the examples of success cases like Ceara on how to create the right incentives for teachers and school administrators to improve performance. In the demographically aging states of the South and Southeast, this may also require loosening budget earmarks to create incentives for efficiency gains.

Chart 20a: Brazil has spent more per student than many middle income peers, but outcomes remain poor



Source: World Bank calculations using PISA, OECD Education statistics

Chart 20b: Brazil can learn from some of its own municipalities how to spend little and achieve good outcomes



Source: World Bank calculations based on SIOPE and Prova Brasil data.

3. Reforming the State

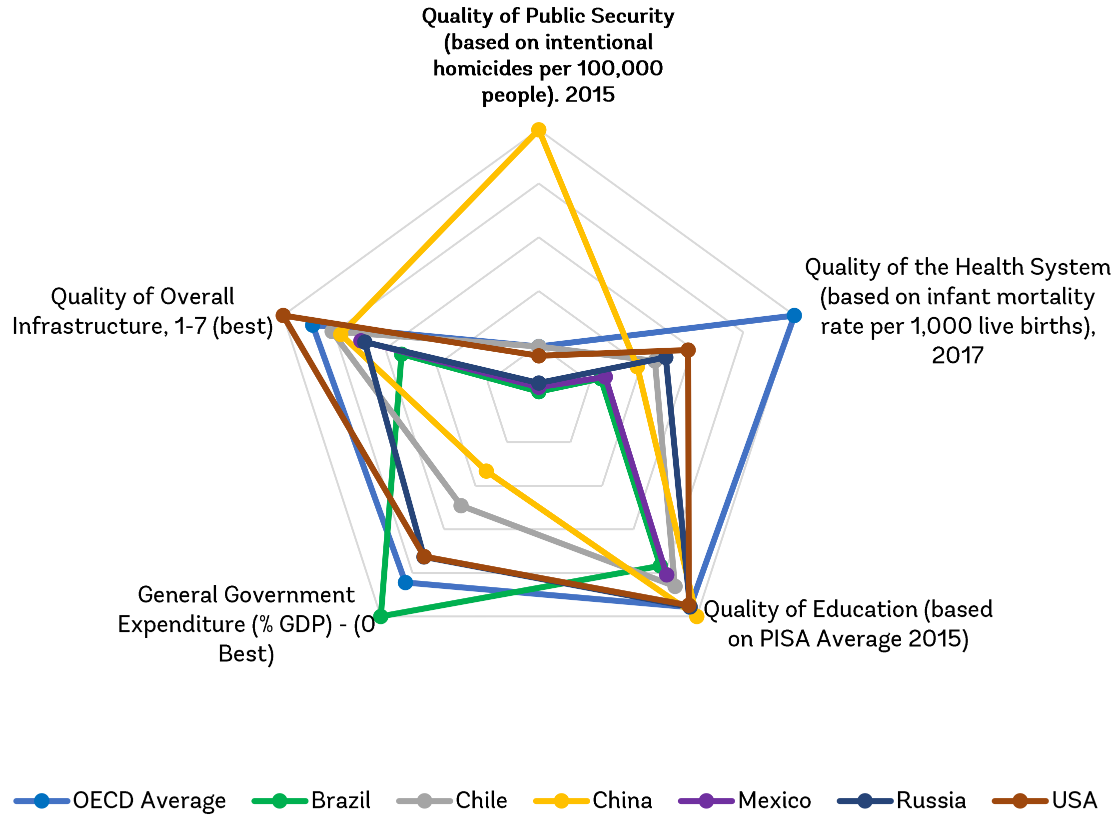
Brazilians expect a lot from the state. The Brazilian Constitution of 1988 formalizes a large set of state obligations towards its citizens, reflecting the sense at the time that the fruits of Brazil's rapid economic growth over the preceding five decades from the 1930s to the 1980s had been very unequally distributed (World Bank, 2016a). The state was given a primary role in redressing these imbalances. Brazilian tax payers have since agreed to fund a substantial expansion of state services, as reflected in a growing share of the government in GDP from under 30 percent in the 1980s to around 40 percent in 2017.

However, thirty years after the adoption of the 1988 Constitution the limits to further expansion of the size of government are becoming increasingly clear. Resistance against tax hikes and serious issues of business competitiveness suggest that further increases in the size of government may not be politically feasible. It may also not be desirable: the track record of government in Brazil is decidedly mixed. Despite of substantial progress in the access to public services, including health, education, public transport, power, and to a lesser extent water and sanitation, the quality of many services continues to lag Brazil's peers, while pockets of exclusion persist among marginalized communities (Chart 21).

