OECD Economic Surveys
BRAZIL

DECEMBER 2020

OECD

LAUNCH VERSION

OECD Economic Surveys: Brazil 2020

BETTER POLICIES FOR BETTER LIVES

LAUNCH VERSION

This document, as well as any data and map included herein, are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area.

The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

Note by Turkey
The information in this document with reference to "Cyprus" relates to the southern part of the Island. There is no single authority representing both Turkish and Greek Cypriot people on the Island. Turkey recognises the Turkish Republic of Northern Cyprus (TRNC). Until a lasting and equitable solution is found within the context of the United Nations, Turkey shall preserve its position concerning the "Cyprus issue".

Note by all the European Union Member States of the OECD and the European Union
The Republic of Cyprus is recognised by all members of the United Nations with the exception of Turkey. The information in this document relates to the area under the effective control of the Government of the Republic of Cyprus.

Please cite this publication as:
OECD (2020), *OECD Economic Surveys: Brazil 2020*, OECD Publishing, Paris, *https://doi.org/10.1787/250240ad-en*.

ISBN 978-92-64-76814-7 (print)
ISBN 978-92-64-62200-5 (pdf)

OECD Economic Surveys
ISSN 0376-6438 (print)
ISSN 1609-7513 (online)

OECD Economic Surveys: Brazil
ISSN 1995-3763 (print)
ISSN 1999-0820 (online)

Photo credits: Cover © f11photo/Shutterstock.com.

Corrigenda to publications may be found on line at: *www.oecd.org/about/publishing/corrigenda.htm*.

Table of contents

Figures

Boxes

Follow OECD Publications on:

http://twitter.com/OECD_Pubs

http://www.facebook.com/OECDPublications

http://www.linkedin.com/groups/OECD-Publications-4645871

http://www.youtube.com/oecdilibrary

OECD Alerts http://www.oecd.org/oecddirect/

This book has...

StatLinks
A service that delivers Excel® files from the printed page!

Look for the *StatLinks* at the bottom of the tables or graphs in this book. To download the matching Excel® spreadsheet, just type the link into your Internet browser, starting with the *http://dx.doi.org* prefix, or click on the link from the e-book edition.

This *Survey* is published under the responsibility of the Secretary-General of the OECD. The economic situation and policies of Brazil were reviewed by the Economic and Development Review Committee of the OECD, on 10 September 2020. The draft report was then revised in the light of the discussions.

The Secretariat's draft report was prepared for the Committee by Jens Arnold and Robert Grundke under the supervision of Piritta Sorsa. Research inputs by Christine Arriola and Frank Van Tongeren of the OECD Trade Directorate and by Matheus Bueno are gratefully acknowledged. Other valuable inputs and comments were received from the OECD's Public Governance Directorate; the Directorate for Financial and Enterprise Affairs; the Centre for Tax Policy and Administration; the Directorate for Employment, Labour and Social Affairs; the Centre for Entrepreneurship, SMEs, Regions and Cities; the Environment Directorate and the Directorate for Education and Skills. Statistical research assistance was provided by Anne Legendre and editorial coordination by Carolina Gonzalez.

The previous *Survey* of Brazil was issued on 28 February 2018.

Information about the latest as well as previous Surveys and more information about how *Surveys* are prepared is available at http://www.oecd.org/eco/surveys.

Basic statistics of Brazil, 2019

(Numbers in parentheses refer to the OECD average)[1]

LAND, PEOPLE AND ELECTORAL CYCLE					
Population (million)	211.0		Population density per km² (2018)	25.1	(38.0)
Under 15 (%)	21.0	(17.9)	Life expectancy at birth (years, 2018)	75.7	(80.1)
Over 65 (%)	9.3	(17.1)	Men (2018)	72.0	(77.5)
International migrant stock (% of population, 2015)	0.3	(9.7)	Women (2018)	79.4	(82.8)
Latest 5-year average growth (%)	0.8	(0.6)	Latest general election	October-2018	
ECONOMY					
Gross domestic product (GDP)			Value added shares (%)		
In current prices (billion USD)	1 841.5		Agriculture, forestry and fishing	5.2	(2.6)
In current prices (billion BRL)	7 256.9		Industry including construction	20.9	(26.8)
Latest 5-year average real growth (%)	-0.6	(2.2)	Services	73.9	(70.5)
Per capita (000 USD PPP)	15.3	(48.4)			
GENERAL GOVERNMENT Per cent of GDP					
Expenditure	40.8	(41.6)	Gross financial debt (OECD: 2018)	75.8	(95.8)
Revenue	33.2	(38.5)	Net financial debt (OECD: 2017)	58.3	(68.7)
EXTERNAL ACCOUNTS					
Exchange rate (BRL per USD)	3.94		Main exports (% of total merchandise exports)		
PPP exchange rate (USA = 1)	2.25		Crude materials, inedible, except fuels	30.3	
In per cent of GDP			Food and live animals	20.7	
Exports of goods and services	14.3	(54.2)	Machinery and transport equipment	14.1	
Imports of goods and services	14.7	(50.6)	Main imports (% of total merchandise imports)		
Current account balance	-2.8	(0.3)	Machinery and transport equipment	35.2	
Net international investment position	-39.7		Chemicals and related products, n.e.s.	25.3	
			Mineral fuels, lubricants and related materials	13.3	
LABOUR MARKET, SKILLS AND INNOVATION					
Employment rate (aged 14 and over, %)	54.6	(57.5)	Unemployment rate, Labour Force Survey (aged 14 and over, %)	11.9	(5.4)
Men	64.4	(65.6)	Youth (aged 15-24, %)	27.8	(11.7)
Women	45.7	(49.9)	Long-term unemployed (1 year and over, %)	5.0	(1.4)
Participation rate (aged 14 and over, %)	62.0	(61.1)	Tertiary educational attainment (aged 25-64, %, 2017, OECD: 2018)	17.2	(36.9)
Mean weekly hours worked	37.5	(37.7)	Gross domestic expenditure on R&D (% of GDP, 2017, OECD: 2018)	1.3	(2.6)
ENVIRONMENT					
Total primary energy supply per capita (toe)	1.4	(3.9)	CO2 emissions from fuel combustion per capita (tonnes, 2017, OECD: 2018)	2.1	(8.6)
Renewables (%)	45.8	(10.8)	Greenhouse gas emissions incl. LULUCF per capita(tonnes CO2,2016,OECD:2017)	9.6	(10.3)
Exposure to air pollution (more than 10 μg/m³ of PM 2.5, % of population, 2017)	68.3	(58.7)	Water abstractions per capita (1 000 m³, 2016)	0.3	
SOCIETY					
Income inequality (Gini coefficient, OECD: 2016)	0.543	(0.310)	Education outcomes (PISA score, 2018)		
Relative poverty rate (%, OECD: 2016)	24.5	(11.6)	Reading	413	(487)
Median disposable household income (000 USD PPP, OECD: 2016)	4.8	(23.9)	Mathematics	384	(489)
Public and private spending (% of GDP)			Science	404	(489)
Health care (2017, OECD: 2019)	9.4	(8.8)	Share of women in parliament (%)	15.0	(30.7)
Pensions (Public, OECD: 2015)	13.1	(8.5)			

1. The year is indicated in parenthesis if it deviates from the year in the main title of this table. Where the OECD aggregate is not provided in the source database, a simple OECD average of latest available data is calculated where data exist for at least 80% of member countries

Source: Calculations based on data extracted from databases of the following organisations: OECD, IEA, ILO, IMF, World Bank.

Executive summary

The COVID-19 outbreak has plunged the economy into a deep recession

COVID-19 caused severe human suffering and triggered a deep recession. Rekindling economic activity past the trough intensifies the urgency of addressing underlying policy challenges.

Economic policies reacted in a timely and decisive manner to the COVID-19 crisis, supporting millions of Brazilians. But the pandemic will nonetheless cause GDP to drop by 5% (Table 1).

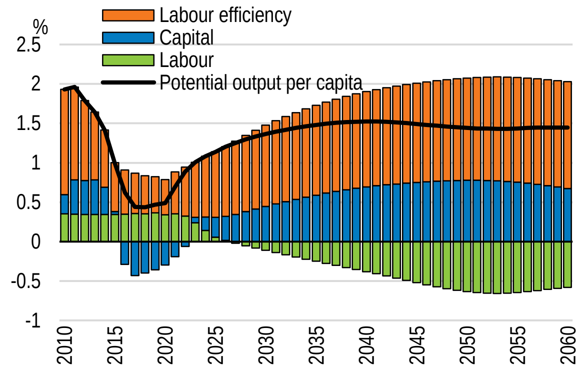
Table 1. The economy is in a deep recession

	2020	2021	2022
Gross domestic product	-5.0	2.6	2.2
Private consumption	-6.2	2.7	2.2
Government consumption	-4.8	0.5	0.0
Gross fixed capital formation	-5.1	4.4	5.6
Exports	-2.0	-0.6	4.0
Imports	-14.3	-4.4	4.6
Unemployment rate	13.6	16.0	15.0
Consumer price index	3.1	3.6	3.2
Consumer price index (Dec-Dec)	3.8	2.9	3.4
Headline fiscal balance	-15.6	-7.2	-6.3
Primary fiscal balance	-10.7	-2.8	-2.3
Public debt (gross, % of GDP)	91.4	94.3	96.6
Current account (% of GDP)	-0.3	-0.5	-0.9

Source: OECD projections.

A strong recovery from the recession will require long-lasting improvements in economic policies. A rising labour force and strong commodity prices will no longer underpin growth and public revenues. Instead, the boost to growth from demographics since the year 2000 will be fully reversed over the next 25 years (Figure 1). Productivity, which ultimately drives prosperity, will need to become the engine of growth, following decades of virtual stagnation. Without deep structural reforms to boost productivity, the recovery will be protracted and disappointing. Inflation risks have been contained for some time, but formalising the de-facto independence of the Central Bank could lock in this progress.

Figure 1. **Ageing will slow Brazil's growth potential**



Source: OECD (2017), OECD Economic Outlook (database).

StatLink https://doi.org/10.1787/888934196138

Financial intermediation is still limited with total credit around 50% of GDP, but the structure of financial markets is improving visibly. Directed lending operations, long at par with free credit, are receding, following a reduction of interest rate subsidies. This is allowing private banks and corporate bond markets to raise their participation in financial markets. Lending spreads are still high and point to scope for stronger competition in the financial sector, but an ambitious policy agenda aiming at reducing financing costs has been put in place.

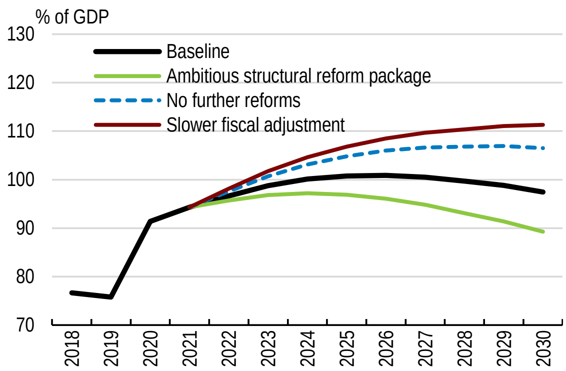
Deforestation is a major source of greenhouse gas emissions and has recently rebounded. Current laws and protections have proven capable to reduce deforestation in the past and should be preserved. But they will only be effective when coupled with stronger enforcement efforts to combat illegal deforestation, which will require additional resources.

Raising spending efficiency is needed to address fiscal challenges

Improving fiscal outcomes remains one of Brazil's principal challenges given a high debt burden, to which the pandemic has added 15 percentage points of GDP (Figure 2). Fiscal adjustment must resume after the crisis, but can be achieved by improving spending efficiency with no need for higher tax rates or new taxes and without detriment to growth or inclusiveness.

Plenty of scope exists for reviewing tax expenditures, including ineffective subsidies to specific activities and special tax regimes, while a public employment reform could generate savings and improve public administration at the same time. Many current expenditures have increased due to revenue earmarking, mandatory spending floors or indexation mechanisms, shifting spending away from where it is most needed, including investment. Reforming mandatory spending items and indexation rules is inevitable to deliver the needed fiscal adjustment and to avoid breaking fiscal rules, which would trigger confidence losses and could derail the recovery.

Figure 2. Gross public debt has shot up



Source: OECD projections, BCB, National Treasury.

StatLink https://doi.org/10.1787/888934196157

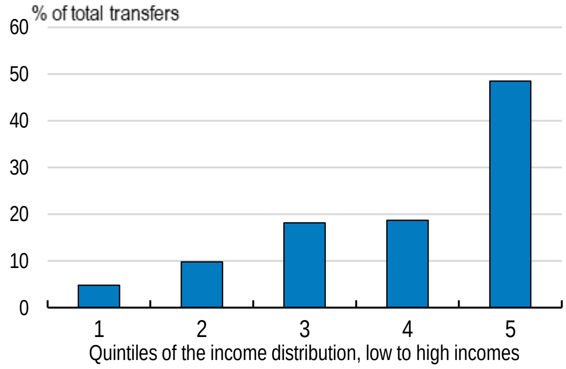
Raising the efficiency of public spending will not be possible without building on remarkable past progress in the fight against corruption and economic crimes. Strong and autonomous enforcement bodies can ensure this, provided that the law provides a credible threat of prosecution.

Large inequalities along several dimensions affect well-being. The richest 10% of the population earn more than four times as much as the bottom 40%. Inequality and poverty have fallen over the past two decades due to strong growth, improvements in education and social transfers. Social benefits amount to over 15% of GDP and are characterised by poor targeting, with almost half of transfers reaching the highest income quintile (Figure 3).

Reviewing current indexation arrangements could free resources for more efficient transfers and generate significant poverty reductions at a low fiscal cost.

Figure 3. Social transfers are not well targeted

Distribution of social transfer spending by quintile of the income distribution (1=lowest income quintile)

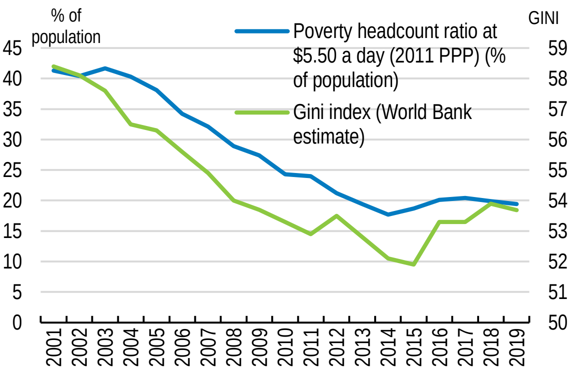


Source: SEAE

StatLink https://doi.org/10.1787/888934196176

Well-targeted conditional cash transfers could be expanded and converted into a true social safety net by accelerating benefit concessions in the case of dismissal and withdrawing them more gradually to strengthen job search incentives. This would support informal workers, which account for one third of employment and are not covered by unemployment schemes, and could revert the recent rise of poverty rates and inequality (Figure 4).

Figure 4. Poverty and inequality have edged up



Source: IBGE.

StatLink https://doi.org/10.1787/888934196195

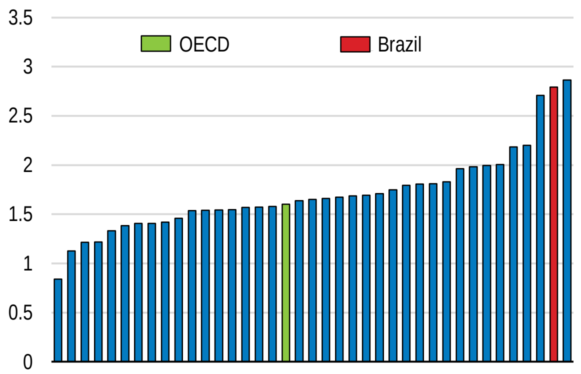
Reviving productivity is the key for a strong recovery of incomes

Realising Brazil's potential and improving well-being and living standards will only be possible through ambitious structural reforms that boost productivity.

With large parts of the economy shielded from competition, firms face limited incentives to become more productive. Reallocation mechanisms like entry and exit appear weaker than elsewhere, leaving many jobs trapped in firms and activities with little potential for improving productivity and wages. Domestic regulatory burdens and market entry barriers are among the world's highest (Figure 5).

Figure 5. Product market regulation hampers competition

PMR indicator



Source: OECD PMR Indicators Database.

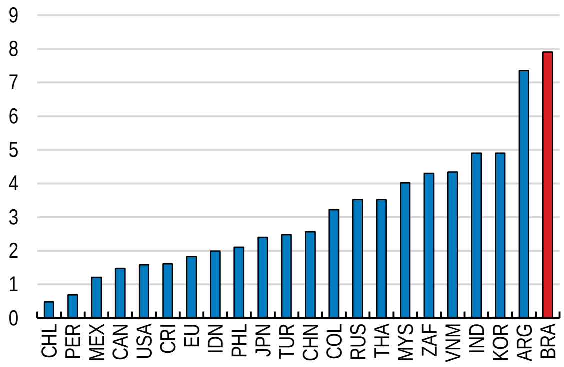
StatLink https://doi.org/10.1787/888934196214

A fragmented tax system gives rise to one of the world's highest tax compliance costs and a wide array of exemptions and special regimes reduces fairness and the redistribution effect of taxes. Infrastructure investment has fallen short of depreciation for years, which has made logistics challenging and costly.

Complex legal provisions give rise to excessive litigation and court congestion. Judicial decisions are slow and firms can find them hard to predict, adding to uncertainty and the cost of contract enforcement.

External competition is hampered by high trade barriers that have cut off Brazil from the opportunities of international trade (Figure 6). Trade barriers are even higher for capital goods and intermediate inputs, elevating domestic production costs.

Figure 6. Average tariff rates are high



Source: Wits.

StatLink https://doi.org/10.1787/888934196233

Well-designed training policies are key

Deeper integration into the global economy and rising domestic competition would boost productivity, including by facilitating the movement of jobs towards more productive firms and activities. But these structural changes create challenges for workers. Well-designed training and education policies can go a long way to help workers master the transition.

Opportunities for skill upgrading will facilitate the move into new and better-paying jobs and strengthen productivity at the same time.

Scaling up training policies can be a highly effective way to mitigate local employment effects in trade-exposed regions if course content is aligned with skill demands in local labour markets. Strengthening incentives for training institutions to raise employability of participants can help to achieve a better alignment with market demand. Facilitating a better adoption of vocational content in secondary education could also help to prepare youths effectively for a changing economic environment. Together with an expansion of early-childhood education, this could reduce early drop-out rates and foster inclusiveness.

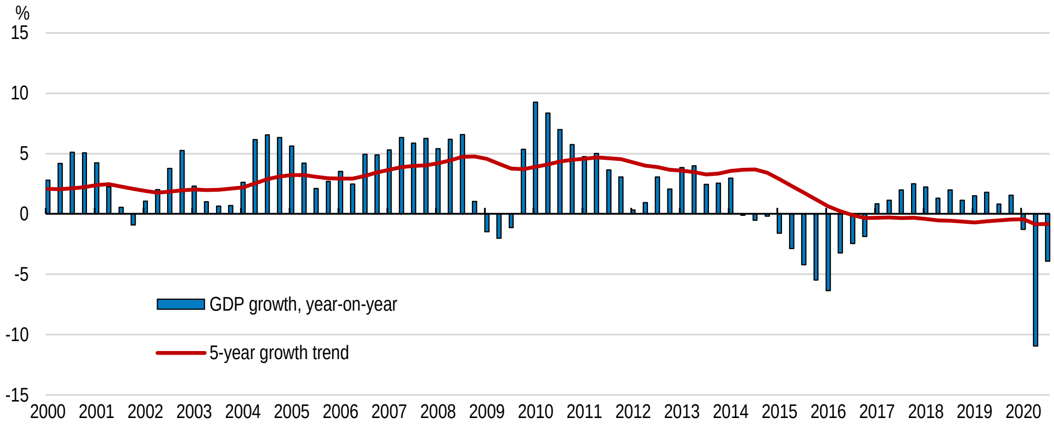
MAIN FINDINGS	KEY RECOMMENDATIONS
Improving macroeconomic policies, governance and social protection	
COVID19 has caused a strong recession. Inflation and inflation expectations are below target and monetary policy has been relaxed.	Keep interest rates low until inflationary pressures become clearly visible.
The Central Bank has conducted monetary policy in an independent way but formalising this independence would strengthen monetary policy effectiveness.	Apply fixed-term appointments for the Central Bank governor and directors and limit earlier dismissal to severe misconduct. Safeguard the budget autonomy of the Central Bank.
Fiscal outcomes require significant improvements as the pandemic has added to high public debt.	Ensure fiscal sustainability by adhering to current fiscal rules, including the expenditure ceiling.
Better spending would allow savings without jeopardising policy objectives.	Strengthen spending efficiency by reviewing civil servant pay structures, ineffective subsidies, special tax regimes and tax expenditures.
Mandatory spending items have reduced the room for fiscal policy as over 90% of the budget is now determined by law.	Reduce budget rigidity by reviewing revenue earmarking, mandatory spending floors and indexation mechanisms.
Spending on social transfers has increased, but most of it has failed to reach the poor, except for recent emergency benefits.	Index social security benefits to consumer prices rather than the minimum wage.
Despite large social transfers, there is no universal social safety net to protect dismissed workers against income losses. Recent emergency benefits improved this temporarily.	Increase benefits and accelerate benefit concessions in the *Bolsa Família* programme, while withdrawing benefits only gradually.
Lengthy appeal procedures lead to court congestion and long delays between sentences and their execution. In penal cases, wealthy defendants can avoid serving prison sentences over many years.	Consider creating the legal basis for executing sentences as of the second instance of appeal, or limit the number of appeals, including to the Supreme Court.
Whistle-blowing procedures are presently hampered by concurrent competences and parallel systems for similar offences, which make it difficult to protect whistle-blowers effectively	Implement a dedicated whistle-blower protection law.
Making growth greener and more sustainable	
Brazil has a strong legal framework to protect forests. Deforestation declined up to 2014 but has risen since, particularly in recent years. Enforcement action has declined significantly, reflecting budget and staff cuts.	Build on past success in fighting illegal deforestation by strengthening enforcement efforts to combat illegal deforestation and ensuring adequate staffing and budget of environmental enforcement agencies.
Political discussions have sent mixed signals about the commitment to the existing environmental protection framework.	Avoid a weakening of the current legal protection framework, including protected areas, the forest code, and focus on the sustainable use of the Amazon's economic potential.
Raising productivity	
Administrative barriers and product market regulation restrict market entry and hamper competition.	Further simplify license requirements for starting a company and apply silence-is-consent rules and one-stop shops wherever possible.
High trade barriers deprive the economy from the benefits of international competition.	Reduce tariff and non-tariff barriers, starting with capital goods and intermediate inputs.
Taxes are high and compliance costs generated by a fragmented system of indirect taxes are large. High tax litigation adds to court congestion.	Consolidate consumption taxes into one value added tax.
Judicial uncertainty entails costs for private enterprises. Courts are required to align their decisions with precedence rulings by superior courts, but there is no enforcement mechanism.	Ensure the alignment of court decisions with precedence rulings of superior courts by linking judges' promotions and salaries to compliance with the rules.
Improving skills, education and professional training	
High secondary drop-out rates reflect a lack of basic social and cognitive skills. Female labour force participation is hampered by lack of childcare facilities, particularly in low-income areas.	Continue expanding access to early-childhood education, prioritising access for low-income families and single mothers.
Structural reforms like stronger competition and global integration will reallocate jobs across firms and sectors.	Scale up resources for professional training courses, but ensure their alignment with local labour market needs.

1 Key policy insights

The COVID-19 pandemic has caused severe human suffering and triggered a deep recession in Brazil. Economic policies reacted in a timely and decisive manner to the crisis, supporting millions of Brazilians. But a strong and inclusive recovery from the recession will require long-lasting improvements in economic policies. Challenges include improving fiscal outcomes, fighting corruption, strengthening social protection, raising productivity and improving education and training policies.

The COVID-19 outbreak caused severe human suffering in Brazil, with around 6.5 million infections and 175 000 deaths attributed to the disease by early December 2020. The pandemic also reversed a gradual recovery from the last downturn and plunged the economy into another, even deeper recession (Figure 1.1). Domestic consumption and investment declined as millions lost their livelihoods. Economic policies responded in a timely and decisive manner by providing income support for millions of Brazilians, financing short-time work, facilitating a credit expansion, postponing taxes and anticipating benefit disbursements (Box 1.1).

Figure 1.1. After a weak recovery, the economy has plunged into another recession

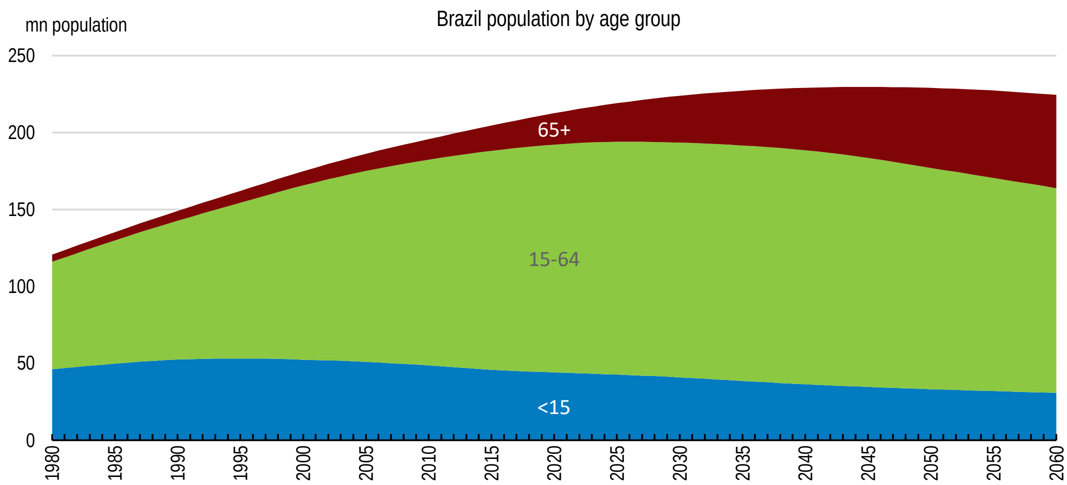


Source: IBGE, OECD calculations.

StatLink https://doi.org/10.1787/888934196252

The pandemic has significantly affected well-being and prosperity. The current need to rekindle economic activity only intensifies the urgency of tackling long-standing structural policy challenges. In the past, these have been partly concealed by favourable demographics and high commodity prices, which allowed a simultaneous expansion of private and public consumption even as productivity growth, the ultimate engine of growth, was virtually stagnant. But demographics reached a turning point in 2019 (Figure 1.2). Over the next 25 years, rapid population ageing will reverse the entire boost to growth from demographics since the year 2000 (IBGE, 2018[1]). Among OECD countries, only Korea and Costa Rica will age more rapidly. On current policies, this will slow down the economy's growth potential substantially, to around 1.5% per annum, and calls for a substantial overhaul of the growth model of the past.

Figure 1.2. Demographics will no longer support economic growth



Source: United Nations (2019). World Population Prospects 2019, Online Edition. Rev. 1.

StatLink https://doi.org/10.1787/888934196271

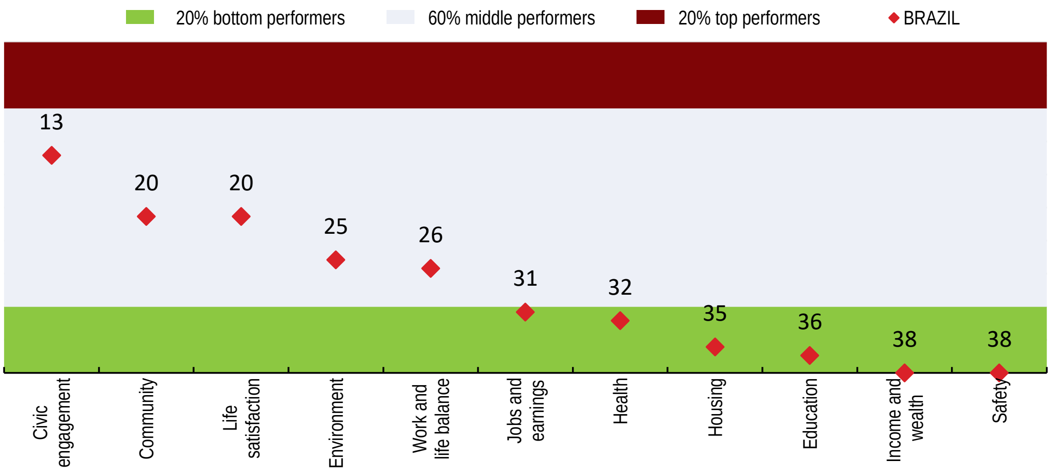
Box 1.1. Policy responses to the COVID-19 pandemic

Economic policy responses included new spending measures exceeding 8% of GDP in 2020, for which the expenditure rule has been temporarily suspended. The central government will provide financial assistance to states and municipalities, which are responsible for most health expenditures. Monetary support and regulatory measures have supported additional credit extension to help firms through the trough. Main measures include:

- **Income support measures for low-income workers**: A new temporary emergency benefit of BRL 600 per month over five months, was paid to over 67 million informal, self-employed or unemployed workers earning up to half the minimum wage during April – August 2020. It will be continued until December 2020 at half its previous level. The amount doubled for single parents and, as a side effect, it has led to significant progress in expanding access to basic banking services. Conditional cash transfer programmes have received resources to enrol 1.2 million additional beneficiaries. A short-time work scheme with public income support from unemployment insurance compensated income losses of formal workers and alleviated wage costs for employers in exchange for job guarantees.
- **Support to businesses**: Policy support for SMEs included a low-interest credit line to cover wages for employees earning up to two-times the minimum wage, with the credit risk borne by the federal government and a government fund to provide guarantee for SME loans that could potentially reach 3.2 million firms. Additional new corporate credit lines were created by the national development bank. Tax liabilities and other charges on firms were postponed, with a particular focus on SMEs. Temporary exemptions from certain labour regulations, the possibility to advance annual leave and other measures create further flexibility in working hours for firms.
- **Credit and liquidity measures**: Monetary policy support has reduced interest rates by a joint 250 basis points, combined with prudential and regulatory measures that allow additional credit extension of up to 18.5% of GDP.

Weak growth prospects are not the only challenge: Despite impressive social progress over many years, well-being indicators show a mixed picture. The OECD Better Life index shows strong performance in civic engagement, and average performance in community and life satisfaction (Figure 1.3). In the areas of income and wealth, safety, education housing and health, however, Brazil's performance is among the lowest in the sample and is likely to deteriorate further with the current deep recession.

Figure 1.3. Well-being indicators

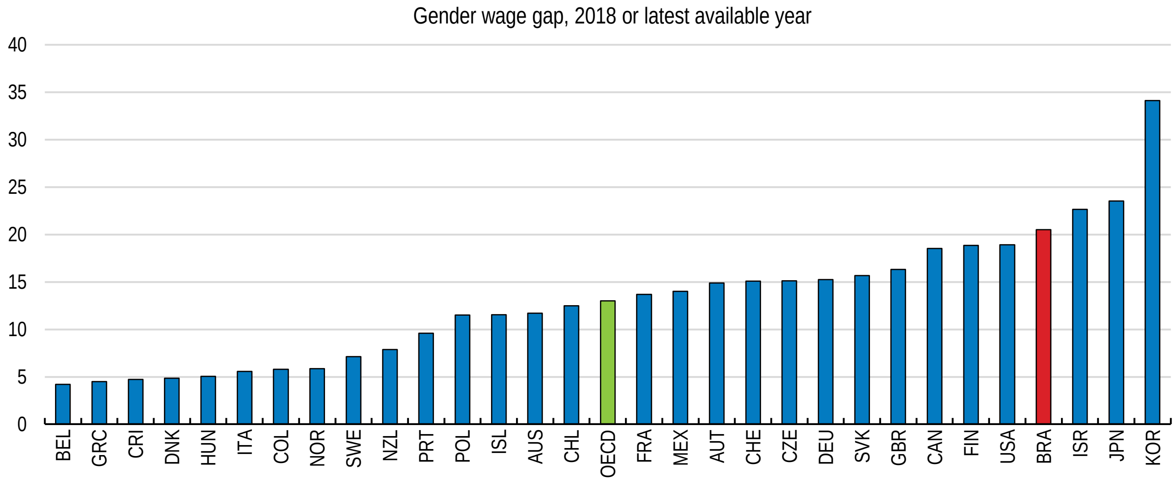


Note: The numbers indicate Brazil's ranking among the 38 countries comprised in the index.
Source: OECD Better Life Index.

StatLink https://doi.org/10.1787/888934196290

Large inequalities are one factor affecting well-being and they have been rising again after years of decline. The bottom 40% of income earners receive 10% of disposable incomes, while the top 10% pocket more than four times as much. Female workers earn 20% less than men, compared to 13% for the OECD average. Women are more likely to be in informal employment and poverty is four times the national average among informal workers. White Brazilians earn two thirds more than other ethnic groups, while the latter are 60% more likely to lack access to basic sanitation and more than twice as likely to be illiterate.

Figure 1.4. Women are facing sizeable wage gaps

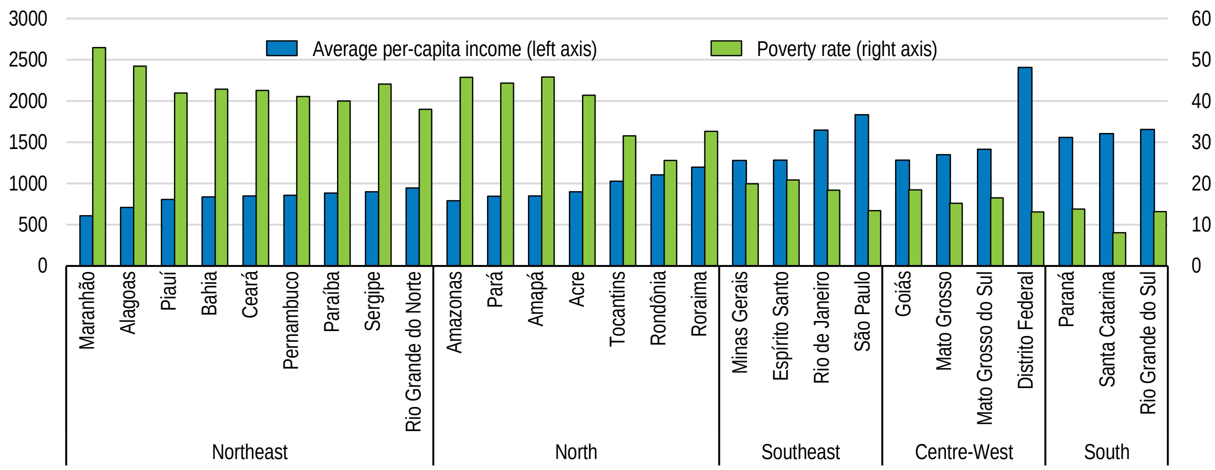


Source: OECD (2020), Gender wage gap (indicator). https://doi.org/10.1787/7cee77aa-en, IBGE (PNAD).

StatLink https://doi.org/10.1787/888934196309

Regional disparities are another crucial challenge. Average incomes in the north-eastern state of Maranhão are less than half of the national average, and the opposite holds for poverty (Figure 1.5). Labour market informality and illiteracy are three to four times more common in the poorer north-eastern states than in the relatively affluent southeast.

Figure 1.5. Prosperity gaps across regions are large



Source: IBGE, Síntesis de Indicadores Sociais 2019.

StatLink https://doi.org/10.1787/888934196328

In addition, improving well-being will require addressing challenges in economic governance and institutions. Corrupt practices exposed in recent years have wasted public resources and exacerbated income inequalities. Finally, protecting Brazil's unique natural resources such as the Amazon rainforest will benefit generations of Brazilians, and has a social value far exceeding the short-term private benefits from deforestation.

The strength of the recovery will hinge on economic reforms

Ambitious structural reforms that raise productivity would help to boost growth and to realise Brazil’s potential. Without support from demographics, further progress in material living standards will hinge crucially on productivity growth, which must become the basis for more and better remunerated jobs for all Brazilians, as discussed in Chapter 2 (OECD, 2018[2]; Dutz, 2018[3]). Following decades of slow reform momentum, many of Brazil’s institutional and policy settings were made for a world that is very different from the challenges of today.

Brazil can build on impressive reform progress made in recent years (Box 1.2). A successful pension reform has been key to improve both the financial sustainability and the redistributive character of Brazil’s large pension system (Box 1.3). A reduction of credit subsidies has opened space for more competition and innovation in financial markets. The federal government contribution to basic education FUNDEB, which has been instrumental for the increase in school enrolment over the years, has been made permanent and more than doubled in volume, and it has incorporated monetary incentives for local governments to raise the quality of education. Congress is discussing tax, administrative and civil service reforms, a new insolvency law, a new framework for fiscal relations with states and municipalities, including clearer rules for sharing oil revenues, and measures to enhance budget flexibility. Moreover, recent corruption convictions reflect stronger institutions, including a judiciary that has not shied away from pursuing and sentencing senior leaders.

Box 1.2. Recent and ongoing reform initiatives since 2017

- A pension reform has improved the sustainability and the redistributive character of Brazil’s pension system.
- A draft for an administrative reform affecting civil servants, fiscal relations with states and municipalities and budget flexibility has been submitted to Congress.
- A draft law with refinements to the expenditure rule is being discussed by Congress.
- A new independent fiscal council produces high-quality monthly reports.
- A draft for a first phase of a tax reform has been submitted to Congress.
- Directed lending rates have been aligned with market rates. As a result, interest subsidies and directed lending volumes have declined.
- A new and comprehensive credit registry has been created.
- Regulatory changes are fostering competition in financial markets, including by facilitating the emergence of FinTech companies and open banking.
- A new legal framework for investments in sanitation was approved in 2020.
- Competition in the oil and gas sector has been strengthened.
- Trade agreements with the European Union and EFTA have been concluded successfully. Brazil has started the adherence process to the government procurement agreement of the WTO. Foreign exchange regulations are being aligned with OECD best practices.

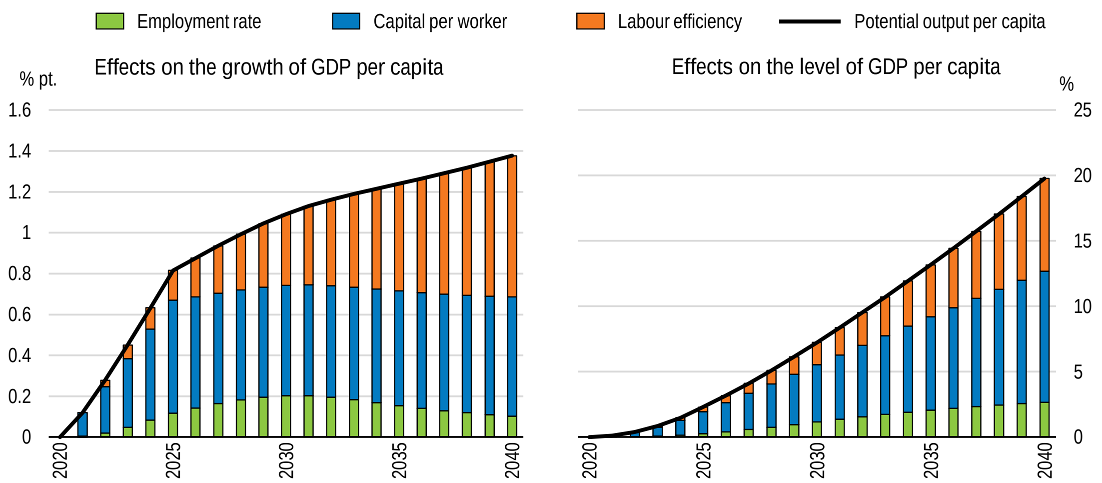
- A 2020 law reduces the bureaucracy and eases regulations for opening a business and obtaining licenses.
- A 2017 labour market reform has increased the scope for firm-level agreements to take prevalence over the law, which provides a legal basis for long-standing practice and reduces legal uncertainties, while preserving essential employee rights as non-negotiable. The reform has also strengthened incentives for formal hiring.
- Recipients of conditional cash transfers were granted a 13th monthly payment.
- Labour tax wedges were cut for low-income earners aged below 29 and above 55.
- A 2017 upper secondary education reform has introduced a nationwide common core curriculum from early childhood to secondary school while making curriculums outside the common core more flexible, reducing the mandatory subjects and allowing a better tailoring of curriculums to different student needs. The reform also mandates longer school hours and can help to reduce early school drop-out.

Finding the necessary political consensus for further reforms will not be easy. Many reforms will require changes to many detailed provisions contained in Brazil's 1988 constitution with supermajorities. Today's fragmented political landscape and the more limited fiscal room adds to these difficulties, as in the past consensus was often achieved on the back of significant inefficiencies in government spending. But in the current context, a failure to reform will hold back economic progress and difficult political choices will have to be made either way, of which inaction may often be the least attractive one. At the same time, there have been significant initiatives in both the executive and more recently also in the legislative branch to garner consensus around a constructive reform agenda.

The payoff of reform progress would be substantial and rapid enough to be politically appealing, according to estimates based on the OECD long-term growth model (Guillemette and Turner, 2018[4]). An ambitious package that would improve domestic regulation and competition, reduce barriers to foreign trade and improve institutions and economic governance, would generate an average annual growth dividend of 0.9 percentage points over 15 years (Figure 1.6). This would accelerate the recovery and approximately double the currently projected potential per capita growth by 2035. Over time, the growth benefits would continue to rise until reaching 2 percentage points of GDP by 2060. Stronger growth implies that per capita GDP could be 13% higher after 15 years (Table 1.1).

Figure 1.6. An ambitious structural reform package can lift growth

Effects on the growth of GDP per capita



Source: OECD calculations.

StatLink https://doi.org/10.1787/888934196347

Table 1.1. Expected gains from structural reform are substantial

Estimated impact of selected reforms on real GDP after 15 years

Reform	Impact on real GDP	Impact on real GDP per capita
Scenario A: Reduce barriers to entrepreneurship and competition (e.g. by cutting administrative burdens and streamlining licensing requirements)	5.3%	4.9%
Scenario B: Stronger global integration (e.g. by reducing tariffs and opening the capital account)	8.0%	7.4%
Scenario C: Improve institutions, economic governance and reduce corruption	6.3%	5.9%
Ambitious reform scenario: all of the above together	14.1%	13.2%
Implied average annual growth increase (of ambitious reform scenario):	0.9 % points	0.9 % points

Note: These estimates were obtained on the basis of the OECD Long term growth model (Guillemette and Turner, 2018[4]). Scenario A assumes aligning product market regulations as captured by the OECD PMR indicator with the current OECD average by 2060. Scenario B assumes a reduction in average tariffs by around 7 percentage points by 2025, when they would reach the level prevalent today in the five OECD economies with the lowest tariffs. In addition, the capital account is assumed to open gradually to reach Chile's current level by 2025. Scenario C assumes that institutional quality, as captured by the rule of law index (Kaufmann, Kraay and Mastruzzi, 2010[5]), converges to the current OECD median value by 2060. The individual reform effects do not sum up to the effect of the ambitious reform scenario due to non-linear effects in the model.
Source: OECD calculations.

The sequencing of reforms may also play a major role for their success. Reforms often trigger a reallocation of production factors to more productive firms and sectors, as one of the key channels through which productivity and growth are boosted. This can entail significant adjustment costs, particularly if distortions in product and factor markets hamper the ability of factors to move (OECD, 2012[6]; Autor, Dorn and Hanson, 2013[7]). Policies that enhance flexibility and facilitate the reallocation of labour and capital across firms, sectors and regions can significantly reduce these adjustment costs (OECD, 2005[8]; OECD, 2012[6]). The credit, labour market and regulatory reforms that Brazil has undertaken in recent years, for example, will be helpful in this context. At the same time, the sequencing of reforms crucially depends on the domestic political context and the momentum for reform (VanGrasstek, 2011[9]; OECD, 2005[8]).

Against this background, the main messages of the Survey are:

- Ensuring fiscal sustainability after the COVID-19 crisis will require improving the effectiveness of public spending, including better economic governance and more effective public transfers.
- Raising productivity to boost growth after the crisis and over the longer run will require structural reforms. Key areas are competition, regulatory burdens, trade barriers, the simplification of taxes and judicial efficiency.
- Preparing workers for job reallocations due to structural changes – including those the COVID-19 crisis is likely to bring about – will require improvements in skill and education policies.

Box 1.3. Brazil’s 2019 pension reform

In November 2019, Brazil approved a pension reform containing a wide range of parametric changes. These included the introduction of a general minimum age of 62 years for women and 65 for men, while previously retirements based on years of contribution led to effective retirement ages of 53 years for women and 56 for men. Contribution rates were made progressive, leading to visibly higher contributions for high-wage earners and to lower rates for minimum wage earners. Survivor pensions will no longer be 100% of the deceased spouse's pension, but vary according to the number of dependants. Limits on the accumulation of benefits were also introduced.

The reform improves the distributional footprint of the pension system. By establishing a binding retirement age, it ended the current practice where low-income earners with part of their working life in informal employment retire later than others who retire on the basis of years of formal contributions. Moreover, the reform reduces inequalities between the private sector regime and the public sector regime, as the latter was significantly more generous before. The overall expected savings of 10% of GDP over 10 years are sizeable. The pension reform, which had been recommended in the 2015 and 2018 OECD Economic Surveys of Brazil, is an important achievement.

COVID-19 has plunged the economy back into a long and deep recession

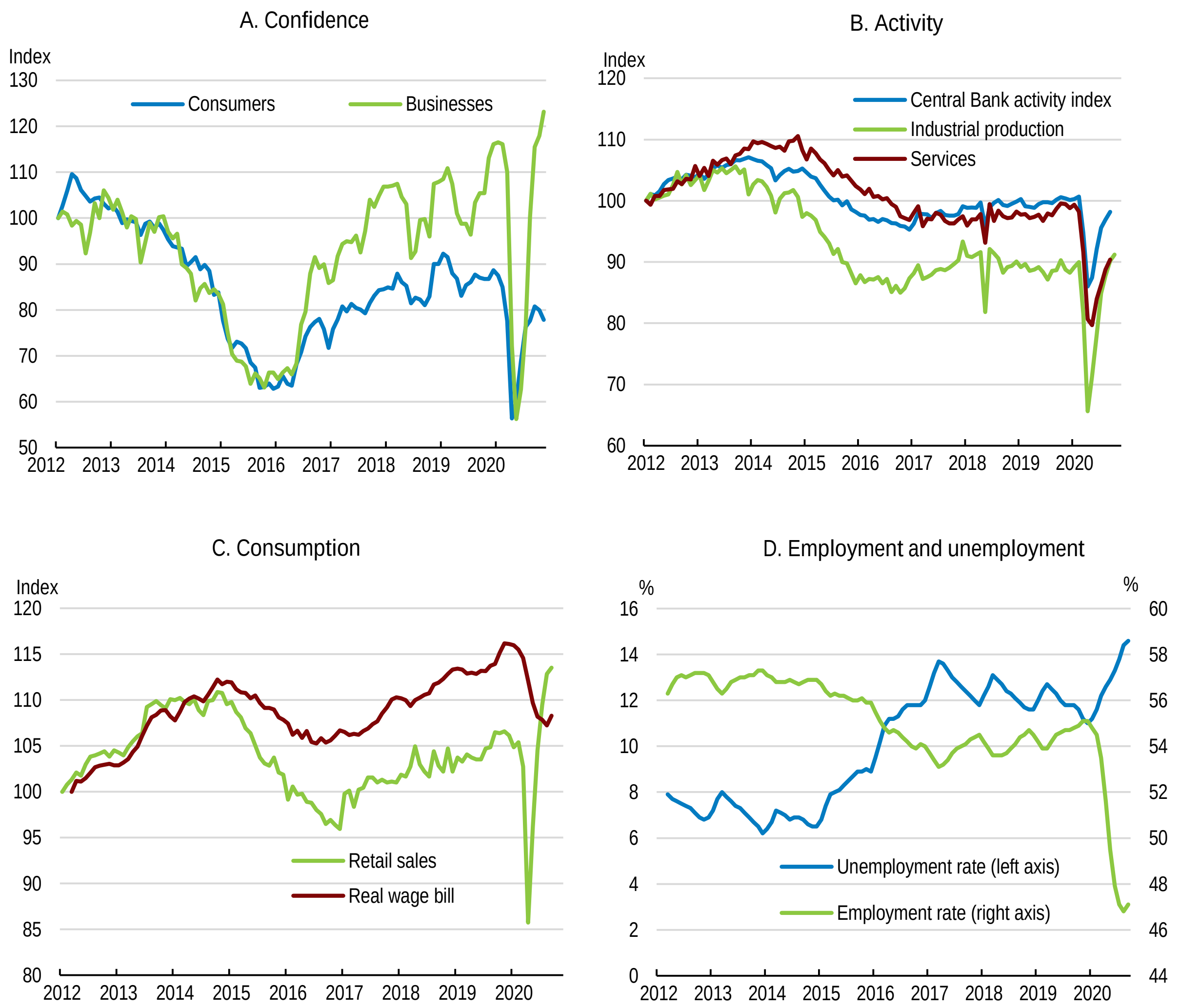
Brazil saw a decade of strong growth at the outset of the new millennium, buoyed by rising commodity prices and favourable demographic developments. Growth then declined drastically as of 2012. The need for structural reforms to boost stagnant productivity became increasingly visible and fiscal accounts were on an unsustainable track. Confidence suffered from a lack of political resolve to address these issues, eventually leading into a deep recession in 2015/16. Public debt rose by 20 percentage points within only three years, while inflation climbed into double digits. As of 2017/2018, slowly improving fiscal prospects, lower inflation and lower interest rates had begun to lift confidence.

The short-term prospects will depend on the health situation

Brazil recorded the first COVID-19 case in late February of 2020. Deaths increased rapidly and Brazil had become one of the global hotspots of the pandemic by June. While the city of São Paulo was the initial epicentre of the outbreak, the virus spread rapidly around the country. The health system soon faced serious shortages, especially in the public sector, on which two thirds of Brazilians depend. Many fatalities occurred among those waiting for admission into an intensive-care unit. Following a decline of as of end-July 2020, new cases and deaths have been rising again as of early November.

Growth turned negative in the first quarter of 2020, as local governments started to impose lockdown measures from mid-March to contain the spread of the virus and avoid even worse human hardship. Distancing measures have been in place in all of Brazil’s 27 federative units, land borders were closed and entry by air from many countries was restricted for months. Growth then plunged further in the second quarter and indicators of confidence, demand and activity fell sharply, but many of them have also shown a strong recovery since (Figure 1.7). GDP expanded again in the third quarter, returning to a level 4% below that of end-2019. For the year 2020, OECD projections expect GDP to decline by 5%, followed by a recovery in 2021 (Table 1.2). GDP will have recovered its pre-pandemic level by early 2022.

Figure 1.7. COVID-19 has triggered a very deep recession



Source: Central Bank, CEIC, IBGE.

StatLink https://doi.org/10.1787/888934196366

Job losses, lower hours worked and significantly reduced earning possibilities for self-employed workers are weighing strongly on private consumption. Unemployment, which never fully recovered from the 2015 recession, is now rising again. Its recent rise, however, reveals only a part of the actual employment losses as many survey respondents did not even pretend to look for a job during the pandemic, and were hence recorded as outside the labour force.

With inflation right at target before the COVID-19 shock started to weigh on demand, financial conditions had eased significantly. Rate cuts of 250 basis points until August 2020, combined with regulatory measures that would allow additional credit extension of up to 18.5% of GDP, will provide favourable conditions for private investment once confidence in the recovery strengthens and credit demand picks up. Fiscal policy, on the other hand, will have to unwind much of the appropriate emergency support even before demand firms, to ensure debt sustainability.

Exports declined in the third quarter of 2020 but are projected to benefit from recovering global demand as of 2021, especially from Brazil's two major export destinations China and the United States (Figure 1.8). Manufacturing exports are limited by weak prospects in neighbouring Argentina, the major destination for

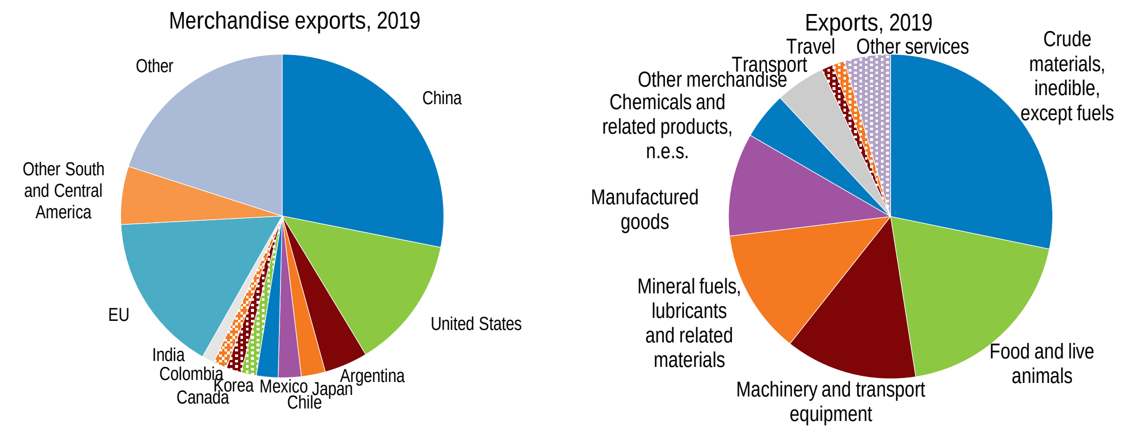
such exports. Import demand will pick up in line with domestic demand. A slightly widening but moderate current account deficit will continue to be covered by foreign direct investment inflows.

Table 1.2. Macroeconomic indicators and projections

	2018	2019	2020	2021	2022
Gross domestic product (GDP)	1.7	1.4	-5.0	2.6	2.2
Private consumption	2.4	2.2	-6.2	2.7	2.2
Government consumption	0.8	-0.4	-4.8	0.5	0.0
Gross fixed capital formation	5.3	3.4	-5.1	4.4	5.6
Final domestic demand	2.5	1.9	-5.7	2.5	2.3
Stockbuilding[1]	-0.5	0.0	-1.2	-0.4	0.0
Total domestic demand	2.1	1.9	-6.9	2.1	2.3
Exports of goods and services	3.3	-2.3	-2.0	-0.6	4.0
Imports of goods and services	7.0	1.1	-14.3	-4.4	4.6
Net exports[1]	-0.4	-0.5	1.8	0.5	0.0
Other indicator					
Unemployment rate (% of labour force)	12.3	11.9	13.6	16.0	15.0
Consumer price index (annual growth rate)	3.7	3.7	3.1	3.6	3.2
Consumer price index (year-over-year growth in December)	3.8	4.3	3.8	2.9	3.4
Core consumer price index (annual growth rate)	3.3	3.5	2.5	2.2	3.3
Current account balance (% of GDP)	-2.2	-2.7	-0.3	-0.5	-0.9
General government headline balance (% of GDP)	-7.0	-5.8	-15.6	-7.2	-6.3
General government primary balance (% of GDP)	-1.6	-0.9	-10.7	-2.8	-2.3
General government gross debt (% of GDP)	76.5	75.8	91.4	94.3	96.6

1. Contribution to changes in real GDP.
Source: OECD projections, OECD Economic Outlook Database, Central Bank.

Figure 1.8. **Brazil's main export markets and products**



Source: UN Comtrade database.

StatLink https://doi.org/10.1787/888934196385

Risks are centred around the implementation of reforms and fiscal sustainability

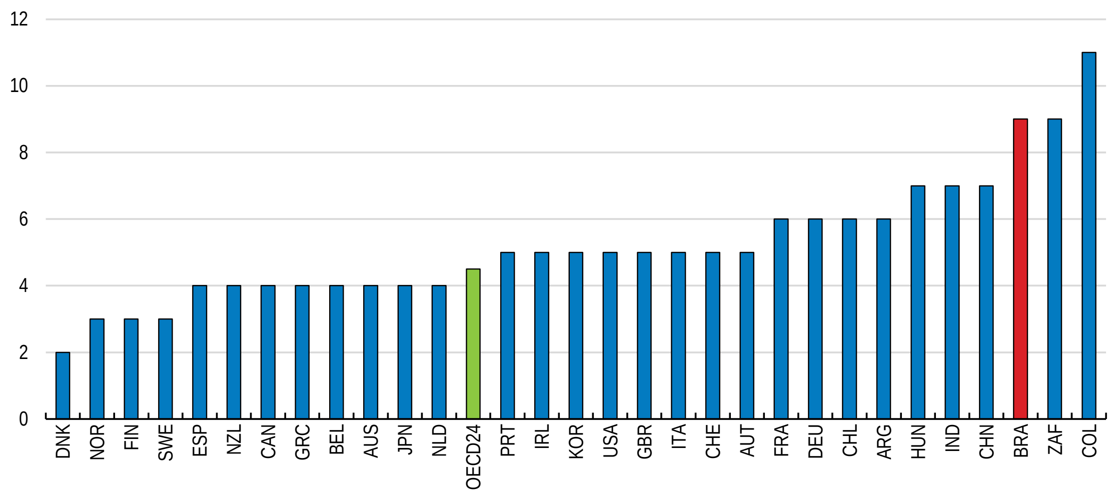
Current projections assume a continuation of progress in structural reforms to improve growth and fiscal performance. Fiscal sustainability hinges on keeping the pandemic-related fiscal measures temporary and on resuming the fiscal adjustment in train before the pandemic. A failure to reduce government spending obligations and budget rigidities would imply breaking the expenditure rule, one of the driving factors behind growing confidence and declining interest rates in the run-up to the pandemic. The situation has now been aggravated as the pandemic response has added some 15 percentage points of GDP to public debt. Without strong action, financing costs could rise substantially, jeopardising fiscal sustainability and depressing investment, and Brazil could experience a protracted recession like the “lost decade” of the 1980s.

