

Insight Report

Brazil Competitiveness and Inclusive Growth Lab Report

March 2018



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Preface



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The factors determining a country's level of economic growth are numerous and complex. The World Economic Forum has pioneered assessments of the level and pattern of growth in an ongoing effort to better identify, measure and monitor these factors under the System Initiative on Shaping the Future of Economic Progress. The Forum's annual flagship *Global Competitiveness Report* highlights how countries have progressed or fallen behind on each of the factors, and compares their performance at the regional and global levels.

Building on this long tradition of competitiveness research and benchmarking, the Forum designed the Competitiveness and Inclusive Growth Lab initiative to help bridge gaps in competitiveness through focused public-private work that is facilitated by the Forum and leads to agendas with achievable reform. Based on the report's results, and under a mandate from the business and government partners meeting at the Forum's Annual Meeting 2014 in Davos-Klosters, the Forum identified the factors on which Latin America lags the most: skills, technological readiness and innovation. Following this initial diagnosis, detailed analysis and policy recommendations were presented at the World Economic Forum Annual Meeting 2015 and validated at the World Economic Forum on Latin America 2015 in Riviera Maya, Mexico.

Since the recent recession, the Government of Brazil has made a concerted effort to implement a series of reforms to modernize its policies and institutions with the objective of increasing productivity and jump-starting the economy. It is in this context that the Ministry of Industry, Foreign Trade and Services of Brazil and the World Economic Forum have partnered to implement the Competitiveness and Inclusive Growth Lab as part of a broader strategy to boost competitiveness and improve the business environment.

The model builds on previous experience in Colombia and Mexico, contributes to the identification and selection of priority areas and promotes the formation of multistakeholder working groups and steering committees for structured dialogue and solutions designed to close competitiveness gaps. The success of this initiative rests on mobilizing resources and commitments across a broad spectrum of stakeholders from the public and private sectors at all levels. This report provides a detailed overview of the Brazil Competitiveness and Inclusive Growth Lab. The plan has been incorporated into the competitiveness agendas under steering board member leadership. The Forum looks forward to implementing the jointly developed work plan and to collaborating with Brazil, and other Latin American countries, within the Competitiveness Lab model in the future.

Introduction

Context and objective

After two years of deep recession, Brazil's economy is currently on a path to recovery as a result of higher commodity prices and rising consumption and investment (IMF, 2018). However, the severity of the recent recession and the modest growth of the past decades have highlighted the need to enhance productivity and competitiveness.

As it is generally easier to fix the roof while the sun is shining, the current rebound provides a window of opportunity to propose forward-looking solutions to strengthen Brazil's competitiveness in the world economy. Such improvements would not only help to pave a sustainable and inclusive path to prosperity, but also to build resilience to future economic shocks. This will depend mainly on the proper functioning of its institutions, the quality of its infrastructure, the allocation of production factors, a coherent regulatory environment, a thriving workforce and a healthy innovation environment.

The World Economic Forum's region-wide Competitiveness and Inclusive Growth Lab initiative in Latin America was launched in 2014. With the help of the experts and leaders from the Forum's multistakeholder communities in Latin America, the initiative aimed to identify the underlying factors behind the gaps in competitiveness in the region in comparison to higher-income countries and to develop a set of recommendations to bridge these gaps. Moving beyond diagnosis, the Forum spearheaded country-level lab initiatives in Colombia and Mexico to develop and implement agendas to improve the innovation environment through public-private collaboration, based on regional-level findings.

While the findings and recommendations from the Latin America lab remain relevant, Brazil's priorities extended beyond the scope of those established regions. To address the country's needs, Brazil's Ministry of Industry, Foreign Trade and Services (MDIC) and the World Economic Forum collaborated on the Lab initiative to shape the country's competitiveness agenda.

The objective of the Competitiveness and Inclusive Growth Lab – Brazil and this report is to support the design, launch and implementation of an achievable agenda to increase competitiveness by addressing some of the vital challenges identified by the stakeholders participating in this initiative.

Structure of the report

Section 2 of this report presents an in-depth analysis of the current state of competitiveness challenges in Brazil. Section 3 details the methodology and the prioritization process used to determine the scope of the lab.