The disproportion between the weight of the public sector on the one hand and the quality of services that citizens get on the other is suggestive of large inefficiencies. The fiscal imbalances and the recent corruption scandals, which have eroded trust in government, add urgency to the resolution of these inefficiencies. In this third section, we argue that Brazil should rethink public sector governance and seek to reform the state at various levels. In doing so, it need not start from scratch. From Minas Gerais to Pernambuco, from Maringa to Manaus several state and municipal governments have achieved impressive outcomes through governance reforms. Much can be learned from these experiences, but they need to be adapted to the new realities of scarce budgets and seek new partnerships with the private sector.

Specifically, we posit that the shortcomings of Brazil's governance model are linked to three underlying themes: (i) resources, (ii) results (ii) regulation. These themes affect the efficiency and quality of government services in many areas. Rather than covering each of these areas in detail, below we use selected examples to illustrate our broader arguments. Readers are referred to the specific policy notes on health, education, violence prevention, infrastructure, transport and logistics, productivity, water resource management and climate change for more information.

Chart 21: Brazil's State Spends More than Most Peers but Achieves Less



Note: The chart uses a normalization, whereby the best performer in each category is given a score of 1, and all others are scaled as a ratio of this "frontier" performer. The best score is given to the country with the lowest homicide rate, the lower infant mortality rate, the highest PISA score and the best quality of infrastructure. The only exception is government spending, wherethe scores are scaled from highest (Brazil) to lowest (China).
Source: World Bank calculations based on WDI, OECD, WEF.

Resource Allocation: Planning, Budgeting and Public Financial Management

The overarching constraint in the allocation of public resources in Brazil is the plethora of budget rules that make for extraordinarily high rigidities and leave very limited room for new policy priorities to be adequately funded or reflected in budget allocation. Over 90 percent of Brazil's budget is determined by such rules against around 80 percent in Mexico and the US or 65 percent in Chile. The limited discretionary budget room in turn has spawned additional attempts to ringfence expenditures through the earmarking of revenues, as demonstrated recently for the case of public security (through an earmarking of revenues from public lotteries). The inability to carry over any savings from one year to the next and the absence of a credible medium-term budget framework erode incentives for cost control and lead to inefficient capital spending sprees at the end of each cycle.

As a result, the budget process, which should be an opportunity for the government and Congress to jointly review priorities and make allocations accordingly, has been emasculated. There is only a tenuous link between government planning and budgeting. This link is further weakened by the way the executive and Congress interact during budget preparation. While the executive submits a budget proposal to parliament, the latter is entitled to change underlying revenue projections, typically to make them more optimistic and thus create room for additional discretionary expenditure. Such spending commitments take the form of parliamentary amendments and are used as a key currency in ensuring parliamentary support for the government's legislative program. When it comes to execution the executive takes charge again and the Ministry of Finance ensures fiscal targets are met through the sequestration of budget funds.

This interaction between executive and legislative undermines the credibility of the budget and erodes incentives for long-term planning. While the executive still regularly produces long-term plans, these are mostly aspirational and rarely serve as a basis for allocating resources. Not surprisingly, government capacity for long-term planning, project appraisal as well as the monitoring of the impact of government policies has been significantly eroded. As shown above, this has meant that numerous government efforts to improve infrastructure and other services have had limited results.

The allocation of resources is also complicated by the fragmentation of Brazil's subnational government structure. The allocation of resources between various levels of government is determined by tax sharing rules and federal government transfers to support poorer regions. However, the parameters determining equalization transfers do not incorporate performance incentives and the allocation of capital grants tied to federal government objectives (such as the education investment fund PAR) has often become politicized. The assignment of expenditure responsibilities is set by the Constitution without much regard for the capacity of subnational governments to deliver. With well over 5000 municipalities, Brazil's service delivery system is enormously fragmented. Most of these municipalities have little revenue of their own and few incentives for cost effectiveness. While municipalities can form consortia to achieve scale economies, political rivalries often stand in the way.

This fragmentation negatively affects service delivery in critical areas such as water and sanitation, solid waste management and health care (Box 3.1).