The political economy of getting these reforms done is not trivial. A fragmented and polarised political landscape casts a shadow over the executive’s ability to build political consensus for key reforms, and implementation risks loom large. Some of the necessary reforms will question long-standing privileges. For example, producers in activities currently shielded from competition have incentives to defend their rents, while user benefits are dispersed. Moreover, some of the benefits from reform may not materialise immediately, unlike some of the costs. Resistance to change may cause setbacks, like the transport strike triggered by rising diesel prices that dented economic activity visibly in 2018. At the same time, if a consensus can be reached, reforms also portend a significant upside, given the significant potential to improve the business climate and the quality of public expenditure.

Social discontent has flared up in several South American neighbours and could also affect Brazil, possibly compounded by deteriorating social conditions as a result of the pandemic. Frustrated aspirations of a rising but still vulnerable middle class have been a common theme across the continent, one that also resonates in Brazil. The 2015/16 recession had already reverted progress with social mobility, deceiving those who thought they would be next in line to improve their lives. Brazil scored 27th out of 30 countries compared in a 2018 OECD comparison of social mobility (Figure 1.9). The resulting frustration was compounded by corruption scandals that have eroded faith in public institutions.

Figure 1.9. Intergenerational mobility is low

Expected number of generations it would take the offspring from a low-income family to reach the mean income



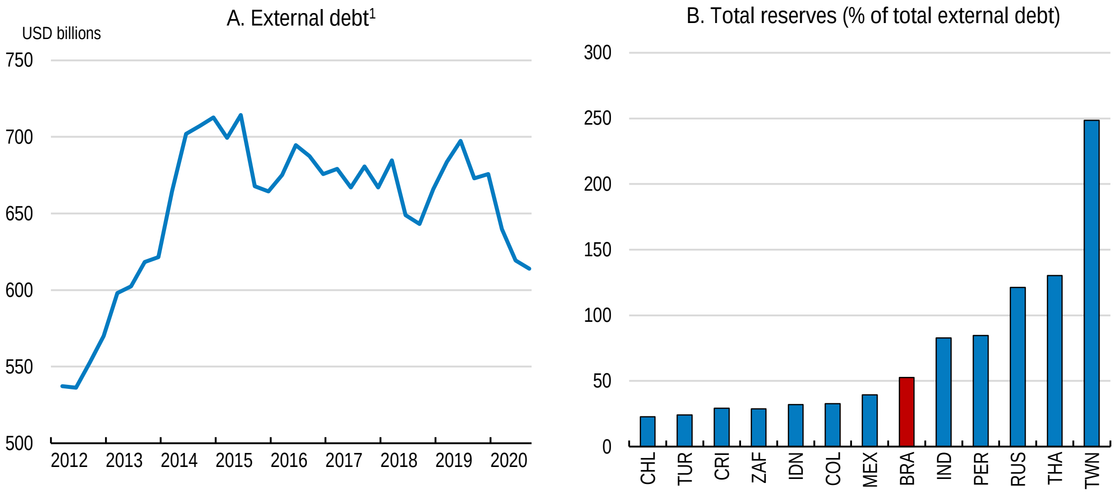
Note: These estimates are simulation-based and intended to be illustrative. They are based on earnings persistence (elasticities) between fathers and sons and the current level of household incomes of the bottom decile and the mean, assuming constant elasticities. Low-income family is defined as the first income decile, i.e. the bottom 10% of the population.
Source: OECD Income Distribution Database, (OECD, 2018[10]).

StatLink https://doi.org/10.1787/888934196404

External vulnerabilities seem contained

Economy-wide external debt has declined below 2018 levels and is lower than in most emerging market economies, relative to currency reserves (Figure 1.10). Corporate external debt of around 26% of GDP is exposed to exchange rate risks. To what extent these are hedged is hard to ascertain. For the public sector, external debt is not a vulnerability as only 4% of public debt is denominated in foreign currency.

Figure 1.10. External debt is stable and currency reserves are substantial

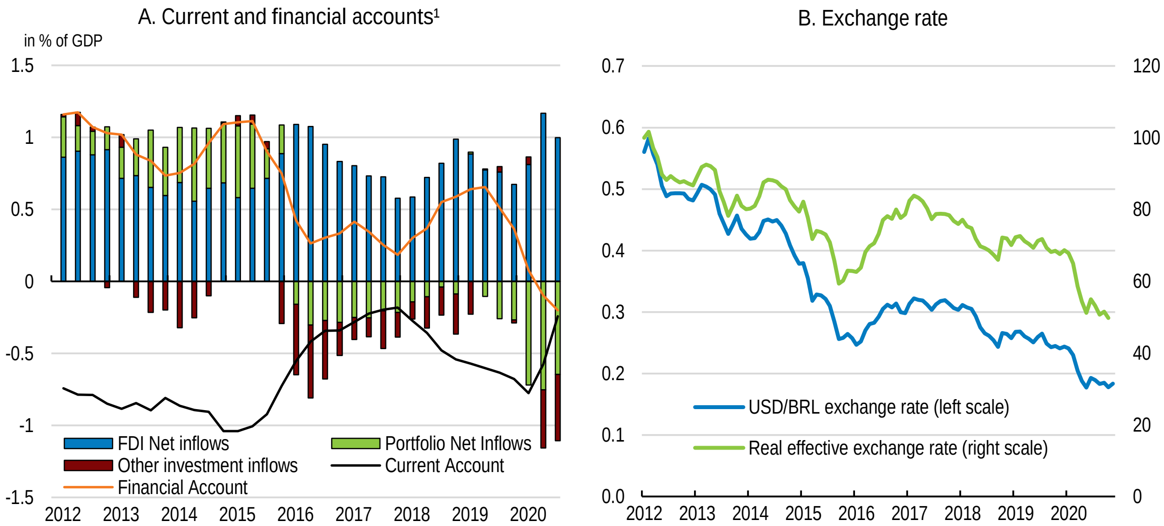


1. The external debt definition used here includes intercompany lending and domestic fixed income securities held by non-residents.
Source: IMF, BCB.

StatLink https://doi.org/10.1787/888934196423

The economy has significant cushions against external financial risks. Currency reserves of 19.7% of GDP make the public sector a net creditor in foreign currency and a dollar swap line with the US Federal Reserve could provide additional dollar liquidity. The strong FDI component of capital inflows makes them less likely to reverse quickly, although Brazil experienced strong portfolio outflows in 2020 (Figure 1.11).

Figure 1.11. Foreign direct investment inflows exceed the current account deficit



1. Moving average, excluding reserves.
Source: BCB, CEIC.

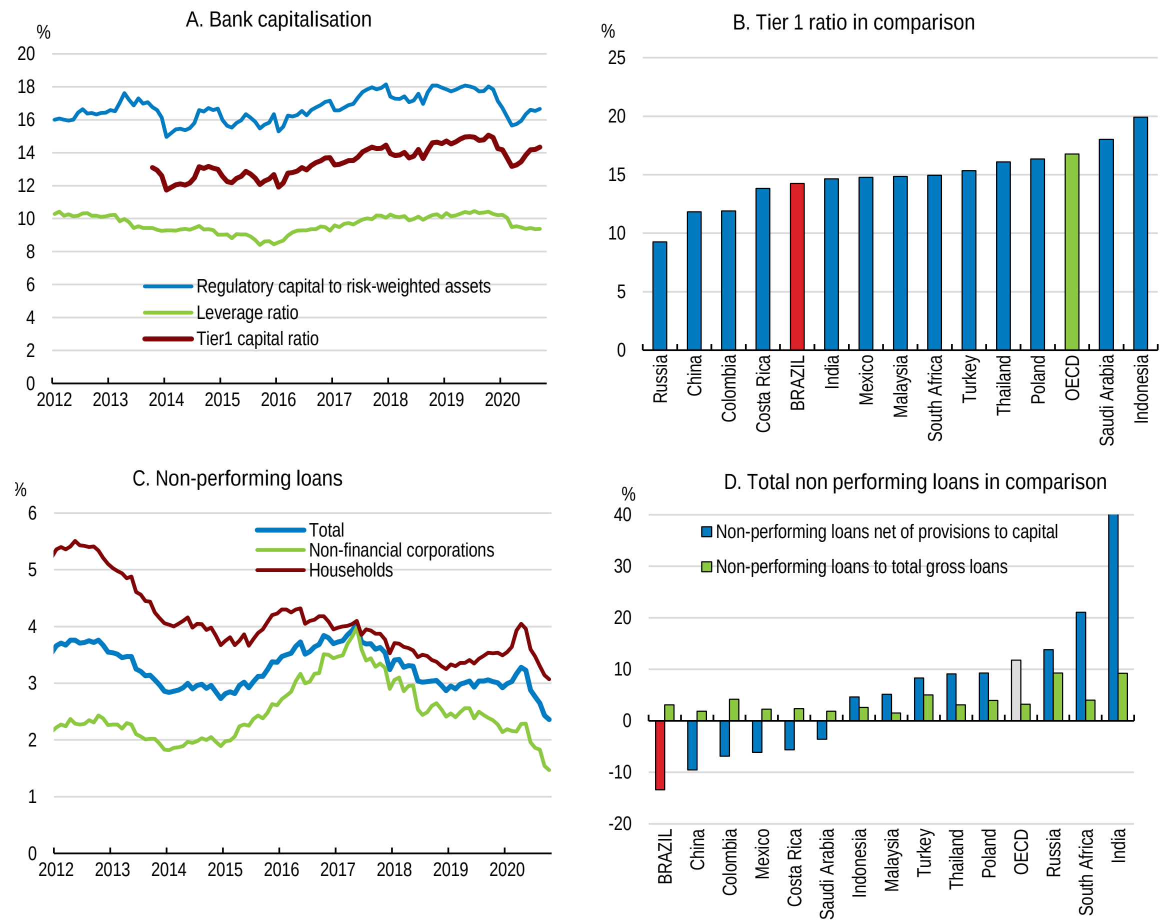
StatLink https://doi.org/10.1787/888934196442

The flexible exchange rate acts as a shock absorber and has served Brazil well. Bouts of exchange rate volatility have been managed well by the Central Bank using direct market interventions and swap contracts to smooth excess movements, but without impeding necessary adjustments. A recent depreciation is partly related to a flight for safety in the context of the pandemic, declining domestic interest rates and an expanding domestic capital market, which have led some corporate debtors to substitute external debt for domestic financing.

Financial soundness indicators are solid but the pandemic entails unprecedented risks

Brazil's relatively small financial sector had a remarkably smooth ride through the deep 2015/16 recession and financial stability indicators were showing cyclical improvements in the run-up to the COVID-19 pandemic. Bank capitalisation has trended upward and significantly exceeds regulatory requirements, despite some recent declines in the context of easier capital regulations, aimed at encouraging banks to lend (Figure 1.12). Non-performing loans have also been on a declining trend, but could increase as an increasing number of businesses and households will struggle to service their debts. This will put significant strain on the banking system and it is conceivable that the effect of the COVID-19 shock exceeds what is simulated in standard stress test scenarios. The last IMF Financial Stability Assessment of 2018 suggests that banks are broadly resilient to macro-financial shocks (IMF, 2018[11]). Stress test carried out by the Central Bank also point to an ability to withstand substantial shocks to growth or risk premiums (BCB, 2019[12]). High margins point to scope for strengthening competition among financial institutions, as currently pursued by the Central Bank.

Figure 1.12. Financial stability indicators have deteriorated at the margin during the pandemic

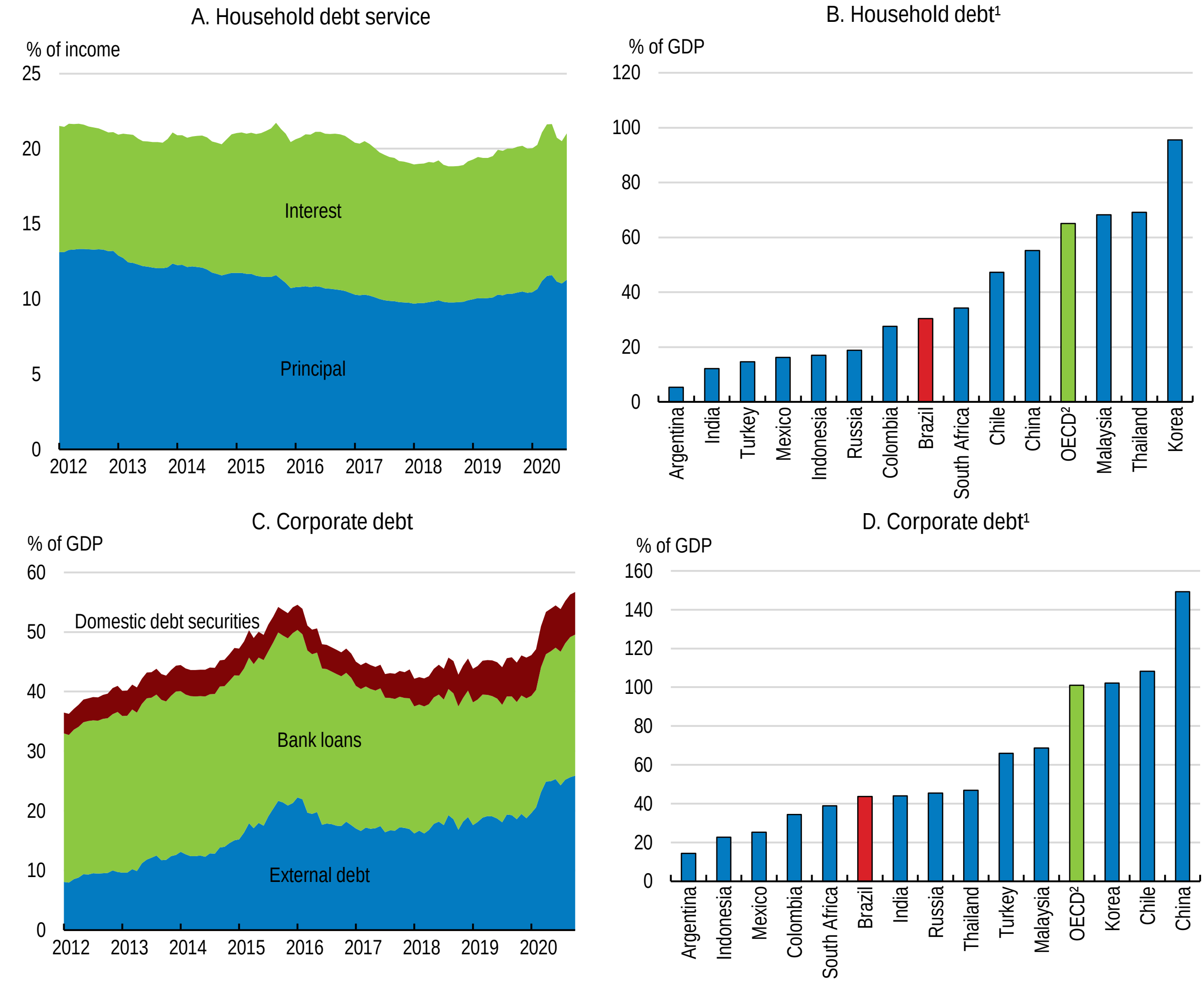


Source: CEIC, BCB.

StatLink https://doi.org/10.1787/888934196461

Household credit stands at 30% of GDP after surpassing corporate credit in late 2016. This is mid-range among emerging economies and less than half the OECD average (Figure 1.13). Debt service relative to household incomes has remained fairly stable at around 20%. Corporate bank loans have edged up since March, possibly reflecting the uptake of emergency lending programmes for firms. Overall corporate debt amounting to 57% of GDP is low in international comparison and includes debt securities and financing from abroad, to which large corporates have increasingly resorted over the last years (IMF, 2019[13]; BCB, 2020[14]). As corporate bond issuance picked up, domestic investment funds have shifted their portfolio towards corporate securities, without detriment to their liquidity level, which is close to record highs (BCB, 2019[12]).

Figure 1.13. Household and corporate debt levels remain moderate



1. Data in panel B and D refer to the 4th quarter of 2019.
2. Unweighted average of 32 OECD countries with available data.
Source: CEIC, BCB, BIS Total credit database.

StatLink https://doi.org/10.1787/888934196480

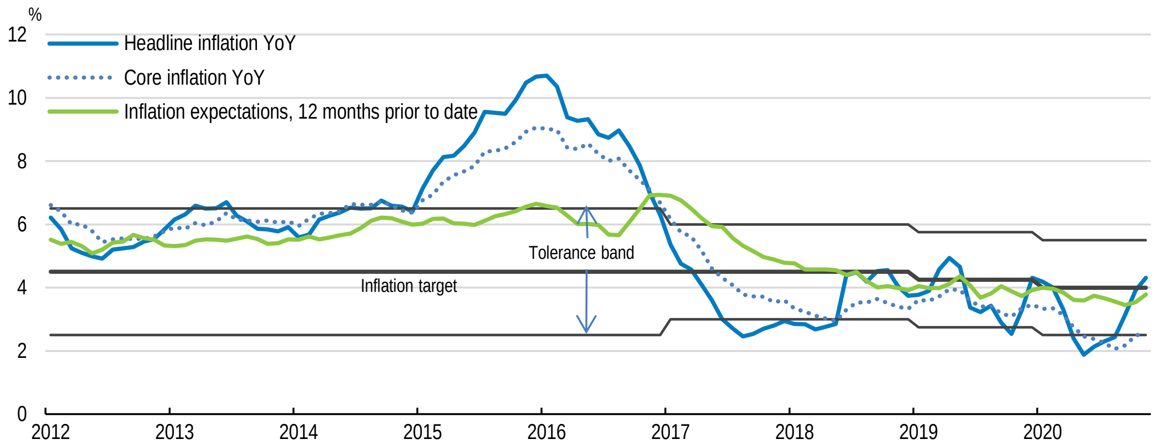
Table 1.3. Events that could lead to major changes in the outlook

Uncertainty	Possible outcome
Failure to implement structural reforms	Without structural reforms, the recovery would be much more protracted as current projections are predicated on improvements in productivity and investment. Without reforms to mandatory spending rules, fiscal outcomes will deteriorate further, which could affect investment flows, raise interest rates, and potentially trigger a fiscal crisis.
A flight to safer assets in global capital markets	If capital flows to emerging markets were to dry up or decline substantially, Brazil could find it more difficult to tap into external financing sources. This could trigger higher interest rates and lower growth.
A resurgence of COVID-19 cases, triggering more stringent social distancing measures	New lockdowns would depress economic activity and could significantly delay the recovery. A potentially costly fiscal response would have negative implications for fiscal accounts.
Slower growth in China and the United States due to trade tensions	Rising trade tensions could lead to a slowdown of demand from Brazil's main trading partners and lower commodity prices would reduce exports and growth. Commodity sectors account for 60% of Brazil's exports, but only for 5% of GDP.
A more protracted or deteriorating recession in Argentina	Argentina is the main export destination for Brazil's manufacturing exports which could decline further if Argentina's economy fails to recover.

Inflation is below target and interest rates have reached a long-time low

Inflation has been on a declining trend since 2016 and the recession has pushed it further down. While headline inflation has risen since September driven by food prices, this increase is likely to be temporary and inflation remains close to the current inflation target of 4%, which is set to decline to 3.75% in 2021 and 3.5% in 2022 (Figure 1.14). Core inflation has remained lower at 2.6%. Markets expect inflation to remain around 3.5% in 2021 and 2022 (BCB, 2020[15]).

Figure 1.14. Inflation has come down



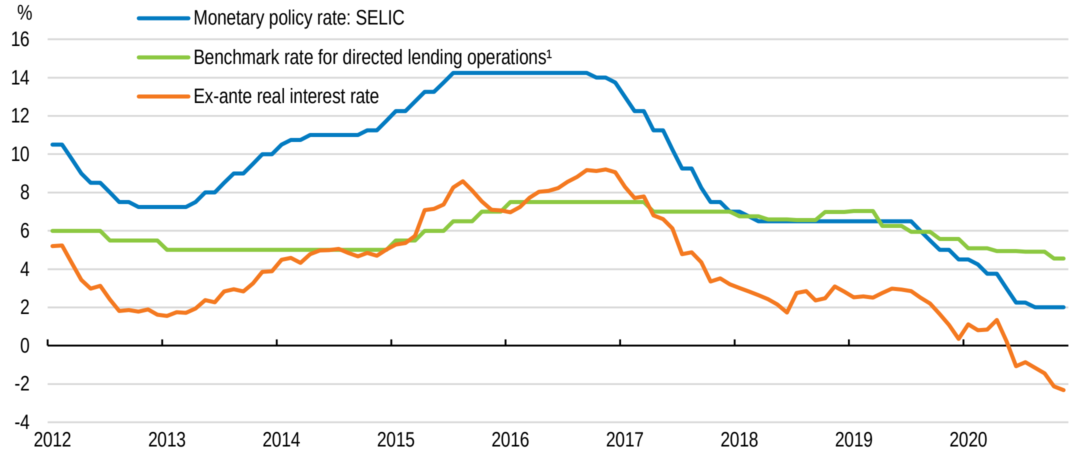
Note: Core inflation is the average of three available core inflation measures.
Source: CEIC, IBGE, BCB.

StatLink https://doi.org/10.1787/888934196499

Below-target inflation has opened up space for significant monetary easing. The benchmark policy rate Selic has fallen by 425 basis points since mid-2019, including 250 basis points of rate cuts since the outbreak of the pandemic. Real interest rates have fallen to almost zero, down from over 9% in late 2016 (Figure 1.15). With plenty of idle capacity and no inflationary pressures in sight, maintaining the current accommodating monetary policy stance well into 2021 appears appropriate to support the recovery, especially in light of the limited fiscal space that will require a gradual withdrawal of fiscal support. This assumes, however, that fiscal policy sticks to current plans. Significant fiscal slippage would likely affect inflation expectations and call for less monetary accommodation.

The contained inflationary pressures and expectations of the last years are partly related to significant economic slack, but they also reflect a prudent and predictable conduct of monetary policy. In 2012-13, the Central Bank cut rates despite inflation being above target, but had soon to retreat as inflation rose (Figure 1.16). The resulting loss of credibility gave rise to several years of high inflation despite an economy in recession. The current situation attests to a significant improvement in the credibility of the Central Bank since then, which is a substantial achievement. The recent easing round only started with inflation declining firmly and expectations very close to the target. The effectiveness of monetary policy has also been enhanced by subjecting directed credit to market rates as of 2017. Together with improving fiscal prospects, this has reduced the neutral rate, defined as the interest rate that allows the economy to grow without causing excessive inflation and it is helping to transform financial markets towards more competition, less directed credit and lower lending spreads (see chapter 2). In the past, large directed credit volumes were decoupled from the policy rate.

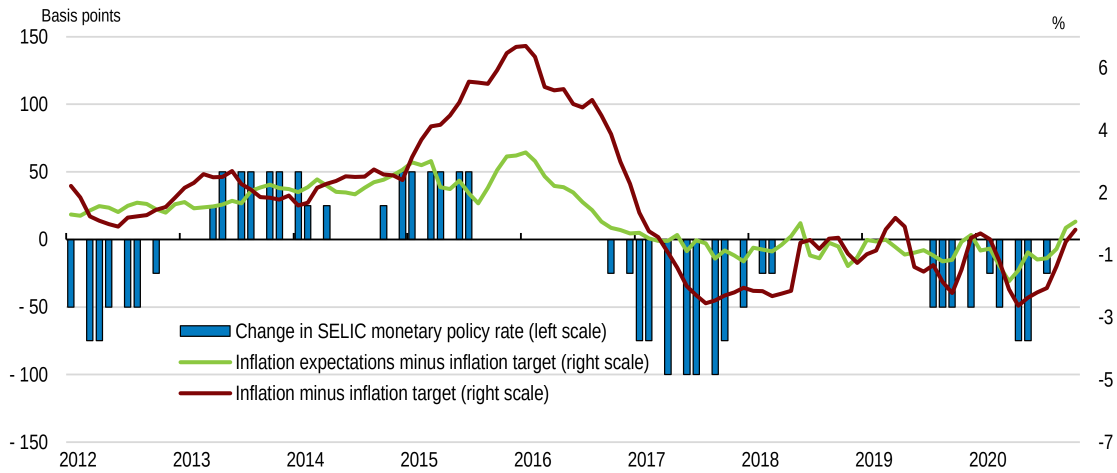
Figure 1.15. Monetary authorities have responded by cutting rates



1. TJLP until 12/2017, TLP as of 1/2018
Source: CEIC, BCB.

StatLink https://doi.org/10.1787/888934196518

Figure 1.16. Monetary policy decisions have closely followed inflation dynamics



Note: Inflation expectations are calculated as market expectations from the Central Bank's FOCUS survey, 12-months ahead.
Source: BCB.

StatLink https://doi.org/10.1787/888934196537

While the Central Bank has acted independently recently, the effectiveness of monetary policy could be improved by formalising this independence and shielding it from possible future political interference. Setting a fixed term for appointments of the central bank governor and members of the monetary policy committee, not coinciding with the presidential term and during which they cannot be dismissed, would be in line with current practice in most inflation-targeting countries (Hammond, 2012). A draft bill to strengthen the independence of the Central Bank has been approved by the Senate and is currently awaiting approval by the Chamber of Deputies. Furthermore, safeguarding the financial independence of the Central Bank, including through an adequate budget and adequate levels of capital, are key for maintaining strong credibility. Chile and Mexico have had formal Central Bank independence for over 20 years, which include long fixed-term appointments of board members. Costa Rica just strengthened the independence of the Central Bank, clarifying the governor's appointment and dismissal conditions, and removing scope for political interference.

The fiscal outlook has become much more challenging after COVID-19

Improving fiscal outcomes remains one of Brazil's principal challenges. COVID-19 is projected to drive up gross public debt by over 15 percentage points to 91.4% of GDP by the end of 2020, and by 20 percentage points to 96.6% of GDP by the end of 2022. This follows an earlier increase of over 25 percentage points of GDP between 2013 and 2019. Interest rates have come down due to improvements in Central Bank credibility and pre-pandemic improvements in fiscal prospects, but interest expenses of almost 5% of GDP are high in international comparison, and are similar to current spending on education.

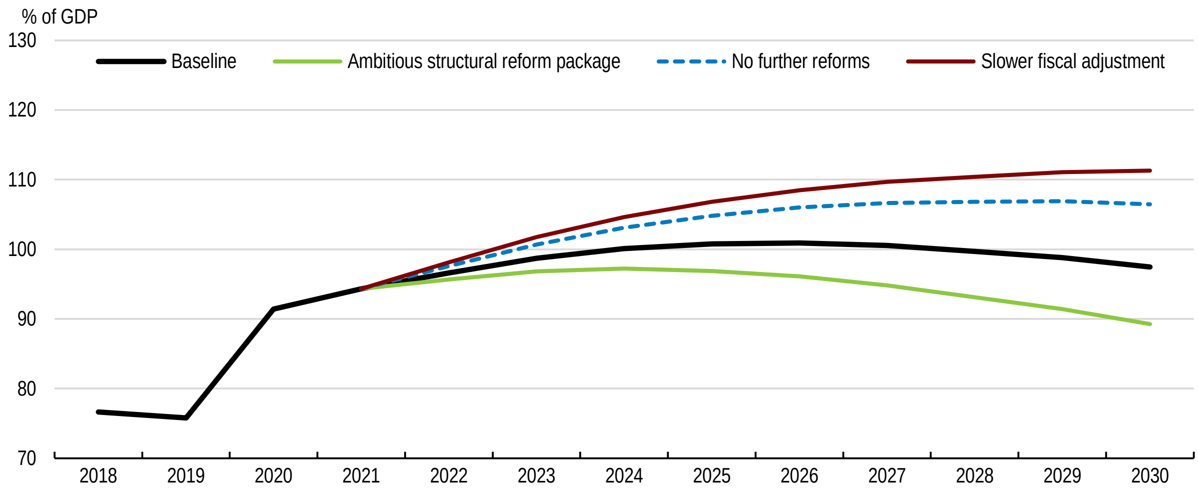
OECD debt simulations suggest that gross public debt will peak at 101% of GDP in 2026, in a likely baseline scenario where current fiscal plans are implemented as announced and where structural reform plans currently discussed by Congress will eventually be approved (Figure 1.17). The primary fiscal deficit will rise to 10.7% of GDP in 2020 on the account of appropriate emergency spending and lower tax revenues. Fiscal consolidation plans in train before the pandemic are assumed to continue after that as in the draft budget, leading up to a balanced primary result by 2025 and a primary surplus of 2% of GDP by 2030. In the baseline scenario, growth will benefit from some gradual progress in reducing distortions from taxes and domestic regulations and a steady if slow reduction of barriers to trade and investment. This would support potential growth of around 2% per year and will allow a gradual decline of public debt relative to GDP in the second half of the decade, returning to 97% of GDP by 2030.

As Brazil is only at the beginning of its population ageing process, the fiscal costs of population ageing, which are included in the baseline projections, will not have much weight over the next decade. Following the approval of the pension reform, pension spending is projected to be 0.2 percentage points of GDP lower in 2030 than today. Public health expenditures are likely to rise, but only by around 0.15% of GDP by 2027 (Tesouro Nacional, 2019[16]), although this does not account for any implications of the ongoing pandemic. Long-term care expenses are currently not covered by the public sector. Future fiscal challenges related to ageing call for reducing public debt before they materialise.

The debt trajectory is highly sensitive to the implementation of the reform agenda. A more ambitious package of structural reforms whose growth effects are quantified in Table 1.1, would boost potential growth by up to one percentage point and lead to an earlier and more profound decline in public debt relative to GDP, to below 90% by 2030 (the green line in Figure 1.17). At the same time, debt sustainability could be jeopardised if all currently discussed reform projects remained inconclusive, so that productivity would continue to remain stagnant and growth outcomes would decline. Debt would hardly decline in this case, and remain at 107% of GDP (dotted blue line). A combination of less ambition in fiscal adjustment plans and higher financing costs could result in less favourable fiscal outcomes. Assuming that a primary surplus is not achieved before 2030 and then reach only 0.5% of GDP, instead of the 2% assumed in the

baseline, would have severe consequences for the trajectory of public debt, which would then rise without bound and exceed 111% of GDP by the end of the decade (red line).

Figure 1.17. Gross public debt is set to stabilise, but subject to risks



Note: In the baseline scenario, the primary fiscal result improves from -10.7% in 2020 to +2.0% of GDP by 2030, in line with projections by the Treasury and the OECD. After 2021 compliance with the expenditure rule is assumed. The exchange rate and the interest rate are assumed to remain constant after 2022. GDP growth is assumed as in table 1.1 and constant at 2% after 2022. The ambitious reform scenario assumes structural reforms that boost raise growth by around 1 percentage point as of 2022 (see table 1). The no further reforms scenario assumes that none of the currently discussed structural reform plans will be implemented and growth will be 1 percentage point lower. The slower fiscal adjustment scenario assumes a 1.5 percentage point higher fiscal deficit as of 2022.
Source: OECD calculations based on National Treasury, IBGE, Brazilian Central Bank and OECD projections.

StatLink https://doi.org/10.1787/888934196556

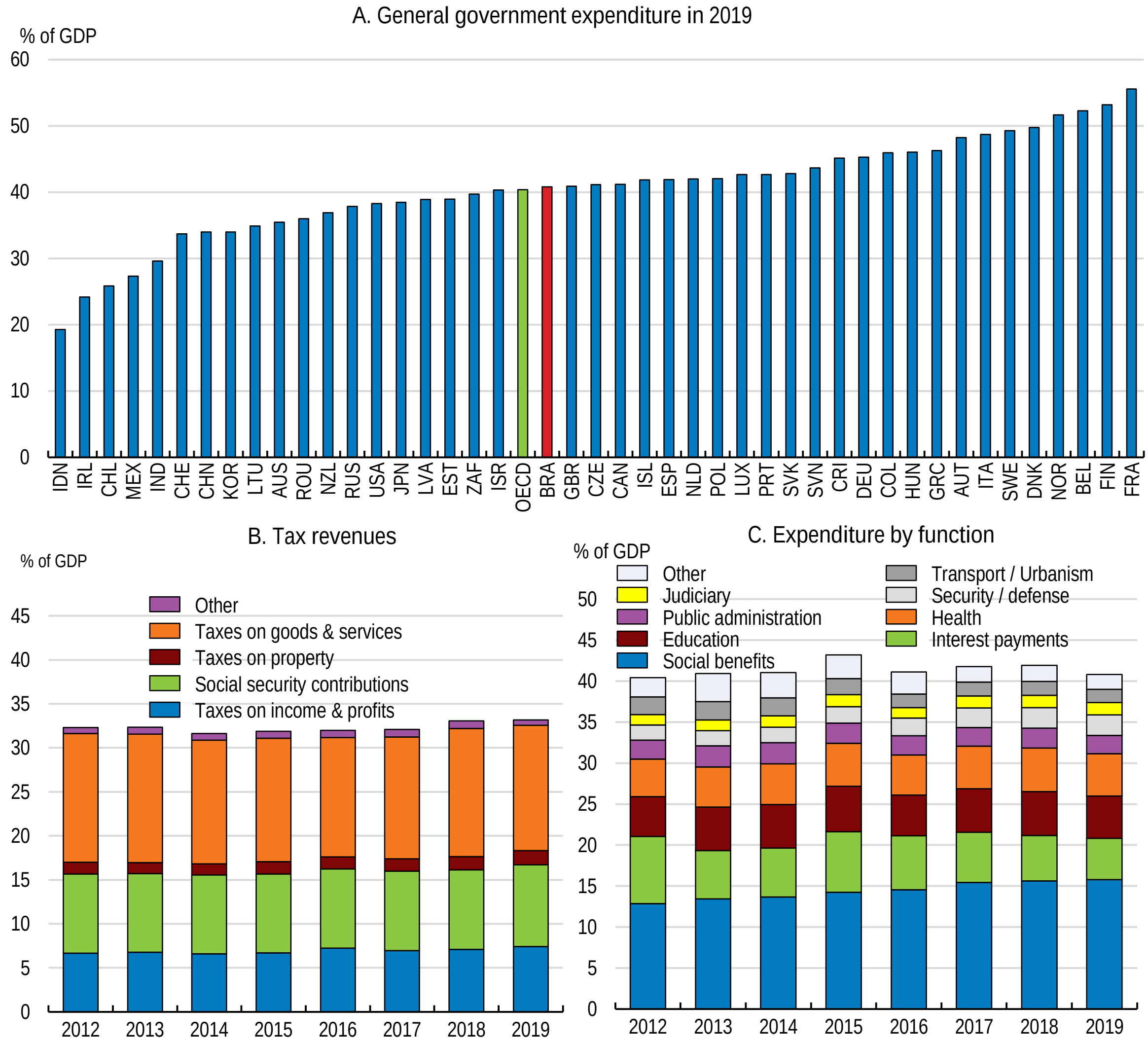
With over 95% of gross public debt denominated in domestic currency, exchange rate risks are not a concern for public debt, but as a flip-side of this coin, maturities are relatively short. Shorter maturities imply greater potential rollover risks. Currently, 22% of gross public debt comes due within 12 months, reflecting an average maturity of around 3.9 years. Maturities have become slightly shorter since 2015, when the average maturity of public bonds stood at 4.6 years. The COVID-19 pandemic is expected to decrease the average debt maturity (Tesouro Nacional, 2020[17]).

Additional risks to debt sustainability stem from weak public finances of some of Brazil's states for which the central government may have to step in. Many state finances suffer from high pension obligations and wage costs. Fiscal relations with the states have been plagued by moral hazard as the central government has repeatedly had to renegotiate debts with states, often rewarding low fiscal prudence due to the lack of effective enforcement mechanisms. A recent draft law submitted to congress aims limiting bailouts in exchange for higher transfers to states by 2026.

Fiscal adjustment will have to resume after the pandemic

With public spending of more than 42% of GDP before the pandemic, the size of Brazil's public sector is closer to the 40% OECD average than to the 28% average of Latin American peers (Figure 1.18). Taxes are characterised by a strong reliance on goods and services taxes, while social benefits, interest payments, education and health are the largest spending items. Social benefits are the spending category that has recorded the strongest increase in recent years.

Figure 1.18. Public sector tax revenues and expenditures

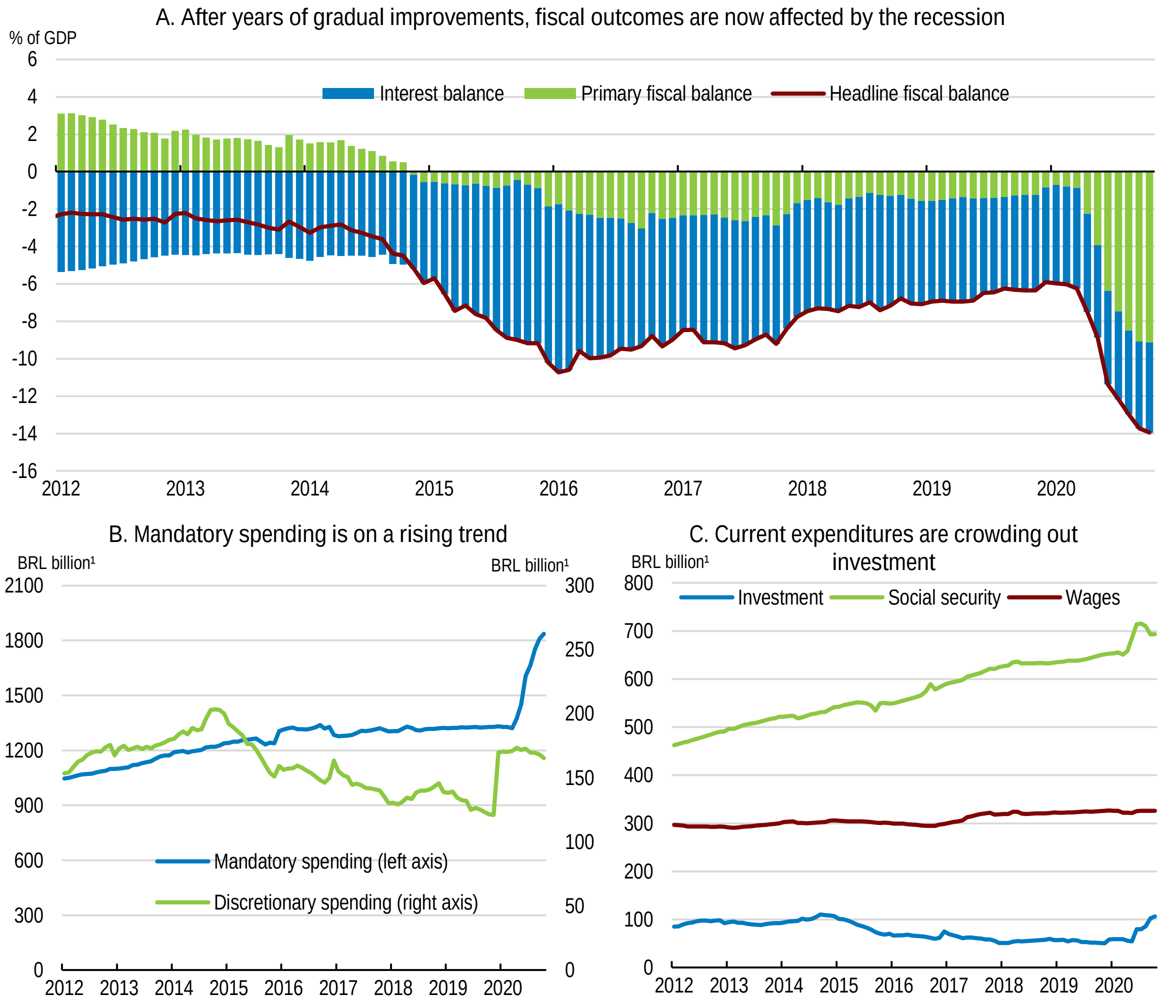


Source: OECD Economic outlook database, except for Chile: IMF WEO; OECD Revenue Statistics; OECD calculations based on Balanço do setor público nacional (National Treasury).

StatLink https://doi.org/10.1787/888934196575

Fiscal accounts deteriorated substantially after 2014, when the primary balance (excluding interest payments) turned negative after more than a decade of primary surpluses (Figure 1.19). This reflected mostly increases in expenditure, but also tax expenditures. Since then, the headline balance had shown improvements until the COVID-19 outbreak, mostly on the back of lower interest expenses and a retrenchment in public investment, which reduced the primary deficit to 0.9% of GDP in 2019.

Figure 1.19. The fiscal outlook has become more challenging



1. In constant BRL of Oct-2020.

Source: CEIC, BCB, National Treasury.

StatLink https://doi.org/10.1787/888934196594

Stabilising public debt and bringing it on a downward trajectory will imply the need to generate a primary surplus of around 2% of GDP by the end of the decade, as assumed in the debt simulations above. Starting from the primary deficit in 2019, this would require a total fiscal adjustment of 2.9% of GDP, compared to 2019. There is also a strong case for public policies to boost investment into people by expanding spending on some well-targeted social benefits to reduce inequality and poverty and invest more into education and training, with a view towards enhancing both productive and inclusive growth. Doing so would reduce inequalities of opportunities and smooth the transition towards a more productive economy that structural reforms can bring about. Part of this, the expansion of the federal education fund FUNDEB, has already been decided. Assuming additional spending of around 1% of GDP on these items, the total fiscal adjustment would need to be around 4% of GDP.

This adjustment could be achieved without raising tax rates or introducing new taxes (Table 1.4). Instead, there is ample scope for raising spending efficiency without jeopardising social and economic objectives (Izquierdo, Pessino and Vuletin, 2018[18]). This could include ending current expenditures that are no longer priority or have proven ineffective, such as subsidies, and by better managing public payroll expenses. Tax

expenditures could also be reduced substantially as many of them create distortions without generating much benefit (World Bank, 2018[19]). Finally, better spending efficiency also hinges on reducing the waste of public resources due to corruption and on avoiding spending on less effective projects for the sake of building political consensus.

Table 1.4. Fiscal impact of recommendations

Fiscal recommendation	Estimated impact on fiscal balance, % of GDP
Reduce public payroll expenses	+2%
Reduce subsidies and tax exemptions	+2% (or more)
Raise spending on *Bolsa Família* programme	-0.5%
Raise spending on professional training	-0.3%
Raise spending on basic education through a higher FUNDEB budget (already decided)	-0.3%
Resulting change in primary balance	+2.9%

Note: Numbers in this table are estimates and some are subject to uncertainty. Implementation would take several years.

Reducing budget rigidities is key

Over the years, spending patterns on current expenditures have been shaped by automatic rules like widespread revenue earmarking, mandatory spending floors or indexation mechanisms. By now, 93% of spending is mandated by law or the constitution. This has shifted much of spending away from where it is most needed and leaves few resources at the discretion of the centre of government to pursue priority policy objectives. Considerable efforts have been made to improve fiscal outcomes through cuts in discretionary spending not subject to congressional approval, particularly public investment, underpinning a tepid recovery of fiscal outcomes since 2018. But the scope for further reductions in discretionary spending has now been largely exhausted.

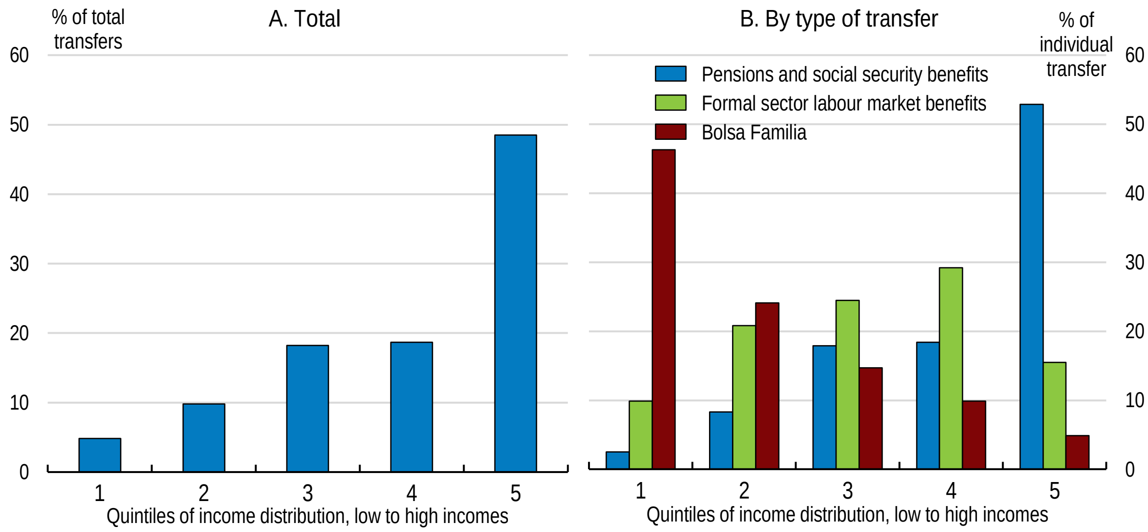
Changes in mandatory spending items and indexation rules have become inevitable to deliver the needed fiscal adjustment and to ensure compliance with fiscal rules in the short term. An expenditure ceiling adopted in 2016 is becoming the most binding of Brazil's various fiscal rules and limits the growth of almost all primary central government expenditures to inflation. Despite in-built enforcement mechanisms, it has so far not generated the expected political momentum for reform to ensure compliance with the rule in the short term. The rule is now at risk of being broken in 2021, which could affect confidence and result in higher financing costs.

Rigidities also affect state and municipality budgets, where specific fractions of revenues and transfers must be spent on education and health. These mechanisms fail to take into account different age profiles across municipalities. Recent proposals to move towards a joint definition of spending floors for health and education would be a step in the right direction, although revenue earmarking should be reconsidered altogether. Often enough, raising spending efficiency in these areas would be at least as important as preserving specific spending amounts. Estimates suggest potential spending efficiency gains of 1.5% of GDP in education and 2.5% in health, without detriment to outcomes (Flamini and Soto, 2019[20]).

Improving the effectiveness of social transfers

Social transfers are a prime example of how automatic rules have reduced spending efficiency and outcomes. Brazil spends over 15% of GDP on social transfers, of which around 13% of GDP on contributory and non-contributory old-age pensions with almost universal coverage of the elderly. This has strongly reduced old-age poverty, but almost half of total social benefits is paid to recipients in the highest income quintile, mostly in the form of pensions (Figure 1.20). Rising benefit levels have been driving pension spending for years, explaining much of the rise of public expenditures.

Figure 1.20. Distribution of monetary transfers by quintiles of the income distribution



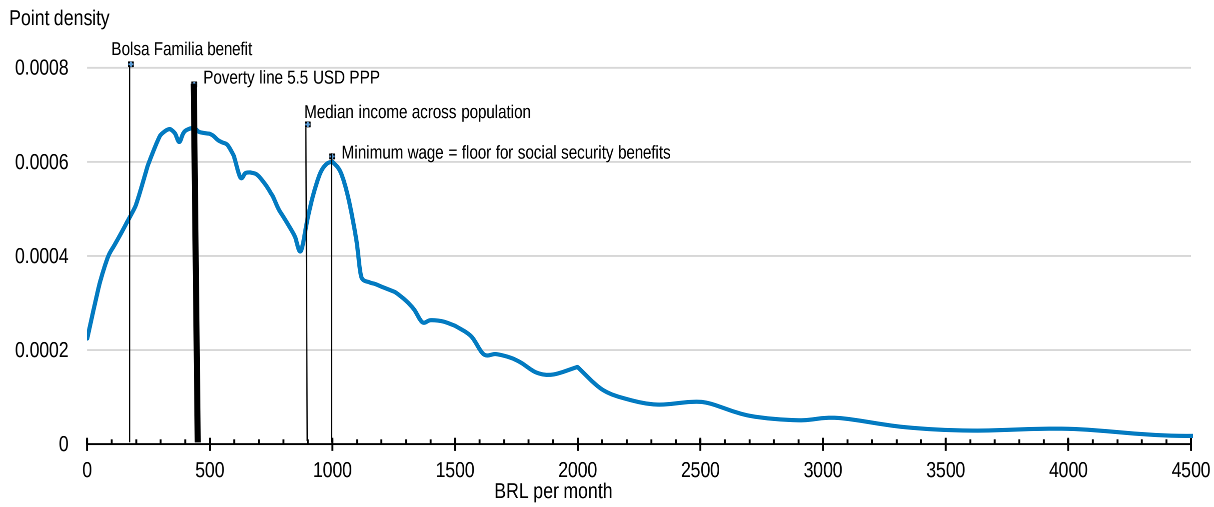
Source: SEAE (2017), based on 2015 PNAD data.

StatLink https://doi.org/10.1787/888934196613

A pension reform approved in 2019 will raise effective retirement ages and make pensions more progressive (Box 1.3). The pension reform was key for fiscal sustainability as pension spending would have otherwise doubled by 2060 (OECD, 2018[21]; OECD, 2017[22]). Over the next decade, pension spending would have been 10 percentage points of GDP higher without the reform. But while the reform contained pension expenses, these are not projected to fall below current levels before 2025 (IFI, 2019[23]). By 2030, pension spending will be around 0.2% of GDP lower than today and demographic change may require further adjustments in the future. A first step would be to align pension rules among state and municipal employees and military staff with current general provisions. This would also help contain the fiscal risk from subnational governments.

A key priority for the future would be to change the current indexation mechanisms for social security benefits. Pensions and other social security benefits, including non-contributory and survivor pensions, are an important achievement, but they have risen rapidly. The minimum wage constitutes a floor for any individual monthly social security benefit paid, and it has seen real increases of 74% over the last 15 years, while real per-capita-incomes have risen by 18%,. This has had strong effects on the fiscal result, and has ultimately proven unsustainable. More than 55% of Brazilians have incomes below the minimum wage, implying that all social security beneficiaries have incomes higher than the median population income (Figure 1.21).

Figure 1.21. Benefits tied to the minimum wage reach only those above median income



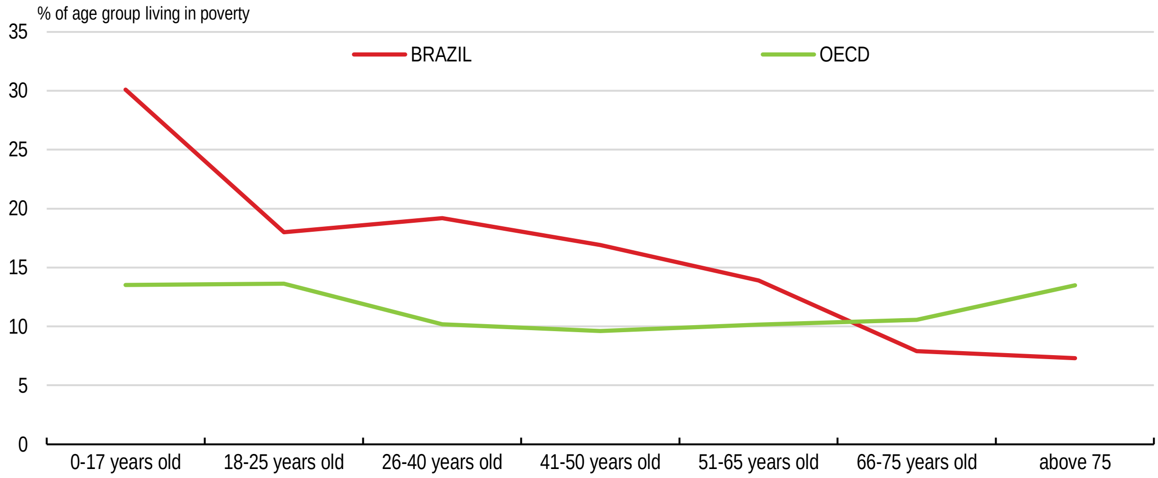
Note: The blue line represents the income distribution of Brazil (or point density function). Higher values mean that more people have incomes of the corresponding level on the horizontal axis. The median income marks the point where half of the population has lower and half has higher per-capita income. The 2019 minimum wage of 998 BRL corresponds to the 55th percentile of the income distribution.
Source: OECD calculations based on 2019 Pesquisa Nacional por Amostra de Domicílios, IBGE.

StatLink https://doi.org/10.1787/888934196632

By contrast, no automatic adjustment is applied to conditional cash transfers under the Bolsa Família programme, which targets households with monthly per capita incomes below BRL 178 per month and with children enrolled in regular school programmes. These transfers have a strong impact on poverty and inequality, but they have declined by 22% in real terms over the last 15 years. Raising benefits and eligibility thresholds has great potential for reducing poverty further, while ensuring that all those eligible are enrolled with reasonable delays. Brazil only spends 0.5% of GDP on *Bolsa Família*, which has reduced poverty by 15% (Ferreira de Souza et al., 2019[24]). More than 70% of money spent on conditional cash transfers spending ends up in the hands of the poorest 40% of the population, in contrast to other social transfers (SEAE, 2017[25]). *Bolsa Família* recipients are mostly families with children and youths, which is where poverty is concentrated (Figure 1.22).

The contrasting indexation mechanisms have implied that the increases in overall social spending that occurred in the past decade have mostly benefited households that are not poor. Simultaneously, these mechanisms have exacerbated the social spending bias to the detriment of children and youths. Preserving the real purchasing power of social security benefits by adjusting them in line with prices could free up resources to raise spending on *Bolsa Família*, the only transfer where incremental spending would really reach the 52 million of Brazilians with incomes below the World Bank's USD 5.50 per day definition. A package of reforms that would sever the link between minimum benefit levels and the federal minimum wage while shifting most of the savings to *Bolsa Família* could have accelerated the declines in the Gini coefficient, a common measure of income inequality, that Brazil experienced in the past. For example, in 2012 when the real value of the minimum wage rose by almost 8%, such a reform package would have allowed Brazil to double the decline in the Gini coefficient of that year (Arnold and Bueno, 2020).

Figure 1.22. Poverty rates are relatively high for young people



Source: OECD Income distribution database.

StatLink https://doi.org/10.1787/888934196651

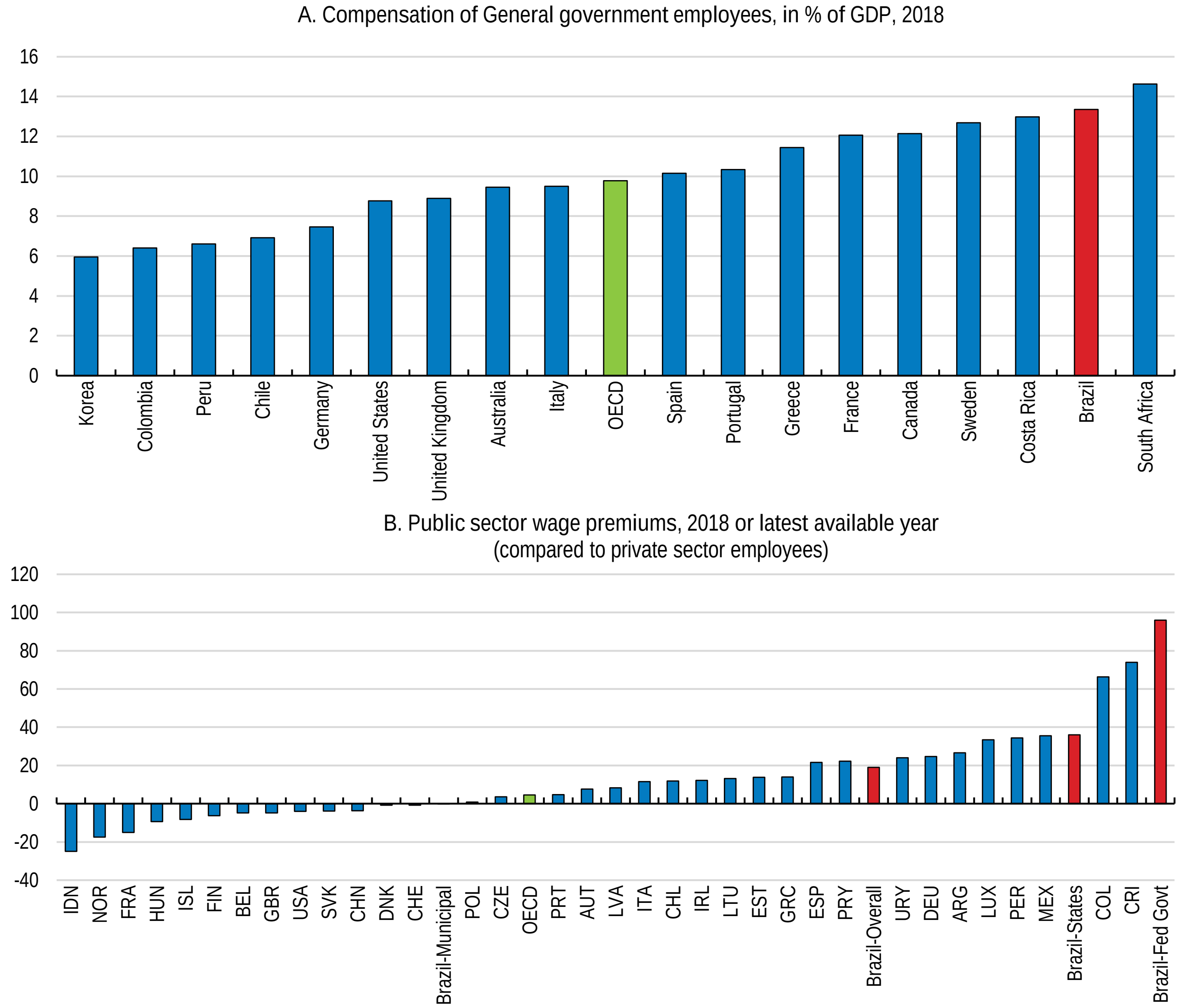
Managing high payroll expenses

Scope for savings also exists in staff costs, which at 13% of GDP are high in international comparison (Figure 1.23). While public employment is not higher than in many OECD countries, wage premiums of federal employees have been estimated at 96% to 60% of comparable private sector earnings and are particularly pronounced for high skill levels (Nemer Tenoury and Menezes-Filho, 2017[26]; World Bank, 2019[27]). In part, this reflects rapid growth of civil servant salaries in recent years. Estimates suggest that 0.5% of GDP could have been saved over the past six years if public salaries had not outgrown private sector pay (IFI, 2019[28]). Looking ahead, remuneration could be indexed to inflation for all three branches of the government, instead of today's discretionary rises. Municipal government employees, which include most teachers, enjoy no wage premium relative to private sector pay.