Section 4 highlights the findings and policy recommendations elaborated by the Working Group within the topics prioritized by the Steering Committee – innovation and trade for global value chain (GVC) integration, promoting a new generation of policies and addressing Brazil's institutional, legal and regulatory framework. For each proposal, a detailed implementation plan is presented to guide policy-makers forward. Lastly, section 5 provides concluding remarks.

Expected outcome

Implementing the proposals presented in the Lab has the potential to further narrow Brazil's competitiveness gaps with higher-income countries. Promoting innovation and increasing trade flows to support technology spillovers and create skilled job opportunities, enhancing policy effectiveness and accountability, and simplifying regulations for businesses are all viable strategies to achieve sustainable increases in productivity growth rates. These recommendations are part of a continuous effort to make tangible progress in addressing critical issues affecting productivity in Brazil.

The Competitiveness Challenge in Brazil

Competitiveness is a complex and multifaceted concept, yet it is widely acknowledged as a vital determinant of prosperity and overall well-being in a country. The World Economic Forum defines competitiveness as the set of institutions, policies and factors that determine the level of productivity of a country. The level of productivity, in turn, reflects an economy's capacity to efficiently use resources to produce goods and services. Productivity levels, thereby, set the level of prosperity that can be earned by an economy.

Competitiveness is not only essential for productivity but also for building resilience to shocks. Tracking the results from the Global Competitiveness Index and GDP growth rates since the 2008 economic crisis, economies that are the most competitive have also been the ones that have had the highest growth rates, showing their capacity to recover faster.

Brazil's overall performance on the Global Competitiveness Index (GCI) indicates that there is room for improvement in most dimensions of the index (Figure 1). Ranking 80th out of 137 economies on the index, Brazil is the least competitive among the BRICS, and is outperformed by several of its neighbours – such as Chile, Colombia and Peru. Brazil's measures of competitiveness over the past decade have been anything but steady. Between 2007 and 2012, Brazil's GCI score increased by 10%, yet dropped by 6% in the following five years.

Similarly, data on productivity in Brazil highlights its difficulties in supporting robust and sustained economic growth in recent years. The average annual growth rate of total factor productivity (TFP), which measures the efficiency with which capital and labour are used, has been negative over the past two decades (Figure 2). The negative TFP growth rate has been persistent despite periods of economic expansion that usually offset negative rates in the long run. According to the World Bank, this can be potentially attributed to the economy's inability to effectively shift its resources from low- to high-productive sectors through structural change, resulting in a misallocation of resources across sectors.

During the same period, Brazil's economy has been steadily decreasing in complexity, which further increases the country's missed opportunities in developing its industrial and technology-intensive sectors. This partly explains Brazil's stagnation as a middle-income economy for nearly six decades. While it is a common feature across most Latin American countries, this contrasts sharply with OECD economies, which have on average remained at the middle-income range for approximately 25 years.

These trends point to long-term structural challenges that are likely to persist beyond the current cycle of economic growth. Without taking measures to address structural impediments and enhance inclusive growth, Brazil's living

Figure 1: Brazil's performance in the *Global Competitiveness Report* against the regional and OECD averages

Source: World Economic Forum (2017), the *Global Competitiveness Report 2017–2018*.