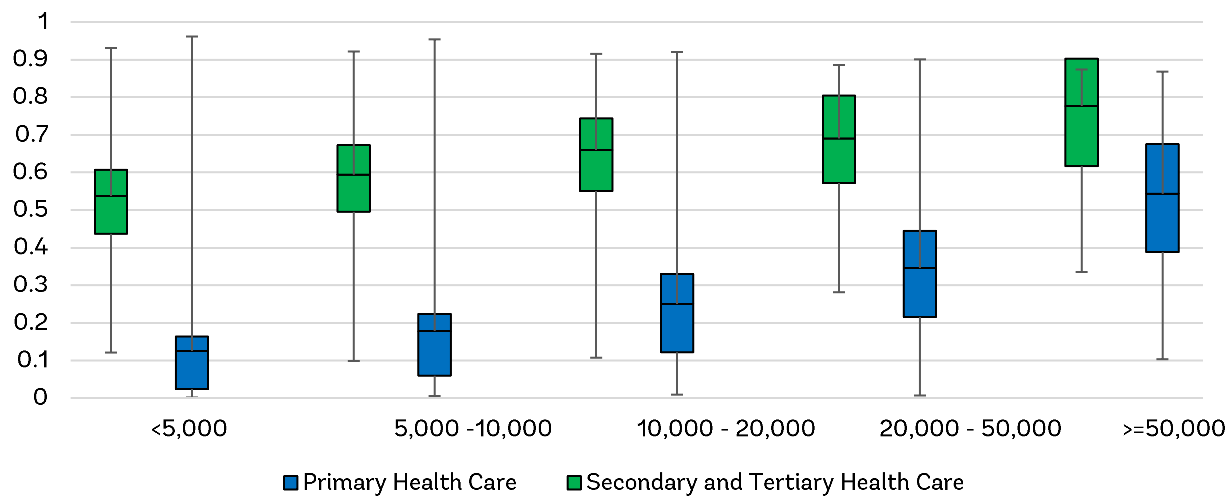
Box 3.1: Integrated service delivery is the key to addressing inefficiencies in health care

Brazil's total expenditures on healthcare have increased rapidly and today at 9.2 percent of GDP are slightly above the OECD average of 8.9 percent. Nonetheless, many Brazilians complain about the quality of health services and more than 20 million take out private health plans to complement the free and universal public health system (SUS).

In fact, both public and private health spending is plagued by significant inefficiencies due to the fragmentation of service delivery. For example, small hospitals with less than 25 beds, which predominate among municipalities with less than 5000 inhabitants, are more than two times less efficient than hospitals with more than 150 beds. The quality of care is also significantly lower in smaller hospitals. Patients are aware of these differences, and so over-crowding in large public hospitals in Brazil's main cities co-exists with empty beds in many others. We estimated that Brazil could save annually over R$ 20 billion by eliminating these inefficiencies—money that could instead be invested in improving the quality of health services.

Overcoming fragmentation would require consolidating hospital care, and improving the gate keeper function of primary care providers. Establishing integrated health care networks at the state level could be one approach. Given the shortages of doctors, the authorities could also consider granting greater responsibilities to other medical personnel and thus improve attendance and ensuring 100 percent coverage at the primary care level. Hospital care could be contracted from providers (both public and private) through performance-based contracts, stimulating innovation and efficiency gains. This could be combined with performance-based pay for doctors in primary care units, as successfully done in Turkey, for instance (World Bank and OECD, 2008). Finally, to manage growing demand pressures fairly, a basic benefit package should be defined for all beneficiaries under the SUS and coordination with private health plans should be improved.

Chart 22: Fragmentation of service delivery in health care leads to large inefficiencies



Note: Index of inefficiency is based on a data envelopment analysis, using an index of health sector outputs and measures of spending per municipality in primary, and secondary + tertiary care.

Source: Policy note 13 on health

Multiple, overlapping budget rules and institutional fragmentation have resulted in a budget system that provides limited room for conscious choices about development priorities and for adjustments as circumstances change. Misallocation and waste of resources is the result. The following policy options could help address these problems:

- A recuperation of the state's capacity to invest will necessitate fiscal adjustment and in particular the reform of social security (Policy Note 1 on fiscal sustainability). It will also require a reduction of budget rigidities in other areas, including a revision of spending floors in health and education, to allow variation in the light of changing local circumstances. And it will need to go hand in hand with strengthening the government's capacity for planning and project appraisal.

- Improved state planning and greater fiscal space will require greater budget credibility to yield concrete results (Policy Note 5 on state reform). The proposed Public Finance law (PLP 295/2016) aims at reforming the public investment budget process by establishing a project bank, from which deputies could choose during the allocation of parliamentary amendments. The new Law would also restrict Congress' ability to change revenue projections, thus increasing the credibility of the budget and reducing the need for sequestration during budget execution. In addition, the government should adopt a medium-term expenditure framework and allow budget units to carry over savings from one year to the next, thereby strengthening incentives for cost control. The United Kingdom offers a well-known example of how this can be done.

- To address fragmentation and horizontal inequities in the capacity and the resources available for service delivery, Brazil could consider a review of its three-tiered government structure as has been in a number of European countries in the past two decades, including for instance in France or Poland. Arguably, the number of municipalities could be reduced, or mechanisms created to allow state governments to withhold and bundle funding when the capacity of municipalities to deliver services is evidently compromised. The formulae for equalization transfers should be periodically adjusted to reflect demographic and economic developments and capital transfers should follow clear criteria, including incentives for improved performance (Policy Note 9 on education). This would need to go hand in hand with reduced rigidities to give local governments the space to innovate and adapt to local needs.