Upcoming retirements of 39% of civil servants within 10 years present an opportunity to reduce staff spending (World Bank, 2018[19]). This strengthens the case for lowering entry-level salaries, which are much above private sector pay. Freezing staff increases will also help as currently, the ratio of new hires to retirees is at 1.3 (World Bank, 2019[27]).

Unifying the multiplicity of different career paths and strengthening links between performance and pay would allow better adaptation to changing needs and policy priorities, as many civil servants enjoy rapid and automatic career promotions to the top salary scale. Finally, specific privileges could be reviewed, such as the 70 days of annual leave common in the judiciary branch and a generous system of allowances on top of high salaries. Savings from these options have been estimated between 0.4% and 3% of GDP (World Bank, 2019[27]). A reduction of 2% of GDP, which would bring payroll spending close to the average of Portugal and Canada, does not seem out of reach.

Figure 1.23. Public payroll expenses are high in international comparison



Source: Government Finance Statistics, IMF, World Bank Bureaucracy Lab, IBGE.

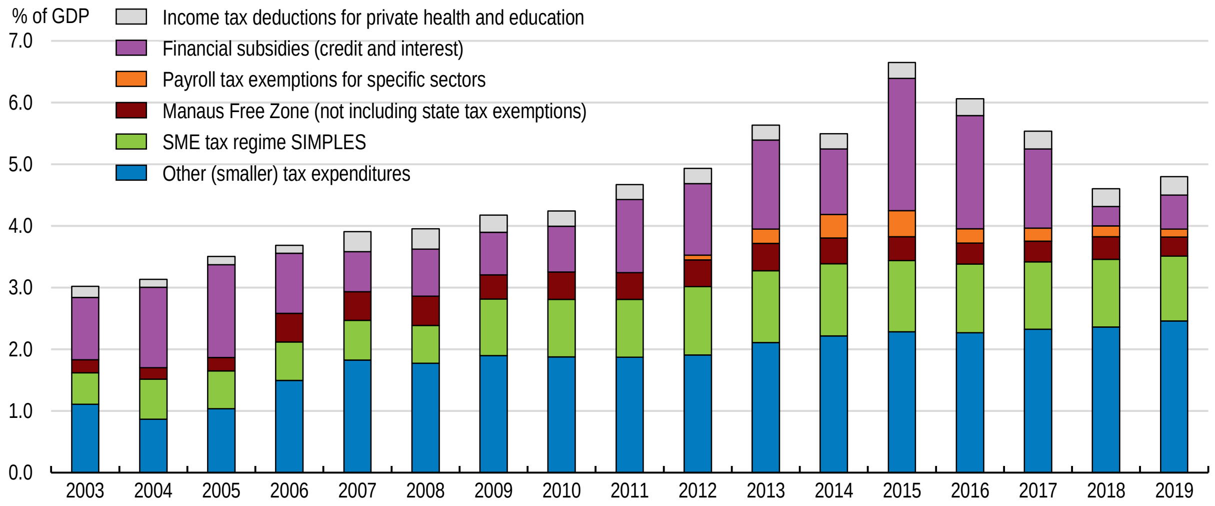
StatLink https://doi.org/10.1787/888934196670

Reducing inefficient subsidies and tax expenditures

Subsidies and tax expenditures have risen, especially since 2010 and now amount to 4.8% of GDP (Figure 1.24). Significant progress has been made in containing financial subsidies used for directed credit operations. These have now declined from 1.8% of GDP in 2015 to 0.6% in 2019 (SECAP, 2020[29]). Beyond this, other tax expenditures like the SME tax regime, the Manaus Free Zone or income tax exemptions for private health and education services could be reconsidered. Lost tax revenues have a particularly high incidence on the poorer north-eastern and northern states. On the whole, a reduction of subsidies and tax expenditures on the order of 2% of GDP appears feasible.

Figure 1.24. Subsidies and tax expenditures have risen

Spending or lost revenues due to subsidies and tax expenditures



Source: Ministry of the Economy, Relatório Orçamento de Subsídios da União. http://www.fazenda.gov.br/centrais-de-conteudos/publicacoes/orcamento-de-subsidios-da-uniao/

StatLink https://doi.org/10.1787/888934196689

Combining regional and industrial policy objectives, the Manaus Free Zone located in the state of Amazonas, far from major consumer markets, has benefited from numerous tax benefits since the 1960s, with a current joint fiscal cost exceeding 0.3% of GDP. Nonetheless, few evaluations and cost-benefit analyses have been undertaken. While employment and industrial activity have risen in the Free Zone, the corresponding fiscal costs are around eight times higher than the total wage bill (World Bank, 2018[19]). Recent empirical work has failed to find significant external effects on human development indicators in the region beyond the Free Zone itself, including on the well-being of women (Cavalcanti Teixeira, 2019[30]).

At a cost of 1.1% of GDP, the targeted tax regime for small and medium enterprises Simples Nacional combines a lighter tax burden with a simplified calculation of tax liabilities based on turnover. This discourages firms to grow beyond the threshold and discourages sourcing intermediate inputs from potentially more efficient external providers. For very small firms, the easier compliance may outweigh these considerations. However, with a high participation ceiling of approximately USD 1 million in turnover per year, the regime is currently used by 74% of Brazilian firms and could be much better targeted, including by reducing the participation threshold.

Filing as a corporate entity under Simples Nacional has also become a preferred choice for high-income professionals, as this can reduce the effective tax burden from almost 50% to as little as 11.5% for those with few deductible expenses (Appy, 2017[31]). One way to reduce these inequities in the short run would be to eliminate the exemption from personal income taxes for distributed profits of companies filing under simplified tax regimes. In the longer run, there may be no strong arguments for maintaining Simples Nacional in the context of a broader tax reform that would simplify the general tax system (see Chapter 2). In that context, Brazil may be sufficiently served with the smaller Microempreendedor Individual programme, with a ceiling of USD 16 000 in turnover. At significantly lower fiscal cost, this programme has contributed to lower informality among low-income entrepreneurs, especially women (OECD, 2012[32]).

The current income tax deductibility of expenditures for private health and education expenses has regressive distributional effects, as 90% of Brazilians have incomes below the threshold where they would

pay income taxes and only 25% of Brazilians are subscribed to private health plans, while most of the population relies on the public health system. Phasing out these deductions could save 0.3% of GDP.

An exemption of “basic goods” from key consumption taxes lacks targeting, as many exempt items are consumed by middle class and high-income families. Part of this 0.3% of GDP could still be spent in a more targeted way, through a targeted tax rebate available only to low-income families registered in the *Bolsa Família* programme.

Reforming taxes to boost productivity and enhance fairness

Brazil stands out for one of the highest tax compliance costs, as discussed in Chapter 2. This wastes resources and hurts the competitiveness of Brazilian companies. A fragmented indirect tax system in which 27 states plus the federal government apply their own tax codes lies at the core of these high compliance costs. Companies wishing to serve the domestic market have to comply with all of these codes. Tax credits for inputs are only granted if the input becomes physical part of the final product, giving rise to legal uncertainty and excessive litigation. A tax reform would have substantial potential for reducing costs and boosting productivity. One avenue would be to consolidate consumption taxes at different levels of government into one value-added tax with simple rules, a broad base, full refund for input VAT paid and zero-rating for exports. A revenue-neutral reform proposal, including temporary compensation schemes for states facing revenue shortfalls, would probably enhance the political viability of this urgent reform agenda, which has been discussed for decades. As a first step, a draft bill to unify two federal consumption taxes and enhance the deductibility of taxes paid on inputs has been submitted to Congress.

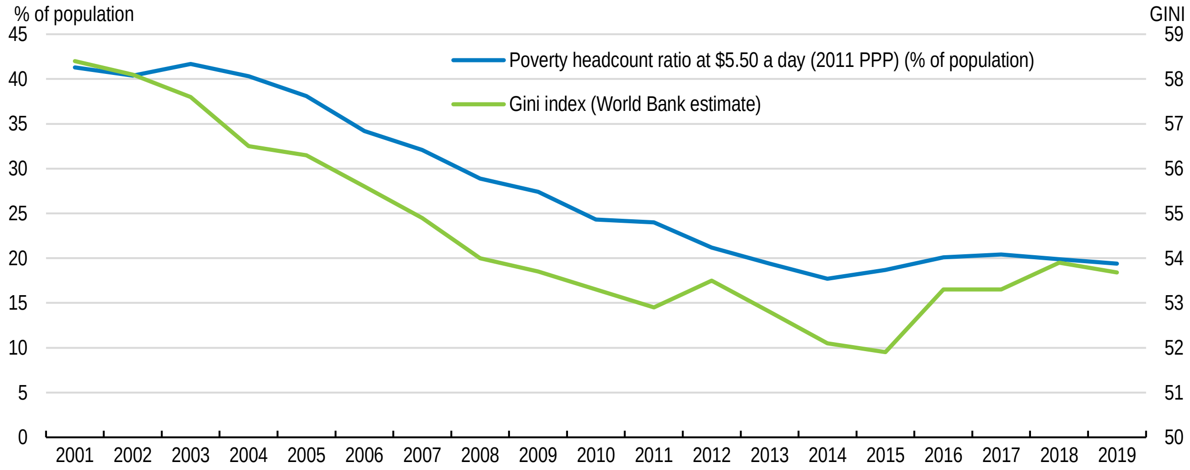
Table 1.5. Past OECD recommendations on macroeconomic policies

Recommendations	Actions taken since the 2018 Economic Survey
Implement the planned fiscal adjustment through permanent spending cuts. Gradually raise the retirement age. Index pensions to consumer prices rather than the minimum wage.	A pension reform will contain future pension spending. Raised to 65/62 for most men/women. No progress made. But minimum wage adjustments followed inflation in 2019.
Shift more resources towards transfers that reach the poor, including *Bolsa Família* .	A 13th benefit payment has been introduced, but monthly benefits or thresholds remained unchanged.
Consolidate consumption taxes at the state and federal levels into one value added tax with a broad base, full refunds for input VAT paid and zero-rating for exports.	No progress made, but tax reform proposals are now being discussed in Congress.
Limit dismissal of the Central Bank governor to severe misconduct to rule out political influence in monetary policy decisions in the future. Safeguard the budget autonomy of the Central Bank.	A draft law on Central Bank reform has been submitted to Congress, but has not been voted on.

Further social progress is possible at reasonable fiscal cost

During the first decade of the millennium, inequality and poverty declined, while improvements in access to education and in social transfers reinforced well-being. 33 million Brazilians have escaped poverty since 2003, which is a remarkable achievement. Brazil’s social progress resulted from a combination of economic growth, a buoyant labour market, better access to education and social transfers (see Chapter 2 of OECD Economic Survey 2013). In recent years, income inequalities and poverty have been rising again on account of the 2015/16 recession (Figure 1.25). Resuming the social progress of the past is clearly feasible, but will hinge on refinements and more effective spending in social protection, education and professional training. Besides these specific policy levers, raising productivity, for which structural reforms play a key role, holds the key to sustainable improvements in economic prospects through new and better jobs. The end of Brazil’s record-high interest rates will also tend to reduce income inequalities by reducing investment returns of the wealthy, with a potential to reduce high wealth inequality.

Figure 1.25. Income inequality and poverty have started to rise again after a long decline



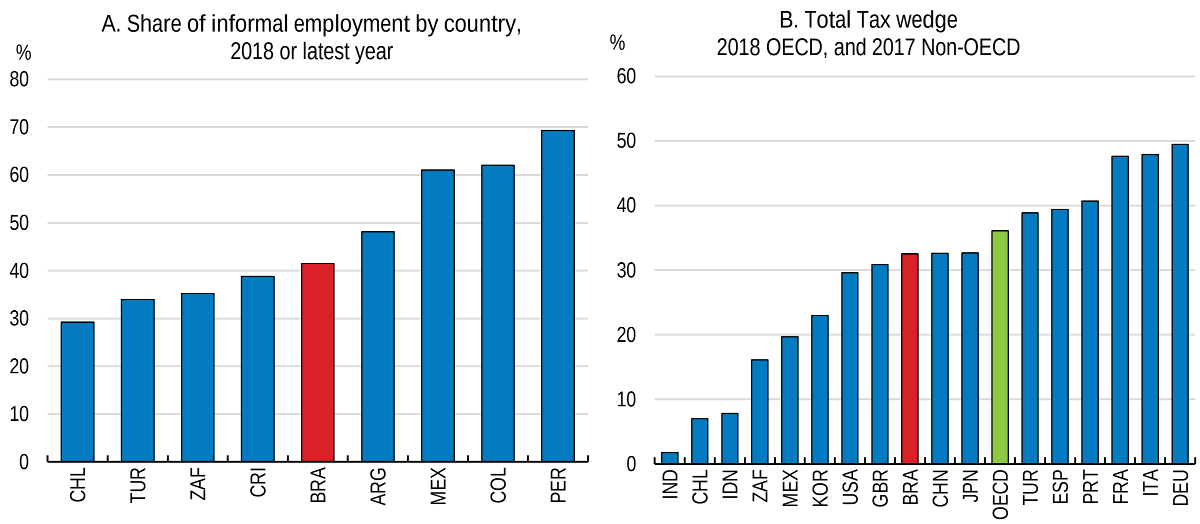
Note: The GINI coefficient for 2010 is an interpolation.
Source: World Bank, IBGE, OECD calculations.

StatLink https://doi.org/10.1787/888934196708

Strengthening the social safety net

Despite all its sophistication, cost and complexity, the social transfer system fails to provide an effective universal and accessible social safety net. Two parallel unemployment insurance schemes serve essentially the same purpose and cost around 1% of GDP, but their limitation to formal sector workers excludes those most in need of protection. Labour informality has recently risen to above 40% (Figure 1.26).

Figure 1.26. Labour informality is high and the labour tax wedge is almost at the OECD average

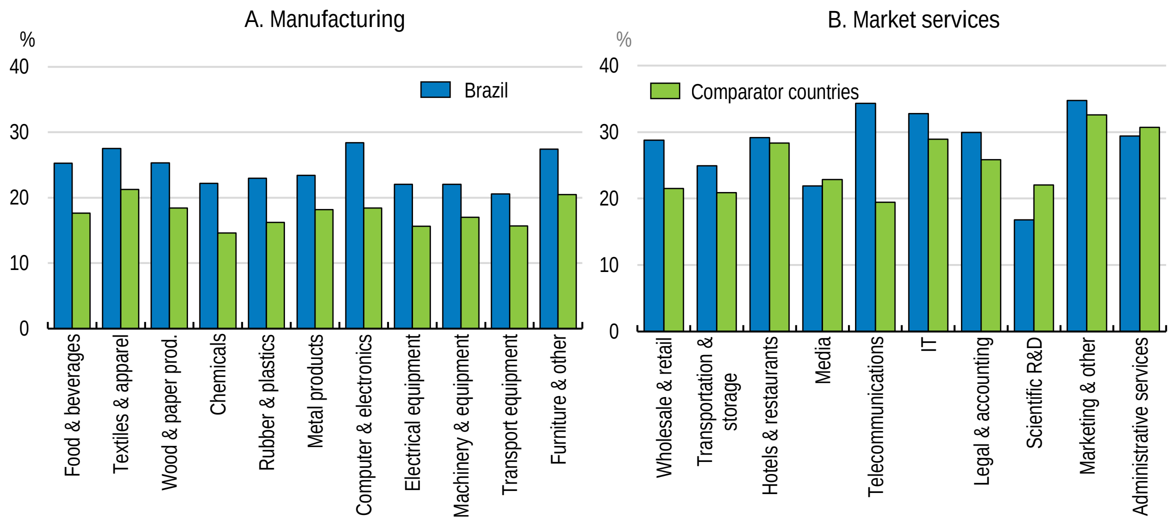


Source: Ilostat on informality, Brazil SIS IBGE, OECD calculations based on the ENOE for Mexico and the HLFS for Turkey; OECD Taxing Wages 2018.

StatLink https://doi.org/10.1787/888934196727

One scheme called *Seguro Desemprego* pays up to two minimum wages for a period of 3-5 months. A second scheme called FGTS *(Fundo de Garantia do Tempo de Serviço)* is based on individual unemployment accounts that are paid out upon dismissal, with top-ups from the employer and the federal government. While individual-account schemes work well in some OECD countries, years of remuneration below market rates have created a deep-rooted distrust in forced savings mechanisms in Brazil, and a culture of cashing out individual balances as soon as possible, for which workers often induce their own dismissal (OECD, 2014[33]). This drives up job turnover and curbs incentives for firms to provide on-the-job training (Figure 1.27). Recent changes to FGTS have allowed workers to opt into a new variant where they can withdraw a certain fraction every year instead of being able to access the whole balance upon dismissal. While this could reduce job turnover, it defies the underlying objective of providing protection against income losses in the case of dismissal. The two schemes could be merged to save resources and reduce contributions and could serve as an individual top-up mechanism for a household-based universal social safety net in which benefits are not conditioned on formal employment.

Figure 1.27. Job turnover rates are high across most sectors



Note: Job turnover is defined as the fraction of workers that change jobs over the course of a year. Comparator countries include Belgium, Costa Rica, Finland, France, Hungary, Italy, the Netherlands, Norway, Portugal, Spain, Sweden and Turkey.
Source: OECD calculations based on DynEmp data.

StatLink https://doi.org/10.1787/888934196746

The fundamental task of protecting people against unexpected income losses from dismissals could be transferred to a universal means-tested social safety net, accessible to all Brazilians including informal workers. The successful *Bolsa Família* programme is well-placed to fulfil this role with a few refinements and an increase in benefit levels, which would also be an effective tool to reduce poverty. Means-tested social safety nets aim at providing basic support regardless of employment history or work patterns (OECD, 2019[34]). Financed by general revenues, they allow reducing non-wage labour costs of formal jobs, which would foster formalisation (Levy, 2008[35]; World Bank, 2019[36]). They would also help to align non-wage labour costs across employment forms, including different contractual arrangements such as gig-workers (OECD, 2019[34]). Possible disadvantages of such schemes include the possibility of non-take-up (Bargain, Immervoll and Viitamäki, 2012[37]), although low take-up of social benefits has so far not been a major issue in Brazil. For those with incomes well-above the poverty line, the relatively low benefits will be an incomplete insurance against the risk of job loss (OECD, 2019[34]), but complementing them with a merged and leaner contribution-based unemployment benefit scheme could address this issue.

A key challenge for this transition will be to make *Bolsa Família* more responsive to changes in beneficiaries' personal situation by speeding up processing of benefit claims. Currently, these can take months or more, but dismissed workers need immediate income support. Workers would also find it easier to seize employment opportunities if they know that the benefit will resume rapidly should they become unemployed again. A gradual rather than sudden phase-out of *Bolsa Família* benefits for those who find a formal job would further strengthen job search incentives.

Making the programme more agile and effective would imply more frequent visits to beneficiary households by local social workers. Disbursements of *Bolsa Família* benefits could also be integrated with other social benefits in one single account to improve monitoring and avoid overlaps (Soares, Bartholo and Guerreiro Osorio, 2019[38]).

In light of the incipient structural transformation of the economy and the resulting movements of jobs across industries and firms, social protection will become of rising importance. In this context, *Bolsa Família* is a key asset on which Brazil should build to protect the poor more effectively and foster the political viability of reforms. There is also scope for combining income support with better activation policies through better training and job search assistance (see Chapter 3).

Brazil's high inequality means that for the country as a whole, the cost of making a significant impact on the material wellbeing of the poor would be relatively manageable. Lifting all current poor, defined as those below the World Bank's USD 5.50 per day poverty line, above that line could cost as little as 0.15% of GDP per year (IBGE, 2019[39]). Eradicating poverty would have significant payoffs. The attached conditionalities of *Bolsa Família* regarding school attendance and medical check-ups also help to reduce inequalities with respect to education and health, which further strengthens future economic opportunities for those living in poverty.

Improving labour market policies

Tackling labour informality remains a key challenge. Labour tax wedges for formal sector workers are high in international comparison and consist principally of social security contributions with no in-built progressivity and an 8% employer contribution to the FGTS (OECD, 2019[40]). Reducing tax wedges for low-skilled workers at risk of informal employment would strengthen formalisation incentives. A recent reduction of social contributions for young people in their first job can help them access formal jobs, but its impact should be carefully monitored and evaluated. If the measure turns out successful, expanding this lower rate to all low-income earners regardless of age would strengthen incentives for formal job creation and add more progressivity into the financing of social security. This could be financed through savings from reforming overlapping unemployment insurance schemes.

Although it is too early for empirical evidence, a 2017 labour market reform may have supported formal job creation as restrictive regulations on formal labour markets have been identified as one factor behind informality (Carvalho Filho and Estevão, 2012[41]). The reform has also reduced legal uncertainty for employers by reducing labour litigation. Further improvements in the ease of registering a business may also improve incentives for firms and their workers to become formal (see Chapter 2). Finally, enforcement efforts also play an important role, but require adequate funding. Recent plans to reduce the labour inspection budget should be reconsidered (Congresso Nacional, 2019[42]).

A highly effective way to raise labour market inclusion would be to foster female labour force participation, which is 20 percentage points lower than for men (ILO, 2020[43]). Women in Brazil perform 71% of unpaid domestic and caretaking activities during the week (ILO, 2020[43]). Their professional development may greatly benefit from expanding access to early childhood education. Access to pre-school has improved as available places doubled in recent years, but most of these improvements have been in high-income neighbourhoods. Prioritising low-income women and single mothers would allow more women to

participate in the labour market. Only 15% of poor families with children below three years have access to child-care, compared to 40% of the more affluent families (World Bank, 2016[44]).

Raising the quality of education

Improving access to quality education for all probably is the most effective and sustainable way to foster social and economic inclusion. While access to education has improved in recent decades, the quality of education is highly unequal across schools and regions. Brazil is one of the countries with the highest correlations between socio-economic status and learning outcomes, which is particularly worrisome as this perpetuates existing inequalities (OECD, 2019[45]). Two thirds of children of parents without basic education do not finish basic education themselves. Improvements in the quality of public basic education, including pre-primary, primary and secondary levels, should be a priority for reducing these inequalities of opportunities.

Overall education spending of 6.2% of GDP is above the OECD average (Figure 1.28). Still, Latin American countries such as Colombia, Mexico and Uruguay spend a lower fraction of GDP and perform better in the OECD PISA tests (OECD, 2019[45]). This suggests that spending better is the key priority, both across different areas of education and within. International evidence suggests that public spending in the early years of a child’s life often has higher returns in terms of productivity and equity, particularly pre-primary and primary education (Heckman and Masterov, 2007[46]; UNICEF, 2019[47]). Brazil’s relatively high spending on free public tertiary education, by contrast, tends to benefit students from high-income families as graduates of private secondary schools tend to score better on admission exams.

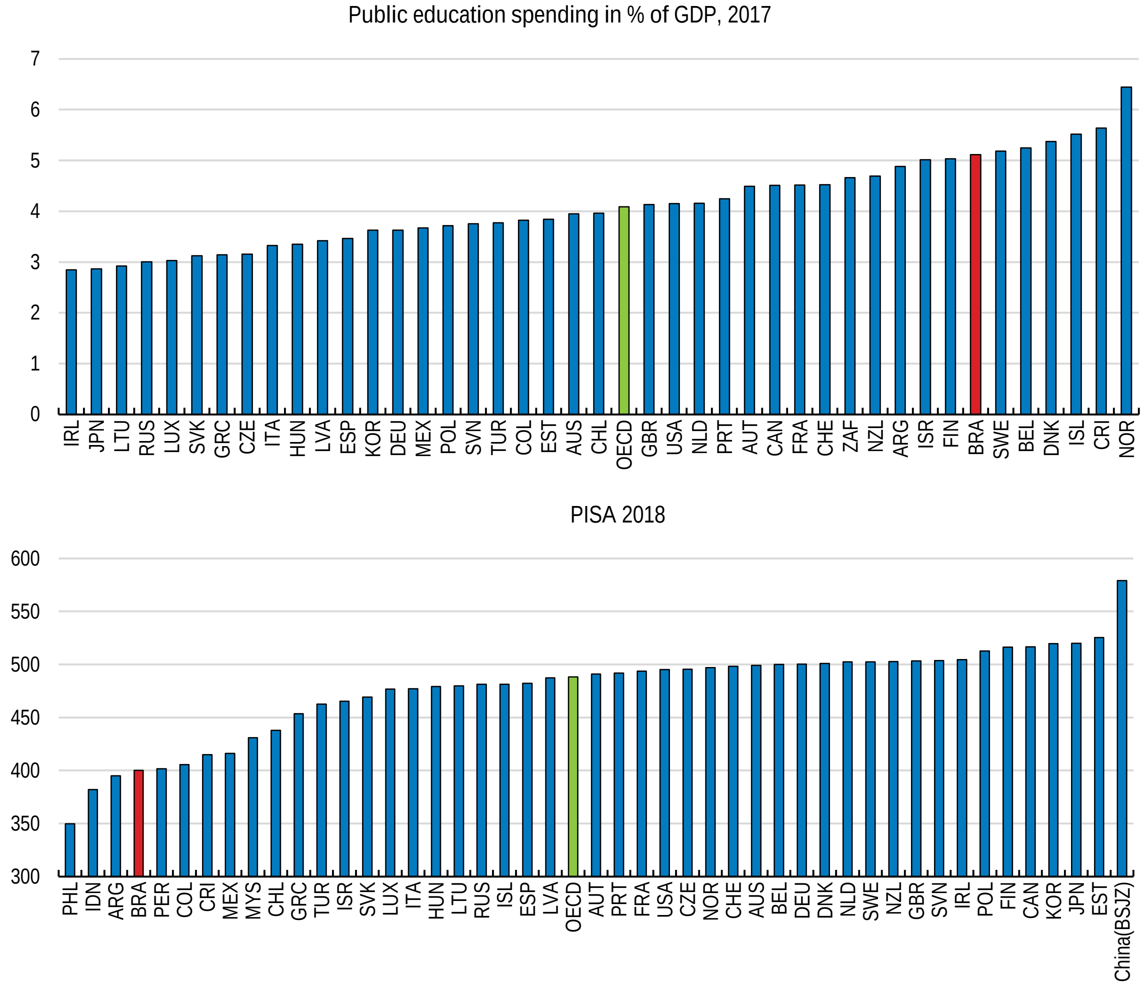
Municipalities bear the main responsibility for delivering basic education but have widely differing capacities, tax revenues and student numbers. A national system of funds called FUNDEB was established in 2007 to reduce inequalities in education funding across municipalities and states. States contribute fixed fractions of revenues from most education-earmarked state taxes to their own state-specific funds. The federal government has then topped off those state funds with low per-student funding until its total contribution of 10% of state funds (around 0.2% of GDP) was exhausted. The funds are then distributed to municipal school networks according to student enrolment. This relatively small top-up has aligned municipalities’ incentives with expanding enrolment and access to education. Access to education has improved substantially since. FUNDEB currently reduces 76% of spending inequalities across municipal school networks, but not all. Comparing the extremes, per-student spending differences across states would be 10000% without FUNDEB and are currently reduced to 564%, which is still substantial.

In August 2020, Congress approved a constitutional amendment to increase this federal top-up from 10% to 23% of state funds and make FUNDEB permanent. Moreover, a part of the federal top-ups has been linked to learning outcomes in Brazil’s universal standardised tests, which is likely to create incentives for spending better, potentially replicating the success achieved in terms of access. Currently, 80% of the inequalities of opportunities facing students result from differences in spending efficiency and governance and comparisons across states reveal no systematic relationship between per student spending and learning outcomes (Todos Pela Educação, 2019[48]). For example, education spending efficiency in the state of Ceará is exceptionally high due to its unique tying of 25% of school funding to improvements in student learning outcomes, which creates incentives for mayors to spend effectively (Boekle-Giuffrida, 2019[49]). Just how important the right governance incentives are is highlighted by the fact that 70% of Brazilian municipalities use only political appointments as the criterion for selecting school principals.

A more systematic effort is needed to distil lessons from local and (INEP, 2018[50]) international experience for school performance (OECD, 2017[51]). Under Chile’s “*Se puede*” programme, for example, government officials visit high-performance schools, seeking to apply lessons learnt on a broader scale. Looking ahead, the federal government could also include technical assistance for improving spending efficiency in its support to municipalities, or reward inclusion of students from vulnerable families, such as those who receive *Bolsa Família* benefits. This would recognise that these students may require more efforts and

would improve incentives for schools to reduce drop-out rates, which are particularly high among disfavoured students. Finally, Brazil should consider raising teacher remuneration as initial salaries are only 60% of those paid in Chile, for example. This could take the form of temporary bonuses to qualified teachers who accept to teach in difficult schools.

Figure 1.28. Spending on education is relatively high, but outcomes are poor



Source: OECD Education at a glance 2020; OECD PISA 2018.

StatLink https://doi.org/10.1787/888934196765

Many students in Brazil repeat grades and finally drop out of secondary education. Grade repetition has high costs and its benefits are highly disputed (Ikeda and García, 2014[52]). Focusing on early and targeted support to those students with a higher risk of leaving the education system would be more efficient and produce better outcomes, as drop-outs often lack basic cognitive and social skills that are acquired during early childhood (OECD, 2016[53]). As drop-out rates are 8 times higher in the lowest income quintile than in the highest, this suggests a stronger focus on expanding access to early childhood education for children from low-income families. Brazil has reached near universal enrolment of 5 and 6 years old but lags behind in the participation of younger children (OECD, 2019[54]).

Providing more professional training content to those without academic ambitions may also be a way to reduce drop-out rates in secondary education and improve job market opportunities. But training needs also include those that have already left school, especially in the context of upcoming structural changes

in Brazil's economy, which calls for improving vocational and professional training. These issues are discussed in chapter 3 of this survey.

Table 1.6. Past OECD recommendations on social and labour market policies and education

Recommendations	Actions taken since the 2018 Economic Survey
Bolster training and job search assistance programmes for workers affected by job reallocations across firms and sectors.	The budget of the former professional training programme PRONATEC is being reduced, while new training programmes are being designed, with an aim at better responding to labour market need. See Chapter 3.

Fighting corruption and economic crimes

Raising the efficiency of public spending will not be possible without further improvements in the fight against corruption and economic crimes. Corrupt practices and kick-backs such as those revealed in recent years waste public resources, increase the perception of political and litigation risk, deteriorate the investment climate of a country and exacerbate income inequalities by allowing relatively prosperous public officials and business people to divert taxpayer resources. Renewed allegations against powerful politicians, albeit not comparable to corruption revelations of the past, may have deceived those who hoped for imminent improvements in this area.

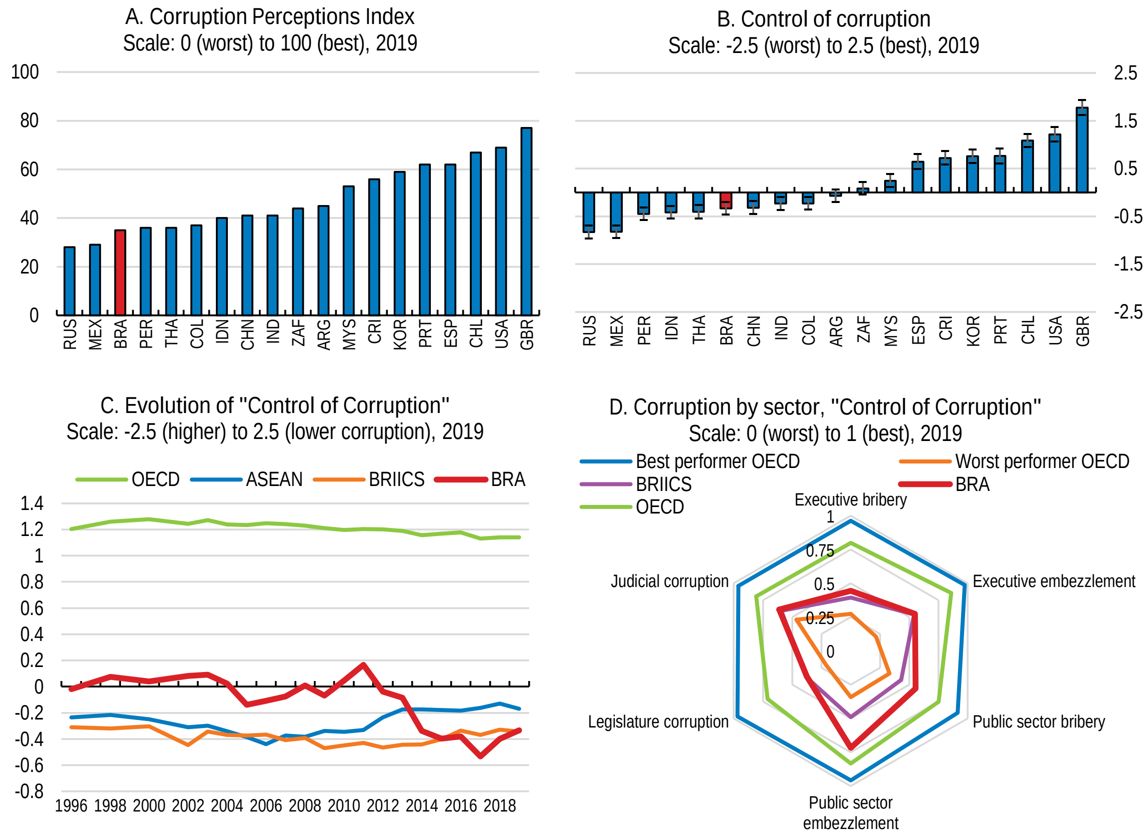
Comparative indicators of corruption perceptions point to significant challenges in economic governance (Figure 1.29). Beyond perceptions, systematic evidence with respect to high-level corruption is scarce. While not without controversy in some cases, Brazil has uncovered one of the largest corruption schemes under the umbrella of the operation "*Lava Jato*" ("Car wash"), involving billions of dollars and politicians and companies from several countries. Economic crimes have surfaced in the context of public procurement, including by state-owned companies, credit subsidies or tax expenditures to the benefit of specific companies and sectors. Infrastructure concessions are also vulnerable to collusion among bidders and corruption. Estimates suggest that corporate campaign donations by companies, banned since 2016, have significantly increased the probability of being awarded public contracts in the past (Boas, Hidalgo and Richardson, 2015[55]).

Enforcing laws is a necessary element to prevent impunity and ensure the credibility and legitimacy of institutions. Progress in Brazil's legal and institutional enforcement framework has been instrumental for recent success. This includes key anti-corruption laws and tools, such as leniency agreements and cooperation agreements (OECD, 2019[56]), in combination with the strengthening of enforcement bodies such as the federal police, the financial intelligence unit, the public prosecutor, the competition watchdog and tax authorities. Strengthening the autonomy of these bodies and insulating them against political interference will be key for building on past progress. Recently, the de-facto autonomy of all of these bodies has been called into question by alleged political interferences in the selection process for key vacancies. Avoiding political interference in the future through clearer rules-based selection processes and formalising the operational and budget autonomy of these bodies will be crucial to avoid setbacks in the fight against corruption. A recent decision to move the Financial Intelligence Unit under the helm of the Central Bank further strengthens the case for formal Central Bank independence.

A well-functioning justice system is fundamental for business activity and productivity. Institutions that ensure property rights and their enforcement are the basis for market-transactions and one of the main determinants of economic development (Acemoglu, Johnson and Robinson, 2005[57]). In Brazil, the effectiveness of the judiciary in its crucial role to enforce the law and support the business climate is hampered by an extensive array of appeal possibilities that creates court congestion. In particular, a broad mandate of the Supreme Court implies that a high share of cases arrives at the Supreme Court. Defendants in all areas of law use these extensive appeal possibilities to postpone sentence execution. In penal cases,

this practice has allowed Brazil's wealthy criminal convicts with access to sophisticated legal support to exploit court congestion and procedural mistakes to escape imprisonment for decades. This contributed to a widespread culture of impunity among powerful elites, which was fundamentally challenged in 2016 when the Supreme Court ruled that sentences could be executed once a trial went into the second instance of appeal. Most defendants of the *Lava Jato* operation have not yet fully exhausted their appeal possibilities but have been imprisoned after losing a first appeal, bringing the delay between sentence and its execution more in line with international practice. A recent Supreme Court ruling has challenged the constitutionality of this practice, thus requiring a constitutional amendment to uphold the possibility of sentence execution as of the second instance of appeal. Passing this amendment would be one possibly quick way to avoid set-backs in the prosecution of corruption and other criminal cases, and enhance judicial efficiency more broadly. Alternatively, reviewing appeal procedures, including narrowing the mandate of the Supreme Court, would be another potential avenue, although it may take longer to implement.

Figure 1.29. Corruption indicators in international comparison



Note: Panel B shows the point estimate and the margin of error. Panel D shows sector-based subcomponents of the "Control of Corruption" indicator by the Varieties of Democracy Project.

Source: Panel A: Transparency International; Panels B & C: World Bank, Worldwide Governance Indicators; Panel D: Varieties of Democracy Institute; University of Gothenburg; and University of Notre Dame.

StatLink https://doi.org/10.1787/888934196784

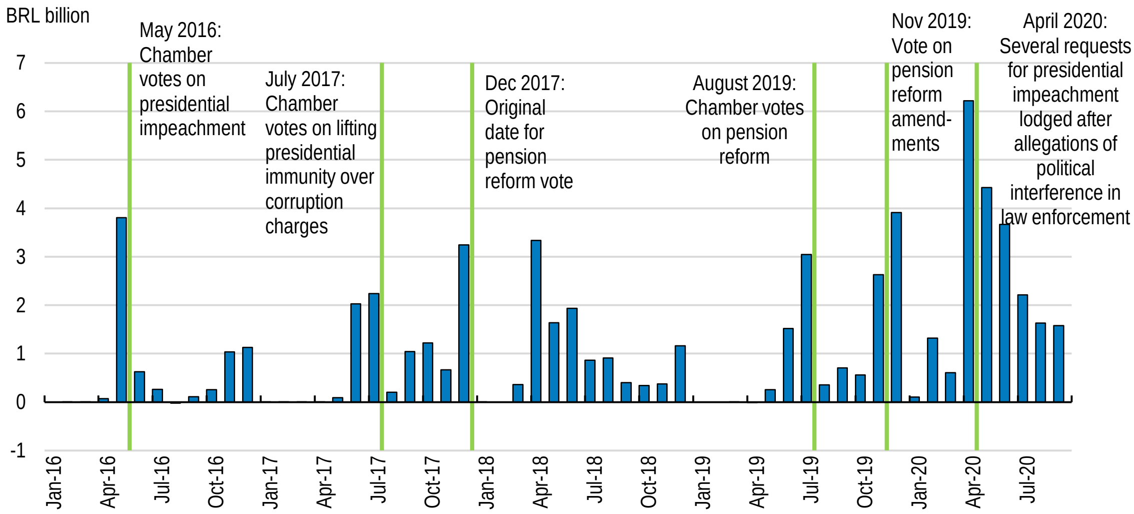
Full disclosure of information on the ultimate beneficiary behind private companies to relevant authorities and private sector bodies is important to prevent asset hiding. Tax authorities and financial institutions have collected such information since 2003, but measures to facilitate data sharing, including a single public registry, would support anti-money-laundering efforts (Berkhout, 2019[58]). Confiscating ill-obtained assets would also be made easier by criminalising illicit enrichment, which is currently only an offence but not a crime (Berkhout, 2019[58]).

Protecting whistle-blowers and officials involved in anti-corruption investigations against the criminalisation of and retaliation for their activities is crucial. First, despite some recent progress in 2018 and 2019 that strengthened transmission channels and protections for whistle-blowers, whistle-blowing procedures often continue to be hampered by concurrent competences and parallel systems for similar offences, which make it difficult to protect whistle-blowers effectively. Most OECD countries have dedicated whistle blower protection laws, like the one implemented by Australia in 2019, while Brazil does not (OECD, 2016[59]). Whistleblowing procedures have recently been strengthened but coordination among different agencies could be further improved. Second, a new law on the abuse of authority is unnecessarily vague (OECD, 2019[56]), leaving room for retaliation from powerful suspects by allowing prosecution of officials if they prosecuted a case "without just cause". More precise rules are needed to protect public officials working on potentially highly political anti-corruption cases and avoid setbacks due to intimidation of officials.

Public procurement is usually one of the government activity most at risk to waste, mismanagement, collusion and corruption (OECD, 2016[60]). Efforts to combat corruption should include a thorough assessment of how public procurement laws could be improved further, in particular how their many complexities and exemptions affect integrity and competition in the tendering process. Brazil is currently conducting such a review with the support of the OECD. Rules pertaining to conflicts of interests, incompatibilities and impartiality in public procurement could be streamlined and strengthened. Building on recent progress with unified electronic procurement platforms can also enhance transparency and reduce the scope for economic crimes.

Constructing political consensus often builds on the widespread practice of budget amendments for parliamentarians, which these can use for projects in their constituency. The 2018 OECD Economic Survey called for reducing them and enhancing their transparency. Audits of the expenditures are still not systematic and empirical evidence suggests links between these amendments and corruption (Sodré and Alves, 2010[61]). These budgets are essentially used for coalition building (World Bank, 2018[62]). For example, in the run-up to the parliamentary vote on the presidential impeachment in May 2016, on lifting the president's immunity in July 2017 or on the pension reform in 2019, these budgets rose visibly (Figure 1.30). This practice creates room for effectively audit-free spending, enhances the dependency of local authorities on members of congress, strengthens political patronage and reduces spending efficiency.

Figure 1.30. Budget amendments for parliamentarians have peaked around key voting dates



Source: Brazilian Senate, available at http://www9.senado.gov.br/painelemendas

StatLink https://doi.org/10.1787/888934196803

Table 1.7. Past OECD recommendations on fighting corruption

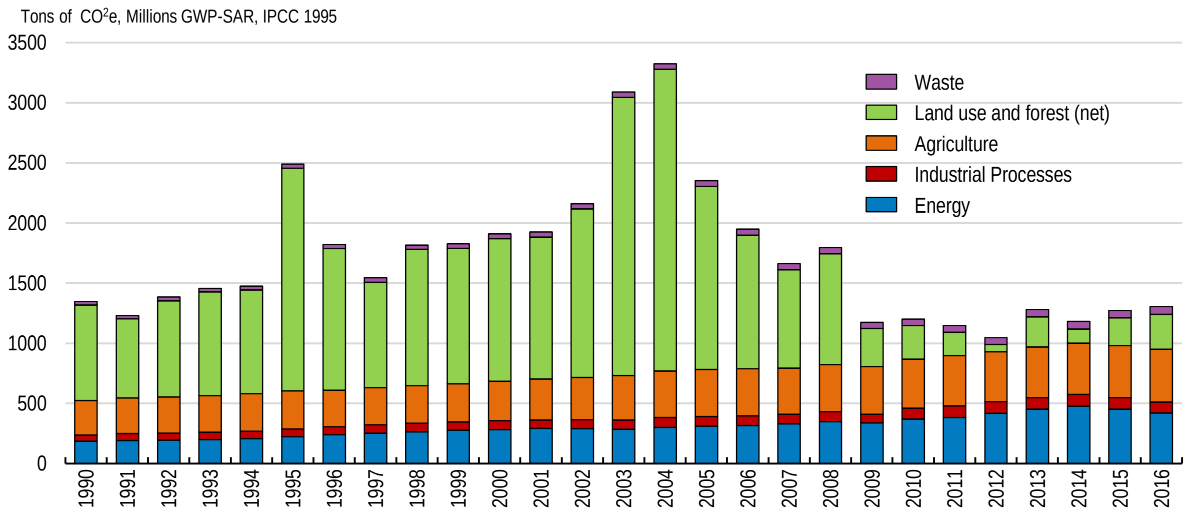
Recommendations	Actions taken since the 2018 Economic Survey
Limit political appointments, especially in state-owned enterprises. Strengthen performance incentives in public companies.	Stricter selection requirements for management positions in state-owned enterprises have limited the scope for political appointments.
Undertake more systematic audits of all expenditures, including parliamentary budget appropriations.	Audits are being undertaken following a risk-based approach. More resources for the internal auditing body would allow more auditing. In practice, only a very small fraction of parliamentary budget appropriations is subject to audits.
Review public procurement laws. Use more centralised purchasing bodies.	Procedures for electronic auctions in the acquisition of goods and contracting of common services have been improved in 2019 and 2020. Brazil is currently conducting a procurement review with the support of the OECD. .
Strengthen whistle-blower and leniency procedures.	Whistle-blower protection was strengthened in 2019. Data exchange between different public bodies, however, was temporarily halted by a supreme court ruling.

Making economic growth greener and more sustainable

Brazil's greenhouse gas (GHG) emissions are comparatively low in per capita terms, and have been broadly stable since 2010 (Figure 1.31). Meeting the pledges made in the Paris accord for 2025, however, will imply cutting GHG emissions by 37% of 2005 emissions. As emissions have recently been on a slight upward rather than downward trend, this will be challenging and requires stepping up policy efforts. The three largest emission components are agriculture (34%), energy (32%) and land use and forestry (22%).

Figure 1.31. Total greenhouse gas emissions have been stable

Net greenhouse gas emissions by sector of origin



Source: Ministério da Ciência, Tecnologia, Inovações e Comunicações (2020), Estimativas Anuais de Emissões de Gases de Efeito Estufa no Brasil, 5th Edition. Available at http://educaclima.mma.gov.br/wp-content/uploads/2020/06/Estimativas-Anuais-5-2020.pdf

StatLink https://doi.org/10.1787/888934196822

Emissions from agriculture, the largest component, have been increasing slowly but steadily over the last 30 years. Livestock emissions, which account for more than half of these emissions, consist largely of

methane, which is 28 times more harmful to global climate than carbon dioxide (IPCC, 2013[63]). These emissions have grown at a much slower pace than meat or milk production, suggesting significant efficiency improvements and advances in low-carbon agriculture, which should be further pursued. In the longer run, however, curbing livestock emissions may require stronger economic incentives to move resources from livestock and cattle production towards crops or other forms of agriculture with lower emissions. Already, Brazil is far ahead on this as it does not subsidise cattle production, in contrast to many advanced economies. Pricing the external effects of cattle on global climate through corrective taxes, however, may be an interesting next step for the future that has recently been pursued by New Zealand.

Energy-related emissions have declined since 2014 in line with economic activity, but structural reductions will be more difficult to achieve than elsewhere as Brazil's energy matrix is already remarkably clean. 45% of primary energy comes from renewable sources, as opposed to 10% across OECD countries, and 62% of electricity comes from hydroelectric sources. Further scope for expanding renewables may exist in solar energy, wind energy, where it will require easing import restrictions on relevant equipment, and in biofuels. The latter includes the move towards second-generation ethanol and the processing of by-products and biomass from agriculture, where a recently revamped biofuels policy is a step in the right direction.

The third largest emission component, land use and forestry, has shown a strong link to deforestation. In fact, annual deforestation numbers from the Amazon biome alone can explain 98% of the annual variation of this emission component and 96% of the variation in total emissions, according to OECD analysis based on the decomposition of variance. Bringing illegal deforestation down to zero by 2030, one of Brazil's intentions in the Paris accord, is and has been a key environmental challenge for Brazil (Table 1.8), along with restoring and reforesting some previously deforested areas.

Table 1.8. Past OECD recommendations on green growth

Recommendations	Actions taken since the 2018 Economic Survey
Ensure continuous decreases in deforestation, including through stronger enforcement and maintaining the status of areas currently under environmental protection.	Deforestation has risen rather than declined. Enforcement staff numbers have declined and the executive branch initiated discussions about less stringent rules for areas under environmental protection. A February 2020 decision to place deforestation-related policies under the responsibility of an inter-ministerial council headed by the Vice President may help to reduce deforestation.

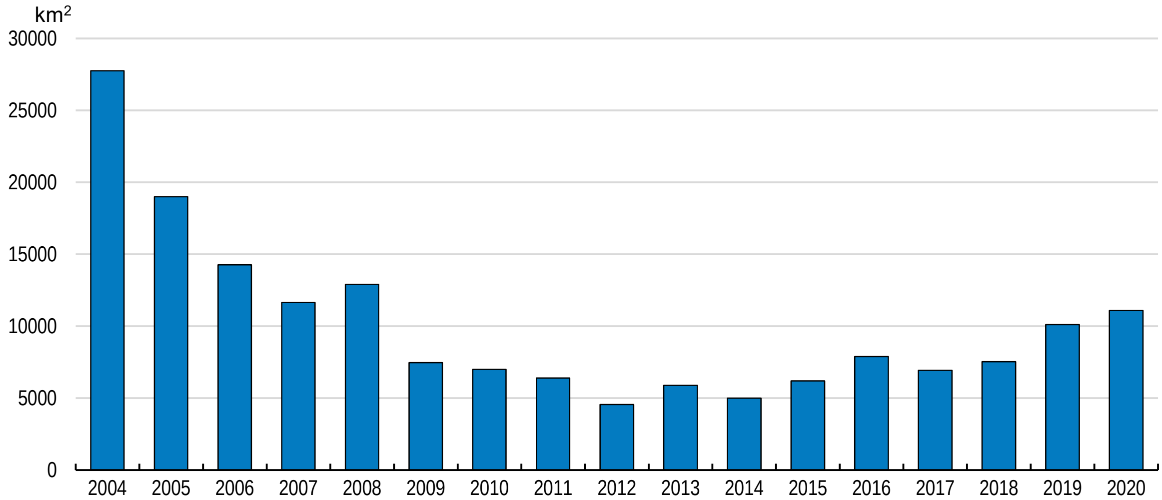
Halting illegal deforestation in the Amazon region

The economic significance of Brazil's forests, especially in the Amazon region, goes much beyond GHG emissions. The Amazon forest is a unique natural asset with a future economic potential that is hard to evaluate today. Protecting it for future generations makes good economic sense, particularly when taking into account that primary forest cannot be restored and that today's deforestation generates private gains that are far below social value. A sustainable use of these natural assets is crucial for helping people in these regions to fulfil their productive potential, including people of indigenous origin who depend on the natural environment for their livelihoods and whose lifestyles are dependent on the preservation of Brazil's natural habitats. Moreover, some researchers have expressed concerns that the Amazon forest may not be far from a series of tipping points, beyond which it could stop producing enough rain to sustain itself (Sampaio et al., 2007[64]; Lovejoy and Nobre, 2019[65]; Nobre et al., 2016[66]; De Bolle, 2019[67]). This is related to the Amazon's role as a driver of atmospheric circulation and precipitation across South America and beyond (Werth and Avissar, 2002[68]).

Deforestation was on a declining trend between 2004 and 2012, following the establishment of a specific policy action plan to curb deforestation, supported by legal changes, significant investments into law enforcement and the use of real-time satellite imagery to direct enforcement interventions. Since 2013, however, this trend has become more erratic until deforestation rose significantly in 2019, and again in

2020. Without a strong drought, the number of fires peaked during August 2019 at a level nearly three times higher than in August 2018 and was hence significantly above normal (Barlow et al., 2019[69]).

Figure 1.32. Deforestation in the Amazon has picked up after a long decline



Note: Data refer to the legal definition of the Amazon region, comprising the states of Acre, Amapá, Amazonas, Pará, Rondônia, Roraima and Tocantins, most of Mato Grosso and the western part of Maranhão. Updated on 30-11-2020.
Source: Prodes, Instituto Nacional de Pesquisas Espaciais (INPE), http://www.obt.inpe.br/OBT/assuntos/programas/amazonia/prodes

StatLink https://doi.org/10.1787/888934196841

Brazil has the highest proportion of preserved native vegetation and 60% of national territory are under preservation (OECD, 2015[70]). The legal protection framework, including the 2012 forest law, natural reserves and indigenous areas, is well-developed (OECD, 2015[70]), and almost all recent deforestation was illegal. This strong framework has proven successful when coupled with strong enforcement efforts. The resurgence of deforestation, and in particular the strong pick-up in 2019, is related to a decline of resources dedicated to enforcing the forest law across the vast Amazon biome. Many retirement-related vacancies at the federal enforcement agency IBAMA have been left unfilled for years and enforcement staff has fallen by 55% since 2010. Leading enforcement officials have openly warned that implementing enforcement objectives set out in IBAMA's Annual National Protection plan may be in jeopardy unless rapid action is taken and have called for more dissuasive enforcement action. Fines have declined, the destruction of illegal logging equipment has been questioned and loggers have come to feel less threatened by prosecution. Even when penalties are imposed, 97% of them have traditionally remained unpaid (Abromovay, 2019[71]).

Raising enforcement efforts through larger budgets and increased hiring of enforcement staff is an important pillar for stopping illegal deforestation. After some mixed signals, political messages about enforcement have recently become more consistent. A February 2020 decision to place deforestation-related policies under the responsibility of an inter-ministerial council headed by the Vice President may help to strengthen this pillar. Deployment of the armed forces to fight illegal deforestation has shown positive effects recently.

Given the immense global external effects of protecting the Amazon, international funding should be part of this strategy, possibly to a much larger extent than in the past. The Amazon Fund has so far disbursed USD 500 million, mostly from donations by Norway and Germany. In the absence of an agreement about the operative governance structure of the Fund, uncommitted funds have been frozen since August 2019.

Resuming this type of cooperation should be a priority, and will depend upon a reduction in deforestation in the Amazon, as well as on an agreement on a strategy for, and governance structure of, the Fund. Preserving past institutional advances is also crucial, including the forest law, the prohibition of logging in protected and indigenous areas and the sectoral agreement of a soy moratorium from 2006, which bars soy production in the Amazon.

In addition, incentives can also be used to foster compliance. Besides payments for environmental services, one way to do this would be by tying subsidised rural credit even closer to compliance with environmental regulations. These conditionalities have led to a substantial reduction in deforestation since 2008, mostly in municipalities where cattle ranching is the leading economic activity (Assunção et al., 2019[72]). For example, individual borrowing limits could be expanded for companies that are fully compliant with the forest code, including legal preservation requirements (Assunção and Souza, 2019[73]). Rural credit could also be used to promote the transition to low-carbon agriculture.

Neither economic development of the Amazon region nor agricultural production run counter to zero illegal deforestation and there is no trade-off between livelihoods and preservation. Brazil's agricultural production, especially its most productive part, is in regions other than the Amazon. Most of the deforested areas in the Amazon are used for low-productivity and low-intensity cattle grazing and an estimated 12 million deforested hectares in the Amazon region are completely unused, often leading to degradation. The problem is not a lack of usable land, but a lack of economic incentives for more intensive land use, which will persist as long as current incentives, including weak enforcement, makes newly deforested land available at low prices.

The Amazon region also has significant untapped economic potential based on preservation rather than deforestation. This includes biological and medical research, pisciculture and eco-tourism. This opens up opportunities for high-end bio-industries in Brazil and elsewhere. In addition, Brazil has pledged to reforest 12 million hectares and reforestation has significant potential for job creation (Scaramuzza et al., 2017[74]).

The Central Bank has recently included a new sustainability dimension into its strategic agenda. Main issues in this area include improved regulations and the establishment of incentives for green rural credit, the creation of green instruments such as a green liquidity facility, increased monitoring of climate risks and the development of new stress tests, as well as enhanced transparency disclosure practices and risk management procedures based on recommendations by the Task Force on Climate-related Financial Disclosures.

Table 1.9. Policy recommendations from this chapter (key recommendations in bold)

MAIN FINDINGS	RECOMMENDATIONS
Improving macroeconomic policies, governance and social protection	
COVID19 has caused a strong recession. Inflation and inflation expectations are below target and monetary policy has been relaxed.	Keep interest rates low until inflationary pressures become clearly visible.
The Central Bank has conducted monetary policy in an independent way but formalising this independence would strengthen monetary policy effectiveness.	Apply fixed-term appointments for the Central Bank governor and directors and limit earlier dismissal to severe misconduct. Safeguard the budget autonomy of the Central Bank.
Fiscal outcomes require significant improvements as the pandemic has added to high public debt.	Ensure fiscal sustainability by continuing to comply with current fiscal rules, including the expenditure ceiling.
Better spending would allow savings without jeopardising policy objectives.	Strengthen spending efficiency by reviewing civil service pay structures, ineffective subsidies, special tax regimes and tax expenditures.
Mandatory spending items have reduced the room for fiscal policy as over 90% of the budget is now determined by law.	Reduce budget rigidity by reviewing revenue earmarking, mandatory spending floors and indexation mechanisms.
Spending on social transfers has increased, but most of it has failed to reach the poor, except for recent emergency benefits.	Index social security benefits to consumer prices rather than the minimum wage.