Results, Monitoring and Accountability

The measurement of the results of public policies can help to target efforts and allow policy makers to change course when things are not working as intended. The measurement and monitoring of the results of state interventions can also be used to directly tie the allocation of resources to performance. And it can help civil society and public control institutions to hold governments to account.

Brazil overall has achieved high standards of government transparency and does well in the collection of data relevant for government policy. For instance, since the late 1990s all secondary students in Brazil take a standardized performance test, which can be used to measure the quality of individual schools but also to verify the impact of public policies on education outcomes. Similarly, in poverty reduction, Brazil's *Cadastro Unico*, carries out a comprehensive assessment of a households living conditions which can be used to target social transfers effectively. However, despite the quality of the data collected, the administrative databases that help determine and monitor access to various social programs are not fully integrated. While *Bolsa Familia* has high coverage and targeting efficiency this is not the case for all social transfers. Overlaps are frequent and the consolidation of all information in one database is thus an important priority going forward.

Moreover, there are areas of public policy that still suffer from the lack of reliable information. We highlight two examples here. First, in public security, Brazil lacks an integrated system that would deliver reliable information on the extent and the causes of the country's persistent high rates of violence. Without better data on the distribution of violence by location and on groups most at risk of perpetrating or suffering from acts of violence, targeted policy interventions cannot be designed (see Box 3.2; and Policy Note 12 on violence prevention).

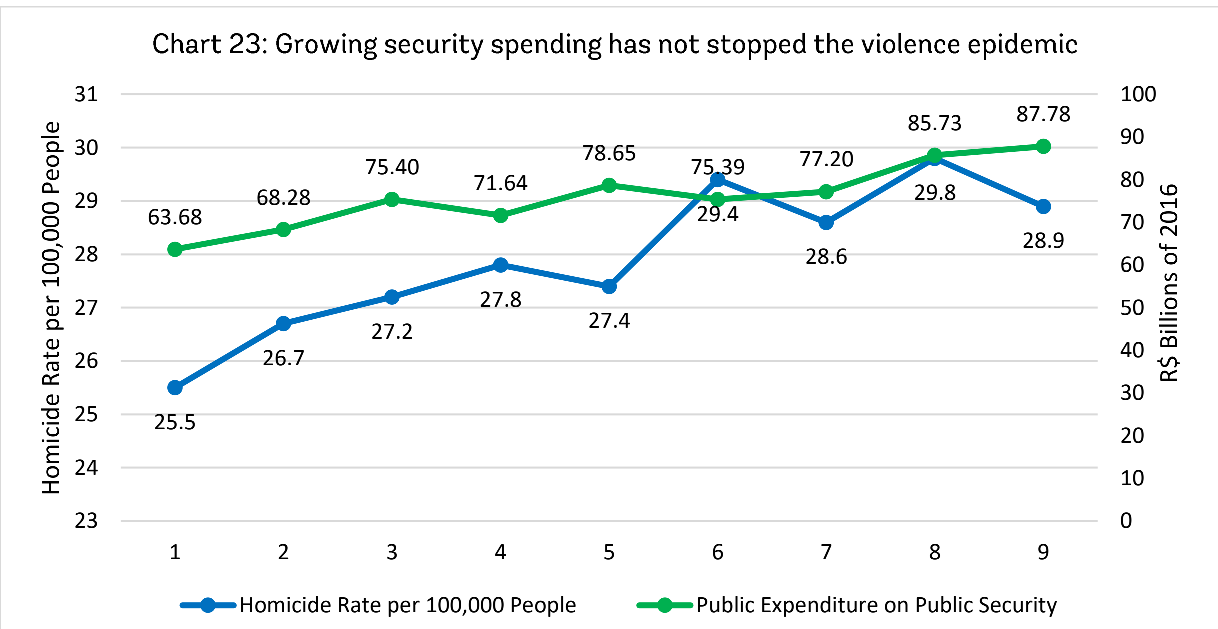
Public policies to support Brazilian businesses is the second area where better data and more transparency is badly needed. Despite of their significant cost, Brazil's tax exemptions and various other forms of subsidies are not systematically analyzed for the impact they are having (see above). Even when comprehensive databases are available, such as in the case of tax administration, data protection clauses prevent researchers from analyzing the evidence. Given that Brazil spends around 4.5 percent of GDP in perks for the corporate sector, the paucity of analysis on the impact of this spending is a major shortcoming. Moreover, Brazil makes little use of regulatory impact assessments to guide new legislation, which is subject to frequent changes and generates substantial uncertainties for business.

The availability of data and analysis on the impact of public policies is only the first step in ensuring improved outcomes. Public sector managers and civil servants also need to act on such evidence. The case of education is emblematic in this regard. Despite striking regional differences in education outcomes (see Section 2.3), little is done to transfer the experiences of the leaders to the education laggards. The case of Ceara, for example, suggests that a combination of careful selection and capacity building for teachers, school principals and education sector managers, combined with performance linked state transfers for education expenses at the municipal level can make a big difference in improving learning at little additional cost. Positive experiences with linking budget allocations or civil servants' remuneration to performance have also been made in the areas of violence prevention in Pernambuco, revenue collection in Manaus, and a host of public services in Minas Gerais.

Box 3.2: Tackling the escalation in crime and violence

Crime and violence, and social exclusion and discrimination in Brazil are locked in a mutually reinforcing vicious circle. In 2016, the country reached the highest absolute number of homicides globally (61,283), with a murder rate above the WHO benchmark for countries in conflict. Both victims and perpetrators are concentrated among the poor, young and afro-descendants. For instance, the homicide rate among afro-descendants aged 15-29 was 86.3 per 100,000, 2.7 times higher than the rate among young whites. Although men are more likely to be victims and perpetrators of homicide, violence against women remains a huge issue. Brazil has advanced legislation protecting women (the *lei Maria da Penha*) but Brazil still ranks among the countries with the highest incidents of domestic violence.

Violence is highly concentrated: two percent of municipalities account for 50 percent of homicides. These municipalities are characterized by high rates of extreme poverty and are underserved by the state. Criminals face a low risk of detection but once detected sanctions are often harsh and counterproductive. The incarceration rate has skyrocketed and is among the highest in the world (328/100,000). Prisons are overcrowded (165 percent occupancy rate) and 40 percent of inmates are awaiting trial. Harsh prison conditions waste rehabilitation efforts and prisons become schools of crime.



Source: World Bank staff elaboration based on the Fórum Brasileiro de Segurança Pública, Anuário Brasileiro de Segurança Pública, 2009 - 2017.

We suggest three main lines of action to deal with Brazil's violence epidemic:

1.Promote an integrated approach to Citizen Security. Addressing crime and violence requires comprehensive, multi-sector, evidence-based strategies that harness the interdependencies between prevention (primary, secondary and tertiary) and control. Citizen security strategies are effective when prevention and control form an integrated whole. Crime and violence is also highly clustered and concentrated geographically and among individuals. Hence, strategies need to be highly targeted to focus on the relevant places and populations.

2.Improve governance by increasing the coordination, scale, and sustainability of citizen security interventions. Reducing crime and violence calls for changes in the governance of the public security sector and its prevailing doctrine, financing criteria, planning processes and accountability mechanisms. This will require (a) much stronger coordination; (b) a concerted effort to bring existing (public and non-governmental) initiatives to scale; and (c) fostering long term sustainability***.***

3.Establish rigorous monitoring and evaluation mechanisms to generate the evidence necessary to develop policy and design cost-effective operations. While Brazil has many promising crime and violence prevention and control initiatives, rigorous evidence on what does/does not work and why is limited. As the root causes, the nature, the level, and the location of crime and violence evolve overtime, Brazil requires the instruments and mechanisms to provide authorities at the federal, state, and local levels with (a) real time reliable information on the various dimensions and levels of crime and violence; (b) monitoring of crime and violence efforts (who spends, how much, where, to do what?); and (c) rigorous evaluation and assessment of results. This would allow a systematic "learning by doing" approach whereby policy advice and design of operations can be driven by evidence.

Source: Policy Note 12 on violence prevention

Finally, it is worth emphasizing the role of civil society and the private sector in holding governments to account for the services they delivery. Brazil has some excellent experiences in this regard, including participatory budgeting in various cities, and a dense network of Non-Governmental Organizations monitoring public sector performance in areas such as the environment, public security, anti-corruption, education and protection of vulnerable groups (to mention just a few examples). Nonetheless, these efforts have not systematically fed back into improved government performance. Civil society engagement has often remained intermittent and the understanding of policy trade-offs in public discussion remains limited.

A couple of general recommendations follow from this analysis. Sector specific recommendations are included in the policy notes.

- Introduce monitoring and evaluation systems in all areas of public policy. The policy evaluation committee (C-MAP) under the coordination of the Casa Civil should be strengthened. Some countries have created independent policy evaluation institutions, such as the Productivity Commission in Australia or the Congressional Budget Office in the US. In the area of macro-fiscal monitoring, Brazil already benefits from quality monitoring thanks to the work of the *Independent Fiscal Institution* under the Senate. For impact evaluation purposes across a wider range of policies, greater capacity is still needed.

- Harmonize data collection systems across levels of government, particularly in policy areas that require a coordinated response, such as violence prevention, or improvements in the business environment, in the same ways as already established for social protection, health and education.

- Consider the introduction of performance incentives both in the allocation of intergovernmental fiscal transfers and in the remuneration of civil servants, based on Brazil's existing positive experiences.