Despite large social transfers, there is no universal social safety net to protect dismissed workers against income losses. Recent emergency benefits improved this temporarily.	Increase benefits and accelerate benefit concessions in the *Bolsa Família* programme, while withdrawing benefits only gradually.
Labour informality affects 40% of workers and labour tax wedges are high in international comparison.	Reduce labour tax wedges for low-skilled workers by levying social security contributions at progressive rates, starting at low rates.
Exemptions, deductions and special regimes reduce revenues and progressivity of personal income taxes.	Eliminate the income tax deductibility of expenditures for private health and education expenses and lower the participation threshold in the SME tax regime Simples Nacional.
The exemption of basic goods from key consumption taxes is poorly targeted on poor households.	Convert the exemption of "basic goods" from consumption taxes into a targeted tax rebate available only to low-income families.
Overlapping unemployment insurance schemes raise the cost of formal job creation and fail to cover the 40% of workers in informal employment.	Merge the two current formal-sector unemployment schemes and reduce fiscal spending and employer contributions on these.
Corruption wastes public funds and exacerbates inequalities. Despite much progress in the fight against corruption, enforcement bodies have been subject to alleged political interference.	Strengthen the legal autonomy of all anti-corruption enforcement bodies.
Lengthy appeal procedures lead to court congestion and long delays between sentences and their execution. In penal cases, wealthy defendants can avoid serving prison sentences over many years.	Consider creating the legal basis for executing sentences as of the second instance of appeal, or limit the number of appeals, including to the Supreme Court.
A new abuse of authority law is unnecessarily vague, leaving room for retaliation against officials by powerful suspects.	Clarify and limit the circumstances under which public officials working on anti-corruption cases can be prosecuted.
Full disclosure of information on the ultimate beneficiary behind private companies to relevant authorities and private sector bodies is important to prevent asset hiding.	Facilitate data sharing across public agencies engaged in anti-money laundering efforts, including a single public registry.
Confiscating ill-obtained assets would also be made easier by criminalising illicit enrichment, which is currently only an offence but not a crime.	Make illicit enrichment a crime and not only an offence, to facilitate the confiscation of ill-obtained assets.
Whistle-blowing procedures are presently hampered by concurrent competences and parallel systems for similar offences, which make it difficult to protect whistle-blowers effectively	Implement a dedicated whistle-blower protection law.
Public procurement is the government activity most at risk to waste, mismanagement and corruption. Recent efforts to centralise purchases online are promising steps.	Build on recent progress to review public procurement laws and strengthen provisions about conflicts of interests, incompatibilities and impartiality in public procurement.
Budget amendments are used by parliamentarians for projects in their constituency, but audits of these expenses are very rare.	Reduce parliamentarian budget amendments and audit these expenditures systematically.
Making growth greener and more sustainable	
Brazil has a strong legal framework to protect forests. Deforestation declined up to 2014 but has risen particularly in recent years. Enforcement action has declined significantly, reflecting budget and staff cuts.	Build on past success in fighting illegal deforestation by strengthening enforcement efforts to combat illegal deforestation and ensuring adequate staffing and budget of environmental enforcement agencies.
Political discussions have sent mixed signals about the commitment to the existing environmental protection framework.	Avoid a weakening of the current legal protection framework, including protected areas and the forest code, and focus on the **sustainable use of the Amazon's economic potential**.
Conditioning subsidised rural credit extended by public on compliance with environmental laws has helped to curb deforestation.	Consider raising borrowing limits in rural credit programmes for companies that are fully compliant with the forest code, or to finance the move towards low-carbon agriculture.
Improving skills, education and professional training	
High secondary dropout rates reflect a lack of basic social and cognitive skills. Female labour force participation is hampered by lack of childcare facilities, particularly in low-income areas.	Continue expanding access to early-childhood education, prioritising access for low-income families and single mothers.
Low teacher salaries in international comparison make it difficult to attract talent, especially in low-income areas.	Consider raising teacher remuneration through temporary bonuses to qualified teachers for teaching in difficult schools.
Structural reforms like stronger competition and global integration will reallocate jobs across firms and sectors.	Scale up resources for professional training courses, but ensure their alignment with local labour market needs.

References

Abromovay, R. (2019), *Conference participation in Programa Ciência Aberta, 15/10/2019*, https://cienciaaberta.fapesp.br/programas/amazonia. [71]

Acemoglu, D., S. Johnson and J. Robinson (2005), "Institutions as a Fundamental Cause of Long-Run Growth", *Handbook of Economic Growth*, Vol. 1, Part A, pp. 385-472, https://ideas.repec.org/h/eee/grochp/1-06.html (accessed on 1 July 2019). [57]

Appy, B. (2017), "Tributação e produtividade no Brasil", in Bonelli R, Veloso F and Castelar Pinheiro A (eds.), *Anatomia da produtividade*, FGV IBRE, Rio de Janeiro. [31]

Assunção, J. et al. (2019), "The Effect of Rural Credit on Deforestation: Evidence from the Brazilian Amazon", *The Economic Journal*, http://dx.doi.org/10.1093/ej/uez060. [72]

Assunção, J. and P. Souza (2019), "White Paper. Aligning Rural Credit with the Forest Code: results may be obtained at no additional costs.", https://climatepolicyinitiative.org/wp-content/uploads/2020/05/White_paper_Credit_FCode_ENG_FINAL_07JUN2019.pdf. [73]

Autor, D., D. Dorn and G. Hanson (2013), "The China syndrome: Local labor market effects of import competition in the United States", *American Economic Review*, Vol. 103/6, pp. 2121-2168, http://dx.doi.org/10.1257/aer.103.6.2121. [7]

Bargain, O., H. Immervoll and H. Viitamäki (2012), "No claim, no pain. Measuring the non-take-up of social assistance using register data", *Journal of Economic Inequality*, Vol. 10/3, pp. 375-395, http://dx.doi.org/10.1007/s10888-010-9158-8. [37]

Barlow, J. et al. (2019), "Clarifying Amazonia's burning crisis", *Global Change Biology*, p. gcb.14872, http://dx.doi.org/10.1111/gcb.14872. [69]

BCB (2020), *Focus - Relatório de Mercado*, https://www.bcb.gov.br/publicacoes/focus (accessed on 8 December 2020). [15]

BCB (2020), *Relatório de Inflação Março 2020*, Banco Central do Brasil, Brasilia, Brazil, http://www.bcb.gov.br/publicacoes/ri. [14]

BCB (2019), *Relatório de Estabilidade Financeira 10/2019*, Banco Central do Brasil, Brasilia, Brazil, https://www.bcb.gov.br/publicacoes/ref (accessed on 3 December 2019). [12]

Berkhout, R. (2019), "Legal Issues in Fighting Money Laundering and Related Corruption", in Spilimbergo, A. and K. Srinavasan (eds.), *Brazil : Boom, Bust, and Road to Recovery*, International Monetary Fund. [58]

Boas, T., F. Hidalgo and N. Richardson (2015), "The Spoils of Victory: Campaign Donations and Government Contracts in Brazil", *http://dx.doi.org/10.1017/S002238161300145X*, http://dx.doi.org/10.1017/S002238161300145X. [55]

Boekle-Giuffrida, B. (2019), "The Challenges of Decentralized Education Policy in Brazil: Two Case Studies from its Northeast". [49]

Carvalho Filho, I. and M. Estevão (2012), "Institutions, Informality, and Wage Flexibility: Evidence From Brazil", *IMF Working Papers*, Vol. 12/84, p. 1, http://dx.doi.org/10.5089/9781475502367.001. [41]

Cavalcanti Teixeira, L. (2019), *Les impacts sociaux de l'ouverture commerciale au Brésil: Une analyse de la Zone de Libre Echange de Manaus et des reformes macroéconomiques des années 90*, Universi'te Paris-Dauphine, https://www.dauphine.psl.eu/fr/recherche/soutenances-de-these/detail-dune-soutenance-de-these/soutenance/les-impacts-sociaux-de-louverture-commerciale-au-bresil-une-analyse-de-la-zone-de-libre-echange-de.html. [30]

Congresso Nacional (2019), *PLOA-2020, Projeto de Lei do Congresso Nacional nº 22, de 2019*, https://www.congressonacional.leg.br/materias/materias-orcamentarias/ploa-2020. [42]

De Bolle, M. (2019), "The Amazon Is a Carbon Bomb: How Can Brazil and the World Work Together to Avoid Setting It Off? | PIIE", *Policy Briefs*, No. 19-15, Peterson Institute for International Economics, Washington, DC, USA, https://www.piie.com/publications/policy-briefs/amazon-carbon-bomb-how-can-brazil-and-world-work-together-avoid-setting (accessed on 10 January 2020). [67]

Dutz, M. (2018), *Jobs and Growth: Brazil's Productivity Agenda*, The World Bank, http://dx.doi.org/10.1596/978-1-4648-1320-7. [3]

Ferreira de Souza, P. et al. (2019), "Os Efeitos do Programa Bolsa Família sobre a Pobreza e a Desigualdade: um balanço dos primeiros quinze anos", *Textos para Discussão*, No. 2499, Ipea - Instituto de Pesquisa Econômica Aplicada, http://www.ipea.gov.br/portal/index.php?option=com_content&view=article&id=34948&catid=419&Itemid=444 (accessed on 20 January 2020). [24]

Flamini, V. and M. Soto (2019), "Doing More with Less: How Can Brazil Foster Development While Pursuing Fiscal Consolidation?", *Working Papers*, No. 19/236, IMF, Washington, DC, https://www.imf.org/en/Publications/WP/Issues/2019/11/01/Doing-More-with-Less-How-Can-Brazil-Foster-Development-While-Pursuing-Fiscal-Consolidation-48540 (accessed on 13 December 2019). [20]

Guillemette, Y. and D. Turner (2018), "The Long View: Scenarios for the World Economy to 2060", *OECD Economic Policy Papers*, No. 22, OECD Publishing, Paris, https://dx.doi.org/10.1787/b4f4e03e-en. [4]

Heckman, J. and D. Masterov (2007), "The Productivity Argument for Investing in Young Children", *NBER Working Paper*, No. 13016, National Bureau of Economic Research, Cambridge, MA, USA, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=978407 (accessed on 21 January 2020). [46]

IBGE (2019), *Síntese de Indicadores Sociais: uma análise das condições de vida da população brasileira: 2019*, https://biblioteca.ibge.gov.br/visualizacao/livros/liv101678.pdf. [39]

IBGE (2018), *Projeções da população : Brasil e unidades da federação : revisão 2018*, IBGE - Instituto Brasileiro de Geografia e Estatística, Rio de Janeiro, https://biblioteca.ibge.gov.br/index.php/biblioteca-catalogo?view=detalhes&id=2101597. [1]

IFI (2019), *Relatório de Acompanhamento Fiscal 12/2019 (Instituição Fiscal Independente)*, Instituição Fiscal Independente, Brasília, https://www12.senado.leg.br/ifi/relatorio-de-acompanhamento-fiscal. [23]

IFI (2019), “Retrato das despesas de pessoal no serviço público federal civil”, *Estudo Especiais*, No. 11, Instituição Fiscal Independente, https://www12.senado.leg.br/ifi/publicacoes-1/estudos-especiais/2019-1/dezembro/estudo-especial-no-11-retrato-das-despesas-de-pessoal-no-servico-publico-federal-civil-dez-2019. [28]

Ikeda, M. and E. García (2014), “Grade repetition: A comparative study of academic and non-academic consequences”, *OECD Journal: Economic Studies*, Vol. 2013/1, https://dx.doi.org/10.1787/eco_studies-2013-5k3w65mx3hnx. [52]

ILO (2020), *Women in the World of Work. Pending Challenges for Achieving Effective Equality in Latin America and the Caribbean. (Thematic Labour Overview, 5)*, International Labour Organisation: Regional Office for Latin America and the Caribbean, http://www.ilo.org/caribbean/newsroom/WCMS_736930/lang--en/index.htm (accessed on 13 September 2020). [43]

IMF (2019), *Brazil : 2019 Article IV Consultation-Press Release; Staff Report; and Statement by the Executive Director for Brazil*, International Monetary Fund, Country Report No. 19/242, https://www.imf.org/en/Publications/CR/Issues/2019/07/23/Brazil-2019-Article-IV-Consultation-Press-Release-Staff-Report-and-Statement-by-the-48520. [13]

IMF (2018), *Brazil : Financial System Stability Assessment*, https://www.imf.org/en/Publications/CR/Issues/2018/11/30/Brazil-Financial-System-Stability-Assessment-46411 (accessed on 2 December 2019). [11]

INEP (2018), *Avaliação e Gestão Educacional em Municípios Brasileiros - Mapeamento e Caracterização das Iniciativas em Curso*, http://portal.inep.gov.br/informacao-da-publicacao/-/asset_publisher/6JYIsGMAMkW1/document/id/6373535 (accessed on 23 December 2019). [50]

IPCC (2013), *Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*, Cambridge University Press, Cambridge and New York, https://www.ipcc.ch/report/ar5/wg1/. [63]

Izquierdo, A., C. Pessino and G. Vuletin (2018), *Better Spending for Better Lives How Latin America and the Caribbean Can Do More with Less*, Interamerican Development Bank, Washington, DC, http://www.iadb.org/DIA2018spending (accessed on 25 January 2019). [18]

Kaufmann, D., A. Kraay and M. Mastruzzi (2010), “The Worldwide Governance Indicators”, *World Bank Policy Research Working Papers*, No. 5430, World Bank, Washington, D.C. [5]

Levy, S. (2008), *Good Intentions, Bad Outcomes: Social Policy, Informality, and Economic Growth in Mexico on JSTOR*, Brookings Institution Press, https://www.jstor.org/stable/10.7864/j.ctt6wpfgq (accessed on 29 June 2020). [35]

Lovejoy, T. and C. Nobre (2019), *Amazon tipping point: Last chance for action*, American Association for the Advancement of Science, http://dx.doi.org/10.1126/sciadv.aba2949. [65]

Nemer Tenoury, G. and N. Menezes-Filho (2017), “A Evolução do Diferencial Salarial Público-Privado no Brasil”, *Policy Papers*, No. 29, Insper, São Paulo, Brazil, https://www.insper.edu.br/wp-content/uploads/2018/09/Evoluc%CC%A7a%CC%83o-da-diferenc%CC%A7a-salarial-pu%CC%81blico-privada.pdf. [26]

Nobre, C. et al. (2016), “Land-use and climate change risks in the Amazon and the need of a novel sustainable development paradigm”, *Proceedings of the National Academy of Sciences*, p. 201605516, http://dx.doi.org/10.1073/PNAS.1605516113. [66]

OECD (2019), *Education at a Glance 2019: OECD Indicators*, OECD Publishing, Paris, https://dx.doi.org/10.1787/f8d7880d-en. [54]

OECD (2019), *OECD Employment Outlook 2019: The Future of Work*, OECD Publishing, Paris, https://dx.doi.org/10.1787/9ee00155-en. [34]

OECD (2019), *PISA 2018 Results (Volume I): What Students Know and Can Do*, PISA, OECD Publishing, Paris, https://dx.doi.org/10.1787/5f07c754-en. [45]

OECD (2019), *Resolving Foreign Bribery Cases with Non-Trial Resolutions - OECD*, https://www.oecd.org/corruption/Resolving-Foreign-Bribery-Cases-with-Non-Trial-Resolutions.htm (accessed on 29 June 2020). [56]

OECD (2019), *Taxing Wages 2019*, OECD Publishing, Paris, https://dx.doi.org/10.1787/tax_wages-2019-en. [40]

OECD (2018), *A Broken Social Elevator? How to Promote Social Mobility*, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264301085-en. [10]

OECD (2018), *OECD Economic Surveys: Brazil 2018*, OECD Publishing, Paris, https://dx.doi.org/10.1787/eco_surveys-bra-2018-en. [21]

OECD (2018), *The Productivity-Inclusiveness Nexus*, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264292932-en. [2]

OECD (2017), *OECD Policy Memo: Pension reform in Brazil*, OECD, Paris, https://www.oecd.org/brazil/reforming-brazil-pension-system-april-2017-oecd-policy-memo.pdf. [22]

OECD (2017), *The Funding of School Education: Connecting Resources and Learning*, OECD Reviews of School Resources, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264276147-en. [51]

OECD (2016), *Committing to Effective Whistleblower Protection*, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264252639-en. [59]

OECD (2016), *Low-Performing Students: Why They Fall Behind and How To Help Them Succeed*, PISA, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264250246-en. [53]

OECD (2016), *Preventing Corruption in Public Procurement*, http://www.oecd.org/gov/public-procurement/publications/Corruption-Public-Procurement-Brochure.pdf (accessed on 15 September 2020). [60]

OECD (2015), *OECD Environmental Performance Reviews: Brazil 2015*, OECD Environmental Performance Reviews, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264240094-en. [70]

OECD (2014), *Investing in Youth: Brazil*, Investing in Youth, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264208988-en. [33]

OECD (2012), *Closing the Gender Gap ACT NOW: Brazil Country note*, OECD, Paris, France, http://www.oecd.org/gender/closingthegap.htm. [32]

OECD (2012), *Policy Priorities for International Trade and Jobs*, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264180178-en. [6]

OECD (2005), *Trade and Structural Adjustment: Embracing Globalisation*, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264010970-en. [8]

Sampaio, G. et al. (2007), "Regional climate change over eastern Amazonia caused by pasture and soybean cropland expansion", *Geophysical Research Letters*, Vol. 34/17, p. L17709, http://dx.doi.org/10.1029/2007GL030612. [64]

Scaramuzza, C. et al. (2017), *Elaboração da Proposta do Plano Nacional de Recuperação da Vegetação Nativa (PLANAVEG)*, Ministry for the Environment, Brasilia, https://pdfs.semanticscholar.org/eb82/65cbcc591cb99c20fe4720f6aa04607bc96a.pdf. [74]

SEAE (2017), *Efeito Redistributivo da Política Fiscal no Brasil*, Ministério da Fazenda, Brasilia, http://www.fazenda.gov.br/centrais-de-conteudos/publicacoes/boletim-de-avaliacao-de-politicas-publicas/arquivos/2017/efeito_redistributivo_12_2017.pdf/view. [25]

SECAP (2020), *4º Orçamento de Subsídios da União (OSU)*, Ministério da Economia, https://www.gov.br/economia/pt-br/centrais-de-conteudo/publicacoes/boletins/boletim-subsidios/. [29]

Soares, S., L. Bartholo and R. Guerreiro Osorio (2019), "Uma Proposta para a Unificação dos Benefícios Sociais de Crianças, Jovens e Adultos Pobres e Vulneráveis", No. 2505, Ipea - Instituto de Pesquisa Econômica Aplicada, http://www.ipea.gov.br/portal/index.php?option=com_content&view=article&id=34998&Itemid=444 (accessed on 20 January 2020). [38]

Sodré, A. and M. Alves (2010), "Relação entre emendas parlamentares e corrupção municipal no Brasil: estudo dos relatórios do programa de fiscalização da Controladoria-Geral da União", *Revista de Administração Contemporânea*, Vol. 14/3, pp. 414-433, http://dx.doi.org/10.1590/S1415-65552010000300003. [61]

Tesouro Nacional (2020), *Investors Presentation — English*, https://www.gov.br/tesouronacional/en/federal-public-debt/investor-relations/investors-presentation (accessed on 13 September 2020). [17]

Tesouro Nacional (2019), *Relatório de Riscos Fiscais da União*, https://www.tesourotransparente.gov.br/publicacoes/relatorio-de-riscos-fiscais-da-uniao/2019/114 (accessed on 3 March 2020). [16]

Todos Pela Educação (2019), *Anuário Brasileiro da Educação Básica 2019*, http://www.todospelaeducacao.org.br. [48]

UNICEF (2019), *A World Ready to Learn: Prioritizing quality early childhood education*, United Nations Children's Fund (UNICEF), https://www.unicef.org/media/57926/file/A-world-ready-to-learn-advocacy-brief-2019.pdf. [47]

VanGrasstek, C. (2011), "Employment and the Political Economy of Trade: A Structured Review of the Literature", *OECD Trade Policy Papers*, No. 133, OECD Publishing, Paris, https://dx.doi.org/10.1787/5kg3nh4jlv0x-en. [9]

Werth, D. and R. Avissar (2002), "The local and global effects of Amazon deforestation", *Journal of Geophysical Research*, Vol. 107/D20, p. 8087, http://dx.doi.org/10.1029/2001JD000717. [68]

World Bank (2019), “Gestão de Pessoas e Folha de Pagamentos no Setor Público Brasileiro: o Que Os Dados Dizem? (Vol. 2)”, http://documents.worldbank.org/curated/en/449951570645821631/Gest%C3%A3o-de-Pessoas-e-Folha-de-Pagamentos-no-Setor-P%C3%BAblico-Brasileiro-o-Que-Os-Dados-Dizem (accessed on 15 January 2020). [27]

World Bank (2019), *World Development Report 2019: The Changing Nature of Work*, World Bank, Washington, DC, https://www.worldbank.org/en/publication/wdr2019 (accessed on 29 June 2020). [36]

World Bank (2018), *A fair adjustment : efficiency and equity of public spending in Brazil : Volume 1 - Overview*, World Bank, Washington, DC, http://documentos.bancomundial.org/curated/pt/643471520429223428/Volume-1-Overview (accessed on 12 December 2019). [19]

World Bank (2018), “Reforma do Estado”, in *Por um ajuste justo com crescimento compartilhado - Uma agenda de reformas para o Brasil*, World Bank Group, Washington, D.C., USA, http://pubdocs.worldbank.org/en/156721534876313863/Sum%C3%A1rio-Notas-de-Pol%C3%ADtica-P%C3%BAblica.pdf. [62]

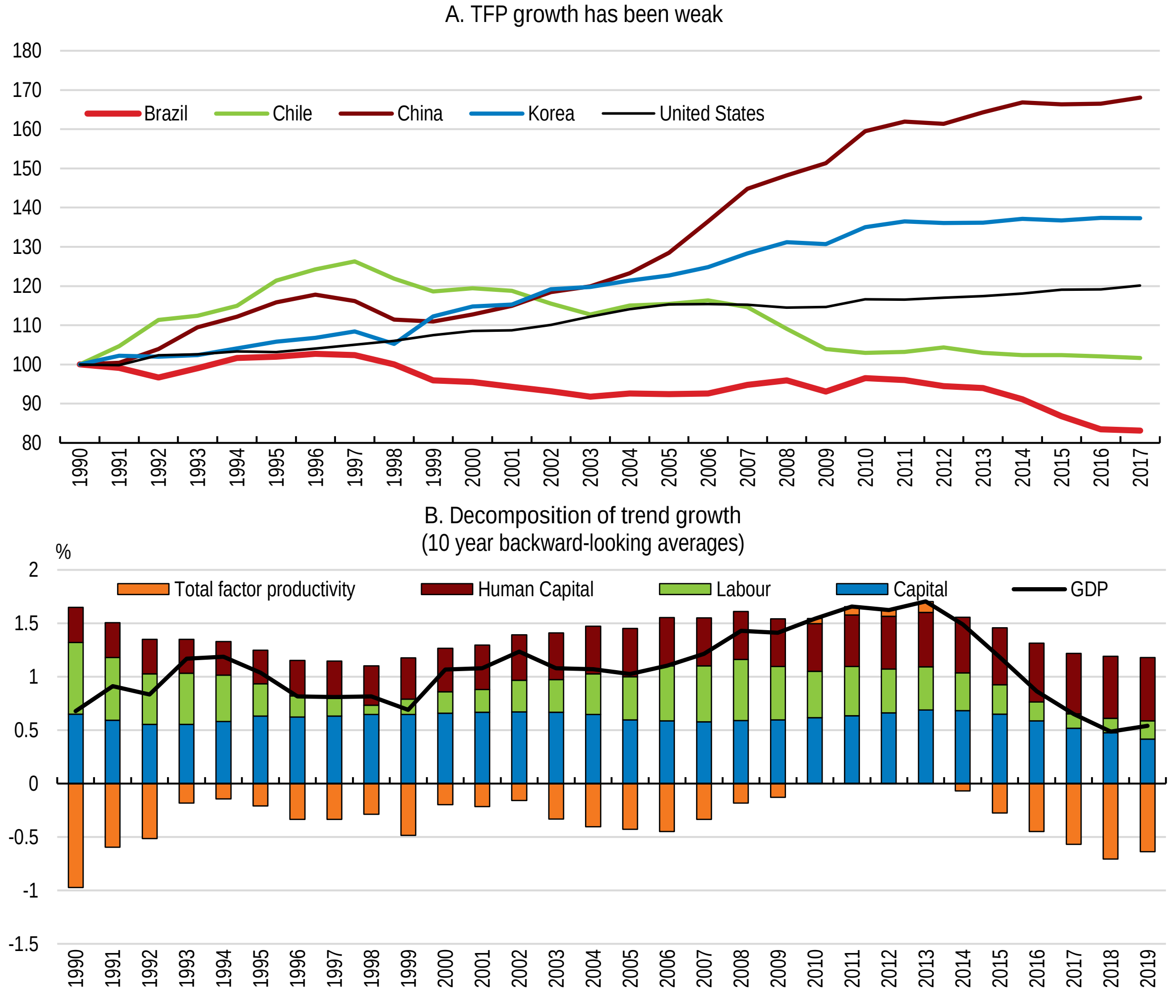
World Bank (2016), *Brazil - Systematic country diagnostic : retaking the path to inclusion, growth and sustainability*. [44]

2 Raising productivity through structural reforms

The recovery from the current deep recession caused by the COVID-19 pandemic will require raising productivity through structural reforms. This implies a number of challenges for economic policies. With large parts of the economy shielded from competition, firms face weak incentives to become more productive. Sizeable shares of labour and capital are trapped in low-productivity firms that survive on the back of support from distortive policies. Reallocation mechanisms such as continuous firm entry, exit or the growth of stronger firms on the expense of less productive ones appear weaker than elsewhere. Domestic regulatory burdens and market entry barriers are high, reducing domestic competitive pressures. External competition is hampered by high trade barriers that have precluded Brazil from the opportunities that an increasingly integrated world economy can offer. A fragmented tax system gives rise to one of the world's highest tax compliance costs and a wide array of exemptions and special regimes reduces fairness and the redistribution effect of taxes. Financial markets used to be dominated by directed credit, but thanks to a successful policy reform that aligned directed lending rates with market rates, they are now undergoing a profound transformation. Challenges in contract enforcement suggest scope for changes in the organisation of the judiciary to reduce judicial uncertainty and reduce trial durations.

Productivity is the principal source of long-run growth in most economies and provides the basis for better material living standards, reductions in poverty and inequality and improvements in well-being. However, in Brazil it has been declining slowly since 1990 and its contribution to growth has been negative, except for a few single years (Figure 2.1). Instead, growth has largely been the result of the accumulation of the factor labour, resulting from demographic changes, rising labour participation and improvements in human capital, and to a lesser extent of capital investment, which has declined since 2011.

Figure 2.1. Total factor productivity is contributing less and less to potential growth



Source: Penn World tables, OECD calculations.

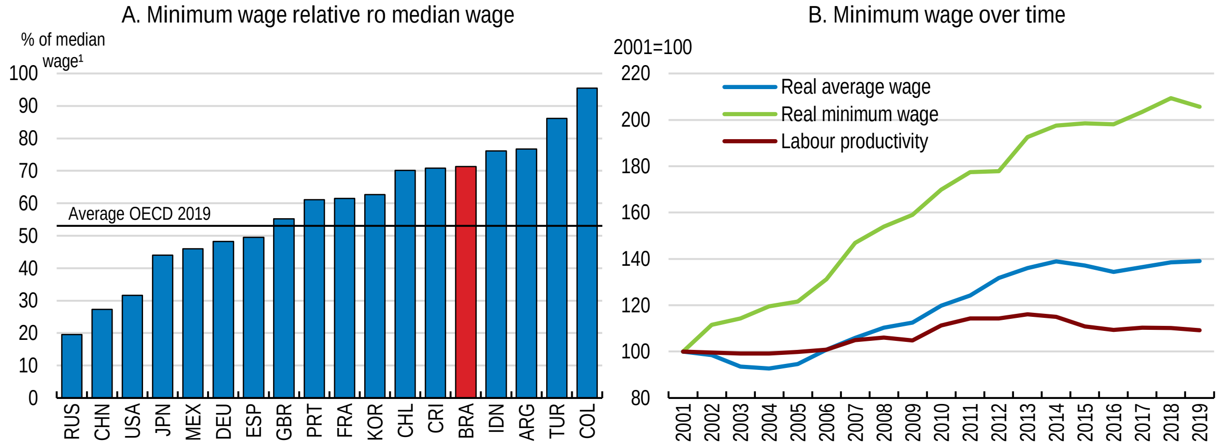
StatLink https://doi.org/10.1787/888934196860

This pattern contrasts with the experience of other countries, especially emerging market economies. In China and India, for example, the capital stock and TFP have been the main contributors to growth, while other Latin American countries share Brazil's weak productivity growth (Dutz, 2018[1]).

Looking ahead beyond the deep recession caused by the COVID-19 pandemic, growth and improvements in material living standards will hinge on policy reforms that can raise productivity, as changing demographic developments will no longer support the economy as in the past. In fact, as less and less young people join the labour force, the population as a whole will age rapidly and demographics will soon turn into a drag on growth (see Chapter 1). Productivity growth will also need to become the basis for

sustainable improvements in wages and living standards. Wages, and especially minimum wages, have increased strongly over the last 20 years. While this has contributed to falling income inequality for some time, wages are now fairly high relative to median wages compared to other countries (Figure 2.2). In fact, 55% of Brazilians currently have incomes below the minimum wage (OECD calculations based on PNAD 2019 Household Survey). Without productivity improvements, there is a risk that future increases in minimum wages could drive workers out of the labour market or into informal contracts, particularly those with low skills. Against this sobering background, this chapter will look into the causes of slow productivity growth in the past and analyse the scope for structural policy reforms to achieve stronger productivity advances in the future.

Figure 2.2. Minimum wages are high



Note: Exactly half of all workers have wages either below or above the median wage for the OECD countries. Data refer to 2018, except for China, Indonesia and the Russian Federation, where they reflect percentage of minimum to average wage 2017.
Source: OECD database LFS - Minimum relative to median wages of full-time workers, IBGE, INDEC.

StatLink https://doi.org/10.1787/888934196879

Possible sources of low productivity growth

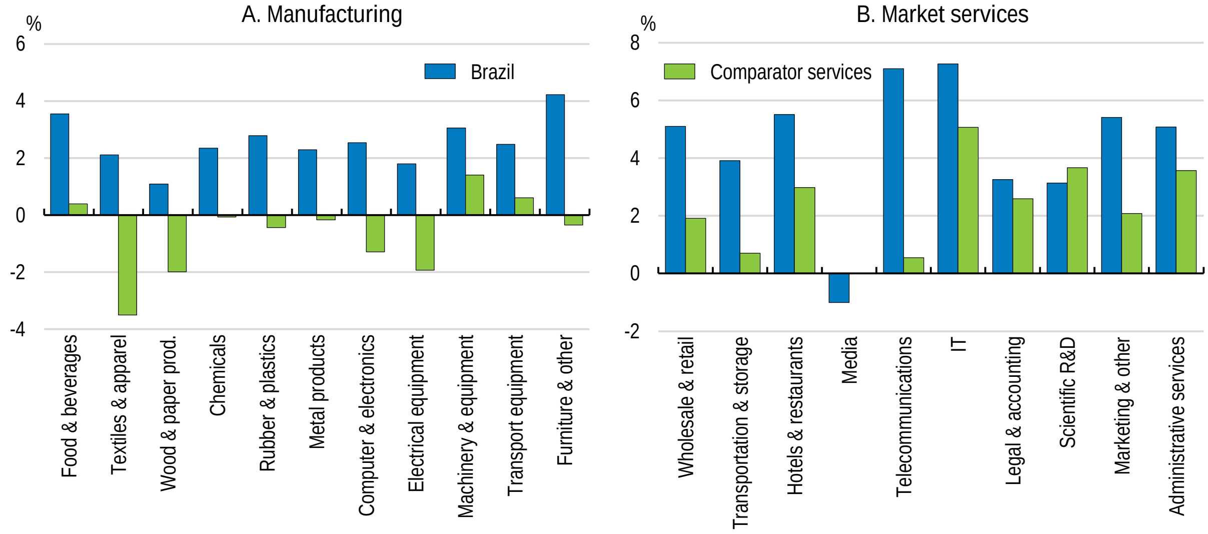
There are several possible explanations for the weak productivity performance of the economy. One string of explanations is related to how the overall factor resources of the economy, capital and labour, are distributed across sectors and firms. The allocation of factors has been highlighted as an important part of the explanation behind differences in productivity performance across countries (Hsieh and Klenow, 2009[2]). A second string of explanations are barriers to productivity enhancements at the level of individual firms, which could potentially affect many firms in similar ways.

Resource allocation at the level of broad sectors is not able to explain much of Brazil's weak productivity growth. A number of empirical studies looked into this question recently, in part motivated by policy discussions about a possible declining role of the manufacturing sector and its potential implications for productivity (Álvarez et al., 2019[3]; Dutz, 2018[1]; Veloso et al., 2017[4]; Bacha and de Bolle, 2013[5]). However, since the 1990s, the main pattern of movements of labour across broad sectors was from agriculture to services sectors, which had a mild positive effect on aggregate productivity. Most of Brazil's manufacturing sectors actually continued to attract labour through the period 1998-2015, although less so than services sectors (Figure 2.3). This contrasts with the experience of other advanced and emerging

economies that lost manufacturing employment as China and other Asian economies emerged as major manufacturing producers (Autor, Dorn and Hanson, 2016[6]).

Figure 2.3. Job creation has been strong in services, but also in manufacturing sectors

Average net job creation rate over the period of 1998-2015 by economic sector (in %)



Note: The net job creation rate is defined as the number of jobs created minus the number of jobs destroyed in year t divided by the average stock of employment stock. The figures shows the average of the years 1998-2015 by sector. Comparator countries include Belgium, Costa Rica, Finland, France, Hungary, Italy, the Netherlands, Norway, Portugal, Spain, Sweden and Turkey.
Source: OECD Dyemp3 database.

StatLink https://doi.org/10.1787/888934196898

The empirical evidence generated by this discussion overwhelmingly suggests that low productivity is not the result of how factors are allocated across sectors, or the activities that Brazil specialises in. Simulation experiments suggest that the productivity gains potentially obtained by raising productivity of individual sectors to those of advanced economies would far outweigh productivity gains that could result from optimising Brazil's industry structure (Veloso et al., 2017[4]). Weak productivity is a feature of most sectors, with the notable exception of agriculture (Dutz, 2018[1]). It is also a pattern that Brazil shares with several Latin American economies (Álvarez et al., 2019[3]). This implies that there is no strong case for policies favouring the expansion of one sector over another as Brazil's productivity problem cannot be solved by simply changing specialisation patterns.

Resource allocation may still play a role for explaining the productivity slump, but within rather than across broad sectors. Within sectors, factor movements including entry, exit or the growth of strong performers at the expenses of weaker firms, are an essential element of aggregate productivity growth (Hopenhayn, 1992; Melitz, 2003; Aghion et al., 2005). In advanced economies, these reallocations can often account for a larger share of productivity growth than developments within individual firms (Olley and Pakes, 1996; Foster et al., 2001; Bartelsman et al., 2008; Andrews and Cingano, 2014).

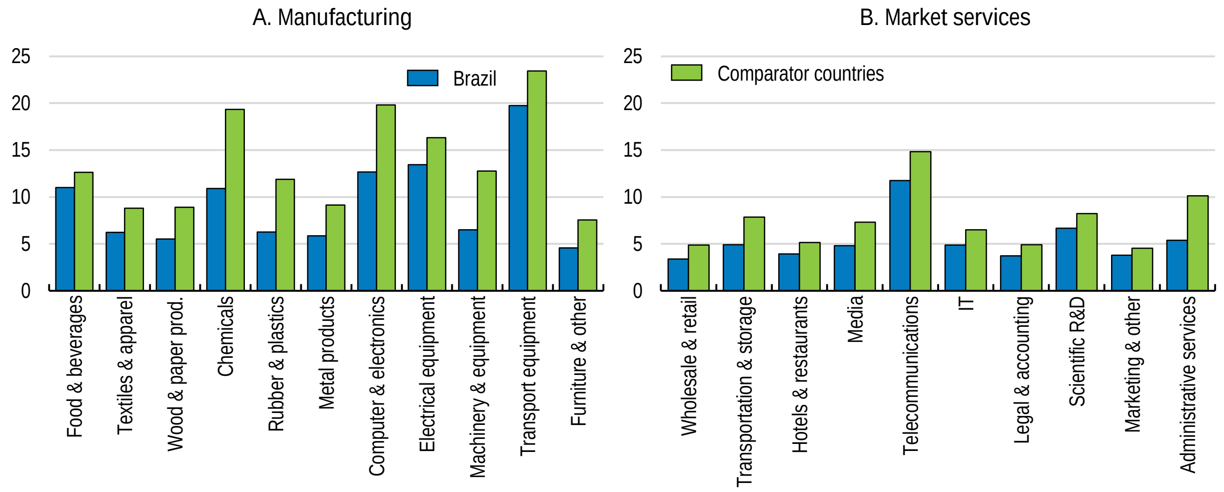
In Brazil, however, these reallocation mechanisms do not seem to work well (SPE, 2020[7]). Productivity levels differ widely across firms within the same sector, and these differences are persistent. Empirical evidence on this exists for both manufacturing and services sectors (Vasconcelos, 2017[8]; De Vries, 2014[9]; Busso, Madrigal and Pagés, 2013[10]). It is often the less productive firms within a sector that enjoy large market shares (Gomes and Ribeiro, 2015[11]; OECD, 2015[12]). This suggests scope for improving

productivity levels by reallocating resources from less productive firms to more productive ones. With respect to productivity growth, the empirical evidence also points to the within-sector component as the principal explanation, with evidence that less productive firms have been able to grow at the expense of more productive ones, at least among large firms (Dutz, 2018[1]). Many countries that experienced growth spurts, particularly in Asia, have indeed seen sizeable within-sector reallocations (McMillan and Rodrik, 2011[13]).

Entry and exit play a key role for within-sector resource allocations. Compared to other economies, Brazilian market entrants are on average smaller than in other economies (Figure 2.1). In fact, Brazil has considerably less entry of medium and large firms than other countries (Dutz, 2018[1]). This in turn reduces the pressure for the exit of less productive firms, which is essential for releasing the resources that allow more successful firms to grow to an efficient scale (Andrews et al, 2017). Indeed, many sectors are characterised by low firm exit and dominated by firms that are at the same time large and old (Maciente, Silva and Gukovas, 2015[14]). The dispersion of firm productivity shows a fat lower tail of less productive firms, suggesting that inefficient firms are not driven out of the market, as they are in other countries with significantly less low-productivity firms (Barbosa Filho and Correa, 2017[15]).

Figure 2.4. New market entrants are relatively small

Average number of employees of market entrants by sector



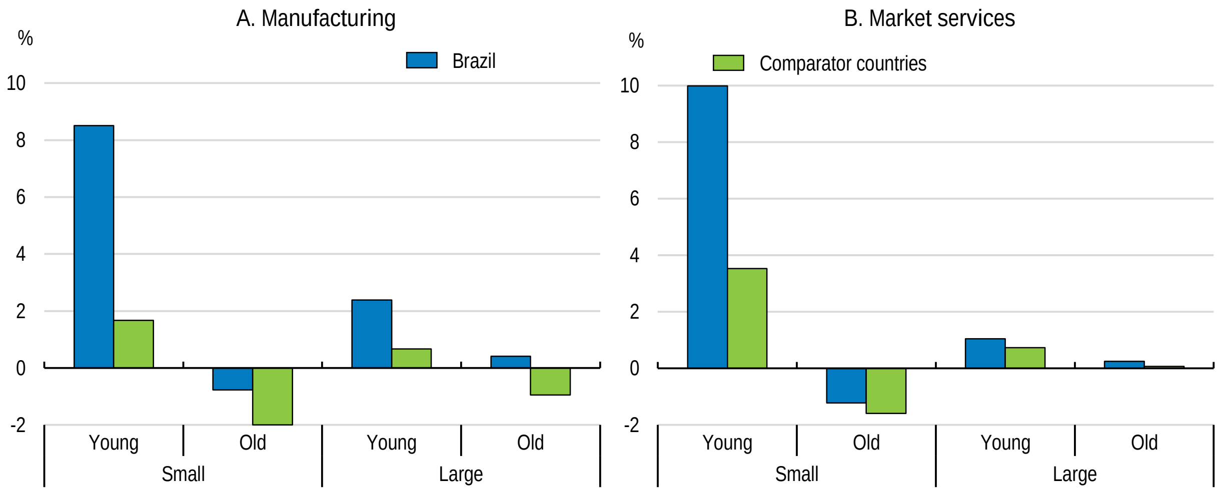
Note: Comparator countries include Belgium, Costa Rica, Finland, France, Hungary, Italy, the Netherlands, Norway, Portugal, Spain, Sweden and Turkey. Data relate to 1998-2015.
Source: OECD analysis based on DynEmp.

StatLink https://doi.org/10.1787/888934196917

The limited role of new market entrants contrasts with their potential contribution to productivity growth. In many countries, firms that are relatively younger and smaller contribute disproportionately to productivity growth (De Negri and Ferreira, 2015, Criscuolo et al., 2014). In Brazil, entry also plays a key role for job creation, as young firms are the main source of newly created jobs (Figure 2.5). At the same time, the number of jobs in older firms tends to decline on balance in benchmark countries, which is consistent with exit and the renewal of industry structures. In Brazil, this mechanism is significantly less visible, particularly in the manufacturing sector.

Figure 2.5. Net job creation is concentrated among firms aged less than 6 years

Contribution of net job creation to aggregate employment change by age- and size-class



Note: Comparator countries include Belgium, Costa Rica, Finland, France, Hungary, Italy, the Netherlands, Norway, Portugal, Spain, Sweden and Turkey. The Figure reports the contribution of net job creation to aggregate employment change by size (with a cut-off at >= 250 employees) and age (with a cut-off at >= 6 years) for manufacturing and non-financial market services. It is defined as net job creation (i.e., the difference of total employment at time t and t-1) of the particular group over total employment in the macro-sector on average over the period 2000-2008.
Source: OECD analysis based on DynEmp.

StatLink https://doi.org/10.1787/888934196936

How can policies help to strengthen productivity growth?

The relatively weak functioning of the essential mechanisms of creative destruction presents significant challenges for economic policies and calls for wide-ranging reforms. Low levels of competition imply that incumbents are not driven out of the market by high-performing entrants as they would in economies where competition is stronger. This reduces market discipline and the incentives to perform better to survive, including incentives for productivity-enhancing investment and innovation. Instead, low competition tends to foster rigid industry structures, perpetuating resource misallocation.

Impediments to competition can be related to two kinds of policies. For one, Brazil’s stringent domestic regulations and administrative burdens erect explicit or implicit barriers to entry, or confer advantages to incumbents relative to entrants (Dutz, 2018[1]). Direct interventions such as directed lending can reinforce this, and rising allocative distortions have been linked with an expansion of directed lending in Brazil (Calice, Ribeiro and Byskov, 2018[16]). Regulations and taxes can also act to fragment the domestic market by obstructing inter-state commerce, thus curtailing local competition. Second, large parts of the economy remain shielded from external competition through high trade barriers.

Besides a lack of competition, there are also policy factors that influence productivity directly. The by now infamous “Brazil cost” which refers to the fact that many aspects of doing business are simply more expensive, raises costs without raising production. For example, complying with a cumbersome tax system or infrastructure bottlenecks generate dead-weight losses as they absorb resources that could be used more productively elsewhere. This puts Brazilian producers at a competitive disadvantage vis-à-vis foreign competitors. A similar effect occurs when firms have to source inputs from sectors characterised by low levels of competition and economic rents. Excessive costs of enforcing contracts, or long delays and high

judicial uncertainty, also put Brazilian producers at a disadvantage. Well-functioning judicial systems are an essential ingredient of a good business climate.

These links between different policy areas underline the role of appropriate sequencing for the success of reforms. Reallocation of production factors to more productive firms and sectors, triggered by reforms, often combines long-term benefits with significant adjustment costs, particularly when distortions in product and factor markets are high (OECD, 2012[17]; Autor, Dorn and Hanson, 2013[18]). For example, labour market rigidities are one reason why many displaced manufacturing workers have struggled to find new formal sector jobs in other firms, sectors or regions (Erten, Leight and Tregenna, 2019[19]). By contrast, adjustment costs can be significantly reduced by policies that facilitate the mobility of labour and capital across firms, sectors and regions (OECD, 2012[17]; OECD, 2005[20]), in addition to those that strengthen macroeconomic fundamentals.

Recent reform progress in many areas provides a better starting point for further reforms (Box 1.2 in Chapter 1 of this Economic Survey). Delays involved in establishing a company have fallen. There have been tariff reductions and some restrictions on foreign entry have been lifted. Financial market structures are improving following a reduction of interest subsidies. An ambitious tax reform is currently being discussed in Congress. The introduction of precedence-based court rulings have laid the grounds for further improvements in judicial efficiency. One area with additional potential to mitigate the adjustment costs from further reform, especially on international trade, are education and training policies, which will be discussed in Chapter 3.

Enhancing domestic competition through reforms on product markets

Product market regulations, like any kind of regulations, may drift away from their original public interest aims and hamper competition. This can influence the productivity of existing firms by altering the incentives to grow, innovate and adopt modern technologies. They can do so by reducing rivalry among incumbents and hampering the entry of new firms. In addition, regulations and administrative burdens sometimes involve compliance costs that exceed their expected benefits or they may become obsolete as technological progress reduces the need for public intervention in the first place. Against this background, a long-standing literature, including contributions by the OECD, has documented that the pace and depth of product market reforms – and in particular reforms in those aspects of regulations that matter for firm dynamics and resource reallocation– are important for understanding differences in productivity performance. This has direct effects on human lives, as estimates suggest that the additional job creation and the lower consumer prices resulting from more competition on domestic markets could lift as many as 9 million Brazilians out of poverty (Dutz, 2018[1]).

Brazil's regulatory requirements on product markets have long been significantly more cumbersome and restrictive than in OECD countries, and lack transparency and simplicity. The 2018 OECD Product Market Regulation (PMR) indicators measure regulatory barriers to firm entry and competition in a broad range of key economic sectors and policy areas by benchmarking a country's regulatory set-ups against internationally accepted best practices (Figure 2.6). Brazil stands out as one of the most restrictively regulated economies when the overall indicator is considered, but also in both its main sub-components: barriers to domestic and foreign entry and distortions induced by state involvement. The widely used Doing Business indicators confirm the picture drawn by the PMR indicators, Brazil ranks 124 out of 190 economies surveyed (World Bank, 2020[21]).

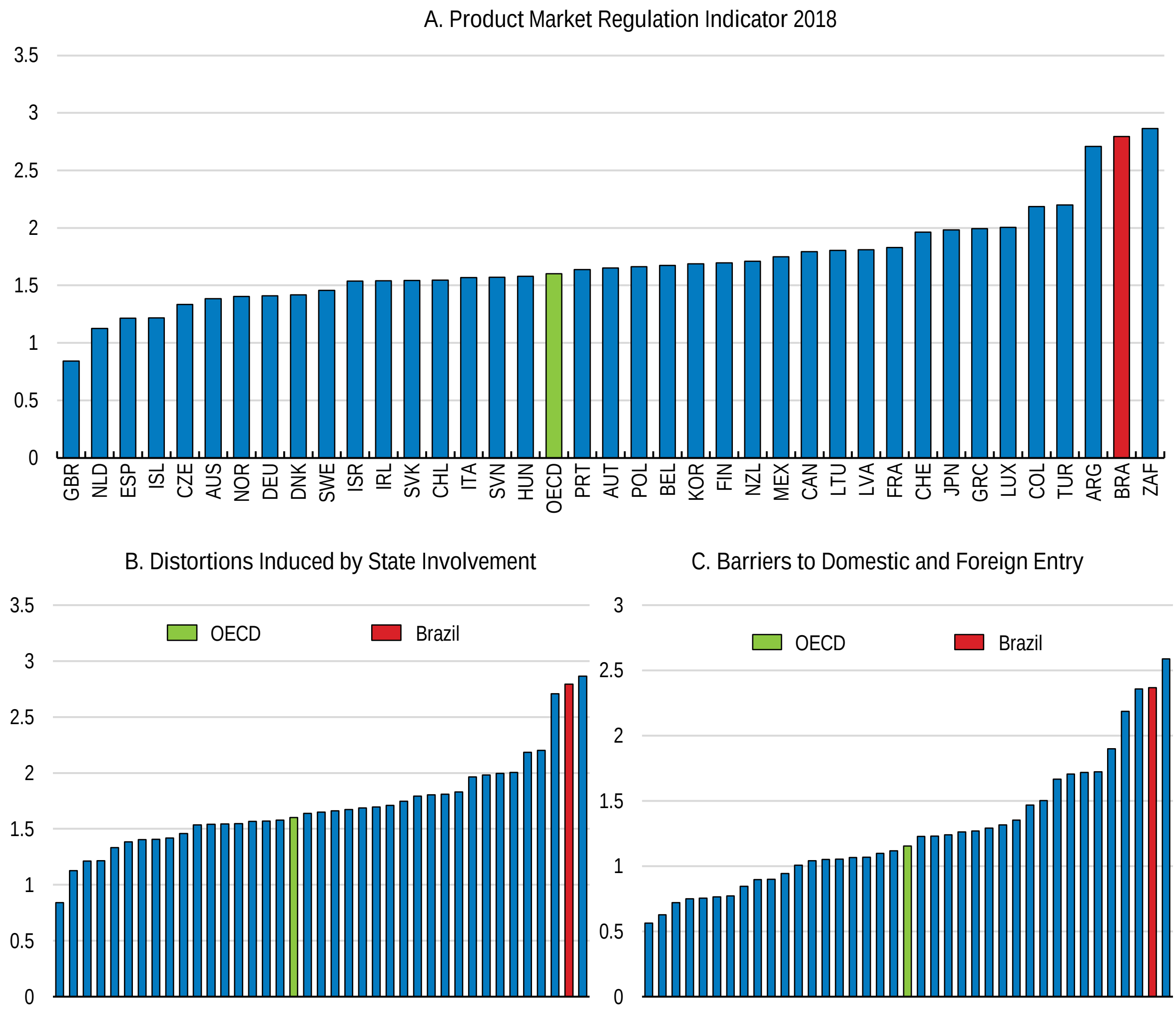
Regulatory barriers to firm entry reduce competitive pressure

The OECD PMR indicators measuring barriers to domestic and foreign entry show that Brazil's policy settings are close to or even weaker than the average of the 5 least competition-friendly OECD countries

on several of the detailed sub-indicators (Figure 2.7). High administrative burdens on start-ups reduce the likelihood of market incumbents being challenged by new entrants, which is a crucial component of competitive pressures.

Opening a business in Brazil has traditionally required approval from local authorities and interactions with four different public entities, both for the cases of personally-owned enterprises and limited liability companies. Significant recent progress, however, has brought Brazil closer to the current best practice among OECD countries to eliminate the approval requirement for all but a few high-risk activities. Opening a business is now automatic and done within a day for low-risk activities, which cover around 96% of applications. Local authorities will need to adjust their own rules to comply with these simplifications and implementing regulations for this are currently being rolled out. Moreover, a 2019 law has enhanced the scope for applying silence-is-consent rules. Efforts are underway to apply silence-is-consent rules wherever possible and establish one-stop-shops for the remaining requirements. Progress has been made in the digitalisation of government procedures. Over 1000 government services across all areas can now be delivered online, an increase of 100% since early 2019.

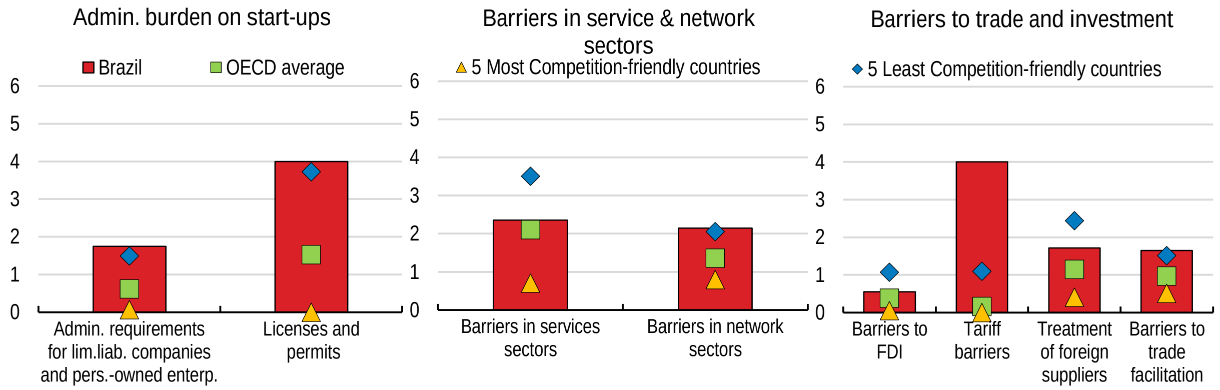
Figure 2.6. Regulatory barriers to competition and entrepreneurship are high



Source: OECD Product Market Regulation Indicators, 2018, available at http://oe.cd/pmr

StatLink https://doi.org/10.1787/888934196955

Figure 2.7. Product markets have high barriers to domestic and foreign entry



Note: Averages include only OECD countries. Information refers to laws and regulation in force on 1 January 2018.
Source: OECD Product Market Indicators 2018

StatLink https://doi.org/10.1787/888934196974

Sector-specific rules, however, are often more restrictive. Professional associations can restrict the scope for new entry and provide an easy forum for price collusion, which is sometimes reflected in outright minimum charges. Engineers, lawyers and other professionals have to be part of the respective professional association in Brazil, for example, which limits the ease of market access for foreign professionals through lengthy accreditation procedures and determines the list of tasks that can only be performed by members of the association. The latter is a task that other countries delegate to more independent bodies (Reis et al., 2018[22]). Brazil still reserves exclusive rights for certain ancillary tasks to legal, accounting or architectural firms, although these tasks could also be performed by other professionals.

One factor that can delay licensing procedures is that public sector managers can be held personally liable for their decisions. In fact, officials have much to lose if ex-post a judge takes a different view on the impact of a specific license than the official had at the time of granting it. As a result, public officials tend to be overcautious and try to back up any decision with long legal analyses. Limiting the possibilities to take public officials to court over their decisions to cases of abuse or bad faith would have significant potential to speed up licensing procedures.

In contrast to other countries, Brazil's national government does not keep a complete count of the number of permits and licences required. This makes it hard to keep control over excessive burdens imposed by lower-level governments that may not always have an eye for competition. Recent efforts to take stock of the complexity of current regulations have led to a review of over 3700 pieces of legislation, of which 3300 were revoked in February 2020. These efforts should continue with a view towards identifying further scope for easing and simplification. The OECD's Competition Assessment Toolkit (OECD, 2017[23]) can provide guidance not only for identifying but also for revising policies that unduly restrict competition (Box 2.1). It has already been used in Greece, Mexico, Portugal, Romania, Tunisia and Asean countries.

Recent progress has also been made in a few specific areas. Natural gas, for example, has long been a monopoly market dominated by the state oil company Petrobras. It is now being opened to competition, including regulation on the access of essential distribution infrastructures and a divesture of Petrobras' participation in distribution companies. Given current price differentials of up to 40-50% relative to US prices, competition in natural gas has substantial scope for providing cheaper inputs to many activities. More recently, the requirement for insurance agents to pass an entry exam into a centralised register was lifted and has potential to reduce high commissions (Valor Econômico, 2020[24]).

Box 2.1. The OECD Competition Assessment Reviews for Greece

Similar to Brazil today, Greece used to have many regulations that effectively hampered competition, but careful competition analysis allowed identifying many of these and produced concrete recommendations. A first assessment in 2013 looked at tourism, retail trade, food processing and construction materials. The review identified 555 problematic regulations and 329 provisions where changes could be made to foster competition. The OECD has estimated that implementing about 60 of these recommendations (those for which quantification was possible) would generate benefits of about 2.5% of GDP in the form of lower prices, higher expenditure and turnover. A second competition assessment in 2014 identified competition-distorting rules and regulations in beverages, textiles, clothing apparel and leather, machinery and equipment, coke and refined petroleum products. The review made 88 recommendations on specific legal provisions. A final review in 2016 covered pharmaceuticals, chemicals, rubber products, paper and paper products, printing as well as construction, media, wholesale trade and e-commerce, leading to the identification of 577 potential restrictions to competition and 356 recommendations.

Source: www.oecd.org/daf/competition/greece-competition-assessment-reviews.htm

A new competition law passed in 2011 led to an overhaul in Brazil's competition regime, which implied a significant improvement for Brazil's competition law and policy, according to the OECD Peer Review of Competition Law and Policy for Brazil (OECD, 2019[25]). The consolidation of competition surveillance in a single autonomous competition agency (CADE) that is equipped with strong powers and enforcement tools effectively modernised antitrust enforcement in Brazil, including the introduction of a pre-merger notification system. Further improvements could be obtained by giving higher priority to abuse of dominance investigations, of which there have been few (OECD, 2019[25]) and reviewing the settlement regime and clarifying the methodology for calculating fines.

State interventions

The second pillar of the OECD Product Market Regulation indicators relates to distortions induced by state interventions, including market interventions such as price regulations, the complexity of rules and as the efforts undertaken to limit this complexity, public procurement and public ownership (Figure 2.8).

More or less explicit price floors established by professional associations or by law exist in several sectors, including legal, notary, architect, engineer services, long-distance coach transport and some non-prescription medicines. As recently as 2018, price floors were also established for road freight services following a transport strike. These anticompetitive practices are far from international best practice and should be swiftly prohibited. Wide parts of the economy including the tradable sector stand to gain from more competition in upstream non-manufacturing sectors, as access to cost-effective and innovative services inputs can play an important role for productivity in downstream sectors (Arnold, Javorcik and Mattoo, 2011[26]; Arnold et al., 2016[27]).