- Strengthen the dialogue with civil society to increase government accountability and public understanding of the policy trade-offs involved in achieving better results.

Regulation: Improving the partnership between the state and the private sector

Many social objectives are achieved in partnership between government and businesses. To ensure that the actions of the private sector are in line with social objectives, governments use regulation. Given the considerable gaps in service quality that remain in Brazil, it is useful to examine the scope for public private partnerships in general and for private provision of key services. For instance, rigid civil service employment rules and the difficulty of introducing stronger performance incentives could be overcome by allowing more public services to be provided privately but with public funding and strong quality oversight. Brazil's ambitious and laudable commitments to reduce carbon emissions under the Paris Agreement, the so-called Nationally Determined Contribution (NDC) rely importantly on the actions of the private sector. The recent debate over the costs of fuel in Brazil raise issues regarding the role and regulation of state owned enterprises (SOEs).

The scope for private provision and hence the need for public regulation differs across services in Brazil. Private provision of infrastructure has long been promoted, in part because of the dearth of public investment resources, although in some sectors, including energy and water, state-owned companies continue to play a significant role. For most infrastructure services, users can be asked to pay, making private provision relatively straightforward. Brazil has thus tended to choose pure concessions over public-private partnerships – public sector undertakings are relatively rare, although the state has tended to provide compensation through subsidized public financing.

Brazil also has a substantial market for the private provision of health and education. Here, too, Brazil has opted for private provision mostly to meet the demand of private customers willing and able to pay. Public service contracts with private providers are relatively rare, with the exception of parts of hospital care. We analyze the scope for public private partnerships and the role of public regulation in policy notes on education, health, infrastructure, transport and logistics, water resource management, climate change as well as in the note on state reform. Box 3.3 summarizes our views in the specific case of natural resource management.

Box 3.3: Regulation, Private Sector Activity and the Management of Natural Resources

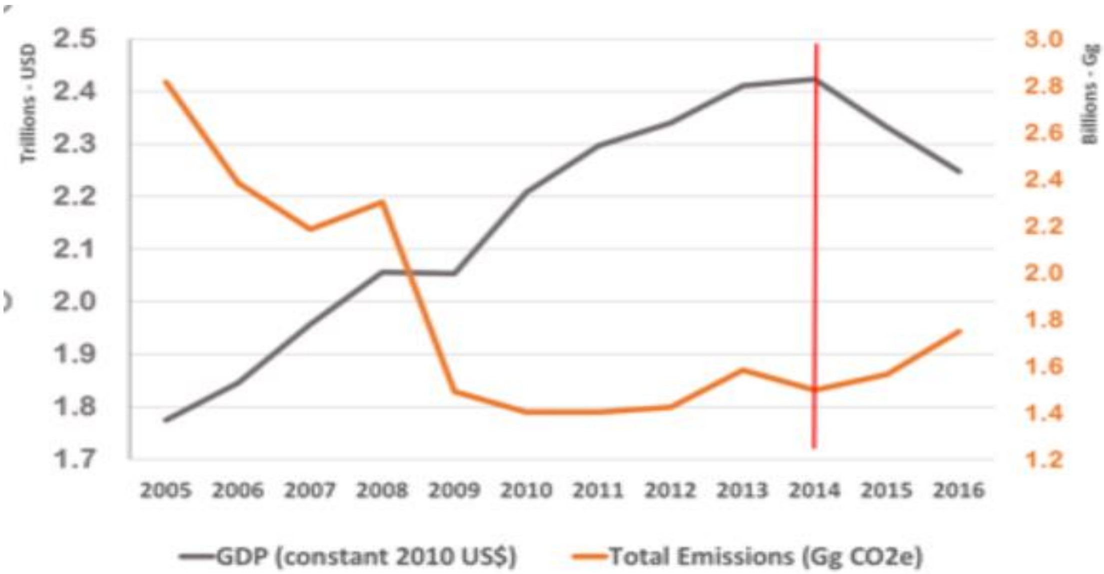
Brazil is the fifth largest country on earth and has vast natural resources. It contains 12 percent of the world's known fresh water resources and its Amazon basin is home to the world's largest rainforest, a biome of global importance for the future of the climate. Brazil's biodiversity is greater than that of any other country on earth.

Yet, these huge assets are under threat from human exploitation and the effects of a changing climate. Despite abundant water resources, droughts are frequent not just in the dry Northeast, but more recently in the Southeast and in the capital Brasilia. Droughts and floods account for 84 percent of all natural disasters in the country, at a cost of some US$2.4 billion a year. Growing irrigation needs and expanding urban use have sharpened potential conflicts over water resources. Declining rainfall has affected Brazil's substantial hydropower installations, pushing up energy tariffs and requiring the expansion of alternative sources of energy. Brazil's agricultural success story has been built on the improved use of its vast land resources, but this has come at the cost of declining native forest cover, which in turn may worsen the loss of fresh water and accelerate changes in the climate.

Brazil is not unique in having to manage the potential trade-offs between economic development and the conservation of the environment. It stands out among emerging markets in having adopted policy measures to reduce these conflicts, as reflected in the dramatic reduction of deforestation and associated emission reductions (Chart 24). Key to this success has been the increase in agricultural productivity which has reduced the need to open new land for cultivation and state regulation, delineating large protected areas and strengthening the monitoring of illegal deforestation. The 2012 Forest Code provides the basis for expanding such efforts into areas of more intensive agricultural use by establishing quotas for native forest cover on agricultural properties and thereby creating incentives for forest preservation and in some cases reforestation.

In the water sector, too, Brazil set an example for many emerging markets with the adoption of the 1997 Water Law, establishing the water basin as the relevant unit for the collective management of water resources and creating the national water agency (ANA) as the key regulatory body.

Chart 24: Brazil has decoupled growth from greenhouse gas emissions, but can this last?



Source: World Bank calculations based on IBGE and Ministry of Environment

These efforts are insufficient, however, to ensure that Brazil continues to serve as an example for environmentally sustainable growth. As analyzed in the policy notes on water resource management and achievement of the country's NDCs, improved state regulation of private sector activities is at the core of the required policy changes:

To achieve its emission reduction targets, Brazil will need to make greater efforts to encourage intensification of agriculture and the adoption of low carbon technologies by all farmers. Its agricultural research institute Embrapa already has many of the relevant solutions. Farmers could be stimulated to adopt them more widely, if cheap agricultural financing from public banks were tied more closely to the use of low carbon techniques and the implementation of the Forest Code (as originally foreseen but repeatedly delayed).

In other sectors of importance for the Brazil's NDCs, notably in transport, industry and energy production, state regulation is similarly key. Improved regulation of third party access could greatly enhance the use of the country's rail network for passengers and freight and encourage new investment. Brazil has made good progress in attracting investment in renewable sources of energy, but much more needs to be done to stimulate improvements in energy efficiency, as many OECD countries and a growing number of emerging markets, including China, have been doing.

Finally, in the water sector, the 1997 Water Law suffers from a number of implementation problems due to overlapping responsibilities and weak coordination between federal, state and basin level authorities, as well as an insufficient use of economic instruments to regulate water demand and poor capacity to enforce more efficient water allocation. The use of water rights and charges for agricultural producers are still in their infancy, while water tariffs for households are rarely sufficient to cover the investments needed to ensure universal access and reduce network losses. Some positive experiences exist in managing water conflicts at the basin level, but water basin management plans rarely serve their purpose to anticipate and mediate potential conflicts among users. An update of the institutional framework for water resource management would thus be timely, 20 years after the adoption of the Water Law.

Source: Policy Note 14 (climate change) and 15 (water resource management).

What are the regulatory prerequisites to ensure public private partnerships are successful and what rules should govern the operation of state-owned enterprises where the state determines to maintain an active presence? In infrastructure, given how far Brazil has progressed in the direction of allowing private provision, the key challenge would seem to be to strengthen sector regulation, make it more predictable and transparent and ensure the public interest is safeguarded. Specifically, this includes:

- Strong but agile environmental and social safeguards, rooted in careful territorial planning and with minimal exceptions but risk-based processes. The draft revisions to the environmental licensing law are a partial step in this direction but fail to sufficiently emphasize the importance of territorial planning and create some undesirable exceptions. In parallel, the authorities should ensure sufficient resources are made available to implement key environmental legislation and monitor compliance.
- A revision of public procurement rules to give greater weight to quality criteria, particularly in the purchase of services. This would be critical for any attempt to strengthen the state's planning and project appraisal capacity. Local content requirements and other restrictions on competition under public tender processes should be reviewed.
- Strengthening the independence of regulatory agencies from both political interference and capture by private sector interests and adopting tariff setting methodologies that clearly reflect costs, including investment. Subsidies are justified to encourage the provision of a public good, such as urban transport for example, or to protect the poor and vulnerable. Subsidies should ideally be paid from the budget; cross-subsidies among users should be transparently recorded. In the transport sector, the creation of a unified transport regulator could also be considered to facilitate inter-modal optimization.
- Where SOEs continue to operate, the new corporate governance rules adopted in 2016 should be strictly enforced. Inviting private investors to participate in SOE capital may be a way to incentivize strong corporate governance but is not always enough. Price controls and other interventions into the operation of SOEs can have high costs in terms of losses in efficiency and profitability. Where SOEs operate as natural monopolies price or tariff regulation is justified. Where they operate in competitive markets it should be avoided.