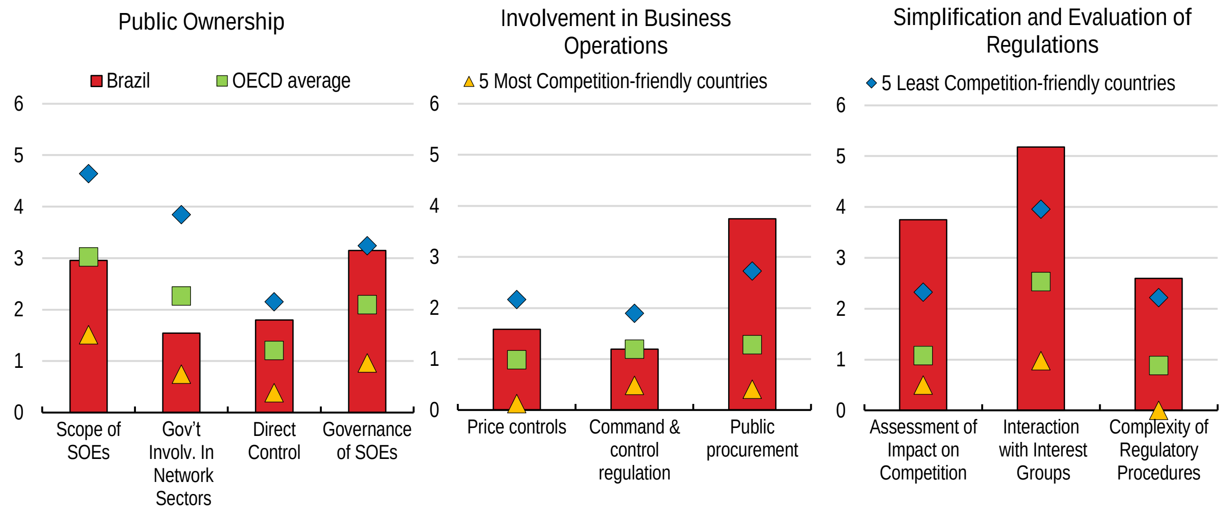
Another challenge relates to containing the complexity of rules and regulatory procedures. A 2020 presidential decree explicitly defines, for the first time, cases of new regulations that require an ex-ante regulatory impact analysis in cases of new regulations with potential economic impacts, including on competition. Such assessments have made systematic inroads in other countries' regulatory procedures. But there is still room for further progress. Regulatory impact assessments can only lead to non-binding recommendations in Brazil, whereas other countries often require a systematic follow-up in such cases. In addition, systematic use of ex-post evaluation to assess whether regulations achieve their objectives is mostly unexplored in Brazil. Some countries like the UK and the US have combined the requirement of

conducting regulatory impact assessments with the application of one-in, two-out rules, where further regulations can only be introduced by alleviating the cost of compliance with other regulations.

Moreover, Brazil has no legal framework for the legitimate interaction between public officials and interest groups in the regulatory process, nor is there a mandatory public register of interest groups, which can help to enhance transparency. Some countries also enhance transparency by requiring disclosure of the interest groups that have been consulted, or by mandating the publication of the meeting agenda of key officials. None of these practices are applied in Brazil, although a code of conduct for interest groups is currently being prepared. While Brazil follows best practice by having established specific conflict of interest regulation for cabinet members, political advisors and senior civil servants, it has yet to extend this framework to members of legislative bodies.

Public procurement has seen improvements. A newly created electronic repository of public procurement purchases can serve for price comparisons, and will be converted into a centralised public purchasing body, with the possibility to register online for bidding in many public tenders. For foreign bidders, the requirement of having a legal representative in Brazil and the need for certified translations of foreign-language documents have been abolished. Brazil is also in the process of joining the WTO Government Procurement Agreement. These efforts should be continued with a view towards systematically publishing all tender documents and receiving bids online at all levels of government, and abandoning the current practice of providing a reference price in the tender documentation for goods and services or for public works. Improvements in this area are not only relevant for strengthening competition, but also for reducing the scope for corruption and collusion in public procurement. Recent years have shed light on many corruption and collusion cases in the context of procurement by state-owned enterprises, with overcharging and kick-backs to politicians partly made possible by the lack of transparency and competition in the procurement process, including renegotiations after the initial bidding process (Campos et al., 2019[28]).

Figure 2.8. Distortions induced by state involvement are high



Note: Averages include only OECD countries. Information refers to laws and regulation in force on 1 January 2018.
Source: OECD Product Market Indicators 2018.

StatLink https://doi.org/10.1787/888934196993

In the area of public ownership, Brazil scores about average with respect to the scope of state-owned enterprises (SOEs), but displays significant weaknesses with respect to SOE governance. Improvements in this area could enhance the efficiency of state-owned enterprises and level the playing field between

privately and publicly owned firms. Progress has been made in the transparency of procurement by SOEs, which are now required to publish all procurement processes on their respective website.

Brazil has 133 directly and indirectly owned SOEs across a wide range of activities, with a total net worth of 9.5% of GDP and almost half a million employees. This about lower mid-range when compared to OECD economies, some of which maintain sizeable SOE sectors (OECD, 2018[29]). 22 of Brazil's SOEs have negative net worth, including several member firms of the Electrobras Group, a utility company. Taken together, the sector's financial performance has improved from a deficit of almost 0.5% of GDP in 2015 to a surplus of 1% of GDP, although this improvement includes asset sales. A 2016 SOE law was a first step to harmonise and improve governance. For example, the law set minimum qualifications for SOE managers, which limited the scope for appointments made purely on political grounds.

More recently, the authorities have announced a privatisation package. During 2019, some subsidiaries of SOES were privatised and BNDESPar, the private equity arm of the national development bank BNDES, reduced its participation in several companies. Further privatisations of smaller SOEs are planned, but the political consensus for privatising key public enterprises such as large public banks, which would require congressional approval, appears limited.

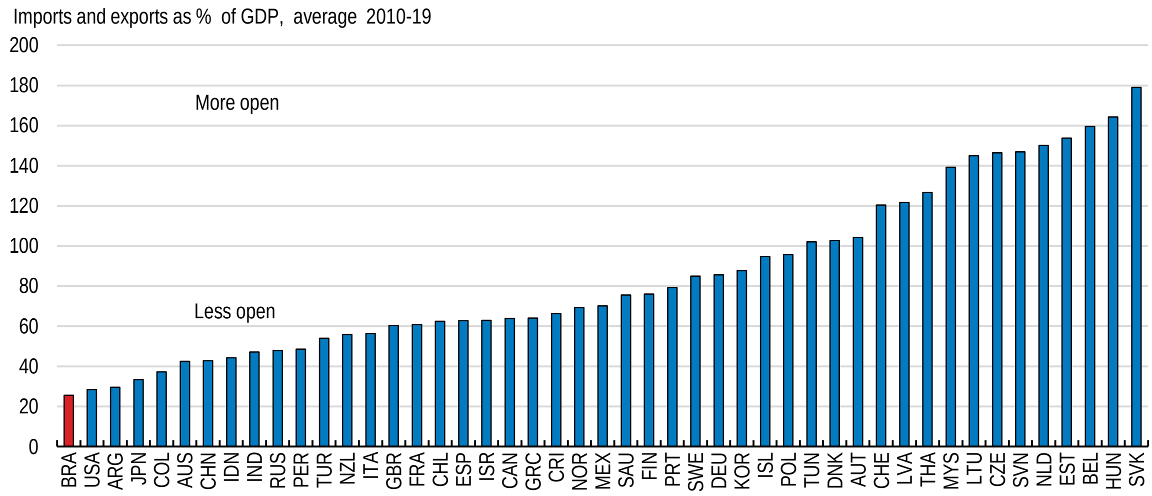
While privatisations generate one-off revenues that can help improve fiscal accounts, the cost-benefit analysis applied to each potential privatisation case should look beyond these short-term effects and instead strive for finding the most effective arrangement to improve governance and raise efficiency. Public sector operation may have disadvantages in some cases as Brazil's public enterprises are bound by stringent budget rules and lack the flexibility to adapt to changing market conditions that private companies could have. Moreover, while the scope for political appointments has been reduced by the new SOE law, management quality and governance is likely still weaker than in the private sector. At the state level, political parties have maintained strong influence over local SOEs. For those companies likely to remain under public ownership, the OECD Guidelines on Corporate Governance of State-Owned Enterprises (OECD, 2015[30]) can be a powerful tool to address governance challenges usually faced by state-owned enterprises.

Enhancing foreign competition by fostering the trade integration

Strengthening competitive pressures from abroad provides a powerful way to raise competition. With exports and imports below 30% of GDP, the economy is significantly less integrated into international trade than other emerging market economies of similar size (Figure 2.9). Brazilian companies have also shown only scant participation in global value chains, where Brazil's only discernible link is with neighbouring Argentina (Criscuolo and Timmis, 2018[31]). In Latin America, Mexico, Chile and Costa Rica exemplify how trade and the integration in global value chains can contribute to economic growth (OECD, 2017[32]).

External competition is hampered by trade barriers of various forms. Average tariff levels weighted by imports are almost twice as high as in neighbouring Colombia and more than 8 times higher than in Mexico or Chile (Figure 2.10). Brazil's most frequently applied tariff rate is 14%, while around 450 tariff lines are at the maximum of 35%, including textiles, apparel and leather and motor vehicles. Brazil is the country with the highest number of tariff lines above 10%. In addition to tariffs, various forms of non-tariff barriers including local content requirements are adding to the protection of domestic producers and model simulations suggest that they are at the root of significant reductions in imports and exports (Stone, Messent and Flaig, 2015[33]).

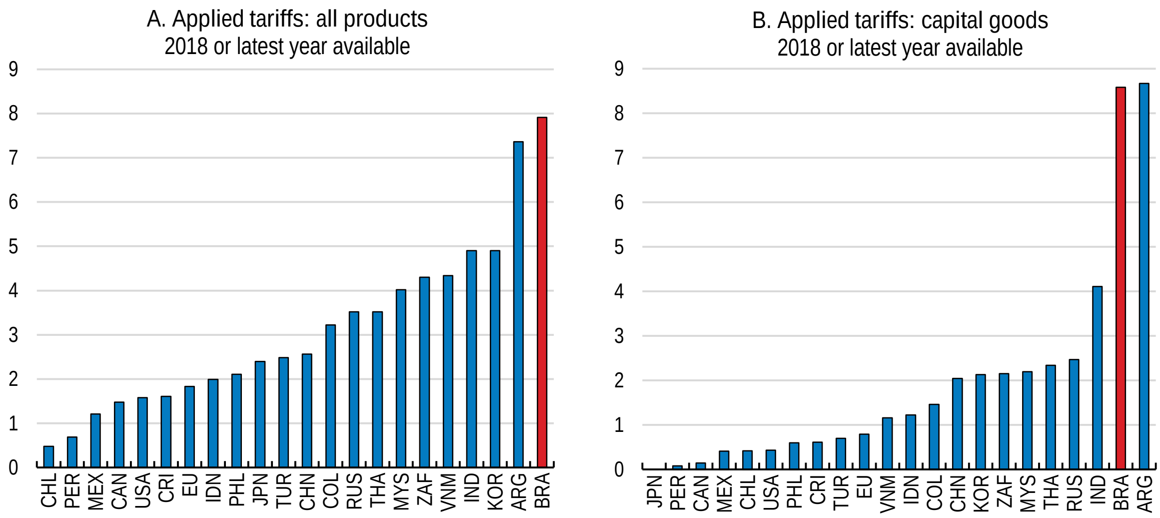
Figure 2.9. The economy has little exposure to foreign trade



Source: OECD Economic Outlook database.

StatLink https://doi.org/10.1787/888934197012

Figure 2.10. Tariff barriers are high, including for capital goods



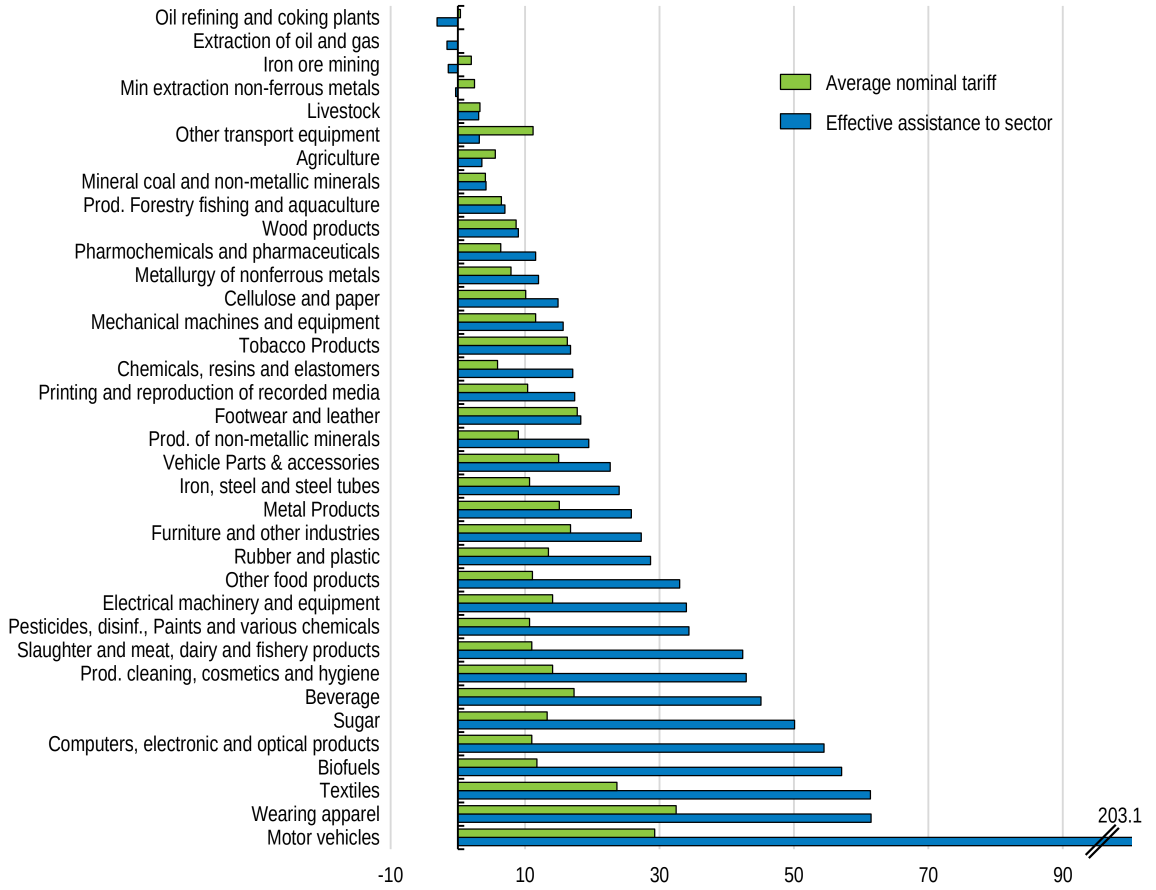
Source: World Integrated Trade Solution database (WITS).

StatLink https://doi.org/10.1787/888934197031

These trade barriers imply that many sectors are cushioned from the forces of external competition, and opening up would probably be the most effective way to boost competition. The high trade barriers preclude Brazil from many of the benefits of an increasingly integrated global economy. Both consumers and companies purchasing intermediate or capital goods are paying markedly higher prices than in other countries. Trade barriers on capital goods tend to be even higher than average tariffs and Brazilian firms use the least of imported inputs among Latin American and emerging market economies, which contributes to low productivity at the firm level (Brambilla, Depetris Chauvin and Porto, 2017[34]). Reducing import barriers would also support Brazil's export performance which has declined by almost 25% over the past 15 years, while Mexico's export performance has increased by 25%.

Protection also has distributional consequences, as it transfers significant resources from consumers to domestic producers. Estimates of effective assistance suggest protection levels above 20% for 17 sectors, peaking above 200% in the case of the automobile sector (Figure 2.11). Effective protection levels estimate the amount of resources that society transfers to a given sector as a result of the wedge between domestic and world prices.

Figure 2.11. Many sectors are enjoying high levels of protection



Note: Effective protection measures final goods tariffs net of input tariffs, relative to the hypothetical sector value added without protection.
Source: Oliveira et al. (2018).

StatLink https://doi.org/10.1787/888934197050

Stronger integration would boost competition, productivity and lower consumer prices

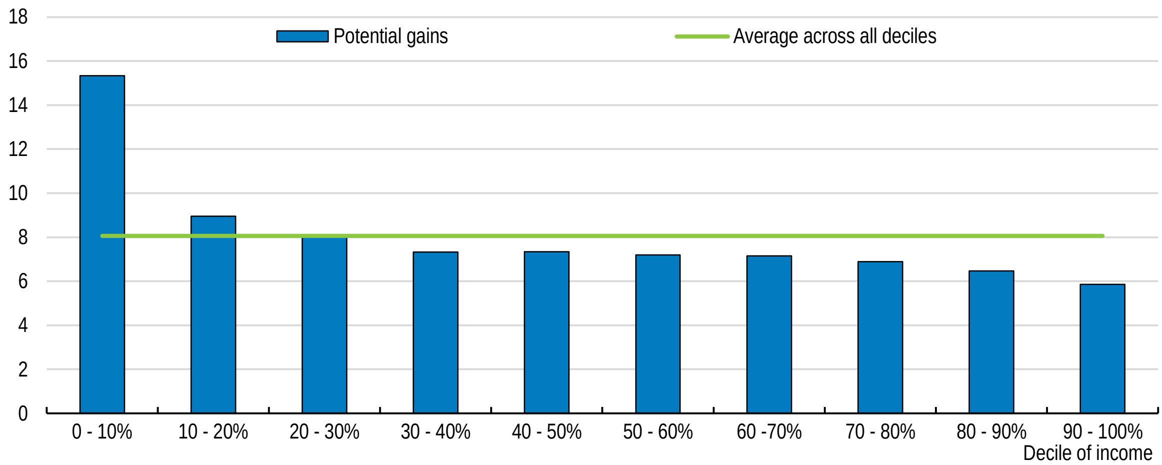
The most evident and immediate effects of lower trade barriers would be falling import prices for consumers and firms in downstream sectors. Partial equilibrium estimates suggest that Brazilian consumers could see their purchasing power increase by 8% without tariff barriers (Figure 2.12). Moreover, these benefits are highly progressive as lower income households spend larger shares of their incomes on tradable goods such as food, home appliances, furniture and clothing. A detailed analysis of reducing trade protection, taking into account differences in the consumption basket across households, suggests that the lowest-income decile could gain as much as 15% in terms of additional purchasing power, compared to 6% for the top decile (OECD, 2018[35]). Lower prices from trade could lift as many as 6 million Brazilians out of

poverty (Dutz, 2018[1]). Lowering tariffs would not result in significant tax losses as they currently amount to around 0.5% of GDP and the productivity effects of better integration would likely lead to an expansion of activity and additional tax revenues.

Firms would simultaneously gain improved access to intermediate and capital inputs, and they would be more exposed to external competition. This would induce them to upgrade products and processes and reduce slack and economic rents. Just like in the case of stronger domestic competition, it would also allow high-performing firms to grow on the expense of less productive ones. This reallocation process towards stronger sectors or firms would allow new and better-paying jobs to be created there, raising aggregate productivity (Criscuolo, Gal and Menon, 2014[36]).

Figure 2.12. The potential consumer benefits from lower trade barriers are highly progressive

Potential gains in purchasing power by deciles of income distribution (in %)



Source: OECD Economic Survey of Brazil 2018, Chapter 2 (OECD, 2018[35]).

StatLink https://doi.org/10.1787/888934197069

A stronger integration into the global economy would bring sizeable benefits that are widely spread across the population. Firms that seize newly arising export opportunities will expand and hire new workers. As Brazilian exporters pay 51% higher wages than non-exporters and employ more formal labour, these jobs are likely to be of higher quality (Brambilla, Depetris Chauvin and Porto, 2017[34]). Evidence also suggests that previous reductions in trade protection were associated with an increase in female employment (Gaddis and Pieters, 2012[37]). This is in line with international evidence suggesting that women benefit particularly from job opportunities arising in the context of stronger integration (UNCTAD, 2009[38]).

However, embracing international trade is likely to general transition costs, for which policies should prepare. For some workers, job reallocations will involve the need to search for a new job, and temporary income losses. There may also be temporary employment losses in specific sectors and regions. This is a significant challenge, but accompanying policies such as professional training and vocational education can go a long way to mitigate the transition costs and lead to substantially better outcomes for all. This issue is the topic of Chapter 3 of this Economic Survey.

Policy options for strengthening integration

Defining a concrete policy agenda for integration requires thinking about the right sequencing and the role of international trade negotiations. On the former, it is tempting to argue that domestic policy reforms to

strengthen the competitiveness of Brazilian companies should precede stronger integration. Despite ample scope for improvements, in practice this argument is likely to block any progress in the nearer term. Given the low growth prospects in the absence of structural reforms, Brazil cannot afford to hold its breath for a political consensus to arise on all domestic reform agendas.

Integration can combine a variety of instruments, including bilateral negotiations and unilateral action. Brazil is a member of the MERCOSUL customs union, which has helped to strengthen trade linkages with other members of the trade bloc, in particular Argentina. At the same time, Mercosul's common external tariffs, for which a reform is currently being negotiated among MERCOSUL members, remain high. Beyond Mercosul members, the exchange of goods and services with the rest of the region is weak (IMF, 2017[39]). Regional integration could be supported by negotiations with the Pacific Alliance or Mexico, although for integration within South America, improvements in infrastructure could even have stronger effects that reducing already relatively low trade barriers. A significant boost in competition and access to intermediate goods, however, is more likely to result from tighter integration with large foreign markets. The most immediate effect could come from the implementation of the recently negotiated trade agreement between Mercosul and the European Union/EFTA, the conclusion of which was an important achievement. But other agreements with large advanced markets would also help. At present, Brazil has bilateral agreements with only about 10% of global GDP, while Peru and Chile have trade agreements covering about 70-80% of global GDP. Bilateral negotiations with Canada, Singapore, South Korea and the United States have been taken up.

At the same time, the sometimes glacial and uncertain pace of progress on large trade agreements suggests to make simultaneous progress on unilateral reductions of trade barriers. Many Asian countries pursued a strategy of liberalising unilaterally in addition to regional and bilateral agreements, with tariffs often reduced for the purpose of attracting investment (Baldwin, 2006[40]). This underlines the case for advances according to a gradual, pre-announced schedule on both tariffs and non-tariff barriers. Pre-announced policy changes give domestic companies time to adapt and can help to create momentum for domestic reforms. Ongoing efforts to improve the business environment will undoubtedly help in the transition to a more open economy.

One area where more scope for foreign market entry could have an impact on logistics costs is cabotage, i.e. the shipment of goods by sea between domestic ports. Currently, cabotage is mostly used for shipping mineral oils and metal ores, especially to servicing off-shore oil platforms. Given that the bulk of Brazil's population lives close to the coast and distances are large, cabotage could be a cost-efficient and low-emission means of transporting many goods across large distances. One 6000-ton ship can replace 172 trucks and reduce CO2 emissions per ton of goods by as much as 20 times (SAE, 2018[41]). A general prohibition of foreign shipping companies in cabotage shipments restricts competition severely, as the domestic supply of shipping services is highly concentrated. Low quality of port infrastructure and high bureaucratic requirements add to these challenges (SAE, 2018[41]).

Brazil can build on recent progress on unilateral reductions of trade barriers. Several tariff lines have recently been reduced unilaterally, including in the chemicals sector. The scope of tariff exemptions for capital goods has been extended by applying a narrower definition of the availability of domestic equivalents, which rules out these tariff exemptions. In addition, rules for foreign entry in air transportation and banking, as well as import licensing requirements, have been eased in 2018, 2019 and 2020. In 2020, the removal of non-automatic licensing has affected imports worth USD 5.6 billion. This has resulted in a significant decline of the OECD Services-Trade Restrictiveness Indicator (STRI) for air transportation. A single window (Portal Unico) has reduced import and export delays. Moreover, Brazil is in the process of acceding the WTO agreement on Government Procurement.

The structure of financial intermediation is improving

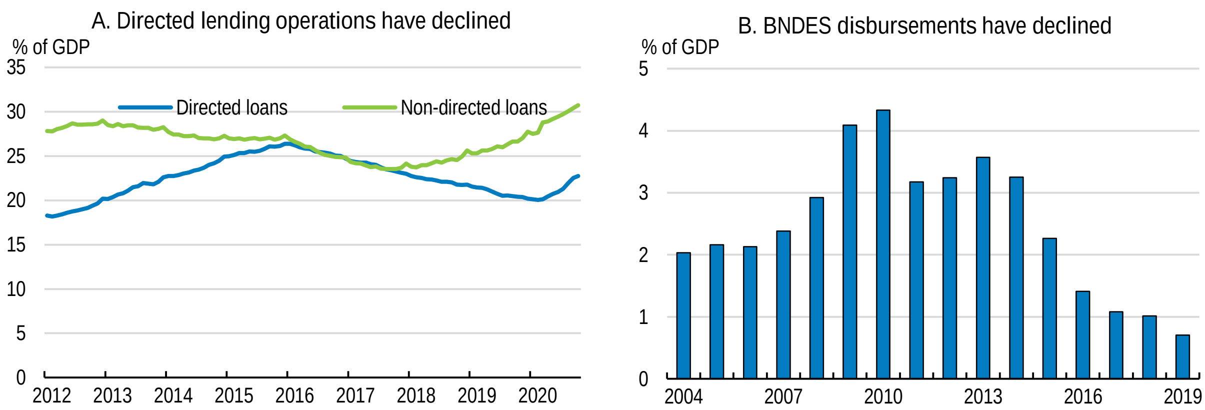
Financial markets and the resulting allocation of credit and capital can also be a significant source of allocative inefficiencies, with negative effects on productivity. Evidence suggests that Brazil's formerly large directed lending volumes and the sizeable associated credit subsidies benefitted mostly larger, older and less risky firms, and did not lead to increased investment or performance (Lage de Sousa and Ottaviano, 2018[42]; Pazarbasioglu-Dutz et al., 2017[43]). Directed lending also led to an unequal allocation of subsidies across sectors.

Following a financial market reform that aligned the benchmark interest rate for directed credit with market rates, financial markets are now going through a remarkable transformation. Directed lending is now playing a lesser role, after being on par with market credit for much of 2016 and 2017 (Figure 2.13). In particular, disbursements of distortive directed credit by the national development bank BNDES have declined visibly. The reform also starkly diminished interest subsidies, which had peaked at 2% of GDP in 2015. These developments have facilitated a structural decline in interest rates and reduced financing costs for the economy.

Fading interest subsidies are also gradually levelling the playing field between public and private lenders, thus facilitating the development of private long-term credit markets. Public banks had been used to expand credit in the past and accounted for the majority of credit up until 2019, when rising private credit started to exceed public lending.

Private banks are still struggling to lend at the maturities required to finance capital investment. Average loan maturities for non-directed credit are around 2 years for corporate borrowers. One reason for short maturities is the absence of longer-term funding options for banks, but structurally lower interest rates are likely to push investors previously pampered with high-yielding liquid assets into sharing more risks and longer maturities. At present, long-term investment credit beyond 3 years is still almost exclusively provided through directed lending operations, in particular by the national development bank BNDES. For the largest firms, bond financing has become an increasingly accessible option to finance investment, but smaller firms are likely to remain dependent on banks for some time. An in-depth assessment should be undertaken in due course to determine if further policy action is needed to develop private long-term credit markets.

Figure 2.13. Financial markets are changing



Source: CEIC, BCB, BNDES.

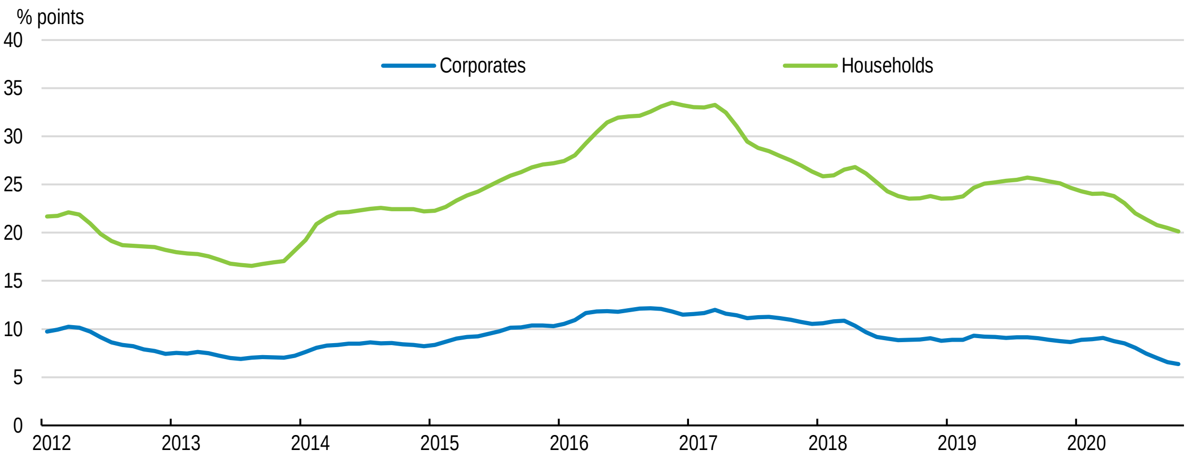
StatLink https://doi.org/10.1787/888934197088

Smaller directed lending programmes for housing and rural finance continue to contain interest subsidies and should be subjected to a thorough analysis regarding their effectiveness and distributional impact (World Bank, 2018[44]). At a minimum, the rural credit programme could be harnessed better to strengthen compliance incentives with environmental regulations, such as the 2012 Forest Code that limits deforestation (see Chapter 1). Reducing subsidies in directed lending programmes that fail to reach legitimate policy objectives could reduce distortions and cross-subsidies in financial markets, potentially allowing further reductions in the neutral interest rate.

The next step in improving financing conditions is to reduce lending spreads, which remain high and reflect, among other things, limited competition in financial markets (Figure 2.14). Lower lending spreads in non-directed lending have been associated with higher employment and output in Brazil (Joaquim and van Doornik, 2019[45]). Strengthening competition in financial markets has rightly become an active part of the Central Bank's policy agenda. This also includes open banking and competition from innovative entrants including FinTech and BigTech companies, and this agenda should be pursued without unnecessary delays. A previously required presidential decree for new foreign bank entry has been abolished and competition between different kinds of providers and business models is fostered through open banking and interoperability requirements. The authorities also improved access to credit histories through a new shared credit registry containing positive payment information. In addition, rates for overdraft facilities, a small segment where competition was particularly limited and rates exceeded 300%, have been capped at 150%. Similar caps on debit card fees applied to merchants are likely to foster the use of bank services and could potentially bring more transactions into the formal sector. Continued policy action on strengthening competition in financial markets would be welcome.

Improving insolvency procedures and reducing judicial uncertainty would have the potential to reduce lending spreads further. Recovery rates on distressed loans are below the regional average as insolvencies are often protracted and creditor rights are weakened by judicial decisions that question the original terms of contracts (Guimaraes and Salama, 2017[46]; Salama, 2016[47]; Arida, Bacha and Lara-Resende, 2005[48]). A new draft insolvency law has been submitted to Congress, which contains a number of improvements, such as more scope for extrajudicial arrangements to speed up insolvency procedures, the possibility of obtaining new financing during the stay on assets and lower requirements for a "fresh start" of entrepreneurs.

Figure 2.14. Lending spreads remain high



Note: Data are presented as 3-month moving averages.
Source: BCB.

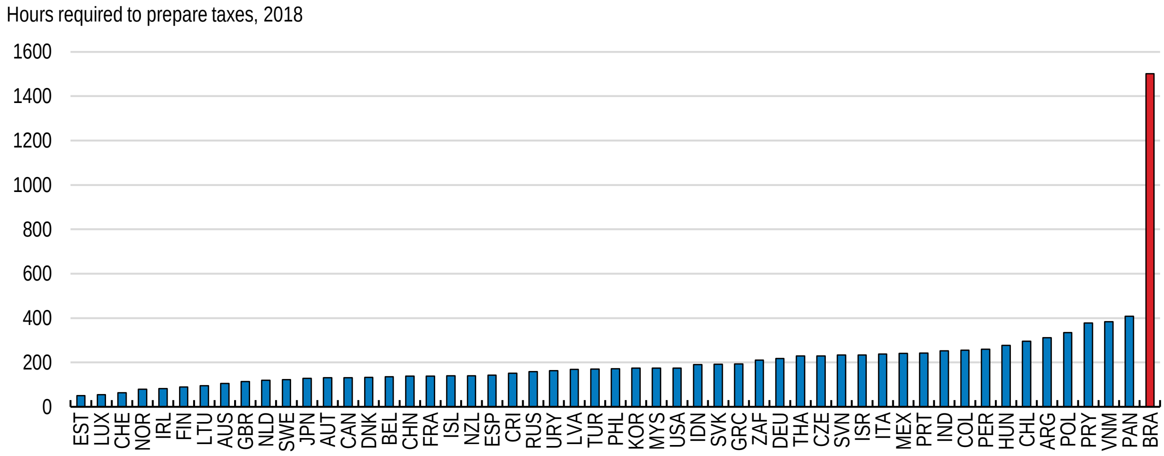
StatLink https://doi.org/10.1787/888934197107

Simplifying taxes and reducing compliance costs

The complex nature of Brazil's tax system reduces productivity through high compliance costs for firms, which command resources that could be used more productively in other activities. According to the Doing Business indicators assembled by the World Bank, Brazil is one of the countries with the highest tax compliance costs. A benchmark firm requires 1500 hours to pay taxes, as opposed to 317 in the average Latin American country or 159 in the average OECD country (Figure 2.15). This requires companies to maintain huge tax departments, adding substantially to fixed costs. Estimates suggest that aligning tax complexity with the OECD average could save Brazil's business sector up to 3.5% of GDP (Rittner, 2019[49]). Complex tax rules also distort incentives for productivity enhancements.

Scope for simplification exists primarily in the area of indirect taxation. Brazil has six different kinds of consumption taxes, which generate around half of public revenues. The largest of these called ICMS raises revenues of around 8% of GDP. It is levied by Brazil's states and each state applies its own tax code, tax base and tax rates. Brazil applies a mixture of the origin and destination principles to interstate commerce and companies wishing to sell goods and services nationwide are required to comply with 27 individual tax codes.

Figure 2.15. Tax compliance is extremely cumbersome



Source: World Bank Doing Business 2020.

StatLink https://doi.org/10.1787/888934197126

ICMS is quite distant from the usual "neutrality" of a well-designed VAT and generates significant distortions. Tax credits for consumption taxes paid on inputs are granted only for inputs embodied in the final good sold. This rules out tax credits for consumption taxes paid on overhead expenses and in particular fixed assets, raising the cost of capital. It also requires companies to prove that every input for which they claim a credit goes directly into the final product. A practical example is that industrial companies often hire tax accountants to identify how their electricity consumption is divided between the part that powers the machines and the part that lights the companies' offices, with the former being deductible and the latter not. These common situations give rise to excessive litigation, which consumes resources that could be employed more productively. Obtaining a tax credit for interstate transactions is even more cumbersome, and these are regularly delayed or refused.

Another large consumption tax is a set of federal "contributions", including those known as PIS/Pasep, and Cofins, with joint revenues of 7.5% of GDP. These apply the same partial deduction of intermediate inputs and are often applied on top of ICMS, thus making the two taxes cumulative.

Consumption tax burdens are also far from uniform across sectors. Most services are not subject to the above-mentioned consumption taxes, but instead subject to a municipal service tax called ISS, with lower tax rates but no credit for inputs at all. This results in a generally lower tax burden on most services, but creates disincentives to source intermediate inputs from potentially more productive external providers. As high-income households typically consume disproportionately more services, the lower tax burden on services also makes consumption taxes less progressive.

Another special federal tax called CIDE has been levied on select goods and services, most notably on imports of services and financial transactions including remittances abroad. CIDE contributes to the very high taxation of imported services, with effective tax rates often approaching 50% (PNST, 2018[50]). This is not only a very high tax burden but also a barrier to competition and precludes Brazilian companies from the competitive advantages stemming from imported tradeable services.

Addressing the productivity losses resulting from taxes requires a comprehensive reform of indirect taxes. One reasonable possibility that is currently discussed in Congress would be to consolidate the different consumption taxes into one value-added tax with simple rules, a broad base, full refund for input VAT paid and zero-rating for exports. This would reduce distortions and the scope for litigation at the same time. The tax rate should be as uniform as possible, applying if possible a single rate across all consumption, with no exemptions, reduced rates or special regimes. As a first step, a draft bill to unify two federal consumption taxes and enhance the deductibility of taxes paid on inputs has been submitted to Congress.

The progressivity of taxing consumption could be enhanced by devolving taxes paid to poor households registered for the Bolsa Família benefit, which would be significantly more progressive than applying lower rates on basic items that are also consumed by high-income households. Current tax exemptions for basic items do not have a particularly progressive footprint (SUASU/SECAP, 2019[51]).

If necessary, it is possible to accommodate the desire for individual states to tax consumption at different rates, once taxation strictly follows the destination principle and tax credits are refunded swiftly for interstate transactions. Such a system is applied in the European Union, for example, where different member states apply different tax rates but consumers are normally subject to VAT in the destination country. Tax collection could be centralised, with automatic redistribution of revenues to states and municipalities (which currently levy consumption taxes on services). In addition, a specific excise tax could be introduced on tobacco, alcohol and fuels, to further regulatory and health objectives, in addition to raising revenue.

Discussions to harmonise the state-level ICMS have been going on for years, but the challenge is to find a political consensus among the states, some of which are threatened by revenue shortfalls from a rationalisation of the system as they effectively tax consumption taking place in other states. Moving towards a destination principle would make this impossible. To address these concerns, a reasonable proposal has been elaborated and discussed in Congress (Centro de Cidadania Fiscal, 2019[52]). This proposal would guarantee current state revenues for a period of 20 years, adjusted for inflation, followed by a gradual transition towards the destination principle thereafter. The substitution of current consumption taxes by a single VAT with the same definition of the tax base would be phased in over a period of 10 years. Given the enormous distortions that the current tax system imposes on economic activity and the growth effects that could be unleashed by reform, reasonable simulations suggest that such a careful transition would effectively ensure that no states would face revenue losses (Centro de Cidadania Fiscal, 2019[52]). While tax reforms involving different levels of government tend to be politically difficult everywhere, India has recently managed to unify state-level consumption taxes, including with a shorter transition period of 5 years (Box 2.3).

In the area of corporate taxes, transfer pricing rules for affiliates of multinational enterprises differ substantially from those applied in OECD countries, but an ongoing project between the OECD and Brazil's tax authorities is reviewing the differences and exploring options for Brazil to converge with the OECD transfer pricing standard (OECD and Receita Federal do Brasil, 2019[53]).

Box 2.2. Tax reform in India

India successfully implemented a tax reform in 2017 and established a national value added tax, called the Goods and Services Tax (GST). The GST replaced about 30 different taxes previously levied by the central, state and local governments. The GST harmonised tax rates across the country for any given good and eliminated interstate trade barriers, which are also an issue in Brazil. In addition, the GST created incentives for formalisation and compliance, as purchasers of intermediate inputs have an interest in those inputs being tax compliant. Achieving consensus across states was politically difficult, just as it is in Brazil today, but concerns about revenue shortfalls were addressed by a central government guarantee that state revenues would grow at 14% a year over 5 years. A compensation fund was created to compensate states for lower revenues. Governance of the tax was delegated to a council of Ministers of Finance by all states and the Union, similar to Brazil's Confaz (Conselho Nacional de Política Fazendária). Decisions by the council require a 75% majority, not unanimity, although de facto, all states ended up adopting a collaborative stance and all decisions have so far been taken unanimously. One cost of building consensus was to keep a few items out of the GST, including petrol, alcohol, real estate and electricity. An appealing feature of the GST for state governments was its potential to reduce tax evasion by matching invoices and applying advanced data techniques to identify compliance gaps, which would have been out of reach for most individual states.

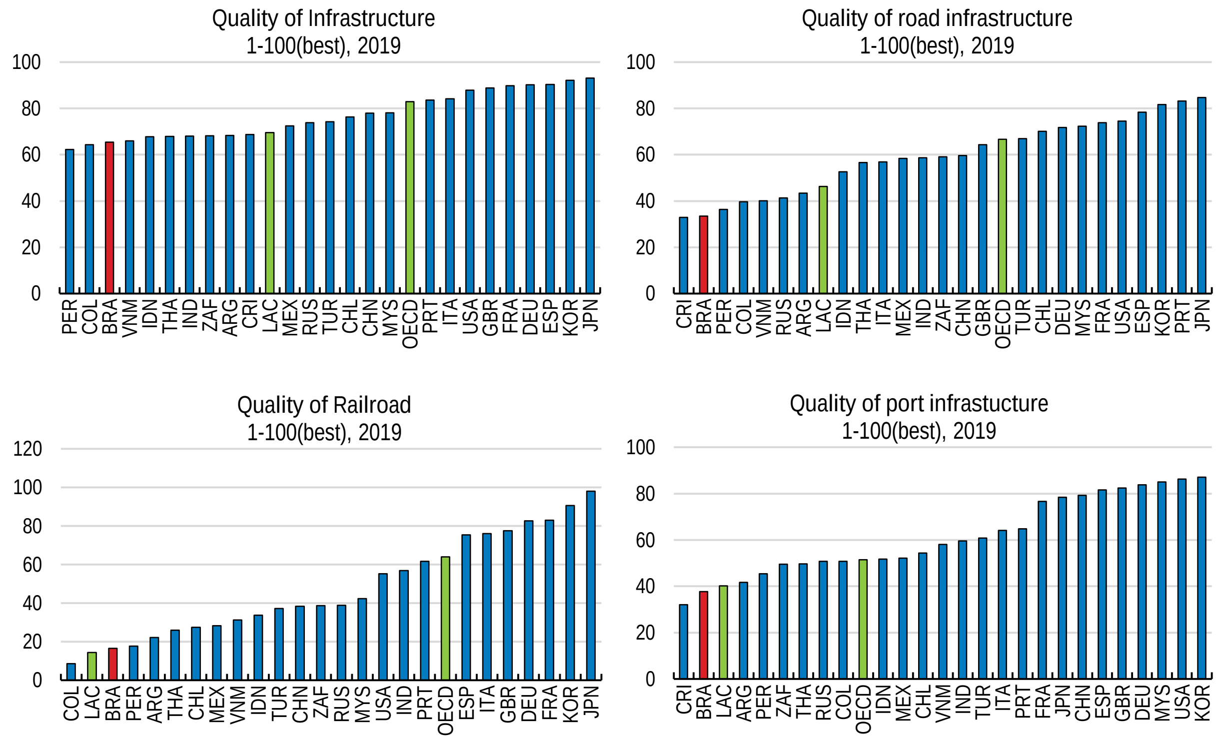
Source: (OECD, 2017[54]).

Addressing infrastructure bottlenecks

Infrastructure bottlenecks are acting as a drag on productivity, export performance and the integration of the domestic market. Infrastructure quality lags behind in several sectors (Figure 2.16). This reflects low infrastructure investments of only 1.8% of GDP, below the 2.3% attained in 2010, and less than half of estimated investment needs (Inter.B). Estimates suggest that infrastructure investment has fallen short of depreciation over 2016 to 2019, with some mild improvements as of 2020 (de Castro Souza Júnior and Moraes Cornelio, 2020[55]). In particular, Brazilian companies suffer from high costs of transport and logistics resulting from severe infrastructure bottlenecks. For domestically oriented producers, infrastructure shortcomings limit the possibilities to exploit economies of scale, while exporters are put at a comparative disadvantage vis-à-vis foreign competitors.

Public investment has become severely constraint by a lack of fiscal space, and –as part of discretionary spending- has often borne the burden of fiscal adjustment in the face of rigid mandatory spending items (see Chapter 1). Until these rigidities can be resolved, tapping further into private infrastructure financing, which already accounts for a large share, will become increasingly important. Brazil has 30 years of experience using private concessions, for example in the road sector. Significant scope exists for expanding the scope for private participation in infrastructure finance, as discussed in Chapter 1 of the 2018 OECD Economic Survey of Brazil. As discussed there, this may imply addressing constraints that go beyond financing, including improvements in the structuring of projects and tender calls, and addressing regulatory risks (OECD, 2018[35]). The Federal Government's Investment Partnership Program (PPI), created in 2016, has helped to attract private investments to priority projects in ever more infrastructure sectors. Thus far, 184 projects have been completed, worth an estimated BRL 709 billion of investments to Brazil, while the current portfolio comprises another 203 initiatives with projected investments worth BRL 600 billion. Moreover, the recently approved new legal framework for investments in sanitation is expected to attract more investment into that sector.

Figure 2.16. Infrastructure quality is low



Source: World Economic Forum, Global Competitiveness Indicator database.

StatLink https://doi.org/10.1787/888934197145

Improving judicial efficiency

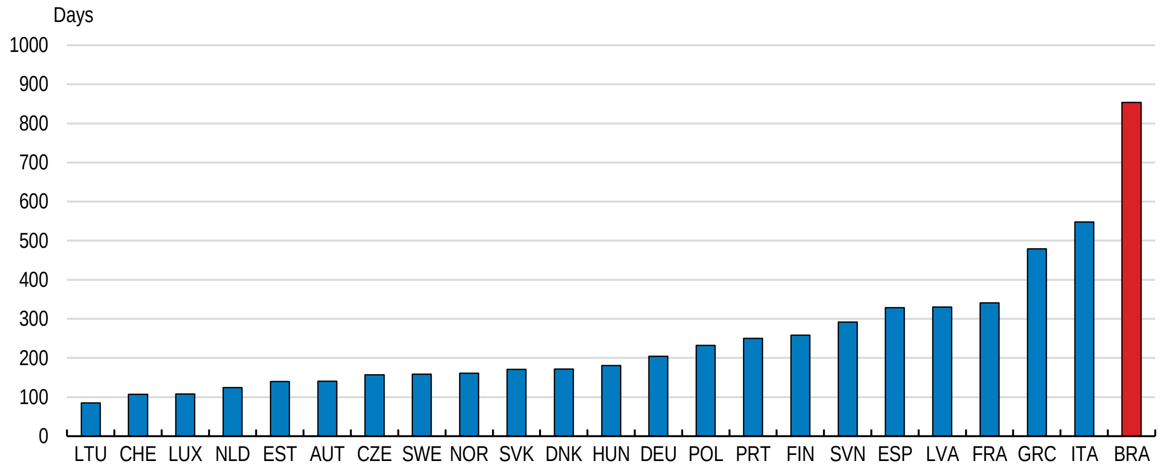
Reducing trial length and judicial uncertainty are key to boost business activity

A well-functioning justice system is fundamental for business activity and productivity. Institutions that ensure property rights and their enforcement are the basis for market-transactions and one of the main determinants of economic development (Acemoglu, Johnson and Robinson, 2005[56]). Hence, an effective justice system is a necessary complement to good legal and regulatory frameworks, as it enforces their implementation. Beyond that, society more widely relies on the effectiveness of the justice system to protect individual rights and to resolve social conflicts. An effective justice system is characterised by efficiency, fairness, and a high quality of judicial decisions.

Trial length shows particularly strong links to economic growth, according to cross-country comparisons using an indicator of judicial efficiency developed at the OECD (Palumbo et al., 2013[57]). The average time needed to resolve civil and commercial cases is high in Brazil compared to OECD countries (Figure 2.17). Lengthy trials are costly, weaken the enforceability of contracts and distort market transactions and investment decisions. In addition, the predictability of judicial decisions and the accessibility of judicial services are also essential for business activity. However, the latter two are strongly related to trial length as the capacity constraints of courts associated with longer trials reduce access to judicial services and the quality of judicial decisions. This can generate feedback loops where the low quality of judicial decisions at lower court levels induces appeal procedures that further contribute to court congestion and longer trials.

Figure 2.17. The time to enforce contracts is high

Average time needed to resolve civil and commercial cases, first instance courts, 2018 or the latest year available



Source: CNJ (2019), Justiça em Números; CEPEJ (2019), The 2019 EU Justice Scoreboard, European Commission.

StatLink https://doi.org/10.1787/888934197164

Moreover, Brazilian firms face difficulties in contract enforcement due to the significant discretionary power of judges and large heterogeneity in judicial decisions, which translate into high legal uncertainty for firms and create disincentives for investment (Dutz, 2018[1]). Young and small firms are particularly vulnerable to weak contract enforcement, as they tend to be less diversified and do not have the financial resources to cope with late payments or default of clients and related lengthy trials to recover collateral (Intrum, 2018[58]).

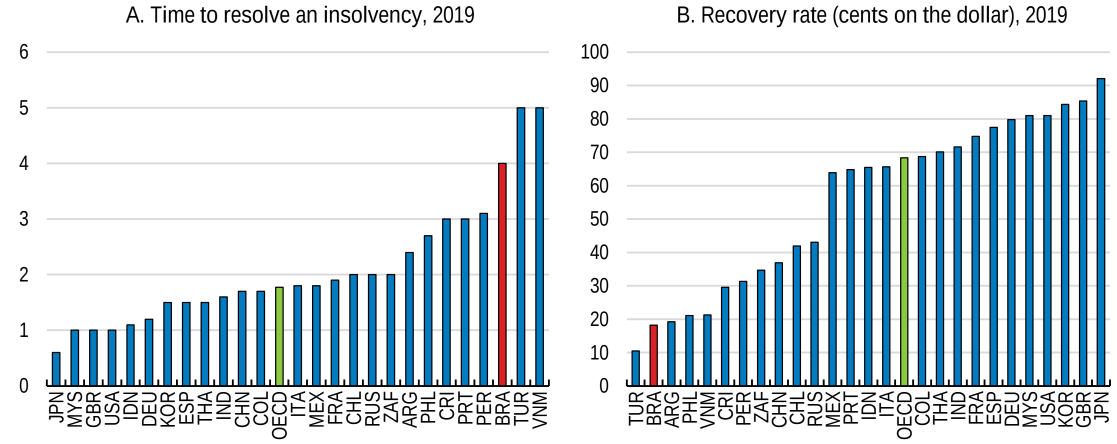
Efficient insolvency procedures play a crucial role to boost investment and productivity, as they facilitate the reallocation of capital and labour to young and innovative firms (Adalet McGowan, Andrews and Millot, 2017[59]; Adalet McGowan and Andrews, 2016[60]). By ensuring timely recovery of collateral, they positively affect bank lending and its conditions and increase access to finance for young and innovative firms (Bae and Goyal, 2009[61]; Djankov et al., 2008[62]; Bergthaler et al., 2015[63]). Moreover, they can facilitate the restructuring of viable companies and boost entrepreneurship by providing second chance opportunities to entrepreneurs.

Brazil implemented a reform of its insolvency law in 2005, which strengthened creditor protection by providing higher priority for secured creditors vis-à-vis workers and tax authorities. This reform showed strong positive effects and was particularly effective in alleviating credit constraints for high productivity firms (Arnold and Flach, 2017[64]). After the reform, better access to credit allowed these firms to thrive on the expense of others, improving the allocation of resources across firms and raising aggregate productivity. Despite this improvement, however, insolvency procedures continue to be less efficient and more costly than in OECD countries (Figure 2.18). A typical bankruptcy resolution takes 4 years in Brazil, compared to 1.8 years in OECD countries. Since assets of distressed companies tend to lose value quickly, Brazil's recovery rate on debt with insolvent companies is only 18 cents on the dollar, while it is 68 cents in OECD high-income countries (Figure 2.18). A new draft insolvency law has been submitted to Congress, which contains a number of improvements, such as more scope for extrajudicial arrangements to speed up insolvency procedures, the possibility of obtaining new financing during the stay on assets and lower requirements for a "fresh start" of entrepreneurs.

More effective contract enforcement and insolvency procedures would have potential to increase private lending to young and innovative firms. This would boost growth and employment creation in young firms

and contribute to improvements in productivity and real wages (Calvino, Criscuolo and Menon, 2016[65]). Simulations based on cross-country firm-level data suggest that reducing the time to resolve insolvency procedures in Brazil to the OECD average would raise employment growth in young firms by 31 percentage points to 97% in the first three years after market entry (Figure 2.19). Employment growth for incumbents could increase by 8 percentage points, to 17% over three years. Reducing the average time of enforcing a contract to the OECD average would also have significantly positive effects on employment growth in entering and incumbent firms.

Figure 2.18. Insolvencies are slow and recovery rates low

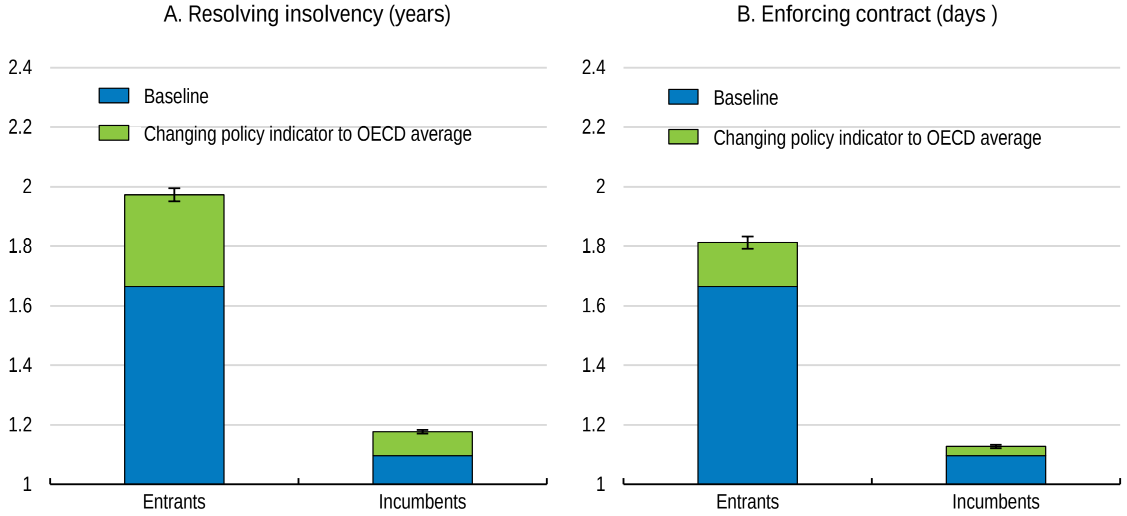


Source: World Bank (2019), Doing Business 2020: Reforming to Create Jobs, available at www.doingbusiness.org

StatLink https://doi.org/10.1787/888934197183

Figure 2.19. Higher judicial efficiency would boost employment growth particularly for young firms

Employment growth in entering and incumbent firms (final over initial employment ratio after three years)



Note: Employment growth is measured over 3 years for incumbents and surviving entrants. The green bars show the employment growth effects of changing the policy indicator for BRA to the OECD average based on estimates from (Calvino, Criscuolo and Menon, 2016[65]). The blue bars show the actual value. Dashed lines show 95% confidence intervals for the estimated counterfactual effect.
Source: OECD calculations based on (Calvino, Criscuolo and Menon, 2016[65]) and OECD DynEmp v.3 database.

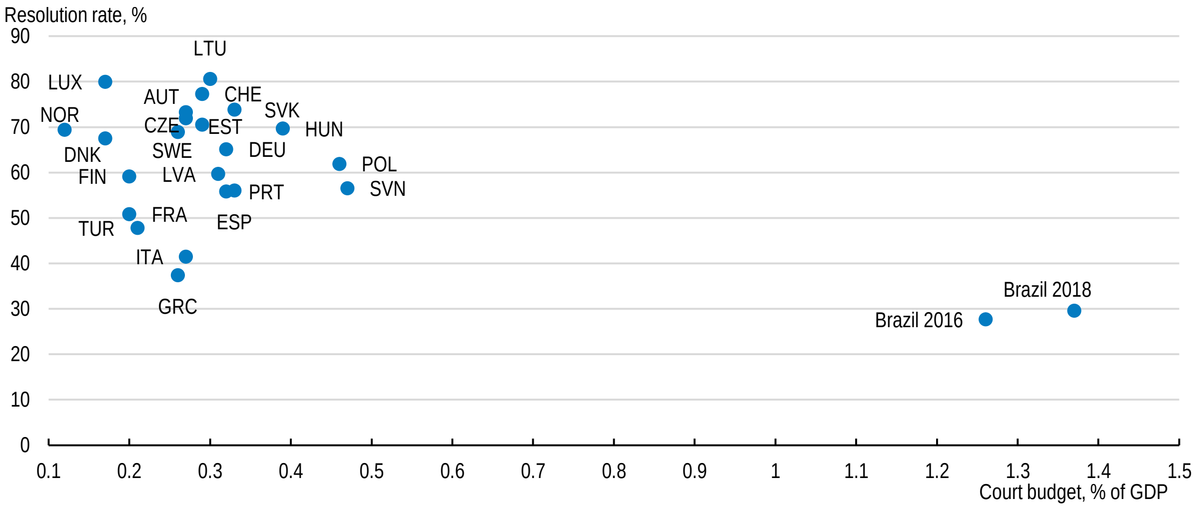
StatLink https://doi.org/10.1787/888934197202

Improving the organisation of courts

One factor behind difficulties in contract enforcement is the slow and uncertain case resolution by courts that suffer from case congestion and could be organised more effectively. Although Brazil spends more on its judiciary than other countries, case resolution in Brazilian courts is slow (Figure 2.20).

Figure 2.20. Spending for courts is high, but case resolution low

Resolution rate (in %) and total court budget (in % of GDP), 2018 or latest year available



Note: The resolution rate is the number of resolved cases in 2018 divided by the stock (pending cases end-2017 plus incoming cases in 2018).
Source: CEPEJ;CNJ, Justiça em Números 2018, Justiça em Números 2019; IBGE; BSPN, Tesouro Nacional.