Circumstances are different in other service areas, such as health and education. We make detailed recommendations for both sectors in specific policy notes. Some broad conclusions are:

- In education, as discussed above, a key challenge is to rapidly expand access to early childhood education (ECE). Given fiscal constraints it will not be possible to do this through public funding alone and given current civil service rules it may also not be prudent to rely on public provision, as the demand for ECE is likely to increase only temporarily before it falls sharply thanks to demographic changes. The solution we propose is to consider private provision under a strong quality assurance framework with public subsidies for lower income families.

- More broadly, a mixture of private and public funding and provision may be appropriate in other levels of education, as well. The most obvious candidate for such a shift would be the federal university system. Even though quotas for low income families have increased the number of poor students offered a free public education, federal universities still disproportionately benefit students from wealthier background. The introduction of student fees for wealthier students could complement scarce public funding in the context of tight budgets.
- In healthcare, the monitoring of private providers tends to be somewhat easier than in education and private provision is well established even in systems where access is free and fully funded from the budget (such as in the UK). Performance based contracts could contribute significantly to increasing the efficiency of hospital care, while public provision could concentrate on ensuring stronger primary care with more effective gatekeeping to improve system integration.

Even where provision and funding remain public, there is a need to monitor and enforce performance standards to ensure the tax payer receives value for money. Brazil has built strong control institutions over the past three decades that watch over public sector performance. Yet, as the capacity of the executive to plan has weakened and evidence of corruption has increasingly come to light, the control institutions, and the judiciary, have found themselves increasingly in a regulatory and policy setting role. Courts rather than the Ministry of Health determine what treatments should be accessible under the universal health system, the chamber of accounts has become involved in long-term economic planning, the federal prosecutor's office has effectively set environmental policy, while the public administration has become extremely risk averse in the face intrusive and compliance focused audits. While we do not address this issue in detail, a key challenge for Brazil will be to introduce a greater performance and results focus into the work of the control institutions and redress somewhat the balance between policy making, regulation and control.

C. Principles for a Path to Prosperity

The policy agenda outlined in this overview is enormously challenging. Political resistance is considerable against many of the proposals we make, in some cases because they would touch well-established vested interests, in others because they favor market-based solutions in areas where some in Brazil would prefer state leadership. What combination of measures is politically feasible is ultimately a question for politicians to decide based on the mandate they have received from voters. We have stated our preferred policy action even where we know it may not be popular, because we are convinced that a new administration will need to consider deep reforms to get Brazil back on track. For this, policy makers require a strong policy mandate from voters and thus controversial issues should be openly discussed. However, we are aware that compromises will be necessary. Policy making is the art of the second best. To guide policy makers as they consider the alternatives, we close with three principles that we believe could be helpful.

Make the state more efficient not larger: The Brazilian state has had a mixed record over the past three decades. Success in poverty reduction and increasing access to services is balanced by failure in improving service quality, huge wastage of resources in perks and subsidies and recurrent fiscal problems. Policy makers should thus think carefully before they lean on solutions that would bring a further increase in the size and scope of the state. Greater focus could help increase efficiency.

Gradual not shock: The depth and complexity of Brazil's challenges in some areas is such that the temptation is to look for a cathartic crisis to start afresh. In our view this would carry significant risks of destroying what works at the same time as getting rid of what doesn't. Moreover, it is not clear that the coalitions necessary to sustain reforms would be easier to build following a major crisis. Instead, the call for easy solutions could grow. We thus advocate for a consensual, gradual approach to reform implementation.

Don't hurt the poor and the young: Brazil has made strong strides in reducing poverty and considerable progress in expanding economic opportunity. As distributive conflicts loom, however, it is important to know who deserves most protection. In our view, this is poor and the young. The poor, because the persistent inequality of opportunity means they generally can do little to escape their predicament without help and protection. The young, because Brazil is aging fast and unless public policy is rebalanced to defend the interest of future generations, they may face the prospect of declining incomes under a mountain of debts inherited from their parents and grandparents. In the 1980s and 1990s, Brazil resorted to inflation to place the burden of past fiscal profligacy on the poor. In the 2000s this was replaced with rising taxes and since 2008 growing public indebtedness, placing the burden on the young. Brazil's leaders should explain why this time, the poor and the young should be protected. This means others will not be able to escape making their contribution.

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Annexes: Policy Notes

Policy Note 1 on fiscal sustainability

Policy Note 2 on tax system

Policy Note 3 on intergovernmental fiscal issues

Policy Note 4 on pension reform

Policy Note 5 on state reform

Policy Note 6 on boosting productivity

Policy Note 7 on credit markets

Policy Note 8 on infrastructure planning and financing

Policy Note 9 on education

Policy Note 10 on transport and logistics

Policy Note 11 on labor markets reform

Policy Note 12 on violence prevention

Policy Note 13 on health

Policy Note 14 on NDCs

Policy Note 15 on water resource management