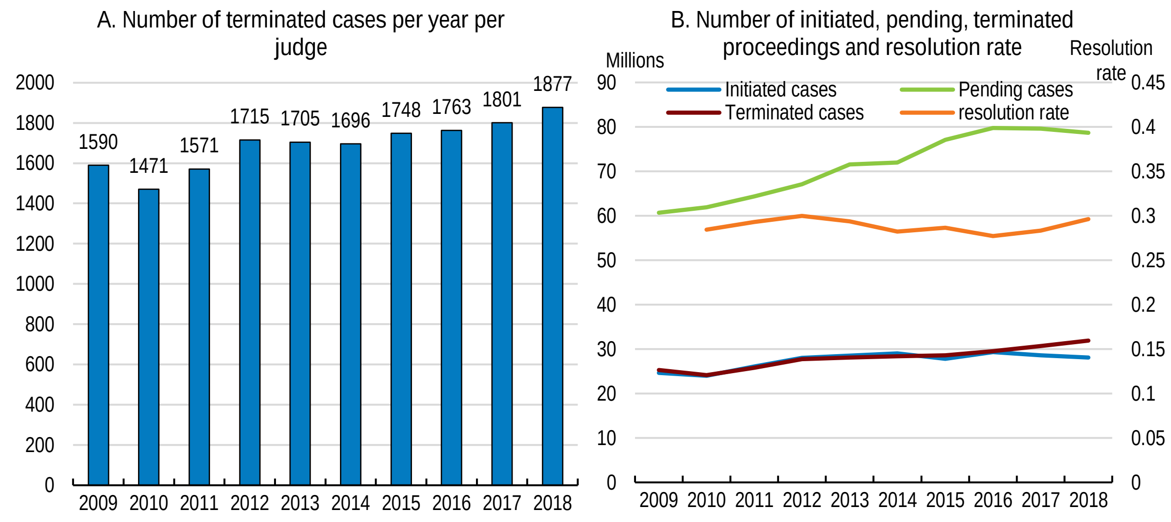
StatLink https://doi.org/10.1787/888934197221

International evidence suggests that common factors for slow case resolution include the structure of trial procedures and procedural formalism (Djankov et al., 2003[66]), an inefficient allocation of resources across courts (Palumbo et al., 2013[57]), and weak incentives for judges (Miceli and Coşgel, 1994[67]). OECD analysis has also identified additional factors favouring judicial efficiency, including the use of specialised commercial courts, which is underexploited in Brazil, and systems of court governance that assign greater managerial responsibilities to the chief judge (Palumbo et al., 2013[57]). In addition, the systematic use of information and communication technologies (ICT) for actively managing and controlling case-flow can improve internal procedures and resource allocation (Palumbo et al., 2013[57]).

Recent reforms in the organisation of Brazilian courts have laid the grounds for improvements in the productivity of judges and court congestion (Figure 2.21). A National Council of Justice (CNJ) was created in 2004 to improve the efficiency of the judiciary and strengthen its autonomy. In recent years, measures taken by the CNJ have considerably improved the supervision and administrative control of courts.

One achievement of the CNJ has been the introduction of ICT-based case-flow management, which has facilitated progress in streamlining court proceedings and collecting data on judge's workload and performance. Some court districts have used this information to better allocate resources across courts and define deliverables and timelines for judges. Moreover, the data collection system contributed to improving the transparency of the judicial system, allowing a yearly publication of statistics related to the judiciary (Lorenzon, 2017[68]; CNJ, 2019[69]).

Figure 2.21. Judicial performance indicators show incipient improvements

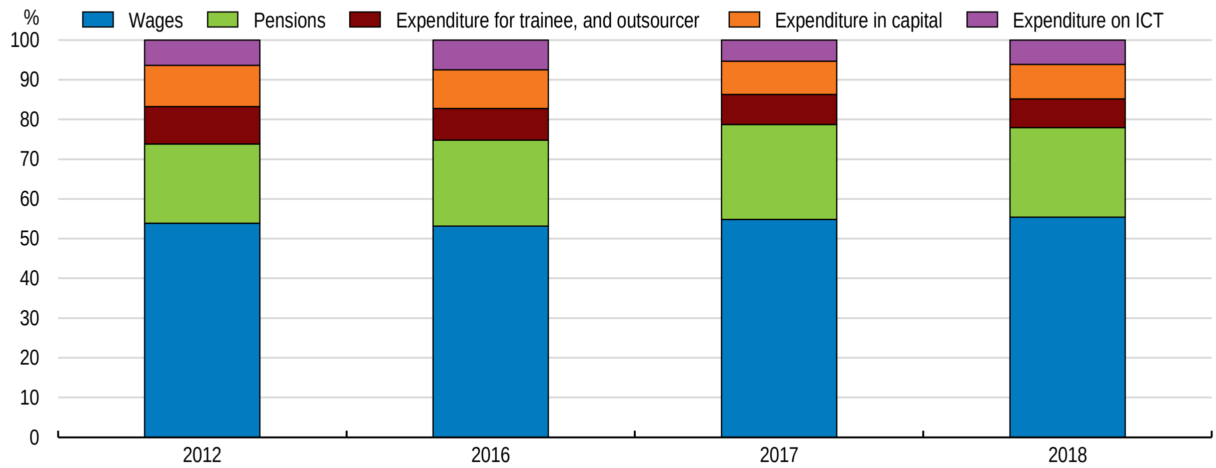


Source: CNJ (Justiça em Números). 2019.

StatLink https://doi.org/10.1787/888934197240

Looking ahead, there may be scope to invest more into effective ICT systems as the current system suffers from design issues complicating information processing for judges. This would require additional resources. In Brazil, staff expenditures are almost 80% of spending on the judiciary, and the share devoted to ICT has decreased in recent years (Figure 2.22). In OECD countries, the average budget share devoted to staff expenditure is 65% (CEPEJ, 2016[70]; Palumbo et al., 2013[57]). This suggests scope for reallocating resources from salaries to ICT and management systems, while streamlining court administration.

Figure 2.22. Investment in ICT infrastructure in the judiciary is low



Note: Expenditure on ICT represents payments for sub-contractors related to ICT. Wage payments include wages for employees working on strategic IT systems within the judiciary.
Source: CNJ 2019, Justiça em Números.

StatLink https://doi.org/10.1787/888934197259

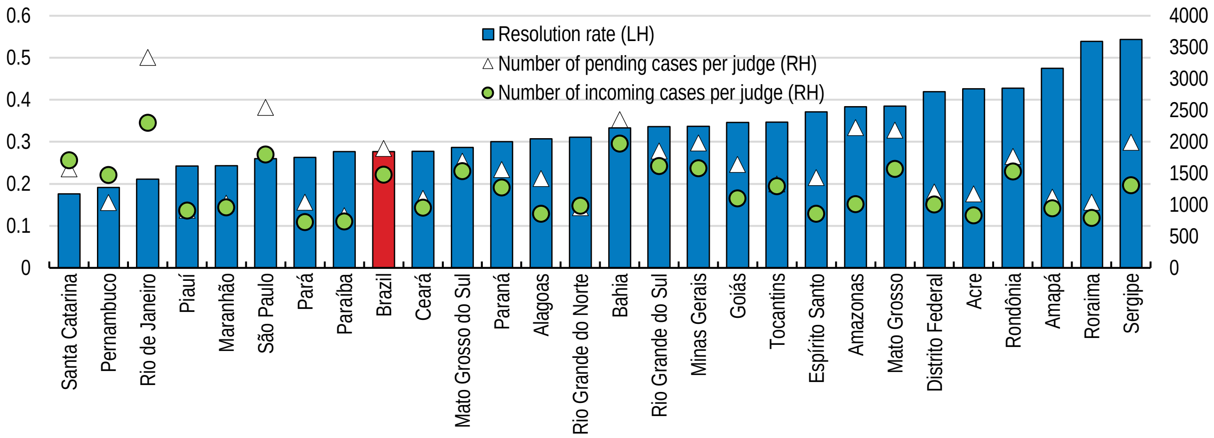
Salaries, benefits and allowances for judges are high, with an average monthly cost per judge of around USD 12 000 per month in 2018, in addition to 70 days of annual leave, part of which is typically paid out rather than taken. At the same time, judges' accountability in case of poor performance or misbehaviour is low (CNJ, 2019[69]; Romero, 2013[71]; Mohallem et al., 2018[72]). Only in the most severe cases can the CNJ force judges into compulsory retirement and disciplining members of the judiciary remains difficult (Lorenzon, 2017[68]). This suggests scope for increasing the independence of the CNJ and introducing better incentives for judges by linking salaries and promotions to performance assessments.

Brazilian judges typically get tenured positions with only around 3 years of practical experience after graduation. Requiring longer periods for judges to gain court experience before they get tenure could bring benefits. In addition, some have observed that the selection of judges for appeal courts continues to be influenced by political connections, potentially hampering the autonomy of the judiciary and the quality of its decisions (Lorenzon, 2017[68]). For many positions, a fifth of vacancies is filled with candidates selected by the Brazilian bar association and the Public Prosecutor's Office. One option would be to fill all vacancies through the regular transparent and merit-based public selection procedures. Moreover, introducing more specialisation in the education of judges and court organisation could enhance performance and reduce judicial uncertainty (Palumbo et al., 2013[57]).

Court congestion differs substantially across states (Figure 2.23). This is due to differences in court organisation and capacities as well as in litigation demand. However, states with a high number of pending and incoming cases per judge do not necessarily have a low resolution rate, which indicates that the organisation of courts is crucial to explain differences in court congestion. A coordinated effort across states involving the federal government is needed to improve the organisation of state courts. Best practices in human resource and court management should be shared across states and federal transfers to reduce capacity differences across states could be made conditional on progress made.

Figure 2.23. The regional disparity of judicial efficiency is high

Resolution rate, incoming and pending cases per judge in state courts, 2018



Note: Resolution rate" is defined as the number of resolved cases divided by the cases in stock which equals the sum of the number of pending cases at the end of 2017 and the number of incoming cases in 2018.
Source: CNJ (2019), database (Justiça em Números)

StatLink https://doi.org/10.1787/888934197278

Another measure introduced by the CNJ with significant potential for accelerating trials was the establishment of precedent cases through the introduction of the "repetitive cases" clause into civil law (Junquilho and Cerqueira, 2016[73]). This clause requires courts to align their decisions with similar precedent cases ruled by superior courts. It also alleviates their workload as courts no longer have to deliberate circumstances that have been addressed in the past. The CNJ has created an online platform

to centralise all information related to repetitive cases so that courts can access the information easily and use it as a base for their decisions. The use of precedence cases cannot only be useful to accelerate case resolution, but it also has significant potential to enhance the predictability of court decisions, thus reducing judicial uncertainty.

This potential, however, has not been fully exploited so far. Courts have not implemented the precedence-ruling clause and used the related online platform on a systematic basis. This is related to the lack of an enforcement mechanism. The Supreme Court has no constitutional rights to sanction judges at lower courts if their decisions are not in accordance with the established precedence guidelines (Bottino, 2016[74]). Looking ahead, improvements in judicial uncertainty, the number of appeals and court congestion will hinge on finding a way to effectively align judges with precedence rulings of superior courts. This will require strengthening the accountability, supervision and training of judges. One solution could be to link promotions and salaries of judges to their alignment with precedence ruling guidelines. Continuing to streamline and consolidate the existing stock of regulations (see Chapter 1) will also help to reduce judicial uncertainty, as contradicting regulations facilitate heterogeneity in judicial decisions.

Two further measures that helped to limit court congestion and the number of appeals were slightly stricter requirements for elevating cases to the Supreme Court and the possibility of sentence execution after the first appeal. However, the mandate of the Supreme Court remains relatively broad and a high share of cases arrives at the Supreme Court. The possibility of sentence execution after the first appeal has also reduced a culture of impunity by which wealthy defendants could postpone their prison sentence until all appeal possibilities were exhausted. The latter has now been repealed by the Supreme Court, thus requiring a constitutional amendment to uphold the possibility of imprisonment as of the second instance of appeal (see Chapter 1). Passing this amendment would be one possibly quick way to enhance judicial efficiency. Alternatively, reviewing appeal procedures, including by narrowing the mandate of the Supreme Court, would be another potential avenue, although it may take longer to implement.

Reducing the demand for litigation to mitigate court congestion

Litigation is much more frequent in Brazil than in OECD countries, with more than eight incoming civil and commercial cases per 100 inhabitants in 2018 (Figure 2.24). High demand for litigation can be due to internal or external factors (Palumbo et al., 2013[57]). Internal factors are related to trial costs and their allocation between parties, incentives for lawyers, the existence of alternative dispute resolution mechanisms, and the degree of certainty and coherence of existing regulations and laws. External factors comprise cultural factors, structural socio-economic factors and business cycle fluctuations.

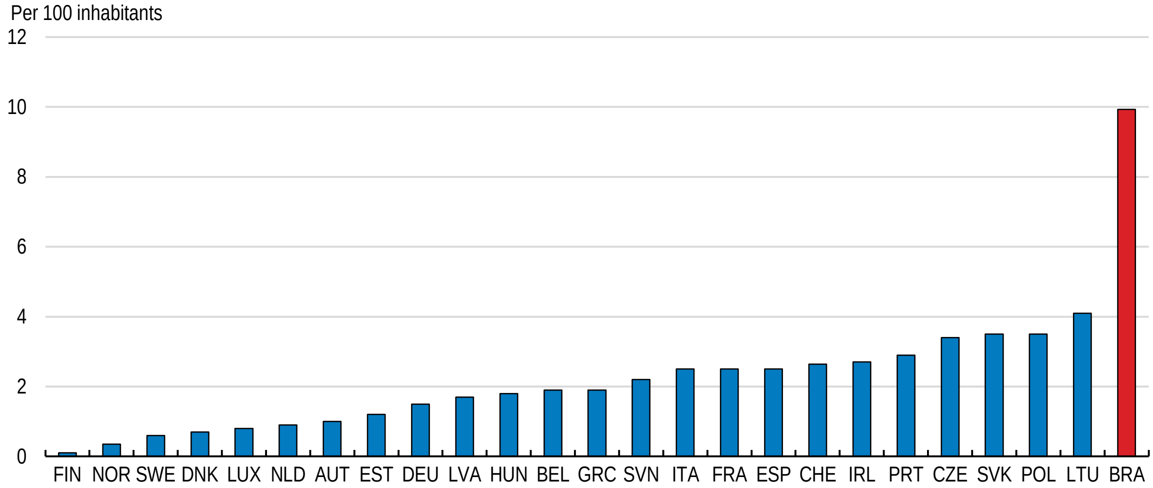
Litigation demand has grown strongly since 1990, as incoming cases rose almost five-fold from about 5 million to 29 million in 2017 (da Ros, 2015[75]; CNJ, 2019[69]). This was mainly due to better access to justice for disadvantaged parts of the population. The creation of specialised small claims courts greatly simplified trial procedures for civil and commercial cases involving claims of up to 40 minimum wages. Access to these courts does not require hiring a lawyer and court fees do not exist, except for appeal procedures (Matos and Ramos, 2016[76]). In addition, the expansion of Public Defender Offices offering free legal aid and litigation for persons without the necessary financial means facilitated access to other court types for poorer parts of the population. The number of public defenders more than doubled since 2004 and their budget increased about tenfold (Matos and Ramos, 2016[76]; Alves and de Castro, 2018[77]).

Although it is crucial to guarantee equal access to justice, too low trial costs can induce spurious litigation, congesting courts and crowding out legitimate demand for judicial services (Palumbo et al., 2013[57]). Free legal aid is not subject to means testing in Brazil and only requires the signature of an affidavit declaring that the individual cannot pay for court fees and lawyers' expenses. Instead, free legal aid could be made dependent on the financial situation of the litigant and the frequency of litigation. The introduction of cost-shifting rules, such as making the losing party liable for the trial costs, can lead to more efficient litigation

decisions, although it might decrease access to justice for more disadvantaged persons (Palumbo et al., 2013[57]).

Figure 2.24. The demand for litigation is high

Number of incoming civil and commercial cases per 100 inhabitants, 2018 or latest year available



Source: CNJ (2019), Justiça em Números.2019 CEPEJ (2019), The 2019 EU Justice Scoreboard, European Commission

StatLink https://doi.org/10.1787/888934197297

The large increase in incoming cases at small claims courts also reflects the structural change of the economy towards the services sector. In many countries, litigation has strongly increased due to a small number of bulk litigants, typically large companies such as cable television operators, mobile phone companies, insurance companies, banks and consumer credit companies, claiming for small amounts of debt (Gomes, 2011[78]). The fact that until 2016 sentences could only be executed after all appeal possibilities had been exhausted incited many debtors in these small claims cases to contest court decisions with the sole objective of blocking sentence execution and delaying payment. Judicial uncertainty due to weak alignment of many judges with precedence ruling guidelines has added to high litigation demand in these cases.

Moreover, more transparent, consistent and stable legal and regulatory frameworks would help to rein in legal uncertainty and demand for litigation. In Brazil, the stock of existing laws and subordinate regulations is large and includes many outdated, overlapping and contradicting regulations, which create legal uncertainty. Regulatory changes have been frequent and regulatory agencies have been characterised by heterogeneous degrees of institutional capacities. Consolidating and streamlining the current stock of regulations and updating them to new economic and social circumstances has large potential to reduce the demand for litigation and to increase the efficiency of and the access to the justice system. The recently passed law on economic freedom is a step in the right direction, but more needs to be done to reduce legal uncertainty.

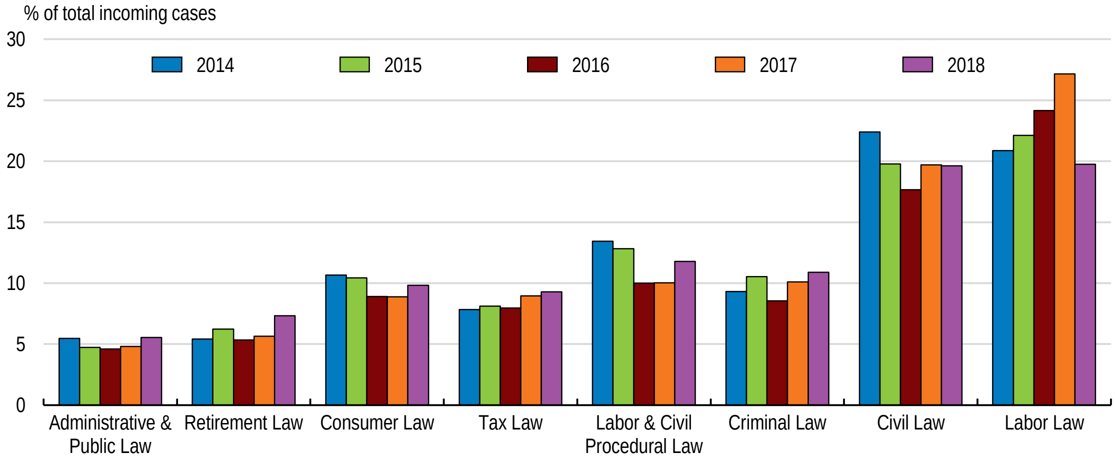
Litigation demand strongly varies across different law areas

Litigation is particularly high in the field of labour law (Figure 2.25). The current labour code was implemented in 1943 and contains many regulations that are not adequately reflecting contemporary employment relationships, particularly regarding safety standards, work time arrangements and worker compensation. Alternative firm-level agreements on labour issues are frequent, but have in the past often

not been recognised by labour courts when contested. Brazil's labour justice alone costs 0.3% of GDP, more than twice as much as the whole justice system in Argentina (CNJ, 2019[69]) (da Ros, 2015[75]).

Figure 2.25. Labour law is responsible for a high share of incoming cases

Incoming cases by law area (1st and 2nd instances)



Source: CNJ, Painéis CNJ (Justiça em Números, demandas por classe e assunto). http://cnj.jus.br/pesquisas-judiciarias/paineis

StatLink https://doi.org/10.1787/888934197316

A labour market reform passed in 2017 has significantly reduced incoming cases in labour courts. The reform has provided the basis for firm-level agreements to gain prevalence of the labour code on issues such as annual leave organisation, working hours, incentive pay and other issues of internal flexibility. At the same time, core worker rights have been preserved and cannot be subject to contractual arrangements. In the area of employment protection for open-ended contracts, the introduction of a new form of separation by mutual agreement has the potential to reduce previously high litigation related to contract rescission and the definition of 'dismissal without just cause'. Trial costs, which used to be free for employees, are now charged to the losing party and free legal aid has been restricted to poor workers (Silva and Esteves, 2018[79]).

However, issues related to the accountability of judges and adherence to precedence case guidelines to align judicial decisions with Supreme Court rulings also affect labour courts. Cases related to dismissal without just cause still accounted for 12% of all incoming cases across law areas in 2018, which could be solved by a clearer legal definition of a "just cause". Changes to the current system of unemployment insurance, as advocated in Chapter 1, could also reduce demand for litigation, as these incentivise litigation. Italy, for example, reformed its labour code in 2014 simplifying the regulatory language, including the definition of dismissal for causes other than just cause. This has reduced the scope for ambiguity and thus litigation demand (Silva, Almeida and Strokova, 2015[80]). France also implemented a successful reform of dismissal case procedures under the Prud'hommes regime in 2016.

Outdated labour safety and health standards are still a large obstacle for investments in physical and human capital. Vocational training for high school students in firms or on machines implies significant legal risks to firms and training providers, which explains why vocational training is almost non-existent in secondary education (see Chapter 3). Cases related to safety and health standards and compensation due to moral damage are among the categories with most incoming cases in labour courts and deter investment of firms into new machinery and technology. The government has recently revised some of the related regulations, in particular related to the import of new machinery, to avoid the need for Brazilian safety approvals of machines that have already undergone similar testing abroad. At the same time, a task

force has been created between members of the executive and the judiciary to update labour regulations and reduce congestion in labour courts.

Other domains causing high demand for litigation relate to debt enforcement, in particular tax foreclosures. After failed administrative attempts to recover tax payments, the law requires prosecutors of the treasury to file tax foreclosure cases and to prosecute every outstanding tax liability until the last appeal. The judiciary has to repeat the same investigation that the tax administration concluded without success, such as locating the debtor and his property. Tax foreclosure cases represent 39% of all pending cases and 73% of cases pending sentence execution (CNJ, 2019[69]). Although the recent law on economic freedom enables tax authorities to evaluate the chances of legal prosecution and abolishes legal sanctions for prosecutors of the treasury, more is needed to decongest courts. Debt enforcement procedures of tax administration and the judiciary should be better coordinated to reduce duplication. Moreover, judicial debt enforcement procedures should be directly linked to judgements, to reduce procedural possibilities for debtors to delay debt enforcement.

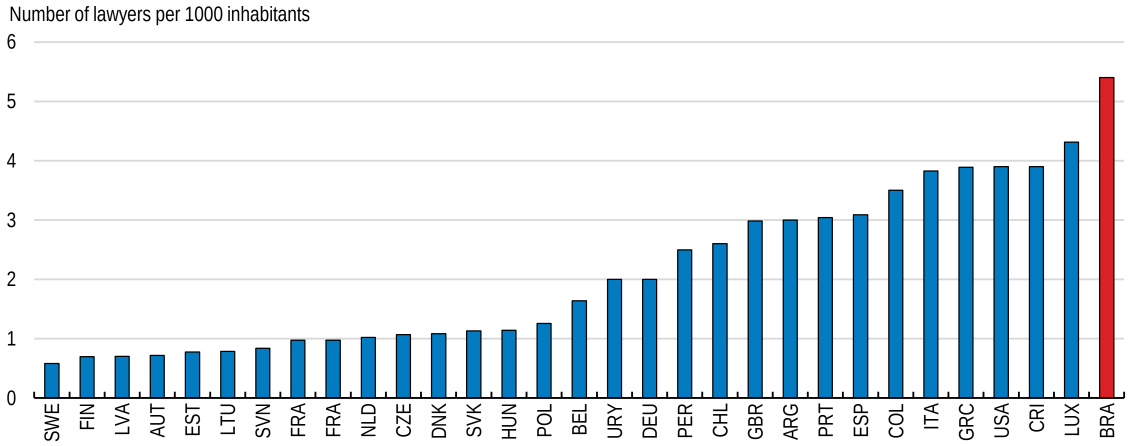
In addition, debt enforcement cases related to insolvency procedures are congesting courts, and reforms to speed up these enforcement procedures are needed. Providing information on debtor assets to the creditor to inform the decision whether to pursue enforcement would help to reduce cases with a low probability of success. Trial length could be reduced by introducing time lines for enforcement procedures to be terminated if no assets are found as well as electronic platforms for auctioning seized assets that facilitate their liquidation. Encouraging the use of secured fiduciary sale clauses in contracts would enable asset seizure in case of debtors default without recurring to the judiciary. A 2019 law has decreased legal uncertainty related to the seizure of private assets of the firm owner, which has the potential to reduce the length of debt enforcement cases.

The legal industry has strongly expanded in recent years and is highly protected

Another driver for the rising demand for litigation has been the strong expansion of the legal industry since the 1990's. The number of lawyers per 1000 inhabitants has expanded four-fold since 1991 (FGV, 2014[81]), and it is superior to that of other countries (Figure 2.26). The number of law schools has strongly increased and is much higher than in other countries (da Ros, 2015[75]). This strong supply of legal experts is related to the increasing demand for litigation, but also to the attractiveness of the profession due to high privileges.

Figure 2.26. The number of lawyers is high

Number of lawyers per 1000 inhabitants (2017 or latest year available)



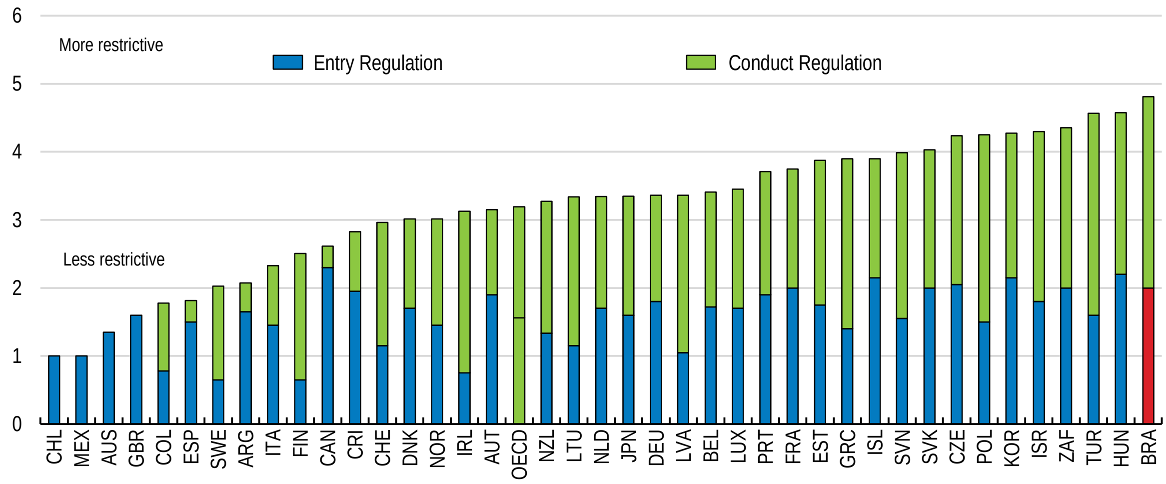
Source: (CEPEJ, 2018[82]), (da Ros, 2015[75]), (Venegas, 2013[83]), (IBGE, 2019[84]), (OAB Nacional, 2019[85]), (Bilardi, 2017[86])

StatLink https://doi.org/10.1787/888934197335

Lawyers play a central role in determining the pattern of demand for judicial services, as they often decide on behalf of their client whether to file a case in court or resolve the issue in alternative ways. Empirical analysis has shown that the number of lawyers affects litigation demand in many countries (Pereira and Wemans, 2017[87]; Mora-Sanguinetti and Garoupa, 2015[88]). Given the asymmetry of information, lawyers may have incentives to go to court and receive service fees even when it is not in the best interests of their clients, due to low claim value or low probability of winning (Carmignani and Giacomelli, 2010[89]; Palumbo et al., 2013[57]).

Stronger competition in the legal profession can help to reduce spurious litigation induced by lawyers (Figure 2.27). Legal contracts between lawyers and clients including fees could be made more transparent so that clients understand the prices and quality of the services provided (Carmignani and Giacomelli, 2010[89]). The authority to deal with disputes regarding lawyer-client contracts is currently given to the Bar Association, the association of the law profession, which creates significant conflicts of interest. Transferring the regulation of the profession to an independent body within the judiciary, for example the national council of justice, could lead to a more impartial judgment and improve transparency and competition.

Figure 2.27. The law profession is highly regulated



Source: OECD 2018 Product Market Regulation Indicators database.

StatLink https://doi.org/10.1787/888934197354

Alternative dispute resolution mechanisms

Alternative mechanisms for dispute resolution, such as arbitration, mediation or online dispute resolution, have large potential to reduce litigation demand (OECD, 2018[90]). In Brazil, arbitration has gained a lot of traction, as its outcomes are legally binding and directly enforceable. A recent amendment to the Arbitration Act provides the legal framework for public entities to engage in out-of-court arbitration procedures. These are already applied, for example, in the context of rebidding procedures related to public infrastructure projects. Moreover, a new legal framework for mediation has facilitated and incentivised mediation between private parties inside and outside of courts. The new civil procedure code has made a conciliation or mediation hearing mandatory in the early stage of most lawsuits (Alves and de Castro, 2018[77]). This resulted in an increase in the number of cases resolved through court-annexed conciliation from 11.1% of cases in 2015 to 12.1% in 2017 (CNJ, 2019[69]). Particularly labour disputes have seen increasing use of alternative dispute resolution, which is partly related to extended scope for firm-level dispute resolution introduced by the 2017 labour reform (CNJ, 2019[69]). But there is scope for further progress. For example,

South Africa has strongly reduced litigation demand related to dismissals by introducing centralised out-of-court conciliation and arbitration procedures (Silva, Almeida and Strokova, 2015[80]).

Regarding debt enforcement and insolvency procedures, alternative dispute resolution for firm restructuring or liquidation have strong potential to facilitate creditor coordination, speed up insolvency procedures and reduce court congestion (OECD, 2019[91]). In Portugal, the introduction of legal frameworks for court-annexed conciliation as well as out-of-court mediation for firm restructuring has facilitated creditor coordination and reduced litigation demand related to insolvency procedures and debt enforcement. Introducing similar legal vehicles in Brazil and extending them to non-viable firms to include firm liquidation could significantly reduce court congestion and the duration of insolvency procedures. Japan has recently introduced a legal framework for out-of-court firm liquidation, which encourages debt resolution proceedings at early stages to avoid the devaluation or hiding of firm assets. Firm owners or debtors are allowed to keep more assets than in case of a personal bankruptcy, which incentivises their cooperation (OECD, 2017[92]).

Online dispute resolution mechanisms can contribute to reduce court congestion, in particular in the field of consumer law. A large share of incoming cases in small claims courts relate to consumer compensation for moral and material damage (CNJ, 2019[69]). Online dispute resolution that connects consumers directly with firms to facilitate out-of-court conciliation has potential to reduce the demand for litigation, as many cases are similar and bulk-litigation is frequent in this area. It can also contribute to the development of e-commerce, as it reduces the costs of enforcing sales contracts signed through the internet and increases trust of consumers. The national justice council (CNJ) has recently introduced such an online platform, which links incoming cases directly to the concerned company to facilitate out-of-court dispute resolution. A thorough evaluation of this online tool could inform the introduction and design of online dispute resolution in other law areas.

Box 2.3. Policy recommendations for raising productivity

Key recommendations

- Further simplify license requirements and apply silence-is-consent rules and one-stop shops wherever possible.
- Reduce tariff and non-tariff barriers, starting with capital goods and intermediate inputs.
- Consolidate consumption taxes into one value added tax.
- Ensure the alignment of court decisions with precedence rulings of superior courts by linking judges' promotions and salaries to compliance with the rules.

Other recommendations

- Continue the ongoing comprehensive review of the competition impact of regulations and administrative burdens.
- Eliminate requirement to seeking approval for company registration from local authorities.
- Reduce the role of professional associations in regulation.
- Avoid price floors in professional services and non-prescription medicines.
- Limit the possibilities to take public officials involved in licensing processes to court over their decisions to cases of abuse or bad faith.
- Publish all tender documents for public procurement online, allow bids to be submitted online and avoid providing reference prices in the tender documentation.
- Continue improving the governance of state-owned enterprises and consider privatisations on a case-by-case basis based on thorough cost-benefit analysis.

- Phase out remaining interest subsidies in directed credit for rural or housing projects.
- Reduce restrictions on cabotage shipping by allowing foreign shipping companies and reducing bureaucratic requirements.
- Improve the ICT system for judicial case-flow management.
- Use information on judges' workload and performance to improve resource allocation across courts.
- Make wider use of specialised courts and judges.
- Reduce demand for litigation by simplifying labour, tax and insolvency laws and related enforcement procedures.
- Strengthen competition in the legal profession by separating regulatory functions from the Bar association.

References

Acemoglu, D., S. Johnson and J. Robinson (2005), "INSTITUTIONS AS A FUNDAMENTAL CAUSE OF LONG-RUN GROWTH", in Aghion, P. and S. Durlauf (eds.), *Handbook of Economic Growth*. [56]

Adalet McGowan, M. and D. Andrews (2016), "Insolvency Regimes And Productivity Growth: A Framework For Analysis", *OECD Economics Department Working Papers*, No. 1309, OECD Publishing, Paris, https://dx.doi.org/10.1787/5jlv2jqhxgq6-en. [60]

Adalet McGowan, M., D. Andrews and V. Millot (2017), "Insolvency Regimes, Technology Diffusion and Productivity Growth : Evidence from Firms in OECD Countries", *OECD Economics Department Working Papers*, No. 1425, OECD Publishing, Paris, http://dx.doi.org/10.1787/36600267-en. [59]

Álvarez, F. et al. (2019), *RED 2018: Institutions for productivity: towards a better business environment*, CAF Development Bank of Latin America, https://scioteca.caf.com/handle/123456789/1410 (accessed on 24 January 2020). [3]

Alves, C. and A. de Castro (2018), *Legal Aid in Brazil: the role of the Public Defender´s Office*, https://www.laf.org.tw/ifla2018/upload/2018/11/(Update)National%20Report%201-3_Brazil_Prof.%20Cleber%20Francisco%20Alves%20&%20Mr.%20Andr%C3%A9%20Castro.pdf (accessed on 18 February 2020). [77]

Arida, P., E. Bacha and A. Lara-Resende (2005), "Credit, Interest, and Jurisdictional Uncertainty: Conjectures on the Case of Brazil", in GIAVAZZI, F., I. GOLDFAJN and S. HERRERA (eds.), *Inflation Target, Debt and the Brazilian Experience: 1999 to 2003*. [48]

Arnold, J. and L. Flach (2017), "Who Gains from Better Access to Credit? Credit Reform and Reallocation of Resources", *CESifo Working Paper Series*, Vol. 6677, https://ideas.repec.org/p/ces/ceswps/_6677.html (accessed on 6 March 2020). [64]

Arnold, J. et al. (2016), "Services Reform and Manufacturing Performance: Evidence from India", *Economic Journal*, Vol. 126/590, http://dx.doi.org/10.1111/ecoj.12206. [27]

Arnold, J., B. Javorcik and A. Mattoo (2011), “Does services liberalization benefit manufacturing firms?. Evidence from the Czech Republic”, *Journal of International Economics*, Vol. 85/1, http://dx.doi.org/10.1016/j.jinteco.2011.05.002. [26]

Autor, D., D. Dorn and G. Hanson (2016), “The China Shock: Learning from Labor-Market Adjustment to Large Changes in Trade”, *Annual Review of Economics*, Vol. 8/1, pp. 205-240, http://dx.doi.org/10.1146/annurev-economics-080315-015041. [6]

Autor, D., D. Dorn and G. Hanson (2013), “The China syndrome: Local labor market effects of import competition in the United States”, *American Economic Review*, Vol. 103/6, pp. 2121-2168, http://dx.doi.org/10.1257/aer.103.6.2121. [18]

Bacha, E. and M. de Bolle (2013), *O Futuro da Indústria No Brasil - Desindustrialização Em Debate*, Saraiva, https://www.saraiva.com.br/o-futuro-da-industria-no-brasil-desindustrializacao-em-debate-4847442/p (accessed on 28 January 2020). [5]

Bae, K. and V. Goyal (2009), “Creditor Rights, Enforcement, and Bank Loans”, *The Journal of Finance*, Vol. 64/2, pp. 823-860, http://dx.doi.org/10.1111/j.1540-6261.2009.01450.x. [61]

Baldwin, R. (2006), “Multilateralising Regionalism: Spaghetti Bowls as Building Blocs on the Path to Global Free Trade”, *The World Economy*, Vol. 29/11, pp. 1451-1518, http://dx.doi.org/10.1111/j.1467-9701.2006.00852.x. [40]

Barbosa Filho, F. and P. Correa (2017), “Distribuição de produtividade do trabalho entre as empresas e produtividade do trabalho agregada no Brasil”, in Bonelli R, Veloso F and Castelar Pinheiro A (eds.), *Anatomia da Produtividade no Brasil*, FGV IBRE. [15]

Bergthaler, W. et al. (2015), *Tackling Small and Medium Sized Enterprise Problem Loans in Europe*, IMF, https://www.imf.org/en/Publications/Staff-Discussion-Notes/Issues/2016/12/31/Tackling-Small-and-Medium-Enterprise-Problem-Loans-in-Europe-42614 (accessed on 18 February 2020). [63]

Bilardi, J. (2017), “Respondamos Las Preguntas ¿Cuántos Abogados Hay? ¿Es Posible Vivir De La Abogacía?”, *Abogacia Practica*, https://www.abogaciapractica.com/abogados-cantidad/. [86]

Bottino, T. (2016), *Habeas corpus nos tribunais superiores: análise e proposta de reflexão*, FGV Direito Rio, http://bibliotecadigital.fgv.br/dspace/bitstream/handle/10438/17508/Habeas corpus nos tribunais superiores.pdf?sequence=1&isAllowed=y (accessed on 18 February 2020). [74]

Brambilla, I., N. Depetris Chauvin and G. Porto (2017), “Examining the Export Wage Premium in Developing Countries”, *Review of International Economics*, Vol. 25/3, pp. 447-475, http://dx.doi.org/10.1111/roie.12231. [34]

Busso, M., L. Madrigal and C. Pagés (2013), “Productivity and resource misallocation in Latin America”, *The B.E. Journal of Macroeconomics*, Vol. 13/1, pp. 1-30, https://ideas.repec.org/a/bpj/bejmac/v13y2013i1p30n3.html (accessed on 4 October 2018). [10]

Calice, P., E. Ribeiro and S. Byskov (2018), “Efficient Financial Allocation and Productivity Growth in Brazil”, *Policy Research Working Papers*, No. 8479, World Bank, http://dx.doi.org/10.1596/1813-9450-8479. [16]

Calvino, F., C. Criscuolo and C. Menon (2016), "No Country for Young Firms?: Start-up Dynamics and National Policies", *OECD Science, Technology and Industry Policy Papers*, No. 29, OECD Publishing, Paris, https://dx.doi.org/10.1787/5jm22p40c8mw-en. [65]

Campos, N. et al. (2019), "Renegotiations and Corruption in Infrastructure: The Odebrecht Case", *SSRN Electronic Journal*, http://dx.doi.org/10.2139/ssrn.3447631. [28]

Carmignani, A. and S. Giacomelli (2010), "Too many lawyers? Litigation in Italian civil courts", *Economic Working Papers*, No. 745, Bank of Italy, https://ideas.repec.org/p/bdi/wptemi/td_745_10.html (accessed on 18 February 2020). [89]

Centro de Cidadania Fiscal (2019), *Reforma do Modelo Brasileiro de Tributação de Bens e Serviços*, Centro de Cidadania Fiscal, São Paulo, Brazil, http://www.ccif.com.br/. [52]

CEPEJ (2018), *The 2018 EU Justice Scoreboard, European Comission*, https://ec.europa.eu/info/sites/info/files/justice_scoreboard_2018_en.pdf. [82]

CEPEJ (2016), *European judicial systems Efficiency and quality of justice - Use of information technology in European courts*, CEPEJ, http://www.coe.int/cepej (accessed on 24 February 2020). [70]

CNJ (2019), *Justica em numeros - 2019*, Coselho Nacional de Justica, http://www.cnj.jus.br (accessed on 18 February 2020). [69]

Criscuolo, C., P. Gal and C. Menon (2014), "The Dynamics of Employment Growth: New Evidence from 18 Countries", *OECD Science, Technology and Industry Policy Papers*, No. 14, OECD Publishing, Paris, https://dx.doi.org/10.1787/5jz417hj6hg6-en. [36]

Criscuolo, C. and J. Timmis (2018), "The Changing Structure of Global Value Chains: Are Central Hubs Key for Productivity?", *International Productivity Monitor*, Vol. 34, pp. 64-80, https://ideas.repec.org/a/sls/ipmsls/v34y20184.html (accessed on 4 October 2018). [31]

da Ros, L. (2015), *O custo da Justiça no Brasil: uma análise comparativa exploratória*, http://observatory-elites.org/wp-content/uploads/2012/06/newsletter-Observatorio-v.-2-n.-9.pdf. [75]

de Castro Souza Júnior, J. and F. Moraes Cornelio (2020), "Estoque de capital fixo no Brasil: séries desagregadas anuais, trimestrais e mensais", *Textos para discussão*, No. 2580, IPEA, Rio de Janeiro, https://www.ipea.gov.br/portal/index.php?option=com_content&view=article&id=36589&Itemid=448 (accessed on 1 October 2020). [55]

De Vries, G. (2014), "Productivity in a distorted market: The case of brazil's retail sector", *Review of Income and Wealth*, Vol. 60/3, pp. 499-524, http://dx.doi.org/10.1111/roiw.12017. [9]

Djankov, C. et al. (2008), "Debt enforcement around the world", *Journal of Political Economy*, Vol. 116/6, pp. 1105-1149, http://dx.doi.org/10.1086/595015. [62]

Djankov, S. et al. (2003), "Courts", *The Quarterly Journal of Economics*, Vol. 118/2, pp. 453-517, http://dx.doi.org/10.1162/003355303321675437. [66]

Dutz, M. (2018), *Jobs and Growth: Brazil's Productivity Agenda*, The World Bank, http://dx.doi.org/10.1596/978-1-4648-1320-7. [1]

Erten, B., J. Leight and F. Tregenna (2019), "Trade liberalization and local labor market adjustment in South Africa", *Journal of International Economics*, Vol. 118, pp. 448-467, http://dx.doi.org/10.1016/j.jinteco.2019.02.006. [19]

FGV (2014), *EXAME DE ORDEM EM NÚMEROS*, Fundacao Getulio Vargas, https://fgvprojetos.fgv.br/sites/fgvprojetos.fgv.br/files/relatorio_2_edicao_final.pdf (accessed on 18 February 2020). [81]

Gaddis, I. and J. Pieters (2012), "Trade Liberalization and Female Labor Force Participation: Evidence from Brazil", *IZA Discussion Papers*, Vol. 6809, https://ideas.repec.org/p/iza/izadps/dp6809.html (accessed on 21 February 2020). [37]

Gomes, C. (2011), *Os Atrasos da Justiça*, FFMS e Relógio d'Água, https://www.ffms.pt/publicacoes/detalhe/142/os-atrasos-da-justica (accessed on 18 February 2020). [78]

Gomes, V. and E. Ribeiro (2015), "Produtividade e Competição no Mercado de Produtos: Uma Visão Geral da Manufatura no Brasil", in De Negri, F. and L. Cavalcante (eds.), *Produtividade no Brasil: desempenho e determinantes – Vol. 2 – Determinantes*, Ipea - Instituto de Pesquisa Econômica Aplicada, Brasilia, http://www.ipea.gov.br/portal/index.php?option=com_content&view=article&id=26104. [11]

Guimaraes, B. and B. Salama (2017), "Contingent Judicial Deference: theory and application to usury laws", *Discussion Papers*, No. 1729, Centre for Macroeconomics (CFM), https://ideas.repec.org/p/cfm/wpaper/1729.html. [46]

Hsieh, C. and P. Klenow (2009), "Misallocation and Manufacturing TFP in China and India", *Quarterly Journal of Economics*, Vol. 124/4, pp. 1403-1448, http://dx.doi.org/10.1162/qjec.2009.124.4.1403. [2]

IBGE (2019), *População do Brasil em tempo real*, https://www.ibge.gov.br/apps/populacao/projecao/box_popclock.php. [84]

IMF (2017), *Cluster Report : Trade Integration in Latin America and the Caribbean*, International Monetary Fund. Western Hemisphere Dept., https://www.imf.org/en/Publications/CR/Issues/2017/03/10/Cluster-Report-Trade-Integration-in-Latin-America-and-the-Caribbean-44735 (accessed on 21 February 2020). [39]

Intrum (2018), *European Payment Report*, https://www.intrum.com/publications/publications-archive/ (accessed on 17 February 2020). [58]

Joaquim, G. and B. van Doornik (2019), *Bank Competition, Cost of Credit and Economic Activity: evidence from Brazil*, Central Bank of Brazil, Research Department, https://ideas.repec.org/p/bcb/wpaper/508.html (accessed on 21 February 2020). [45]

Junquilho, T. and M. Cerqueira (2016), "A Participação Popular na Formação dos Precedentes em Irdr No Cpc/15: Ampliação da Esfera Pública Habermasiana", *Revista de Teorias da Democracia e Direitos Políticos*, Vol. 2/1, pp. 271-287, https://indexlaw.org/index.php/revistateoriasdemocracia/article/view/1116/pdf (accessed on 18 February 2020). [73]

Lage de Sousa, F. and G. Ottaviano (2018), "Relaxing credit constraints in emerging economies: The impact of public loans on the productivity of Brazilian manufacturers", *International Economics*, Vol. 154, pp. 23-47, http://dx.doi.org/10.1016/j.inteco.2017.11.002. [42]

Lorenzon, G. (2017), "Corruption and the Rule of Law: How Brazil Strengthened Its Legal System", *Policy Analysis*, Vol. 827, https://www.cato.org/publications/policy-analysis/corruption-rule-law-how-brazil-strengthened-its-legal-system (accessed on 18 February 2020). [68]

Maciente, A., J. Silva and R. Gukovas (2015), "Employment Creation, Labor Productivity, and Firm Dynamics"*, Background report for "Sustaining Employment and Wage Gains in Brazil"*, World Bank. [14]

Matos, A. and M. Ramos (2016), "Brazilian Legal Culture: From the Tradition of Exception to the Promise of Emancipation", *International Journal for the Semiotics of Law*, Vol. 29/4, pp. 753-778, http://dx.doi.org/10.1007/s11196-015-9449-2. [76]

McMillan, M. and D. Rodrik (2011), "Globalization, structural change and productivity growth", in Bacchetta, M. and M. Jansen (eds.), *Making globalization socially sustainable*, World Trade Organization, Geneva. [13]

Miceli, T. and M. Coşgel (1994), "Reputation and judicial decision-making", *Journal of Economic Behavior and Organization*, Vol. 23/1, pp. 31-51, http://dx.doi.org/10.1016/0167-2681(94)90095-7. [67]

Mohallem, M. et al. (2018), *NOVAS MEDIDAS CONTRA A CORRUPÇÃO*, FGV Direito Rio, http://www.unidoscontraacorrupcao.org.br (accessed on 4 December 2020). [72]

Mora-Sanguinetti, J. and N. Garoupa (2015), "Do lawyers induce litigation? Evidence from Spain, 2001-2010", *International Review of Law and Economics*, Vol. 44, pp. 29-41, http://dx.doi.org/10.1016/j.irle.2015.06.003. [88]

OAB Nacional (2019), *Quadro de Advogados*, https://www.oab.org.br/institucionalconselhofederal/quadroadvogados. [85]

OECD (2019), *OECD Economic Surveys: Portugal 2019*, OECD Publishing, Paris, https://dx.doi.org/10.1787/eco_surveys-prt-2019-en. [91]

OECD (2019), *OECD Peer Reviews of Competition Law and Policy: Brazil 2019*, OECD, Paris, https://www.oecd.org/competition/oecd-peer-reviews-of-competition-law-and-policy-brazil-2019.htm (accessed on 9 March 2020). [25]

OECD (2018), *Access to Justice for Business and Inclusive Growth in Latvia*, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264303416-en. [90]

OECD (2018), *OECD Economic Surveys: Brazil 2018*, OECD Publishing, Paris, https://dx.doi.org/10.1787/eco_surveys-bra-2018-en. [35]

OECD (2018), *Ownership and Governance of State-Owned Enterprises: A Compendium of National Practices*, https://www.oecd.org/daf/ca/ownership-and-governance-of-state-owned-enterprises-a-compendium-of-national-practices.htm (accessed on 9 March 2020). [29]

OECD (2017), *Competition Assessment Toolkit: Volume 2. Guidance,*, http://www.oecd.org/competition/toolkit. [23]

OECD (2017), "How to make trade work for all", in *OECD Economic Outlook, Volume 2017 Issue 1*, OECD Publishing, Paris, https://dx.doi.org/10.1787/eco_outlook-v2017-1-3-en. [32]

OECD (2017), *OECD Economic Surveys: India 2017*, OECD Publishing, Paris, https://dx.doi.org/10.1787/eco_surveys-ind-2017-en. [54]

OECD (2017), *OECD Economic Surveys: Japan 2017*, OECD Publishing, Paris, https://dx.doi.org/10.1787/eco_surveys-jpn-2017-en. [92]

OECD (2015), *OECD Economic Surveys: Brazil 2015*, OECD Publishing, Paris, https://dx.doi.org/10.1787/eco_surveys-bra-2015-en. [12]

OECD (2015), *OECD Guidelines on Corporate Governance of State-Owned Enterprises*, OECD, Paris, France, https://www.oecd.org/corporate/guidelines-corporate-governance-soes.htm. [30]

OECD (2012), *Policy Priorities for International Trade and Jobs*, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264180178-en. [17]

OECD (2005), *Trade and Structural Adjustment: Embracing Globalisation*, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264010970-en. [20]

OECD and Receita Federal do Brasil (2019), *Transfer Pricing in Brazil: Towards Convergence with the OECD Standard*, http://www.oecd.org/tax/transfer-pricing/transfer-pricing-in-brazil-towards-convergence-with-the-oecd-standard.htm (accessed on 2 October 2020). [53]

Palumbo, G. et al. (2013), "The Economics of Civil Justice: New Cross-country Data and Empirics", *OECD Economics Department Working Papers*, No. 1060, OECD Publishing, Paris, https://dx.doi.org/10.1787/5k41w04ds6kf-en. [57]

Pazarbasioglu-Dutz, C. et al. (2017), *Brazil Financial Intermediation Costs and Credit Allocation*, World Bank, Washington, DC, http://dx.doi.org/10.1596/26401. [43]

Pereira, M. and L. Wemans (2017), "Productivity in civil justice in Portugal: A crucial issue in a congested system", in Banco de Portugal (ed.), *Banco de Portugal Economic Studies*, http://www.bportugal.pt (accessed on 18 February 2020). [87]

PNST (2018), *Brazilian Tax Aspects on Import of Services - PNST*, https://www.pnst.com.br/en/articles/tax-consulting-and-litigation/brazilian-tax-aspects-import-services/ (accessed on 8 February 2020). [50]

Reis, J. et al. (2018), "Trade Liberalization and Integration of Domestic Output Markets in Brazil", *Policy Research Working Papers*, No. 8600, World Bank, Washington, DC, USA, http://documents.worldbank.org/curated/en/848981538569408470/Trade-Liberalization-and-Integration-of-Domestic-Output-Markets-in-Brazil (accessed on 5 February 2020). [22]

Rittner, D. (2019), *Custo Brasil consome 22% do PIB e ganha nova estratégia de combate | Brasil | Valor Econômico*, https://valor.globo.com/brasil/noticia/2019/11/28/custo-brasil-consome-22-do-pib-e-ganha-nova-estrategia-de-combate.ghtml (accessed on 6 February 2020). [49]

Romero, S. (2013), "Brazil, Where a Judge Made $361,500 in a Month, Fumes Over Pay", *The New York Times*, https://www.nytimes.com/2013/02/11/world/americas/brazil-seethes-over-public-officials-super-salaries.html?_r=0 (accessed on 18 February 2020). [71]

SAE (2018), *Navegação de cabotagem no Brasil, Relatório de Conjuntura 6.*, Secretaria Especial de Assuntos Estratégicos, Presidência da República, Brazil, https://www.gov.br/secretariageral/pt-br/centrais-de-conteudo/publicacoes/publicacoes-e-analise/relatorio-de-conjuntura/relatorio_de_conjuntura_2019.pdf. [41]

Salama, B. (2016), "Crédito bancário e judiciário: condutores institucionais da superlitigância.", in Prado, M. (ed.), *O Judiciário e o Estado Regulador brasileiro*, FGV Direito SP, São Paulo, http://hdl.handle.net/10438/17700. [47]

Silva, F. and D. Esteves (2018), "A nova disciplina da gratuidade de Justiça na reforma trabalhista", *Boletim de Notícias ConJur*, https://www.conjur.com.br/2018-mar-13/disciplina-gratuidade-justica-reforma-trabalhista (accessed on 18 February 2020). [79]

Silva, J., R. Almeida and V. Strokova (2015), *Sustaining Employment and Wage Gains in Brazil: A Skills and Jobs Agenda*, The World Bank, http://dx.doi.org/10.1596/978-1-4648-0644-5. [80]

SPE (2020), *Redução da má alocação de recursos (misallocation) para a retomada do crescimento da produtividade na economia brasileira*, Secretaria de Política Econômica, Ministério da Economia, https://www.gov.br/economia/pt-br/centrais-de-conteudo/publicacoes/notas-informativas/2020/ni_misallocation-2020.pdf/view (accessed on 2 August 2020). [7]

Stone, S., J. Messent and D. Flaig (2015), "Emerging Policy Issues: Localisation Barriers to Trade", *OECD Trade Policy Papers*, No. 180, OECD Publishing, Paris, https://dx.doi.org/10.1787/5js1m6v5qd5j-en. [33]

SUASU/SECAP (2019), *Boletins Mensais de Subsídios: Desoneração da Cesta Básica*, Ministério da Economia, Brasília, http://www.economia.gov.br/acesso-a-informacao/participacao-social/conselhos-e-orgaos-colegiados/cmap/publicacoes/subsidios-da-uniao/boletim/boletim-mensal-sobre-os-subsidios-da-uniao-desoneracao-da-cesta-basica-1/view. [51]

UNCTAD (2009), *Mainstreaming gender in trade policy*, United Nations Conference on Trade and Development, Geneva, http://www.unctad.org/en/docs/ciem2d2_en.pdf. [38]

Valor Econômico (2020), *MP acaba com registro de corretor de seguros*, Valor Econômico - Finanças - 19/02/2020, https://valor.globo.com/financas/noticia/2020/02/19/mp-acaba-com-registro-de-corretor-de-seguros.ghtml (accessed on 19 February 2020). [24]

Vasconcelos, R. (2017), "Misallocation in the Brazilian Manufacturing Sector", *Brazilian Review of Econometrics*, Vol. 37/2, http://dx.doi.org/DOI: ,. [8]

Veloso, F. et al. (2017), *O Brasil em Comparações Internacionais de Produtividade: Uma Análise Setorial*, IBRE, FGV, http://bibliotecadigital.fgv.br/dspace/handle/10438/24869 (accessed on 25 January 2020). [4]

Venegas, F. (2013), *¿Existen demasiados abogados en Chile?*, http://idealex.press/mercado-legal/existen-demasiados-abogados-en-chile/. [83]

World Bank (2020), *Doing Business 2020: Comparing Business Regulation in 190 Economies*, World Bank, Washington, DC, USA, http://dx.doi.org/10.1596/978-1-4648-1440-2. [21]

World Bank (2018), "Improving the Efficiency of Credit Markets", in *Public Policy Notes - Towards a fair adjustment and inclusive growth*, https://www.worldbank.org/en/country/brazil/brief/brazil-policy-notes (accessed on 14 January 2020). [44]

3 Improving skills to harness the benefits of a more open economy

As Brazil is significantly less integrated into international trade than other emerging market economies, opening up to trade has significant potential to create jobs that are more productive and better paid. At the same time, this will be associated with structural changes and adjustment costs. Some workers are required to move to more productive firms, change occupations, sectors or even location. In particular, low-skilled workers need to upgrade their skills to move into newly created medium-skilled jobs in expanding firms and sectors. Workers who stay in their jobs will face similar challenges as firms upgrade production processes towards more advanced technologies. Well-designed and well-funded training and adult education policies, combined with effective social protection and employment services, can go a long way to mitigate adjustment costs for low-skilled, unemployed and informal workers. Evidence suggests that training policies can make a real difference, provided that its content is aligned with skill demands in local labour markets. Moreover, the education system plays a fundamental role for preparing current and future generations for the challenges that international integration and rising digitalisation will bring about.

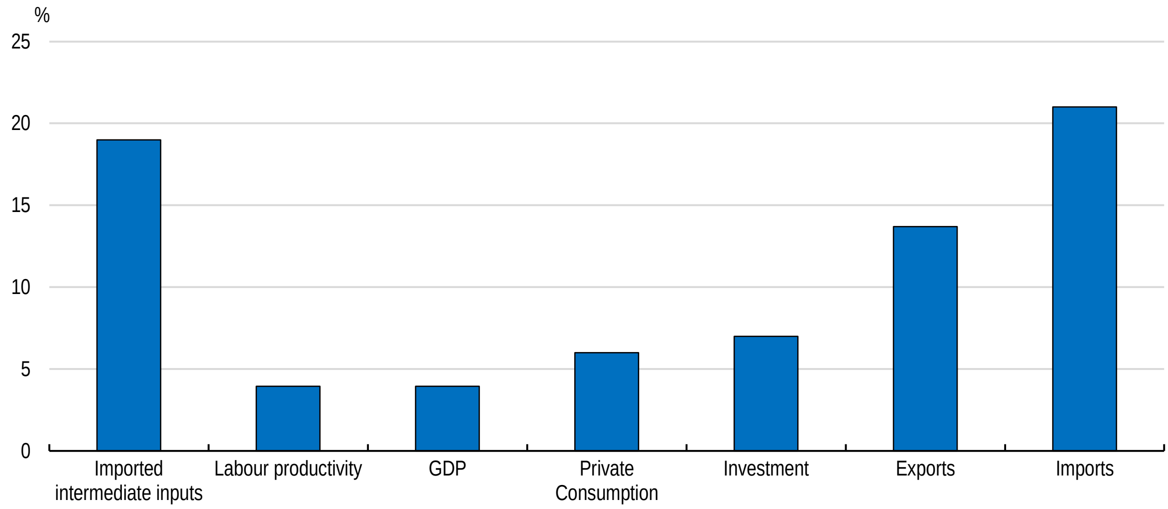
Policies can help to make trade work for all

Fostering a stronger integration into the global economy has significant potential to raise productivity, real wages and well-being. At present, the economy is relatively closed and has foregone many of the benefits that other emerging markets have reaped from international trade and investment (see Chapter 2) (OECD, 2018[1]). For producers, productivity and competitiveness would gain from access to cheaper and higher quality inputs and capital goods, which would in turn allow improvements in wages (Amiti and Konings, 2007[2]; Goldberg et al., 2009[3]). For consumers, trade has potential to reduce prices and enlarge the variety and quality of available goods, which would improve particularly the purchasing power of low-income households (Amiti, Redding and Weinstein, 2019[4]; Grundke and Arnold, 2019[5]).

OECD model simulations suggest substantial rewards from lower trade barriers (Figure 3.1). An ambitious reform could raise labour productivity by 4%. The rising competitiveness of domestic producers would boost exports by 14% facilitating improvements in real wages. Moreover, increasing import competition would reduce consumer prices raising the purchasing power of households and private consumption by 6%. These benefits are likely to be progressive as lower income households spend larger shares of their incomes on tradable goods such as food, home appliances, furniture and clothing, which are currently highly protected (see Chapter 2). In the case of lowering only tariff barriers, and not non-tariff measures or services trade restrictions, private consumption is estimated to rise by 4%.

Figure 3.1. Lowering trade barriers boosts productivity, exports and private consumption

Effects of a simulated reduction of trade barriers, in percent



Note: Simulations are based on the OECD Metro model, which assumes full employment (Box 3.2). The simulated policy change aligns tariffs and non-tariff measures unilaterally with the lowest level among G20 countries, and services trade restrictions with the G20 average.
Source: OECD calculations based on the METRO model (2020).

StatLink https://doi.org/10.1787/888934197373

However, opening up to trade is likely to trigger structural changes in the economy. These are a crucial element of the productivity benefits, but can raise challenges in the transition. Increasing competitive pressures forces companies to reduce inefficiencies and upgrade their production processes through more advanced technologies. Firms need to increase product quality and reduce high prices that result from low domestic competition (Amiti and Khandelwal, 2013[6]; De Loecker et al., 2016[7]). While this leads to a

revitalising effect on the more productive domestic firms, which seize newly arising export opportunities, expand and hire new workers, some low-productivity firms leave the market, freeing resources for the more productive firms and sectors to grow (Melitz, 2003[8]; Pavcnik, 2002[9]; Criscuolo, Gal and Menon, 2014[10]; Araújo and Paz, 2014[11]).

As workers and capital move towards more productive firms and activities, the economy as a whole becomes more productive, and this process does not necessarily comprise a massive substitution towards imports (Hsieh and Klenow, 2009[12]; Topalova and Khandelwal, 2011[13]). However, the transition of workers to other firms, sectors and locations, can imply significant adjustment costs (Winters, Mcculloch and Mckay, 2004[14]; Goldberg and Pavcnik, 2007[15]; Autor et al., 2014[16]). Displaced workers lose their wage income; they have to learn new skills and often have to bear, together with their families, the social costs of moving to other locations to find a new job (Hummels, Munch and Xiang, 2018[17]; Hyman, 2018[18]). Workers that stay in their jobs also need to update their skills. As firms upgrade production processes through more advanced technologies and increasingly import high quality inputs, the task content and skill requirements of existing jobs changes (Hummels et al., 2012[19]; Becker and Muendler, 2015[20]; Becker, Ekholm and Muendler, 2013[21]).

The reallocation process triggered by stronger external competition also presents an opportunity to harness the benefits of a rising digitalisation of production processes, which adds to potential productivity gains from rising international integration. At the same time, digitalisation will eventually also amplify structural transformations in the economy (OECD, 2019[22]). Some occupations will be automated and workers will need to move to new jobs in other firms or sectors (Arntz, Gregory and Zierahn, 2016[23]; OECD, 2018[24]; Autor and Dorn, 2013[25]). In many other occupations the nature of tasks and the skills required to perform will change (Spitz-Oener, 2006[26]; OECD, 2019[22]). The digitalisation and globalisation of production processes increasingly requires a good mix of cognitive and social-interactive skills (Hummels, Munch and Xiang, 2018[17]; Grundke et al., 2018[27]).

The best policy response to these challenges is to invest in people, by supporting workers with targeted education and training programmes that address changing skill needs. Training may involve shorter vocational training courses, but also more fundamental formal education to help workers move into new occupations and sectors (Hummels et al., 2012[19]; Hyman, 2018[18]). Especially for low-skilled and informal workers, an improvement in general cognitive skills, such as literacy and numeracy, through longer term formal education courses might be necessary to participate in professional training and move into new jobs in expanding sectors and firms (Bechichi et al., 2018[28]; Bechichi et al., 2019[29]; Autor et al., 2014[16]). An effective social protection system combined with efficient job placement services would facilitate the transition process and support better training and employment outcomes for displaced workers (OECD, 2019[22]).

Besides education and training policies, other policies that are beyond the scope of this chapter can also help to mitigate adjustment costs and support the structural transformation of the economy. This entails reducing frictions on labour and capital markets, improving infrastructure, especially transport infrastructure, and encouraging innovation (Rusticelli et al., 2018[30]; Fiorini, Sanfilippo and Sundaram, 2019[31]). Phasing out distortive taxes and simplifying the tax system would increase the competitiveness of domestic firms and contribute to the creation of high-quality jobs. Moreover, strengthening domestic competition on product markets is crucial, as Brazil still has the highest barriers to entrepreneurship among countries covered by the OECD Product Market Regulation (PMR) Indicators (see Chapter 2 of this Survey).

Finally, opening up to trade also has significant distributional consequences. Empirical evidence shows that workers are affected differently by opening up to trade, depending on their skill level, occupation or the sector and firm they work in (Goldberg and Pavcnik, 2007[15]; Winters, Mcculloch and Mckay, 2004[14]). Moreover, as certain industries are concentrated in certain regions and production factors are not fully mobile across regions, trade opening can also have distributional consequences across regions (Rusticelli

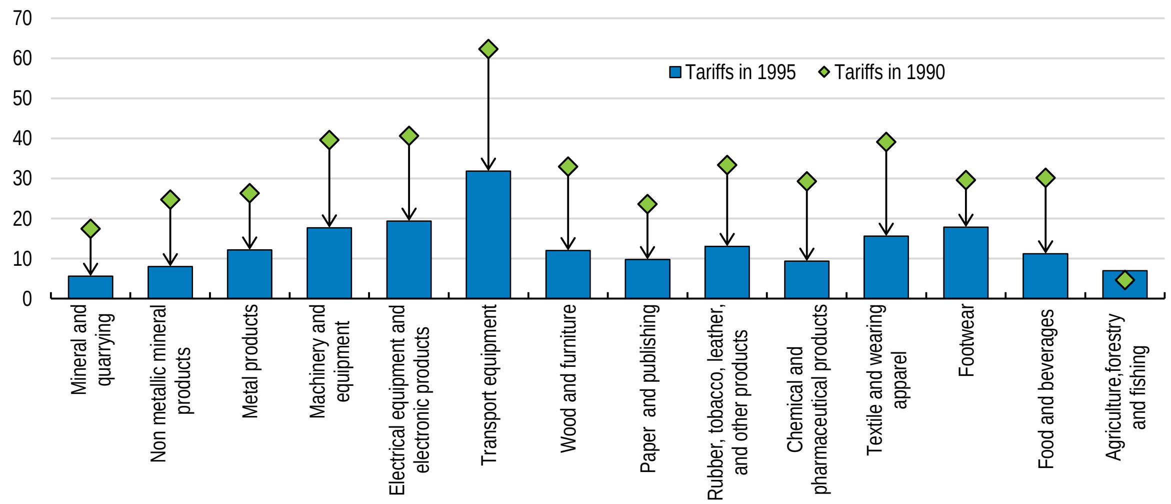
et al., 2018[30]). To ensure that everybody gains from trade, governments should complement trade opening with redistribution policies comprising effective social transfers and progressive taxation (Autor et al., 2014[16]; Lyon and Waugh, 2018[32]; Hyman, 2018[18]).

Gauging the effects of stronger integration into the global economy

History can provide some insights into the likely effects of stronger integration going forward. Since the 1970s, trade policy in Brazil has seen only one significant inflection point, which is the visible reduction in trade barriers that occurred in the context of macroeconomic stabilisation in the 1990s. Many manufacturing sectors experienced substantial reductions in trade barriers in the early 1990s, when tariff rates fell from an average of 31% in 1990 to an average of 11% in 1995 (Figure 3.2). This reform had a sizeable impact on the economy, although in light of continuous trade integration around the world and the absence of significant follow-up reforms in Brazil, the economy has pretty much reclaimed its outlier position in terms of openness by now (Chapter 2).

Figure 3.2. The tariff reductions of the 1990s

Average tariff levels by manufacturing sector in 1990 and 1995 (in %)



Source: Kume et al. (2003).

StatLink https://doi.org/10.1787/888934197392

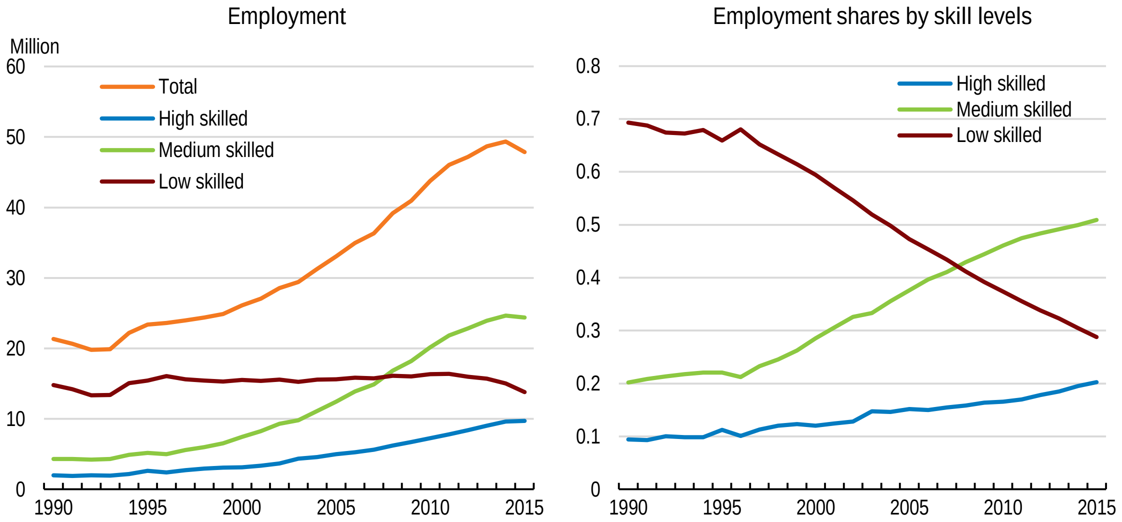
Overall, the period since the 1990s has been characterised by strong growth of formal employment (Figure 3.3). This has been related to several factors, including improvements in macroeconomic stability, solid growth, a rising working-age population, improvements in education and progress in formalisation. In this context, the share of medium and high-skilled jobs grew steadily, reflecting both improvements in access to education and increasing demand for these skills (Silva, Almeida and Strokova, 2015[33]).

The services sectors showed a particularly strong expansion of formal employment, absorbing many young high school graduates, but also informal workers from the agricultural sector (Dutz, 2018[34]). Skill-intensive services sectors like telecommunications, information technology (IT) and other business services led this process, but also retail, transport services, and hotels and restaurants, where more skill-intensive jobs have emerged. This trend towards skilled employment in market services was complemented by a strong

expansion of employment in public administration, health and education services, where over 80% of workers are medium or high skilled.

Figure 3.3. The number and share of medium and high skilled jobs has strongly increased

Total formal employment and employment share by skill category



Note: Skill level is defined according to educational attainment: upper secondary not completed (low skilled), secondary completed and tertiary non-completed (medium skilled) and tertiary completed (high skilled).
Source: OECD calculations based on data from Relação Anual de Informações Sociais (RAIS).

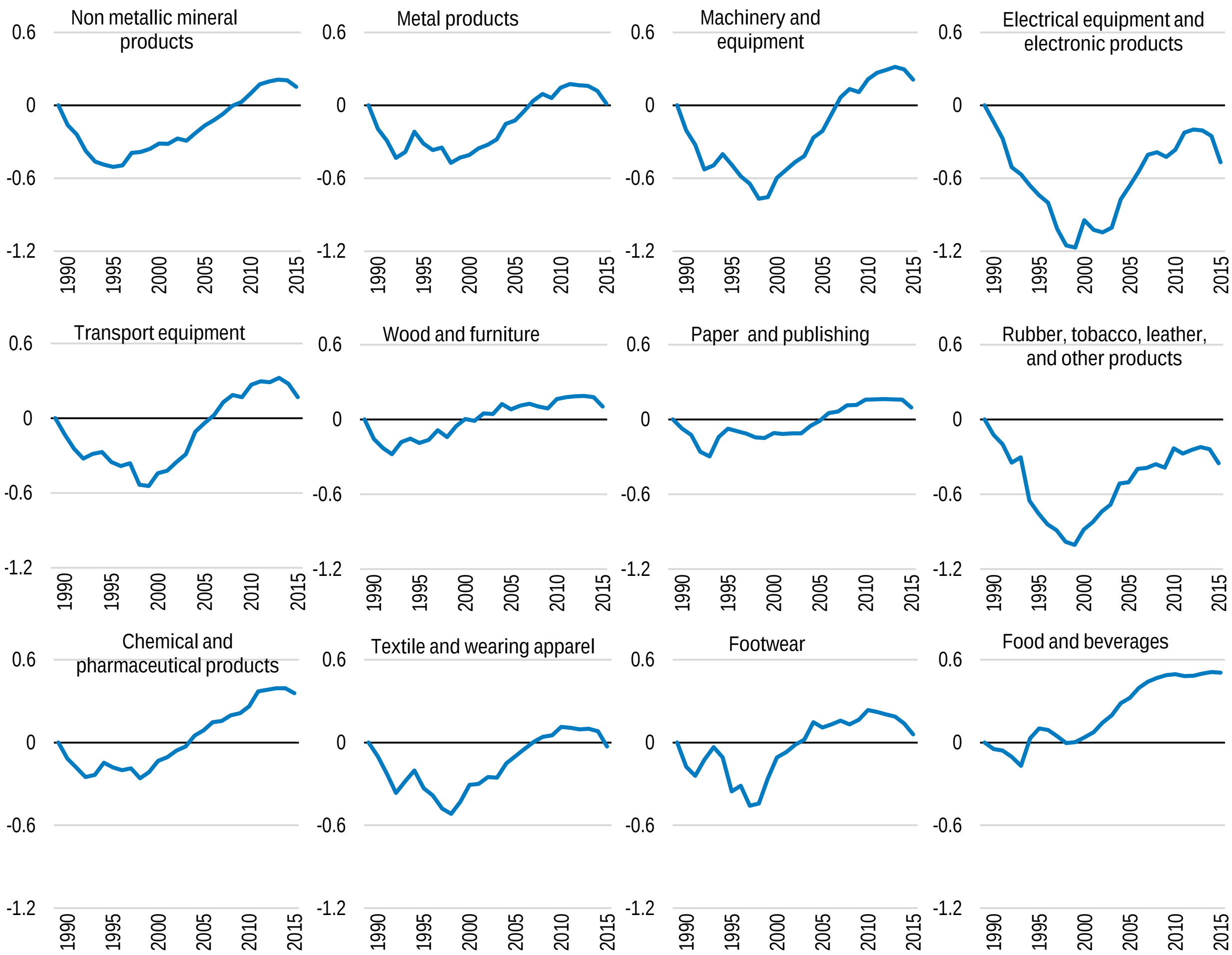
StatLink https://doi.org/10.1787/888934197411

In most manufacturing sectors, falling trade barriers and the resulting rise in import competition in the early 1990s were associated with initial employment losses (Figure 3.4). However, over time, productivity-enhancing factor reallocation and increasing exports generally lead to a strong recovery of employment, which was increasingly medium and high skilled, particularly in the chemical, machinery and transportation equipment industries (OECD calculations based on RAIS data).

For example, chemical products, food processing, machinery and equipment as well as transport equipment experienced tariff cuts of more than 20 percentage points, while labour productivity and exports grew by more than 5% and 10% per year from 1995-2011, respectively (OECD calculations based on OECD TiVA data). Formal employment initially fell but started to recover strongly towards the end of the 1990s, eventually surpassing initial employment levels. In other manufacturing sectors with sizeable tariff cuts, e.g. textile and wearing apparel, electronic equipment or rubber and plastics, productivity and export performance have been weaker. Although formal employment started to rise at the end of the 1990s, it remains below pre-liberalisation levels, the exception being the textile and wearing apparel industries, which remain highly protected.

Figure 3.4. Manufacturing employment has recovered since the 2000s

Cumulative net job creation since 1990 as a share of employment (by manufacturing sector)



Note: The figures shows the cumulative net job creation since 1990 divided by total employment in each year.
Source: OECD calculations based on RAIS data.

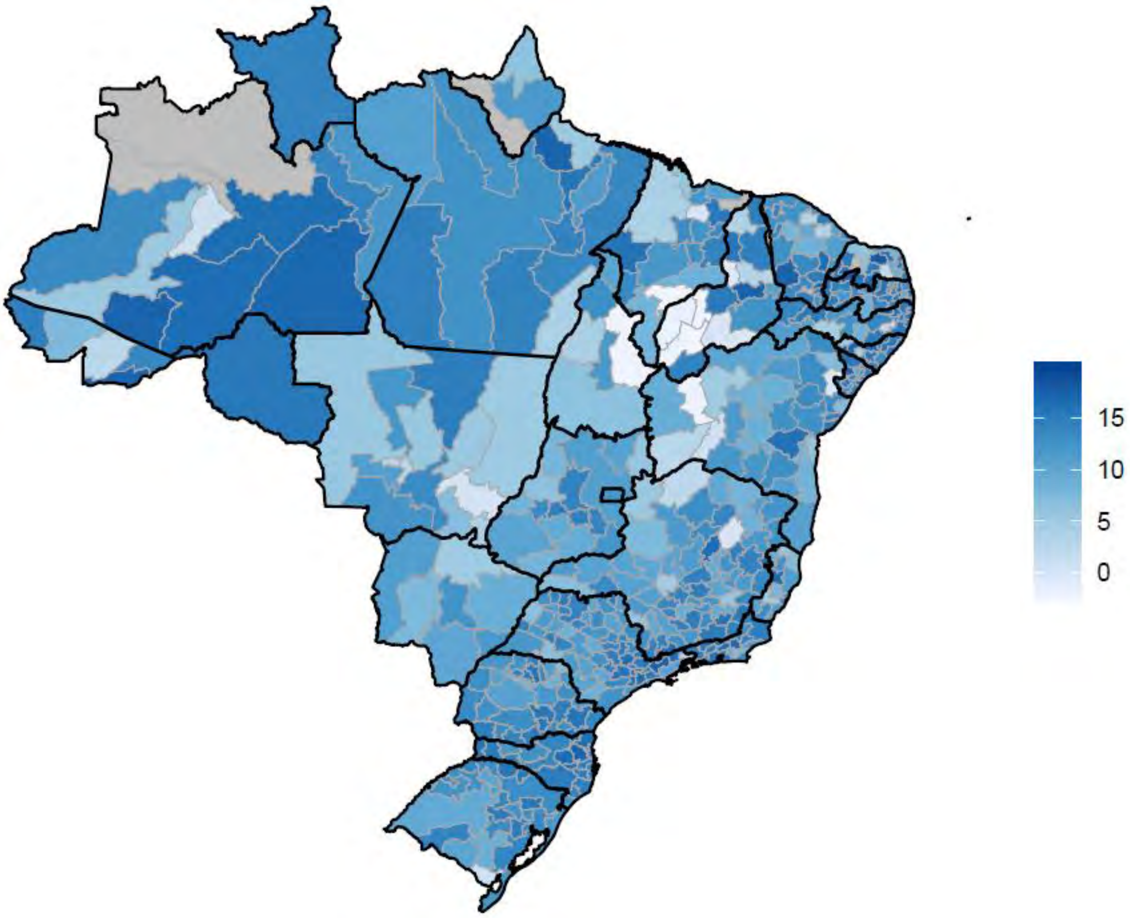
StatLink https://doi.org/10.1787/888934197430

A look at local labour markets

Drawing lessons from aggregate or even sector-specific developments is intrinsically difficult due to a myriad of competing explanations and factors acting at these levels. For this reason, an empirical analysis based on 481 local labour markets may provide more reliable insights into the effects of increasing international economic integration on employment and firm dynamics in Brazil. Local labour markets, called micro regions in Brazilian national statistics, differ with respect to their industry structure and thus their exposure to trade liberalisation (Figure 3.5). This in turn allows identifying the effects of trade opening by focusing on different trajectories of outcomes across regions (Box 3.1).

Figure 3.5. The exposure to trade liberalisation has been heterogeneous across local labour

Tariff reductions 1990-1995 weighted by industry employment shares in micro regions (in percentage points)



Note: Micro regions are defined by the Brazilian national statistics institute as an aggregation of municipalities that are well connected by transport infrastructure. Regional trade exposure is computed as the weighted average of tariff cuts from 1990-1995, with industry employment shares per micro region as weights.
Source: OECD calculations based on RAIS data and data from Kume et al. (2003).

Although formal employment has increased strongly since the 1990s, employment growth has generally been weaker in regions that were more exposed to import competition (Figure 3.6). In particular, this reflects initial employment losses in manufacturing sectors during the 1990s. Since the 2000s, formal employment has recovered, but some differences between regions with different levels of exposure to trade liberalisation remain. For example, a micro region that experienced a 10 percentage point larger tariff cut in the 1990s, approximately the difference in tariff reductions between the 90th and the 10th percentile of micro regions, showed a 45 percentage point lower employment growth between 1990 and 2015. These average effects hide considerable heterogeneity across micro regions that have experienced large tariff cuts in the 1990s. Some of them have performed well, with strong employment and output gains recorded in micro regions located in poorer states such as Pernambuco, Maranhão, Alagoas and Rio Grande do Norte (OECD analysis).

Box 3.1. Identifying the effects of trade opening on employment and firm dynamics

The trade liberalisation of the 1990s and local labour markets in Brazil

After four decades of policies to foster industrialisation through import substitution including high import protection, Brazil lowered import tariffs significantly from 1990 until 1995 (Figure 3.2). This policy change was unexpected, as a polarised political landscape and close presidential elections in 1989 had led to high uncertainty about the future course of economic policy (Cavgias et al., 2019[35]). Immediately after taking office in early 1990, the new president announced a schedule to reduce tariffs until 1995, mostly implemented ahead of the initially set dates. The size of tariff reductions by sector was mostly determined by pre-liberalisation tariff levels, as the objective was to lower and equalise import protection across sectors to reduce distortions of relative prices (Dix-Carneiro and Kovak, 2017[36]).

The fact that during the 1990s a range of different macroeconomic and structural policies were implemented simultaneously makes it difficult to draw conclusions from macro-economic or sectoral data. One frequently applied solution to this identification problem is the local labour market approach (Autor, Dorn and Hanson, 2013[37]; Topalova, 2010[38]; Dix-Carneiro and Kovak, 2017[36]). Local labour markets differ with respect to their industry structure and thus their exposure to trade liberalisation (Figure 3.5), but are subject to the same national institutions and macroeconomic shocks. Together with the fact that migration of workers and firms between local labour markets is costly, it is possible to disentangle the effects of trade opening on employment and firm dynamics by focusing on different trajectories across regions. The analysis exploits differences across micro regions as defined by the Brazilian statistics institute (IBGE), which combine municipalities that are well connected by transport infrastructure and have common production structures (Dix-Carneiro and Kovak, 2017[36]).

The analysis follows the empirical literature investigating how trade affects local labour markets and constructs a regional measure of exposure to tariff reductions, using regional employment by industry as weights (Topalova, 2010[38]; Dix-Carneiro and Kovak, 2017[36]). This is combined with administrative labour market data covering the universe of formal sector workers and firms from 1985-2015 including information on employment, wages and other socio-economic characteristic of workers. The analysis uses a long-difference estimator to investigate the effects of trade exposure on regional firm dynamics and labour market outcomes across time (Dix-Carneiro and Kovak, 2017[36]). Further details on the empirical methodology are described in Grundke et al., 2020[40].

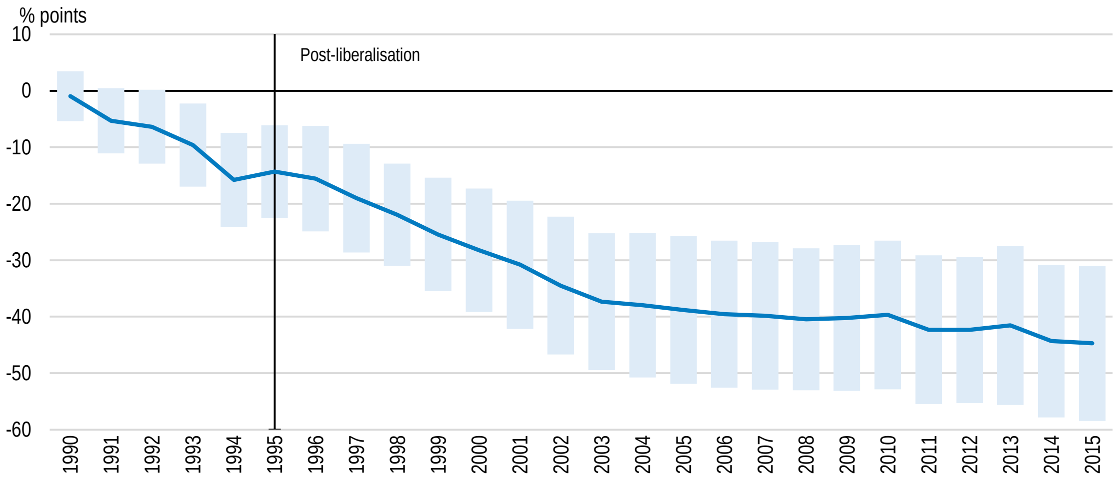
Employment growth in regions that were more exposed to trade liberalisation has been especially weak for low-skilled workers. From 1990 until 2015, their employment share has decreased by 3.7 percentage points relative to less exposed regions (Figure 3.7). Particularly the share of medium-skilled jobs has increased in trade-exposed regions, but high-skilled employment has also expanded its relative weight. A similar trend can be observed for real wages as well as wage shares across skill groups. From 1990 until 2015, the wage share of low skilled workers in trade-exposed regions decreased by 7.2 percentage points relative to less exposed regions, and the one of medium and high-skilled workers increased by 4.2 and 3 percentage points, respectively. This indicates that rising import competition presents challenges for low-skilled workers, who need to move to newly created medium-skilled jobs in expanding firms and sectors, or even other regions.

Identifying sectors, firms, occupations and regions, where workers will be displaced or new jobs will be created, is key to design efficient and effective training policies and mitigate adjustment costs for workers. The content and intensity of the required training depends on the difference between the task-specific skill requirements in the old and the potential new job as well as the general cognitive and social skills of the worker (Bechichi et al., 2018[28]). Especially for older workers, learning new skills and moving to new jobs in other firms, sectors or regions can be costly (Autor et al., 2014[16]). The analysis shows that elderly

workers are particularly at risk of suffering trade-related job losses and find it more difficult to move into new jobs (Grundke et al., 2020[39]).

Figure 3.6. Employment growth has been weaker in regions more exposed to trade liberalisation

Differences in employment growth between regions more and less exposed to trade opening

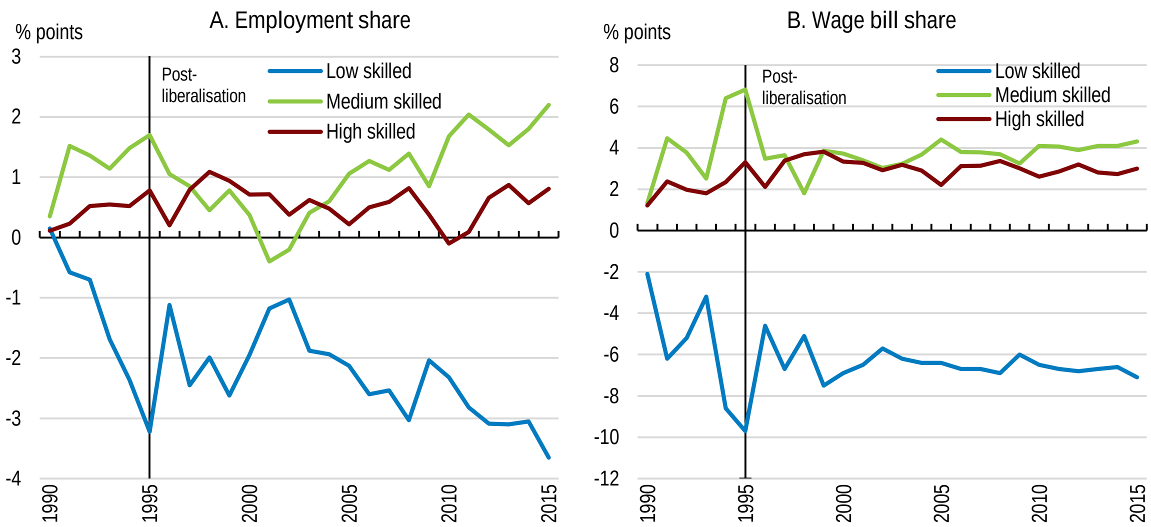


Note: Trade-exposed regions are defined as micro regions that experienced a 10 percentage points larger tariff cut in the 1990s (approximately the difference in tariff reductions between the 90th and the 10th percentile of micro regions). The bars show 95% confidence bands.
Source: OECD calculations based on RAIS data.

StatLink https://doi.org/10.1787/888934197449

Figure 3.7. Trade liberalisation has affected low-skilled workers more severely

Differences between more and less trade-exposed regions by skill level



Note: Trade-exposed regions are defined as micro regions that experienced a 10 percentage points larger tariff cut in the 1990s (approximately the difference in tariff reductions between the 90th and the 10th percentile of micro regions). Employment share by skill level represents the number of workers by skill level (per micro region) divided by the total number of workers (per micro region). Wage bill share by skill level represents the wage bill of workers by skill level (per micro region) divided by the total wage bill (per micro region).
Source: OECD calculations based on RAIS data.

StatLink https://doi.org/10.1787/888934197468

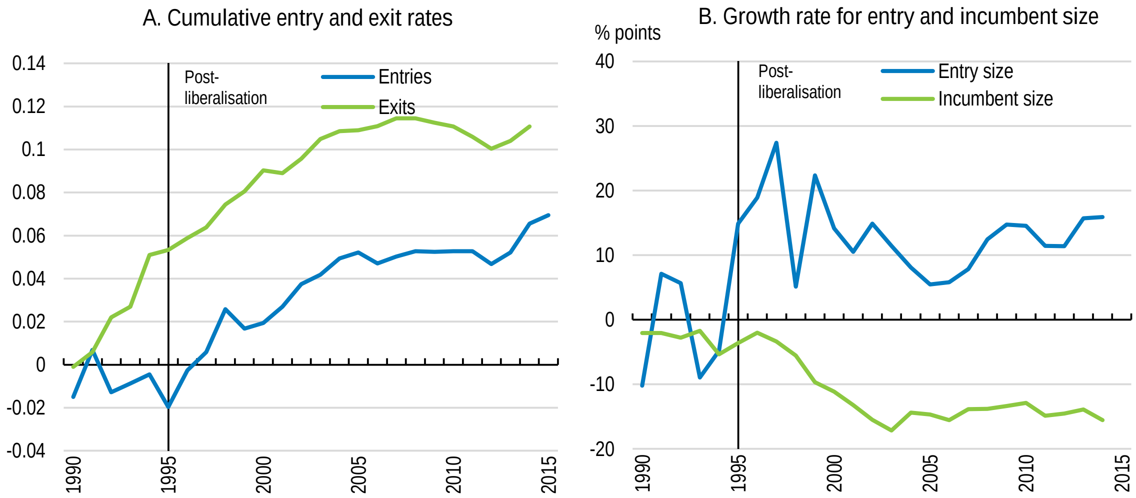
The reallocation of workers within sectors

Training needs depend on the exact nature of reallocation. As producing the same type of products usually requires a similar set of skills, the need for training to help displaced workers move to other firms in the same sector is likely to be smaller than for moves to other sectors (Bechichi et al., 2018[28]; OECD, 2019[22]). Nevertheless, firms within the same sector differ in their production processes and the type of technology they use (Andrews, Criscuolo and Gal, 2015[40]). Increasing technology adoption among highly productive frontier firms will change the task-content of occupations and require workers who move to more productive firms to update their skills (Bechichi et al., 2019[29]; Hummels et al., 2012[19]; Hummels, Munch and Xiang, 2018[17]).

Rising import competition has invigorated the forces of creative destruction and increased entry and exit rates of firms. This churning process has been more pronounced in regions more exposed to trade liberalisation, where cumulative firm entry and exit rates exceeded those of less exposed regions by 7 and 11 percentage points in 2015, respectively (Figure 3.8). Resources shifted from exiting to entering firms, as the average size of incumbents has decreased and the size of entrants increased in more trade-exposed regions.

Figure 3.8. Firm dynamics have increased in regions more exposed to trade liberalisation

Differences between more and less trade-exposed regions



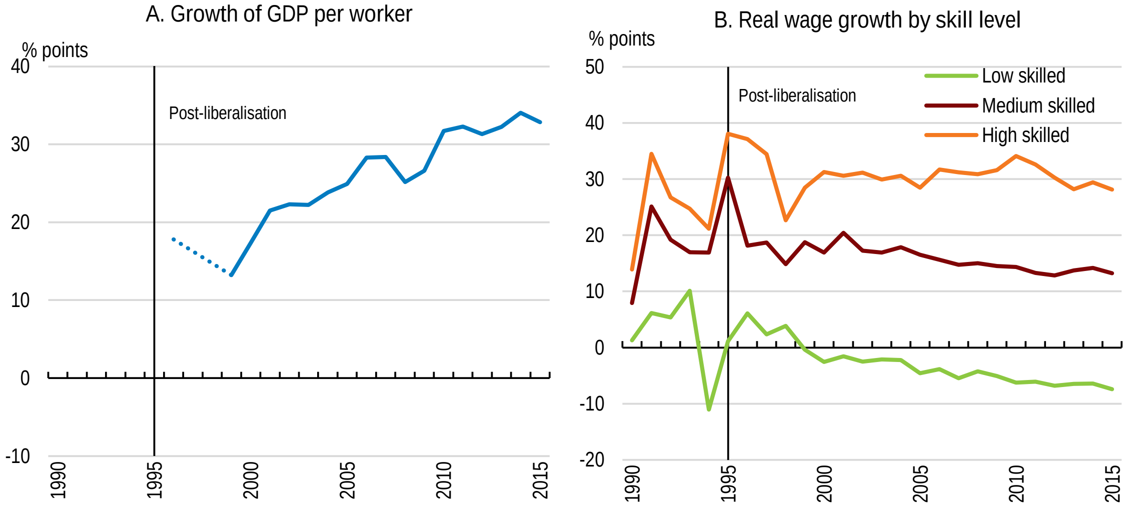
Note: Trade-exposed regions are defined as micro regions that experienced a 10 percentage points larger tariff cut in the 1990s (approximately the difference in tariff reductions between the 90th and the 10th percentile of micro regions). Cumulative entry and exit rates represent cumulative sums of entering and exiting plants by micro region since 1990, respectively, divided by the total number of plants per micro region in each year. The average size of entering and incumbent plants per micro region are measured using formal employees per plant.
Source: OECD calculations based on RAIS data.

StatLink https://doi.org/10.1787/888934197487

Higher churning has in turn led to increases in productivity and real wages. Labour productivity has risen more rapidly in trade exposed regions, supporting exports and enabling increases in real wages (Figure 3.9) (Grundke et al., 2020[39]). In particular, real wages for medium and high skilled workers have grown faster in trade-exposed regions, signalling that the upgrade of production processes and technology adoption in more productive firms are complementary to high and medium-skilled labour.

Figure 3.9. Labour productivity and real wages have risen in trade-exposed regions

Differences between more and less trade-exposed regions



Note: Trade-exposed regions are defined as micro regions that experienced a 10 percentage points larger tariff cut in the 1990s (approximately the difference in tariff reductions between the 90th and the 10th percentile of micro regions). Average labour productivity per micro region is measured as GDP divided by the number of formal sector workers. As GDP data for micro region is not available for all years, differences in labour productivity growth between regions are computed using 1985 as the base year and the regressions start in 1996.
Source: OECD calculations based on RAIS data and GDP data by municipality from IBGE.

StatLink https://doi.org/10.1787/888934197506

The finding that lower trade barriers foster the creation of medium-skilled jobs presents an opportunity for training and education policies to succeed in mitigating the adjustment costs for low-skilled workers. Many of these medium-skilled jobs that have expanded in regions more exposed to trade liberalisation are low-complexity white-collar jobs, such as clerical support, services and sales workers (Grundke et al., 2020[39]). Transitions from low-skilled occupations to these expanding medium-skilled occupations may imply relatively manageable training needs (Bechichi et al., 2018[28]).

As rising trade exposure increases job-turn over particularly for low and medium skilled workers (Grundke et al., 2020[39]), the transition towards a more open economy would be easier with additional policy support for these workers. This could take the form of strengthening the social safety net, especially for informal workers, and skills programmes, to reduce the length of unemployment spells.

The reallocation of workers across sectors

The current structure of import protection varies considerably across different sectors of the economy. Tariff rates are high for textile, wearing apparel, leather and furniture industries, and non-tariff measures particularly protect food processing, transport equipment as well as machinery and equipment industries (Cadot, Gourdon and van Tongeren, 2018[41]). Services sectors also differ in their openness to foreign competition, with banking, insurance, media and broadcasting as well as logistics showing the highest barriers to foreign entry (OECD calculations based on the STRI index).

Lowering these trade barriers will lead to reallocation of labour across sectors with substantially different skill-requirements (Bechichi et al., 2019[29]). Identifying existing sectors with particularly strong challenges and large expected training needs can help to target training and education policies effectively. At the same time, identifying those sectors with particularly strong future employment potential may help to guide the choice of training content.

Economic models can help to guide these choices. Static computable general equilibrium models are a common analytical tool to investigate the effects of trade liberalisation on the reallocation of production factors across sectors, while assuming that total factor endowments in the economy are fixed and fully employed (Box 3.2). The modelling exercise presented in the introduction of this chapter, based on the OECD METRO model, can be used to shed more light on sector-specific developments.

Some manufacturing sectors with high protection, such as textile and wearing apparel, metal products, machinery and equipment, motor vehicles, electronic equipment and other manufacturing, would face stronger import competition with lower trade barriers. Rising competitive pressures will increase productivity and ultimately lead to rising production and exports in those sectors. However, the model simulations suggest some employment losses in highly protected sectors (Table 3.1). The same holds for a number of services industries like finance, business services or transport services, where moderate reductions in the workforce would go along with rising productivity, output and exports. At the same time, the model simulation also identifies sectors where new employment opportunities will arise. These include food processing, agriculture, transport equipment, communication services and other services sectors such as utilities, retail, construction, tourism, education and health.

Table 3.1. Trade liberalisation will require some workers to move to jobs in other sectors

Effects of a simulated reduction of tariff and non-tariff protection as well as services trade restrictions

	Changes in employment due to trade liberalisation scenario from METRO model (in %)	Formal and informal employment per sector in 2018 from PNAD (in thousand)
Cereal grains	2.0	502
Other agriculture	1.3	5490
Oil seeds	2.4	22
Dairy	0.1	220
Natural resources	2.0	440
Meats	3.7	3023
Food and beverage	0.4	1067
Textile and wearing apparel	-4.9	2751
Mineral products	-2.8	553
Ferrous metals	-3.5	154
Nonferrous metals	1.7	66
Metal products	-5.1	954
Motor vehicles and parts	-4.7	476
Transport equipment	23.3	113
Electronic equipment	-5.2	359
Machinery and equipment	-10.6	521
Other manufacturing	-4.4	2836
Transportation	-0.6	4680
Communication	0.6	1244
Financial services	-0.8	906
Insurance	0.1	357
Business services	-2.1	7129
Other services	0.5	58468
Total	0	92331

Note: The simulation reduces tariffs and ad-valorem equivalents for non-tariff measures unilaterally to the lowest level among G20 countries, and services trade restrictions to the average level across G20 countries. Total employment in the METRO model is fixed and includes formal and informal workers as defined by the International Labour Organisation.
Source: OECD calculations based on the METRO model (2020). PNAD 2018.

Box 3.2. Policy simulations based on the OECD METRO model

The effects of trade policy changes tend to affect almost all parameters of an economy due to numerous feedback effects. One attempt to capture these effects is to undertake simulations in a computable general equilibrium model, which combines the supply and the demand side of an economy. Such models can capture the input linkages between economic sectors and model markets for production factors, which are mobile across sectors. Thus, tariff changes affecting output in one sector also have repercussions on other sectors by changing the demand and prices for inputs and production factors. These models also capture the feedback effects of changing income of workers and relative prices of goods and services on private consumption as well as the interlinkages of disaggregated sectoral trade flows.

To analyse the economy wide effects of a reduction in import protection for Brazil, simulations have been undertaken using the OECD METRO model, which links 61 countries and 57 economic sectors (see Technical Background Paper). This static model assumes fixed endowments and full employment of production factors and has been used widely in trade analysis to simulate the effects of domestic trade policy reforms in an international environment (OECD 2015). The model simulations incorporate a productivity-enhancing effect of improving access to and lowering prices of foreign inputs, based on the estimated elasticity of labour productivity with respect to input tariffs. This has been obtained from panel data covering 33 sectors across the period1995-2011. The final model has been used to simulate a unilateral decrease of Brazil's currently applied tariffs and non-tariff measures to the lowest levels among G20 countries as well as its services trade restrictions to the average level among G20 countries.

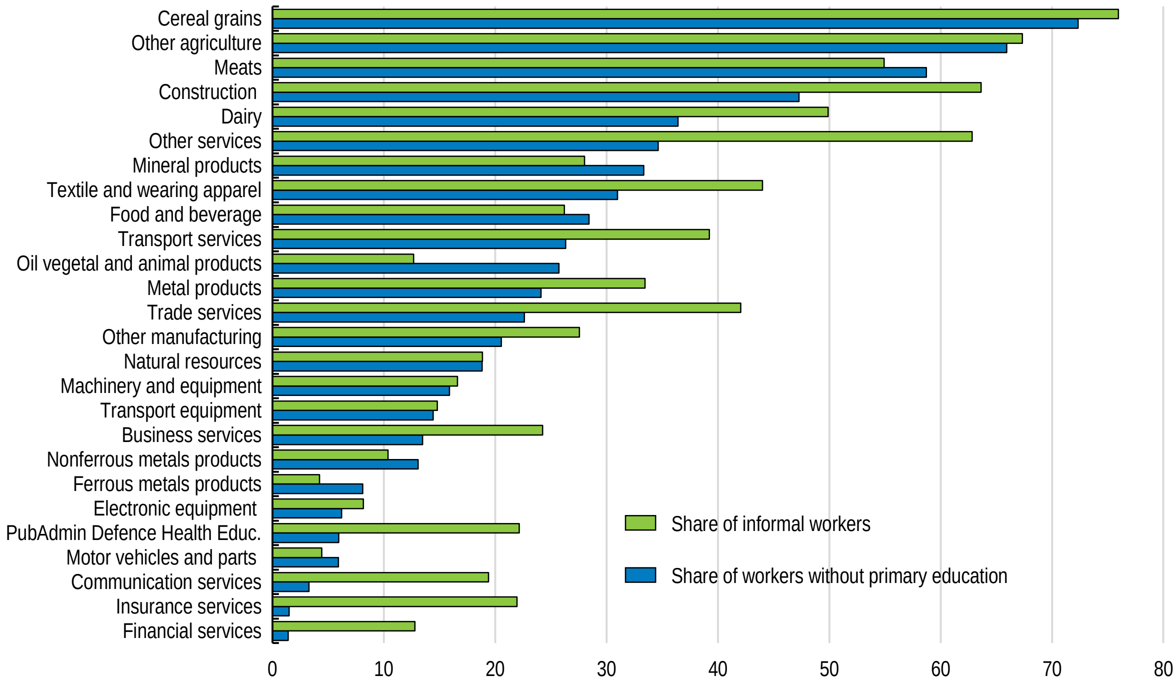
Targeted training can make a real difference

The results of the econometric analysis and the modelling exercise can provide inputs for the targeting and the content of future training programmes. Training needs will depend on the difference between the task-specific skill requirements in the old and the potential new job, but also on the general cognitive and social skills of the worker (Bechichi et al., 2018[28]). Many workers in protected sectors have not completed primary education and are in informal employment, lacking access to formal training opportunities (Figure 3.10). For these workers, improvements in general cognitive skills through longer-term formal education courses are a pre-condition for bridging the skill gap towards newly created medium-skilled jobs in expanding firms or sectors (Bechichi et al., 2018[28]).

In particular, workers in the heavily protected textile and wearing apparel industries will require intensive education courses to prepare for future job transitions. More than 31% of the workforce of 2.8 million have not completed primary education and 44% are in informal employment (Figure 3.10). Metal products and other manufacturing industries show a similar picture. In agriculture, food processing and some services sectors, which are expected to expand employment as import barriers fall, the share of low skilled and informal workers is also very high (Figure 3.10). As these sectors face rising import competition and jobs move towards high-productivity firms, basic adult education policies are key to prepare these workers for the challenges associated with new technologies and rising product quality.

Figure 3.10. Protected sectors employ many low-skilled and informal workers

The share of workers without completed primary education and the share of informal workers (by sector)



Source: PNAD 2018.

StatLink https://doi.org/10.1787/888934197525

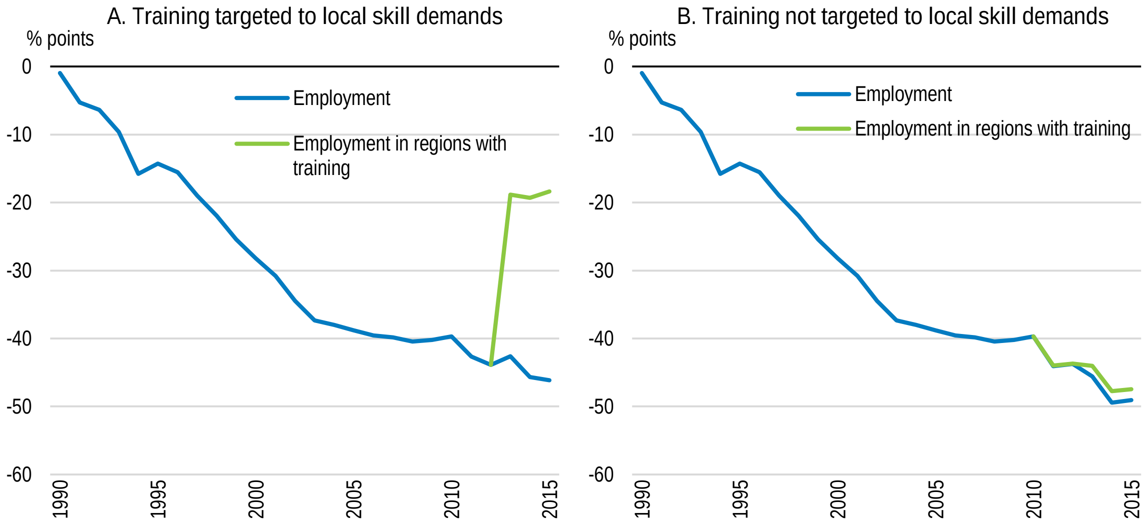
Moreover, displaced workers who dispose of the necessary cognitive skills for moving into medium and high skilled jobs may need more specific vocational training courses to acquire the specific skills necessary for a new job. For these courses to be successful, alignment with skill demands in local labour markets is key. This implies a need to involve the private sector closely in content, design and implementation of these courses (O'Connell et al., 2017[42]; OECD, 2018[43]). The geographic mobility of workers, and in particular of low-skilled and older workers, is often severely limited by the low quality of transport infrastructure, housing market distortions, job search costs, social costs of moving families or a limited ability to learn and adapt to new social contexts (Autor et al., 2014[16]; Gathmann, Helm and Schönberg, 2018[44]; Hyman, 2018[18]). A lack of alignment with local labour market needs has been identified as a shortcoming of previous training programmes, notably the large-scale programme PRONATEC (OECD, 2018[45]). For example, poorly designed remuneration incentives have led training suppliers to build up excessive training capacities for secretarial assistants, which were relatively cheap to instruct, while local companies continued to face severe difficulties in hiring staff with technical skills.

Empirical analysis based on micro data allows matching regional exposure to stronger import competition with detailed information on past training policies (Box 3.3). In particular, this information allows the identification of training capacity that was created in response to skill demands by local employers, which corresponds to a small fraction. The results of this analysis suggest that only this vocational training that was aligned with local skill demand has been effective to reduce the negative employment effects of rising import competition (Figure 3.11). Trade-affected micro regions that have raised the supply of vocational training courses targeted to local skill demands by an average of 10,000 training class hours from 2011 to 2015 have narrowed the gap in employment growth with respect to less trade-exposed regions by around 50%. Other types of training courses, which had not specifically targeted skill demands in local labour

markets, have had much smaller effects on employment growth. In many cases, the effects were negligible, highlighting the importance of targeting.

Figure 3.11. Training targeted to local skill demands mitigates adjustment costs for workers

Differences between more and less trade-exposed regions



Note: Trade-exposed regions are defined as micro regions that experienced a 10 percentage points larger tariff cut in the 1990s (approximately the difference in tariff reductions between the 90th and the 10th percentile of micro regions). Regions with training are micro regions that have increased training class supply by 10,000 hours from 2011-2015.
Source: OECD calculations based on RAIS data.

StatLink https://doi.org/10.1787/888934197544

One lesson that can be distilled from this analysis is that the investment required to implement effective training programs is manageable and likely to have high pay-offs, once proper targeting is ensured. OECD estimates based on micro-data and past training costs suggest that additional yearly spending in the order of 0.5% of GDP could be sufficient to address upcoming skill challenges, provided that future training programmes are carefully targeted to skill demands in local labour markets.

However, for the 24 million workers without completed primary education, the necessary investments are likely to be higher. Vocational training courses targeted to local skill demands have particularly improved employment opportunities for medium-skilled workers (Blyde et al., 2019[46]; Grundke et al., 2020[39]; O'Connell et al., 2017[47])This may be a sign that current training institutions have not been successful in supporting workers who need it the most. Completing basic adult education is a pre-condition for successfully attending many vocational training courses. Thus, policies to prepare the workforce for the rising integration into the global economy need to comprise an ambitious expansion of adult education and an improvement of its quality.

Box 3.3. Training targeted to local skill demands can mitigate adjustment costs for workers

To investigate how training can mitigate adjustment costs for workers, empirical analysis undertaken for this Survey combines administrative labour market data with micro data on training enrolment and completion from Brazils PRONATEC program from 2011-2015. PRONATEC was a government-led initiative that strongly expanded the offer of short-term vocational training courses to low-skilled workers and unemployed individuals. The Ministry of Education coordinated the programme, but other ministries could request training courses for specific localities and select training participants (OECD, 2018[45]). There were no guidelines to collaborating ministries on how to identify training needs in their respective areas of intervention. Most ministries organised their requests centrally without consulting regional and local authorities. This resulted in many courses not meeting the skills required by recruiting firms in local labour markets and not addressing individuals' actual re-skilling needs (O'Connell et al., 2017[42]; OECD, 2018[45]).

The Ministry of Industry (MDIC) was the only PRONATEC partner that developed a systematic method to assess and anticipate skills needs before submitting course requests. Their method explicitly took into account the location, scale and skill content of firms training needs, and training classes started in 2013. Initially, staff at MDIC contacted firms in different sectors and locations informally to enquire about their training needs. At a later stage, MDIC developed a web platform called "SuperTec" where employers could register and provide information regarding their skills needs and the volume of training desired. The platform significantly increased the efficiency of the information collection procedure. As a result, training courses demanded by MDIC were demand-driven, as opposed to the courses from other collaborating ministries (O'Connell et al., 2017[47]; OECD, 2018[45]).

The empirical analysis uses data on training courses at the micro region level and separates between courses offered by MDIC and courses offered by other Ministries to single out training that targeted local skill demands. Training class hours in the micro region is used as the treatment variable (10,000 hours are one unit). Further information can be found in Grundke et al., 2020[43].

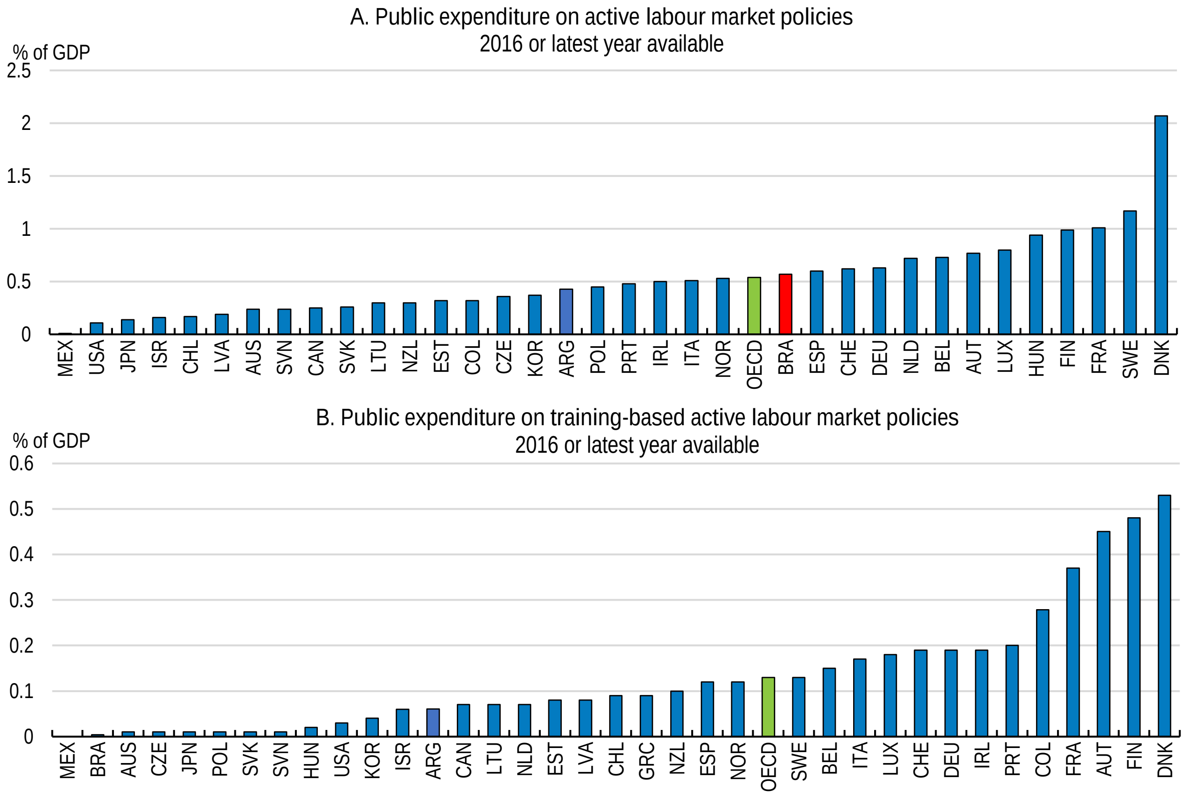
Improving professional training policies

The empirical analysis based on the 1990s trade reforms shows a need for training policies to accompany future trade opening, to ensure that all Brazilians can reap the benefits, including those with low skills. At the same time, the analysis also shows how much of an impact training policies can have to mitigate challenges in the transition, provided that they are well-designed. This combination builds a strong case for a major boost to investing into people, by providing them with the necessary skills to reap new opportunities. Investing in people's skills will not only help to master the transition towards a more modern and open economy, but it will also support the productivity improvements that Brazil urgently needs to sustain economic growth (see Chapter 2).

Within the realm of active labour market policies, Brazil's expenditure is on par with the OECD average, but this spending is much less concentrated on training policies (Figure 3.12). Most of the spending goes to programmes supporting self-employment and micro enterprise creation as well as to employment subsidies. Part of these resources could be shifted to vocational training and adult learning policies, as these other measures are less effective in increasing the employability of participants (Brown and Koettl, 2012[48]). In addition, improving labour market job services and linking them better with training policies may also require additional resources, but can significantly improve the employability of job seekers and reduce skill-mismatch in the labour market (OECD, 2018[45]).

Figure 3.12. Active labour market policies are not focused on training policies

Public expenditure on training-based and total active labour market policies (in %)



Source: ILO (2016).

StatLink https://doi.org/10.1787/888934197563

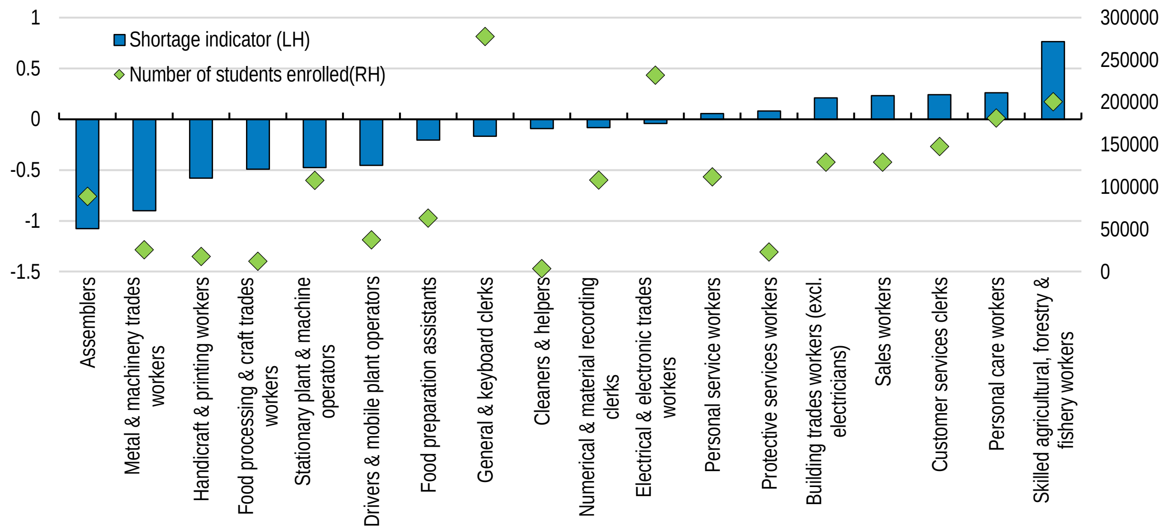
Aligning training supply with labour market demands is key

Not only is spending for training and adult learning policies relatively low, the training and adult learning system has also been characterised by large spending inefficiencies (OECD, 2018[45]). From 2011 until 2018, Brazil implemented a large-scale training program called PRONATEC in a coordinated effort involving various ministries. Training subsidies targeted particularly the poor and low-skilled parts of the population including informal and unemployed workers. The regional coverage was extensive and included many poor and remote areas.

An important shortcoming of PRONATEC, however, was a mismatch between course content and skill needs in local labour markets, at least for large parts of the programme (Box 3.3). In many cases, the type and content of subsidised training courses as well as the target population were centrally decided without taking into account skill demands and training needs in local labour markets (OECD, 2018[45]). Moreover, weakly designed incentives for training institutions led to a large heterogeneity in training quality, dropout rates and future employability of training graduates. The programme paid a fixed subsidy per enrolled student without any incentives related to content relevance, cost effectiveness or quality improvements. Evaluation was not mandatory. In those cases where private training providers had a say in choosing training content, they usually offered courses that could be set up or expanded quickly rather than those that were needed. Rapid expansion of course capacities weakened the selection criteria for teachers and reduced teaching quality. As a result, large numbers of workers enrolled in vocational training courses related to occupations for which labour demand was low (Figure 3.13).

Figure 3.13. PRONATEC courses were poorly aligned with labour market needs

Number of students enrolled and indicator on relative labour demand (by occupation)



Note: The total number of students enrolled in the PRONATEC program is depicted in the right-hand side vertical axis and the occupational shortage indicator is represented in the left-hand side axis. A negative value for the occupational shortage indicator means that the occupation is in surplus, i.e. firms have no difficulties to find workers with the right skills. A positive value for the indicator means that the occupation is in shortage, i.e. firms have difficulties to find workers with the right skills. Data for the shortage indicator refers to 2014. Data for the number of students enrolled refers to 2012-2018.
Source: SISTEC micro data set of PRONATEC students' records and OECD Skills for Jobs database, taken from (OECD, 2018[45]).

StatLink https://doi.org/10.1787/888934197582

The assignment of students to training supply was also characterised by a lack of interaction with career guidance services, which are patchy and poorly structured. As a result, many low-skilled workers lacked the most basic skills to benefit from the course (OECD, 2018[45]). On the other hand, career counsellors had no access to information about past training participation, which prevented the design of consistent training agendas for individuals and further reduced the employability benefits from professional training for workers. A small part of PRONATEC, however, referred to as PRONATEC-MDIC or SuperTec and organised by the Ministry of Industry (MDIC), did not suffer from misalignment with labour market demands (Box 3.3).

Current plans draw lessons from past weaknesses, but should go further

Training policies are currently undergoing a comprehensive overhaul, with a particular focus on improving their cost effectiveness through more involvement of the private sector. An additional 1.3 million training places will be created, with the training supply based on a prior analysis of skill demand involving local productive sectors. These will be allocated via training vouchers handed out to firms between 2020 and 2022, strengthening the link between training choices and local firm needs. The training places will be created by SENAI, which is part of a semi-public network of training providers that receive part of their revenue from a national payroll tax. SENAI has played a major role in the provision of PRONATEC training courses and its regional coverage and training quality is high (OECD, 2018[45]).

The vouchers will allow firms to select the training participants and pay for the training they need. Training participation is not limited to current employees of the firm, but could include unemployed persons that the firm wishes to hire after the training. The engagement of private employers will lead to rising effectiveness of the training, as firms have an incentive to select the worker for whom the training will be most effective and will select training courses that reflect private sector skill demands. This approach has a strong focus on training those with greater expected benefits from training.

However, there may be a case for expanding policy efforts beyond these low-hanging fruits, although that would require additional resources. The social benefits of expanding professional training programmes to make more space for those from disadvantaged socio-economic backgrounds could be substantial. In fact, there is a risk that the new training subsidy may not reach the workers that would need training the most: low-skilled, informal or unemployed workers that are particularly affected by the structural changes that trade opening or digitalisation will bring about (OECD, 2017[49]; OECD, 2019[22]).

To support this vulnerable group of workers, the government is planning to introduce social impact bonds to finance training provision. In this type of public-private partnership arrangements, providers would get significant autonomy in designing training courses and content, but their remuneration would be made contingent on specific outcome targets, such as the future employment rate of training participants. The potential success of such arrangements crucially depends on how contracts are designed (OECD, 2016[50]). In particular, the definition and measurement of social outcomes and the selection of target and control group to evaluate whether objectives have been met are complex tasks that entail significant transaction costs and risks for the public sector. So far, the empirical evidence on the effectiveness of social impact bonds has been mixed and governments should be careful in providing specific social services completely through these type of arrangements (OECD, 2016[50]). However, as a complement to traditional forms of public social service provision, social impact bonds have the potential to nurture a culture of monitoring and evaluation in social service delivery, which is currently missing in Brazil.

Additional public resources will be required to effectively equip unemployed, low-skilled and informal workers with market-relevant skills that will allow them to share in the opportunities that lie ahead. The government should consider closely involving SENAI and related institutions in the design and implementation of targeted training policies for vulnerable workers, not least because these semi-public institutions receive payroll tax revenues of around 0.25% of GDP. Despite agreed quotas to include disadvantaged workers in its training courses, their number has in reality been low, which is partly related to a lack of enforcement of the agreed quotas (OECD, 2018[45]).

An expansion of training efforts should include a more systematic role for evaluations and subsequent refinements. Close cooperation with the private sector to detect changing skill requirements of occupations as well as systematic feedback from employed graduates should inform regular updates of training content and quality control. SENAI, for example, has established methods for training assessment and content update that follow international best practices (OECD, 2018[45]).Ongoing efforts to expand demand-driven SuperTec courses and collect training requests from local firms through an electronic platform should be expanded and combined with a skill anticipation assessment focusing on skill needs in local labour markets (Box 3.3). Best practice examples for region-specific skill anticipation exercises already exist in Brazil, including the work of SENAI in the state of São Paulo. Building on this success with a view towards covering all sectors and regions within the country could feed into region specific training catalogues (OECD, 2018[45]).

The current voucher system could be complemented with additional vouchers allocated to disadvantaged individuals. The allocation could be based on administrative data such as the comprehensive register of all poor households used to administer the conditional cash transfer programme *Bolsa Família*. This could reduce registration and information costs and improve competition between training providers, if combined with a transparent quality certification system for training institutions (OECD, 2018[45]). The vouchers could be used to select courses from a region-specific training catalogue that is closely linked to private sector skill demands. Another option could be to allocate a certain share of places in courses requested by firms in the current voucher system to disadvantaged workers, following a successful experience in Singapore (Box 3.4). Incentivising the supply of evening, part-time or distance learning courses and linking the worker-specific subsidy to income or living area would facilitate the participation of disadvantaged workers living in remote areas.

Career counselling and job placement services could be better linked with training programmes (Box 3.4). Matching trainees' skills and experience with training content is important to ensure the cost effectiveness of training. Access to courses could be made dependent on career counselling and an evaluation of the necessary prior-knowledge (Box 3.4). High dropout rates in PRONATEC training courses were often related to missing fundamental skills of trainees as well as unrealistic expectations about the course content and its objectives (OECD, 2018[45]). Counselling services could provide better information on training opportunities and help to direct those interested in training to the right course.

Moreover, job counsellors should have full access to individual training records and employment histories to better match job seekers with skill demands of firms and tailor training supply to individual needs. Improving and expanding the certification system for work competences, in particular for informal workers, would raise employability and improve the effectiveness of public employment services. It would also encourage training investments of workers (Dutz, 2018[34]). Current efforts by the government to share databases and engage private providers in job counselling services with performance-based remuneration could help to address some of the shortcomings of public job placement services in the past.

As many job-seekers lack required soft skills and on-the-job experience, training courses should be combined with soft-skill training and practical internships (Figure 3.14). A good mix of technical and soft skills such as communication and teamwork becomes increasingly important with rising international integration and digitalisation of the economy (OECD, 2019[22]; Grundke et al., 2018[27]; OECD, 2017[49]). For workers that have not completed basic primary education, the government should expand the provision of basic adult education courses as a prerequisite for accessing vocational training courses, as discussed below.

Box 3.4. Targeting vocational training to vulnerable workers

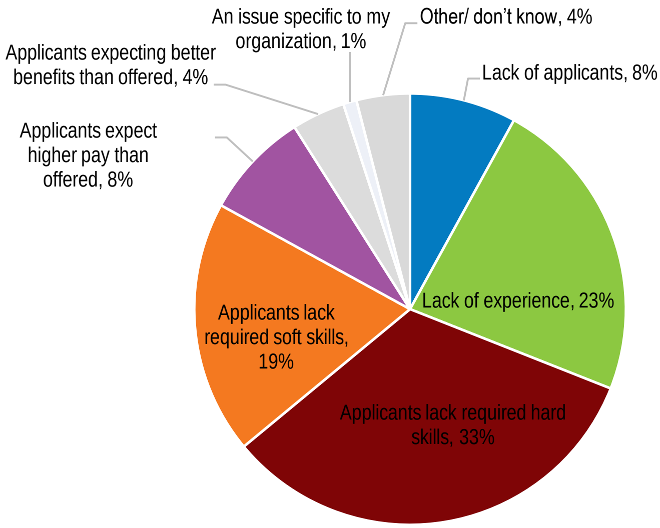
Allocating vouchers for subsidised training courses to disadvantaged individuals has been a successful strategy to enhance employability of low skilled, older and low- income individuals in many countries (OECD, 2019[51]). An important feature of successful programs has been to steer the use of vouchers to training content that is linked to labour market skill needs. Effective information and career guidance infrastructure have helped to increase take-up, and some countries even link the delivery of vouchers to the outcomes of career counselling.

In Korea, for example, unemployed individuals are required to attend career counselling before they can access the Vocational Competency Development Account (OECD, 2019[52]). In Belgium, adults with tertiary qualification can only access training vouchers if career counsellors agree that training is necessary. Other countries restrict the use of vouchers to a list of pre-approved training courses. In Estonia, for instance, vouchers can only be used by individuals who enrol in training that is related to ICT skills or has been identified to develop skills that are in shortage in the labour market (OECD, 2019[51]). In Austria and Greece, vouchers are available for both the employed and the unemployed to develop digital skills while in Israel vouchers must be used to develop skills such as Real-Time, Java, or Application Development.

To reduce the administrative costs of targeting training to labour market demand, some countries have allocated vouchers directly to firms that could decide on training content and select workers for which the training would be most effective (OECD, 2019[22]). Singapore has made these vouchers conditional on the inclusion of low-skilled, informal or unemployed workers in these courses so that they could benefit from training directly mapping with firms' skill demands. However, the experience of Italy and Malaysia with their training funds shows that employers are not necessarily perfectly forward looking in their assessment of future skill demands, as a major part of the funding is used for safety and health related training and very little for training related to ICT skills (OECD, 2019[53]).

Figure 3.14. Firms have difficulties to find the workers they need

Main reasons for why firms in Brazil do not find the workers they need



Note: The information is based on opinion surveys of business leaders.
Source: 2018 Talent Shortage Survey, Manpower group

StatLink https://doi.org/10.1787/888934197601

Finally, improving management and organisational skills in small and medium size firms can be a very effective way to increase human capital investments and on the job training for workers (Dutz, 2018[34]). It also has potential to significantly raise the productivity of firms in Brazil and contribute to the reduction of informality. Many small and medium size firms in Brazil suffer from weak management practices and underinvestment in human capital of their staff (Bloom and Reenen, 2010[54]). Subsidising targeted training for managers of small firms can be a suitable policy tool to improve human resource management and prepare low-productivity firms for rising domestic and international competition (Dutz, 2018[34]). On a small scale, the government has already launched such a programme, whose impact should be carefully evaluated before upscaling it.

Beyond publicly subsidised training programmes, it will also be important to improve the incentives for private training provision by employers. At present, the design of the unemployment insurance scheme FGTS creates incentives for high job turnover, which in turn reduces the benefits for firms to invest in the skills of their staff. Informality is another factor for low investment of firms in training of staff (Dutz, 2018[34]). These structural factors holding back private training provision should be addressed by rethinking current unemployment insurance schemes as well as labour taxes and regulations, as discussed in Chapter 1 of this Survey.

Improving education policies

While professional training is an effective way to reach those already in the labour market and whose basic skills allow a successful upgrading of specific job-related capabilities, the education system plays a fundamental role in preparing current and future generations for the challenges that international integration and rising digitalisation will bring about. Automation and offshoring may lead to the redundancy of certain tasks or occupations, which might require workers to change occupations and pursue new formal education degrees at a later stage of their careers (Bechichi et al., 2019[29]; Hummels et al., 2012[19]; Autor

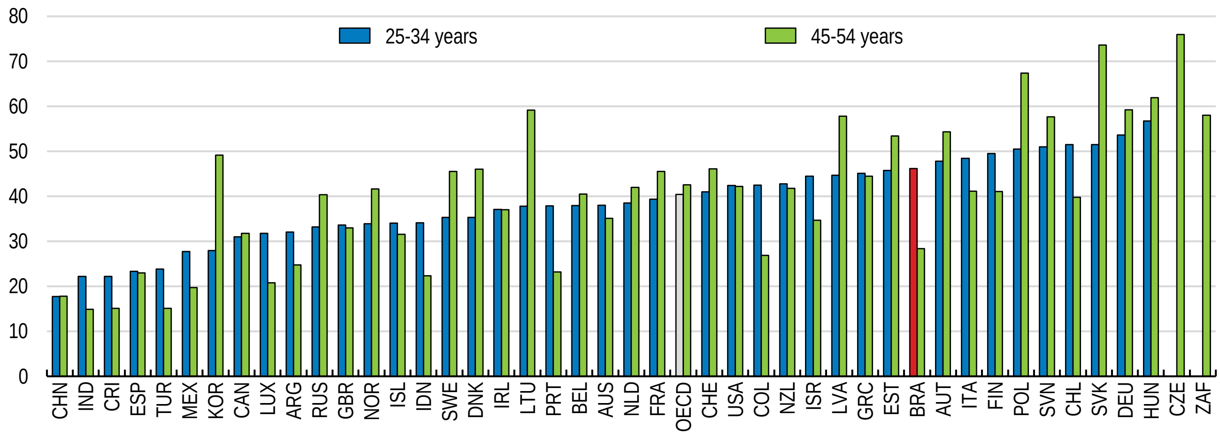
et al., 2014[16]; Hyman, 2018[18]). Therefore, it is crucial to lay good fundamentals in cognitive and social skills already early in life to facilitate learning and adaptation at a later stage (OECD, 2019[22]; Heckman and Mosso, 2014[55]; Heckman, Pinto and Savelyev, 2013[56]; Heckman et al., 2010[57]).

Access to education has increased, but education quality is still weak

During the last decades, Brazil has strongly increased education spending and improved access to basic education. In many poor and remote municipalities, school infrastructure significantly improved and many new teachers were hired (IBGE, 2019[58]). Enrolment rates have strongly increased for early childhood, primary and secondary education (OECD, 2019[59]). The share of young adults having completed upper secondary education reached 46% in 2018, which is 20 percentage points higher than for older workers and at par with the OECD average (Figure 3.15). The share of young adults having completed tertiary education has also increased compared to the older generation, but is still 20 percentage points below the OECD average (OECD, 2019[59]).

Figure 3.15. Educational attainment has strongly increased

The share of adults having completed upper secondary or post-secondary education in 2019 (in %)



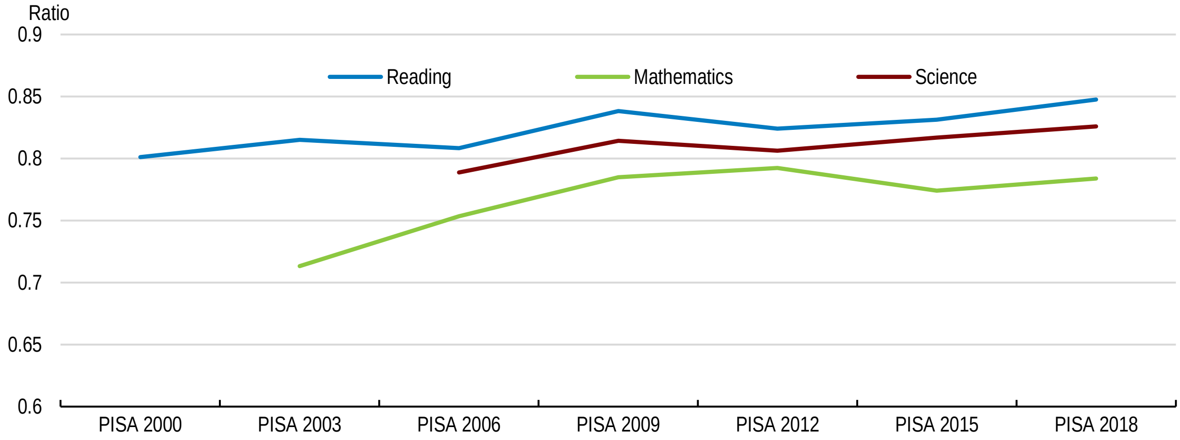
Source: Education at a Glance 2020

StatLink https://doi.org/10.1787/888934197620

Rising access to education has not been accompanied by increases in the quality of education. Comparing PISA test scores of 15-year-old students, Brazil ranks lower than other Latin American countries or the OECD average, although its education spending is with 6.2% of GDP even higher than in the average OECD country (see Chapter 1). Since 2009, test scores for reading, mathematics and science have not improved much relative to the OECD average (Figure 3.16). Moreover, dropout rates in secondary education are still higher than 30% (OECD, 2019[59]) . This is related to large heterogeneity between schools in terms of teaching quality, a curriculum that has focused on academic content and very little on vocational education and training, and a lack of basic cognitive and social skills among children from low-income families (INSPER, 2017[60]).

Figure 3.16. Educational quality is weak and has not improved much

Brazil performance in PISA relative to OECD average by PISA cycles



Source: OECD, PISA 2018.

StatLink https://doi.org/10.1787/888934197639

Improving the quality of basic education

In recent years, significant steps were taken to improve the quality of basic education, but challenges related to implementation remain. Nation-wide common learning standards, which comprise a rich set of cognitive and socio-emotional skills and hold up to international best practices, have been introduced for early-childhood, primary and secondary education. The new common core for upper secondary education introduces more flexibility in course choice including a vocational training track, which has strong potential to reduce dropout rates (INSPER, 2017[60]). The new standards also increase minimum schooling duration from four to five hours per day. However, due to large heterogeneity in resources and technical capacities across municipalities and states, the implementation of the new nation-wide standards will be challenging.

A highly decentralised education system combined with large economic disparities has led to high variation of education quality and outcomes across municipalities (IBGE, 2019[58]; Todos pela educação, 2018[61]). The constitutional authority for early-childhood and primary education until the 5th grade lies in the hands of over 5000 municipalities, which are responsible for curriculum design and implementation, teacher selection and training, and design of learning material within their jurisdiction. Although a federally funded redistribution fund called FUNDEB has mitigated funding inequalities to a certain extent, resources and technical capacities are still low in many municipal school networks. Until the recent establishment of nation-wide standards, many municipalities did not have systematic learning standards, teachers have not been trained to properly implement existing standards and there was little coordination across municipalities. For the new standards to be effective, the federal and state governments need to take the lead and coordinate the implementation of standards and the common national curriculum into teaching practices in municipal and state school networks. They should continue to support local governments in teacher training and design of learning materials. As a first step, national guidelines for teacher training and the national textbook programme have been aligned with the content of the common national curriculum.

Coordination has also been weak across different levels of government and led to high spending inefficiencies in secondary education (Economistas do Brasil, 2018[62]). The constitutional authority for lower secondary education from the 6th to 9th grade is split between municipalities and states. School networks co-exist in many communities without any coordination or pooling of resources to use synergies

(Todos pela educação, 2018[61]). States are responsible for upper secondary education from the 10th to 12th grade, and there has been little coordination in learning standards and their implementation with lower secondary municipal school, nor with school networks in other states. Moreover, in many poor communities, the existing school infrastructure and teaching staff is insufficient to comply with the new mandated minimum schooling hours or to provide the range of subject choices foreseen in the new learning standards for upper secondary education (Todos pela educação, 2018[61]). Although the new standards are an important step, implementing them will require continued coordination among different levels of government.

The quality of education will only improve with better selection and training of teachers. Although incentive based payment might increase motivation, these incentives will be ineffective if teachers do not have the skills they need for the job (Todos pela educação, 2018[61]). Teachers are located at the lower end of the skill distribution of tertiary education graduates in Brazil. This is related to the fact that rapidly increasing access to basic education was only possible with an accelerated hiring of teachers combined with weaker selection criteria. Moreover, relatively low wages in the teaching profession have contributed to the self-selection of lower-skilled graduates (IBGE, 2019[58]). The allocation of additional resources to under-funded municipal school networks through the new FUNDEB will help attracting higher-skilled graduates to the teaching profession.

Moreover, recruitment procedures for teachers should be standardised nationwide including common tests and certifications, possibly mimicking existing recruitment procedures for public employees. The recruitment system could classify candidates according to several criteria to improve the matching of teachers to open positions with differing skill requirements. Skill needs vary widely across school types, such as early-childhood, primary or secondary education, but also according to the socio-economical background of children.

Besides selecting the right candidates, teacher training needs to improve and adapt to the new learning standards. The national curriculum guidelines for initial teacher training for basic education, approved in December 2019, are a step into this direction. Curriculums for teacher careers at many universities include very little pedagogical knowledge or practical experience in classrooms (INSPER, 2017[60]; Todos pela educação, 2018[61]). Once young graduates have been hired, they face highly heterogeneous levels of counselling and training on the job. Most graduates do not get any support during their first years in school and there is no regular evaluation of their performance. Weak management of schools is related to frequent political appointments of school principals, which strongly influences the quality of teacher training and motivation (INSPER, 2017[60]; Todos pela educação, 2018[61]).

Besides teaching quality, socio-economic background and good early-childhood education are the main determinant for educational outcomes (OECD, 2019[63]; Heckman and Mosso, 2014[55]). In particular for young children, the access to food, clean drinking water and good health services is crucial for the development of cognitive and social skills (Heckman, Pinto and Savelyev, 2013[56]; Heckman et al., 2010[57]). Thus, recent increases in enrolment rates for early childhood education should be complemented with continued efforts to eradicate extreme poverty, raise access to universal health care and improve municipal water and sanitation services (IBGE, 2016[64]). Moreover, improving internet access for low-income households is key to enable distance learning, which during the school closures due to the Covid19 pandemic has been the only way to participate in schooling activities and will play an increasing role in skills development throughout life (OECD, 2019[22]).

Shifting more resources to the successful conditional cash-transfer program *Bolsa Família* would be one way to improve access to food and health care for many poor children. Food could be directly provided in schools to ensure nutrition quality. Eventually, the programme could also be linked to enrolment in early childhood education or home visits of teachers consulting parents on education practices. When allocating scarce spaces in early childhood education, preference should be given to low-income households and

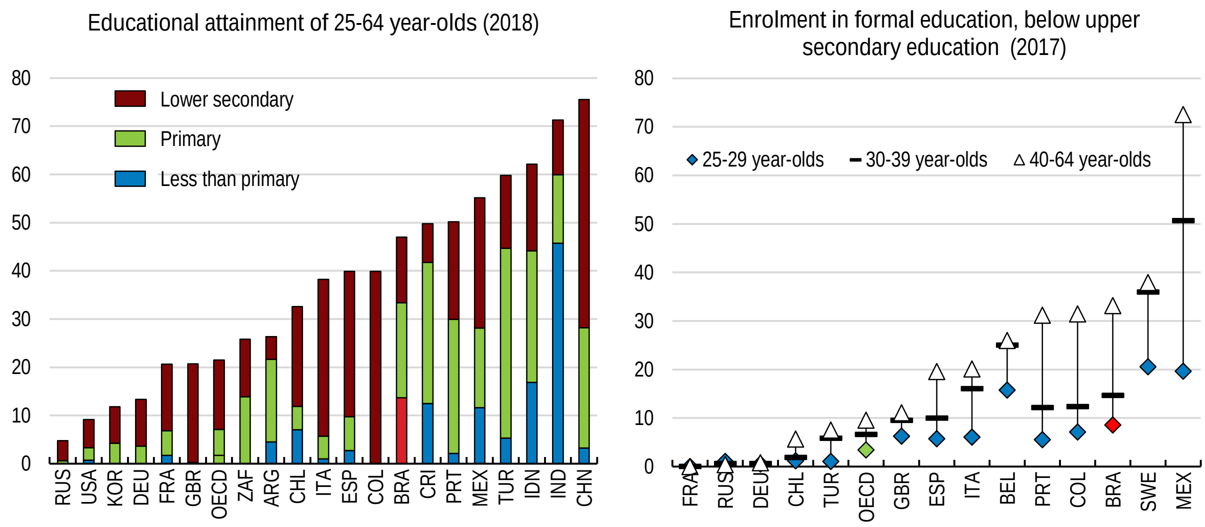
single mothers. Only 15% of poor families with children below 3 years have access to child-care, compared to 40% of the more affluent families (World Bank, 2016[65]).

Preparing low-skilled adults for the challenges of the future

Due to low access to basic education until some decades ago, a large share of adults has not completed primary education (Figure 3.17). The share of older workers who cannot read or write is still large compared to other countries (IBGE, 2019[58]). Although enrolment rates of adults into formal education are higher than in the average OECD country, the quality of basic education for adults is low and many drop out before graduating (Todos pela educação, 2018[61]; IBGE, 2019[58]). There is no separate targeted system of adult education. Adapted learning standards, curriculums or learning material as well as specific teacher training or selection do not exist. In most municipalities, the same teachers who teach children in basic education may be teaching adults in their second or third day shift. The supply of specific facilities for adult education is low and often classes take place in regular schools or other municipal buildings.

As opening up the economy will require many low-skilled workers to find new jobs in other firms or economic sectors, it is key to reform the current system and increase its funding. Current transfers for adult education from the federal government to municipalities are not conditional and mostly spend on basic education of children. The government should consider including basic education of adults in the federal top-up mechanism for education funding FUNDEB and combine funding allocation with the same type of quality improving incentives for municipalities and states discussed in Chapter 1. To inform education policies on skill needs of adults, Brazil could consider participating in the OECD Survey of Adult Skills (PIAAC).

Figure 3.17. The share of adults without completed basic education is high



Source: OECD, Education at a Glance 2019.

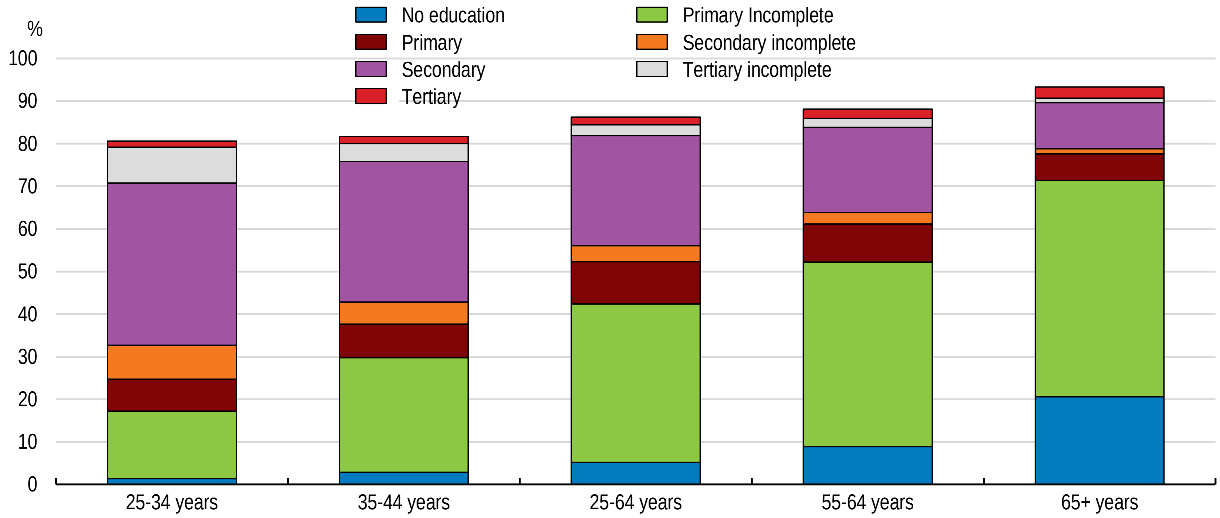
StatLink https://doi.org/10.1787/888934197658

As the share of adults without completed primary education is particularly large among older and poorer parts of the population (Figure 3.18), it is key that learning standards, curriculums and teaching material as well as teacher selection and training are specifically adapted to these target groups (IBGE, 2019[58]). This requires a concerted national effort and a strong coordination among different levels of government. To support poor households and facilitate school attendance of working adults, increasing funding for *Bolsa Família* could be combined with requirements for parents to attend basic education. This could even

generate synergies for poor children, whose parents might be in better conditions to support them in their educational career.

Figure 3.18. Particularly old workers have low educational attainment

Educational attainment by age, 2018



Source: IBGE. Pesquisa Nacional por Amostra de Domicílios Contínua, 2º trimestre, 2018.

StatLink https://doi.org/10.1787/888934197677

Improving access to vocational education and apprenticeships

For many students, the strong focus of secondary curriculums on academic subjects and a lack of opportunities to select courses according to their interest or ability may be one factor behind frequent class repetition and school dropout (Figure 3.19). Professional training opportunities within secondary education are currently scarce. Expanding them could help to reduce high dropout rates (INSPER, 2017[60]).

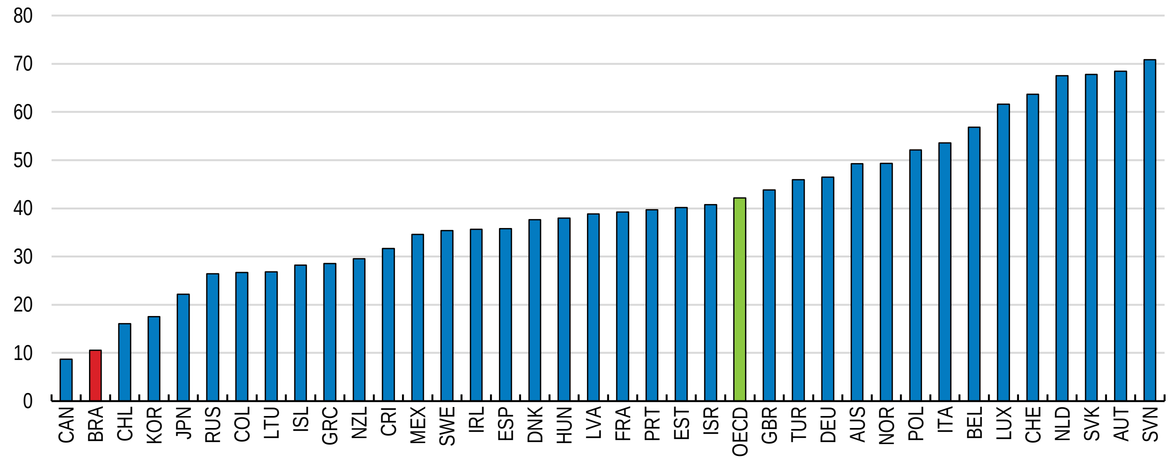
A 2017 education reform that established nation-wide learning standards and curriculums for upper secondary education laid the grounds for offering more vocational content in secondary education. Mandatory subjects are reduced to 1800 hours per year. For the remaining 1200 hours, student can choose among five different paths, including mathematics, science, languages, humanities and vocational education. This newly created flexibility is a major step forward, but challenges related to implementation remain. Many states and municipalities do not have the necessary resources and capacities to implement all five pathways (Todos pela educação, 2018[61]; Almeida and Packard, 2018[66]). Both physical school infrastructure and the availability of adequately trained teaching staff are severe bottlenecks, which will require additional resources and better coordination across different levels of government (see Chapter 1). For example, idle facilities from federal and state institutes that had expanded their training capacities in recent years under the umbrella of the PRONATEC programme could be used for vocational education classes.

For the new vocational education path in upper secondary education to be successful, the close cooperation and involvement of the private sector in design and delivery of workplace training is key. So far, vocational education is mainly taking place at post-secondary level and most state and federal institutes for vocational education do not offer much practical experience (OECD, 2019[59]; OECD, 2018[45]). The semi-public network of training providers "Sistema S", including SENAI for the manufacturing sector, are a

notable exception. Sistema S institutions have developed strong ties with the private sector and offer high quality vocational education, including practical experience in firms or training laboratories (OECD, 2018[45]). Their courses are linked to skill demands in the private sector and course content is regularly updated using skill anticipation assessment and graduate surveys. However, there is very little cooperation with high schools and most students start their vocational education after completing high school. Recent efforts to include “Sistema S” training providers in the design and implementation of the new vocational education path in secondary education are promising and should continue.

Figure 3.19. Opportunities for vocational training in upper secondary education are low

Share of vocational students of all upper secondary students, 2018



Source: OECD, Education at a Glance 2020.

StatLink https://doi.org/10.1787/888934197696

Vocational education institutes close to the private sector are reluctant to cooperate with high schools due to excessively restrictive work safety and health standards, which complicate practical vocational education for minors in firms or at machines in laboratories (Silva, Almeida and Strokova, 2015[33]; Almeida and Packard, 2018[66]). Uncertainty around judicial decisions have led to closedowns of private-sector institutes with integrated vocational education in upper secondary education, such as one previously operated by the car manufacturer Volkswagen. These labour safety and health standards should be simplified to facilitate cooperation between high schools and the private sector in the implementation of the new vocational education path in secondary education.

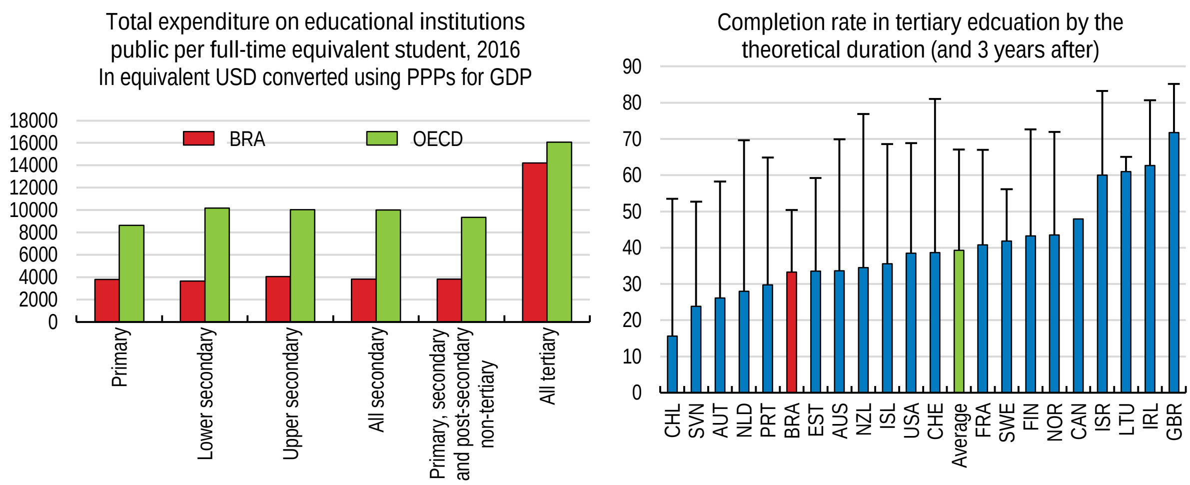
The experience of the United Kingdom may also serve as inspiration for providing monetary incentives for firms to offer apprenticeships. In the UK, a specific apprenticeship levy of 0.5% of total payroll is collected from firms with a wage bill of more than USD 4 Million (NAO, 2019[67]). These firms can use their contribution to select coursework or other instructional services related to apprenticeships from a dedicated digital portal, and receive a 10% top up from the government. For smaller firms not paying the levy, access to these courses requires a co-financing of 5% of the costs. Apprentices must spend at least 20% of their paid hours doing off-the-job formal training. However, a wider use of apprenticeships in Brazil would likely require addressing negative training incentives related to high job turnover and the policy distortions behind it, as discussed above. The experience of Germany shows that the main motivation for firms to offer apprenticeships is to secure its future supply of skilled workers (Grollmann et al., 2016[68]).

Improving access and quality in tertiary education

Access to tertiary education has increased and 20% of young adults had a completed tertiary degree in 2018, but this is still over 20 percentage points below the OECD average ((OECD, 2019[59])). Public tertiary education is virtually free in Brazil, but the selective admission tests put children from public schools at a disadvantage vis-à-vis graduates from private schools, where the quality of secondary education is generally higher (IBGE, 2019[58]). This makes spending on tertiary education largely regressive. Recently introduced admission quotas have been successful in raising the share of students from disadvantaged groups of the populations and should continue. Another alternative would be to introduce means-tested university fees with ample scope for grants for students from low-income households.

The most effective way to improve the opportunities for students from low-income families in tertiary education is to prepare them better before they graduate from secondary school. This suggests that the current focus could be shifted from relatively high spending on tertiary education towards earlier levels of education (Figure 3.20). Tertiary education also suffers from quality shortcomings and low completion rates (Economistas do Brasil, 2018[62]). More than 50% of students have not completed their degree three years after the end of the theoretical duration (Figure 3.20).

Figure 3.20. Spending for tertiary education is relatively high, but dropout rates are high



Source: OECD, Education at a Glance 2019.

StatLink https://doi.org/10.1787/888934197715

Reducing dropouts in tertiary education would require strengthening the alignment of university curriculums to the type of occupations and skills demanded by the labour market (Economistas do Brasil, 2018[62]; OECD, 2019[59]). Many firms in Brazil indicate that university graduates do not have the technical and social skills they need (Schwab, 2019[69]). Skill demand is particularly high in science, technology, engineering and mathematics (STEM), but only 13% of tertiary graduates study these fields, compared to 20% in the OECD average or 26% in Mexico ((OECD, 2019[59])). The federal government should consider linking admission rates for university subjects to a nation-wide skill anticipation assessment system, which would indicate which type of occupations are in high demand in the labour market. Curriculums should be regularly updated and linked to changing skill requirements and task content of occupations.

Student choices could also be guided by transparent assessments and certifications of tertiary education courses, to inform high school graduates about the quality and the content of these courses (Economistas do Brasil, 2018[62]). This could be combined with career counselling services for high school students to well align interest and abilities with the content of selected tertiary education courses.

Box 3.5. Policy recommendations for improving skills

Key recommendations

- Scale up resources for professional training policies, in particular for low–skilled, unemployed and informal workers, and link subsidies for training providers to employment outcomes.
- Continue expanding access to early-childhood education, prioritising access for low-income families and single mothers.

Other recommendations

- Align training supply with labour market demand using skill anticipation assessments and multi-stakeholder dialogue at the local level.
- Complement training vouchers for firms with vouchers for low-skilled, informal and unemployed workers to allow participation in training courses demanded by firms.
- Establish systematic evaluations and certifications of training programmes.
- Improve the certification system for work competences to enhance employability, in particular for informal workers, and raise the effectiveness of public employment services.
- Improve the quality of basic education for adults by increasing resources for municipalities and states through including adult education funding into FUNDEB and introducing nation-wide learning standards and curriculums.
- Coordinate teacher training and the design of curricula and learning material across municipalities and states to properly implement the new nation-wide learning standards.
- Consider raising teacher remuneration through temporary bonuses to qualified teachers for teaching in difficult schools.
- Improve teacher selection through introducing nation-wide standardised tests and allocate teachers to schools according to differing skill needs across school types.
- Standardise curriculums for teacher education nation-wide including more practical experience and make regular evaluation and support mandatory during the first years on the job.
- Reform work safety and health standards to facilitate cooperation with the private sector to include practical experience into the new vocational education pathway in secondary education.
- Better align university curriculums with labour market needs and introduce a transparent assessment and certification system of tertiary education courses.
- Consider participating in the OECD Survey of Adult Skills (PIAAC) to inform education and training policies on skill needs.

References

Almeida, R. and T. Packard (2018), *Skills and Jobs in Brazil: An Agenda for Youth*, World Bank, Washington, DC, http://dx.doi.org/10.1596/978-1-4648-1293-4. [66]

Amiti, M. and A. Khandelwal (2013), "Import Competition and Quality Upgrading", *The Review of Economics and Statistics*, Vol. 95/2, pp. 476-490, https://www.mitpressjournals.org/doi/pdf/10.1162/REST_a_00271 (accessed on 22 September 2018). [6]

Amiti, M. and J. Konings (2007), "Trade Liberalization, Intermediate Inputs, and Productivity: Evidence from Indonesia", *American Economic Review*, Vol. 97/5, pp. 1611-1638, http://dx.doi.org/10.1257/aer.97.5.1611. [2]

Amiti, M., S. Redding and D. Weinstein (2019), "The Impact of the 2018 Trade War on U.S. Prices and Welfare", National Bureau of Economic Research, Cambridge, MA, http://dx.doi.org/10.3386/w25672. [4]

Andrews, D., C. Criscuolo and P. Gal (2015), "Frontier Firms, Technology Diffusion and Public Policy: Micro Evidence from OECD Countries", *OECD Productivity Working Papers*, No. 2, OECD Publishing, Paris, https://dx.doi.org/10.1787/5jrql2q2jj7b-en. [40]

Araújo, B. and L. Paz (2014), "The effects of exporting on wages: An evaluation using the 1999 Brazilian exchange rate devaluation", *Journal of Development Economics*, Vol. 111, pp. 1-16, http://dx.doi.org/10.1016/j.jdeveco.2014.07.005. [11]

Arntz, M., T. Gregory and U. Zierahn (2016), "The Risk of Automation for Jobs in OECD Countries: A Comparative Analysis", *OECD Social, Employment and Migration Working Papers*, No. 189, OECD Publishing, Paris, https://dx.doi.org/10.1787/5jlz9h56dvq7-en. [23]

Autor, D. and D. Dorn (2013), "The growth of low-skill service jobs and the polarization of the US Labor Market", *American Economic Review*, Vol. 103/5, pp. 1553-1597, http://dx.doi.org/10.1257/aer.103.5.1553. [25]

Autor, D., D. Dorn and G. Hanson (2013), "The China syndrome: Local labor market effects of import competition in the United States", *American Economic Review*, Vol. 103/6, pp. 2121-2168, http://dx.doi.org/10.1257/aer.103.6.2121. [37]

Autor, D. et al. (2014), "Trade Adjustment: Worker-Level Evidence *", *The Quarterly Journal of Economics*, Vol. 129/4, pp. 1799-1860, http://dx.doi.org/10.1093/qje/qju026. [16]

Bechichi, N. et al. (2018), "Moving between jobs: An analysis of occupation distances and skill needs", *OECD Science, Technology and Innovation Policy Papers*, No. 52, OECD, Paris, http://www.oecd.org/going-digital (accessed on 27 September 2018). [28]

Bechichi, N. et al. (2019), "Occupational mobility, skills and training needs", http://www.oecd.org/going-digital. (accessed on 26 January 2020). [29]

Becker, S., K. Ekholm and M. Muendler (2013), "Offshoring and the onshore composition of tasks and skills", *Journal of International Economics*, Vol. 90/1, pp. 91-106, http://dx.doi.org/10.1016/j.jinteco.2012.10.005. [21]

Becker, S. and M. Muendler (2015), "Trade and tasks: an exploration over three decades in Germany", *Economic Policy*, Vol. 30/84, pp. 589-641, http://dx.doi.org/10.1093/epolic/eiv014. [20]

Bloom, N. and J. Reenen (2010), “Why do management practices differ across firms and countries?”, *Journal of Economic Perspectives*, Vol. 24/1, pp. 203-224, http://dx.doi.org/10.1257/jep.24.1.203. [54]

Blyde, J. et al. (2019), “Training and Labor Adjustment to Trade”, *IDB WORKING PAPER SERIES*, No. Nº IDB-WP-01069, Inter-American Development Bank, Washington, D.C., http://dx.doi.org/10.18235/0001970. [46]

Brown, A. and J. Koettl (2012), “Active Labor Market Programs: Employment Gain or Fiscal Drain?”, *IZA Discussion papers*, No. 6880, IZA. [48]

Cadot, O., J. Gourdon and F. van Tongeren (2018), “Estimating Ad Valorem Equivalents of Non-Tariff Measures: Combining Price-Based and Quantity-Based Approaches”, *OECD Trade Policy Papers*, No. 215, OECD Publishing, Paris, https://dx.doi.org/10.1787/f3cd5bdc-en. [41]

Cavgias, A. et al. (2019), *Edited Democracy: Media Manipulation and the News Coverage of Presidential Debates.*, Working Papers, Department of Economics 2019_17, University of São Paulo (FEA-USP). [35]

Criscuolo, C., P. Gal and C. Menon (2014), “The Dynamics of Employment Growth: New Evidence from 18 Countries”, *OECD Science, Technology and Industry Policy Papers*, No. 14, OECD Publishing, Paris, https://dx.doi.org/10.1787/5jz417hj6hg6-en. [10]

De Loecker, J. et al. (2016), “Prices, Markups, and Trade Reform”, *Econometrica*, Vol. 84/2, pp. 445-510, http://dx.doi.org/10.3982/ECTA11042. [7]

Dix-Carneiro, R. and B. Kovak (2017), “Trade liberalization and regional dynamics”, *American Economic Review*, Vol. 107/10, pp. 2908-2946, http://dx.doi.org/10.1257/aer.20161214. [36]

Dutz, M. (2018), *Jobs and Growth: Brazil’s Productivity Agenda*, The World Bank, http://dx.doi.org/10.1596/978-1-4648-1320-7. [34]

Economistas do Brasil (2018), *Carta Brasil - Um conjunto de propostas para o novo governo*, https://iepecdg.com.br/wp-content/uploads/2018/11/Carta-BRASIL-01.11.2018logo.pdf. [62]

Fiorini, M., M. Sanfilippo and A. Sundaram (2019), “Roads: From Trade Liberalization to Firm Productivity”, *Robert Schuman Centre for Advanced Studies Research Paper No. RSCAS*, No. 32, http://dx.doi.org/10.2139/ssrn.3393548. [31]

Gathmann, C., I. Helm and U. Schönberg (2018), “Spillover effects of mass layoffs”, *Journal of the European Economic Association*, http://dx.doi.org/10.1093/jeea/jvy045. [44]

Goldberg, K. and N. Pavcnik (2007), *Distributional Effects of Globalization in Developing Countries*, https://pubs.aeaweb.org/doi/pdfplus/10.1257/jel.45.1.39 (accessed on 14 September 2018). [15]

Goldberg, P. et al. (2009), “Trade Liberalization and New Imported Inputs”, *American Economic Review*, Vol. 99/2, pp. 494-500, http://dx.doi.org/10.1257/aer.99.2.494. [3]

Grollmann, P. et al. (2016), *Duale Ausbildung als betriebliche Strategie der Fachkräftesicherung – Fallstudien zu Motivation und Organisation im internationalen Vergleich*, Bundesinstitut fuer Berufsbildung - Bonn, https://www.bibb.de/tools/dapro/data/documents/pdf/zw_15312.pdf. [68]

Grundke, R. and J. Arnold (2019), “Fostering Argentina’s integration into the world economy”, *OECD Economics Department Working Papers*, No. 1572, OECD Publishing, Paris, https://dx.doi.org/10.1787/7ed95b2b-en. [5]

Grundke, R. et al. (2020), “Brazils’ trade liberalisation of the 1990s revisited: How targeted training can reduce adjustment costs for workers”, *OECD Economics Department Working Papers*. [39]

Grundke, R. et al. (2018), “Which skills for the digital era?: Returns to skills analysis”, *OECD Science, Technology and Industry Working Papers*, No. 2018/09, OECD Publishing, Paris, https://dx.doi.org/10.1787/9a9479b5-en. [27]

Heckman, J. et al. (2010), “The Rate of Return to the High/Scope Perry Preschool Program”, *Journal of Political Economy*, Vol. 94/1-2, pp. 114-128. [57]

Heckman, J. and S. Mosso (2014), “The Economics of Human Development and Social Mobility”, *Annual Review of Economcs*, Vol. 6, pp. 689-733, http://dx.doi.org/10.1146/annurev-economics-080213-040753. [55]

Heckman, J., R. Pinto and P. Savelyev (2013), “Understanding the mechanisms through which an influential early childhood program boosted adult outcomes”, *American Economic Review*, Vol. 103/6, pp. 2052-2086, http://dx.doi.org/10.1257/aer.103.6.2052. [56]

Hsieh, C. and P. Klenow (2009), “Misallocation and Manufacturing TFP in China”, *The Quarterly Journal of Economics*, Vol. 124/4, pp. 1403-1448, https://www.jstor.org/stable/pdf/40506263.pdf (accessed on 17 January 2019). [12]

Hummels, D. et al. (2012), “Offshoring, Transition, and Training: Evidence from Danish Matched Worker-Firm Data”, *American Economic Review: Papers & Proceedings*, Vol. 102/3, pp. 424–428, http://dx.doi.org/10.1257/aer.102.3.424. [19]

Hummels, D., J. Munch and C. Xiang (2018), *Offshoring and labor markets*, American Economic Association, http://dx.doi.org/10.1257/jel.20161150. [17]

Hyman, B. (2018), “Can Displaced Labor Be Retrained? Evidence from Quasi-Random Assignment to Trade Adjustment Assistance”, *SSRN Electronic Journal*, http://dx.doi.org/10.2139/ssrn.3155386. [18]

Hyman, B. (2018), “Can Displaced Labor Be Retrained? Evidence from Quasi-Random Assignment to Trade Adjustment Assistance *”. [70]

IBGE (2019), *Síntese de Indicadores Sociais - Uma análise das condições de vida da população brasileira 2019*, https://biblioteca.ibge.gov.br/visualizacao/livros/liv101629.pdf. [58]

IBGE (2016), *Pesquisa nacional de saúde do escolar 2015*, Instituto Brasileiro de Geografia e Estadisticas, https://biblioteca.ibge.gov.br/visualizacao/livros/liv97870.pdf. [64]

INSPER (2017), *Políticas públicas para redução do abandono e evasão escolar de jovens*, http://gesta.org.br/wp-content/uploads/2017/09/Politicas-Publicas-para-reducao-do-abandono-e-evasao-escolar-de-jovens.pdf. [60]

Lyon, S. and M. Waugh (2018), “Redistributing the gains from trade through progressive taxation”, *Journal of International Economics*, Vol. 115, pp. 185-202, http://dx.doi.org/10.1016/j.jinteco.2018.09.008. [32]

Melitz, M. (2003), *The Impact of Trade on Intra-Industry Reallocations and Aggregate Industry Productivity*, https://www.jstor.org/stable/pdf/1555536.pdf?refreqid=excelsior%3Ae3382ca8aee44f583882d975e0cdb85e (accessed on 22 September 2018). [8]

NAO (2019), *The apprenticeships programme*, National Audit Office, https://www.nao.org.uk/wp-content/uploads/2019/03/The-apprenticeships-programme.pdf. [67]

O'Connell, S. et al. (2017), "Can Business Input Improve the Effectiveness of Worker Training? Evidence from Brazil's Pronatec-MDIC", *Policy Research Working Paper*, No. 8155, World Bank, Washington DC, http://econ.worldbank.org. (accessed on 19 February 2020). [42]

O'Connell, S. et al. (2017), "Can business input improve the effectiveness of worker training? evidence from Brazil's Pronatec-MDIC", *Policy Research Working Paper*, No. WPS8155, World Bank, http://documents.worldbank.org/curated/en/444871501522977352/Can-business-input-improve-the-effectiveness-of-worker-training-evidence-from-Brazils-Pronatec-MDIC (accessed on 5 October 2018). [47]

OECD (2019), *Education at a Glance*, https://doi.org/10.1787/f8d7880d-en. [59]

OECD (2019), *Financial Incentives to Promote Adult Learning in Australia, Getting Skills Right*, OECD Publishing Paris, https://doi.org/10.1787/c79badcc-en. [52]

OECD (2019), *Getting Skills Right: Future-Ready Adult Learning Systems, Getting Skills Right*, OECD Publishing Paris, https://doi.org/10.1787/9789264311756-en. [51]

OECD (2019), *OECD Economic Surveys: Malaysia*, OECD Publishing Paris, https://doi.org/10.1787/eaaa4190-en. [53]

OECD (2019), *OECD Skills Outlook 2019 : Thriving in a Digital World*, OECD Publishing, Paris, https://dx.doi.org/10.1787/df80bc12-en. [22]

OECD (2019), *PISA 2018 Results (Vol II): Where all students can succeed.*, OECD Publishing Paris, https://doi.org/10.1787/b5fd1b8f-en. [63]

OECD (2018), *Fostering Brazil's integration into the world economy*, OECD Publishing, https://doi.org/10.1787/eco_surveys-bra-2018-5-en (accessed on 7 February 2020). [1]

OECD (2018), *Getting Skills Right: Brazil*, Getting Skills Right, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264309838-en. [45]

OECD (2018), *Getting Skills Right: Brazil*,, https://doi.org/10.1787/9789264309838-en. [43]

OECD (2018), *Job Creation and Local Economic Development 2018: Preparing for the Future of Work*, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264305342-en. [24]

OECD (2017), *OECD Skills Outlook 2017: Skills and Global Value Chains*, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264273351-en. [49]

OECD (2016), *Understanding social impact bonds*, OECD, Paris, http://www.oecd.org/cfe/leed/UnderstandingSIBsLux-WorkingPaper.pdf (accessed on 19 February 2020). [50]

Pavcnik, N. (2002), “Trade Liberalization, Exit, and Productivity Improvements: Evidence from Chilean Plants”, *The Review of Economic Studies*, Vol. 69/1, pp. 245-276, http://dx.doi.org/10.1111/1467-937X.00205. [9]

Rusticelli, E. et al. (2018), “Going local: a regional perspective on how trade affects labour markets and inequality”*, OECD Economics Department Working Papers*, No. 1530, OECD Publishing, Paris, https://dx.doi.org/10.1787/2981f94c-en. [30]

Schwab, K. (2019), *The Global Competitiveness Report 2019*, World Economic Forum, http://www3.weforum.org/docs/WEF_TheGlobalCompetitivenessReport2019.pdf (accessed on 19 February 2020). [69]

Silva, J., R. Almeida and V. Strokova (2015), *Sustaining Employment and Wage Gains in Brazil: A Skills and Jobs Agenda*, The World Bank, http://dx.doi.org/10.1596/978-1-4648-0644-5. [33]

Spitz-Oener, A. (2006), “Technical Change, Job Tasks, and Rising Educational Demands: Looking outside the Wage Structure”, *Journal of Labor Economics*, Vol. 24/2, pp. 235-270, http://dx.doi.org/10.1086/499972. [26]

Todos pela educação (2018), *Educação ja - Uma proposta suprapartidária de estratégia para a Educação Básica brasileira e prioridades para Governo Federal em 2019-2022*. [61]

Topalova, P. (2010), “Factor immobility and regional impacts of trade liberalization: Evidence on poverty from India”, *American Economic Journal: Applied Economics*, Vol. 2/4, pp. 1-41, http://dx.doi.org/10.1257/app.2.4.1. [38]

Topalova, P. and A. Khandelwal (2011), “Trade Liberalization and firm productivity: The case of India”, *The Review of Economics and Statistics*, Vol. 93/3, pp. 995-1009, http://dx.doi.org/10.1162/REST_a_00095. [13]

Winters, L., N. Mcculloch and A. Mckay (2004), “Trade Liberalization and Poverty: The Evidence so Far”, *Journal of Economic Literature*, Vol. 42/1, pp. 72-115, https://www.jstor.org/stable/pdf/3217037.pdf?refreqid=excelsior%3Afb2fd700a65867707fddc544b380482d (accessed on 14 September 2018). [14]

World Bank (2016), *Brazil Systematic Country Diagnostic: Retaking the path to Inclusion, Growth and Sustainability*, The World Bank Group. [65]

OECD Economic Surveys

BRAZIL

The COVID-19 pandemic has caused severe human suffering and triggered a deep recession in Brazil. Economic policies reacted in a timely and decisive manner to the crisis, supporting millions of Brazilians. But a strong and inclusive recovery from the recession will require long-lasting improvements in economic policies. Improving fiscal outcomes remains one of Brazil's principal challenges given a high debt burden, to which the pandemic has added significantly. Public spending will need to become more efficient, including by building on past progress in the fight against corruption and economic crimes. Social protection can be strengthened through a better focus on the most effective policies and benefits, which could allow significant reductions in inequality and poverty. Stronger growth will hinge on raising productivity, which has been virtually stagnant for decades. This requires addressing underlying policy challenges, including reducing regulatory burdens, reforming taxes, strengthening judicial efficiency and fostering a stronger integration into the global economy. Raising productivity implies reallocations and structural changes in the economy, which should be accompanied by well-designed training and education policies. Training with a strong focus on local skill demand can help workers master the transition and seize new opportunities to move into better jobs.

SPECIAL FEATURES: BOOSTING PRODUCTIVITY; SKILLS POLICIES TO FACILITATE STRUCTURAL ADJUSTMENT

PRINT ISBN 978-92-64-76814-7
PDF ISBN 978-92-64-62200-5

ISSN 0376-6438
2020 SUBSCRIPTION
(18 ISSUES)

9 789264 768147

Volume 2020/14
December 2020