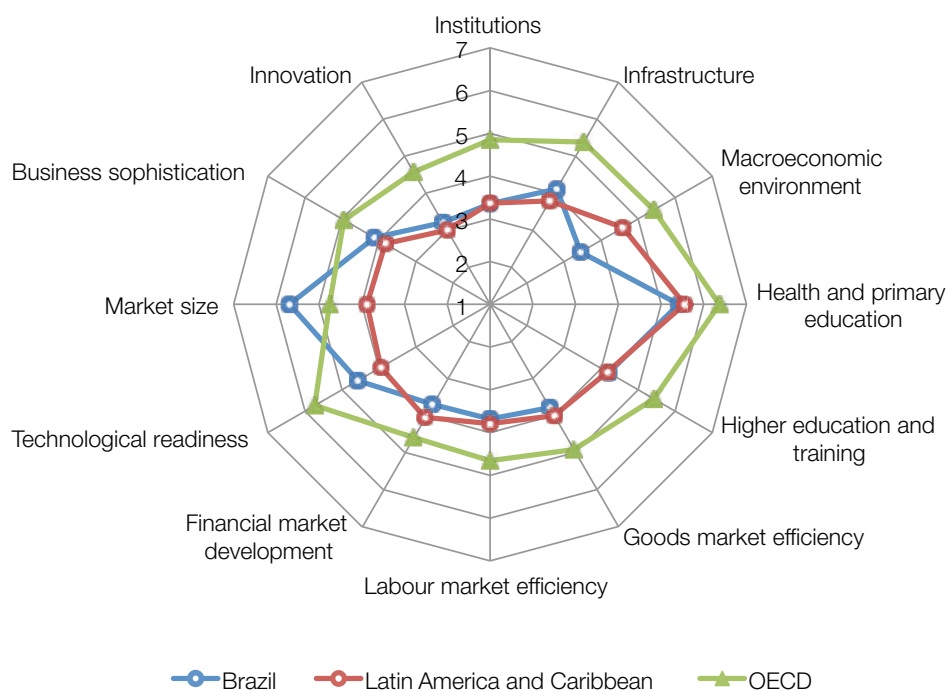
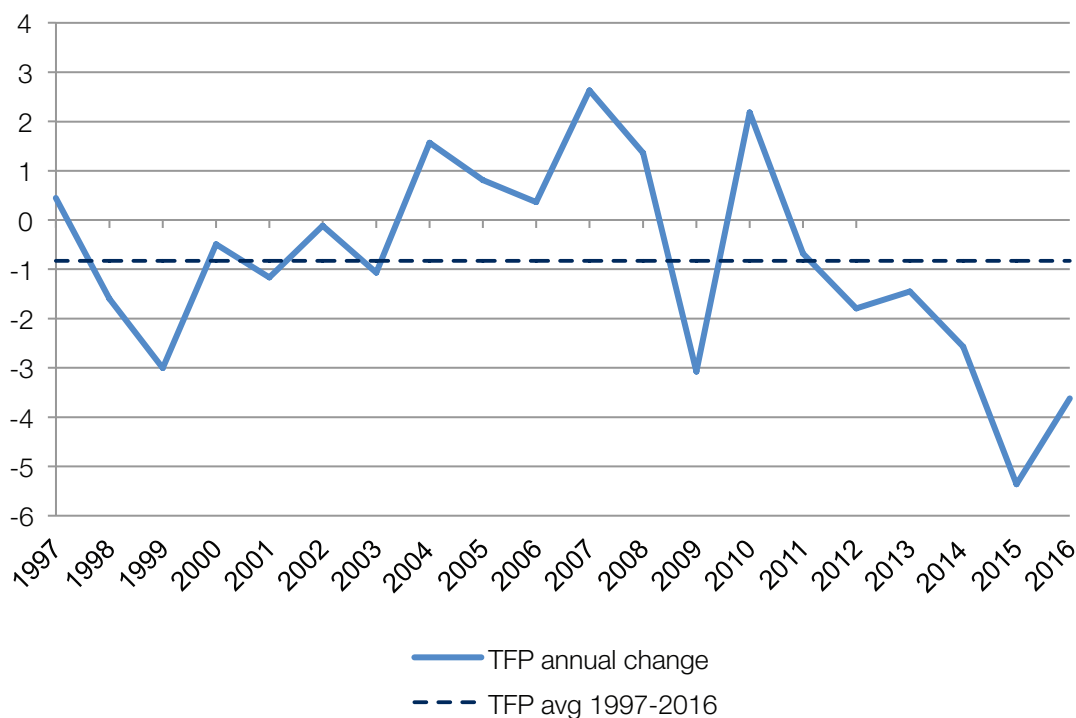


Figure 2: Total factor productivity (TFP) growth, 1997–2016

Source: Conference board, 2017.



standards will be unlikely to effectively converge with those in high-income countries. This raises the question of what kind of measures and policies the government can adapt to improve economic efficiency and increase output levels in the long run.

A series of ambitious and comprehensive reforms and policies have already been implemented or considered by the current administration with the aim of modernizing the economy, enhancing productivity, stimulating growth and putting the country on a fiscally responsible path. For instance, the government recently established a cap on government spending with the objective of curbing deficits and stimulating private investment. A major labour reform recently came into effect to reduce labour charges and risks born by companies in order to improve productivity and stimulate job creation. Reforms in the credit market were implemented to stimulate productive investments. The government has proposed reforms on social security with the dual objective of balancing the budget and redistributing wealth in a fairer way.

While the overall picture of competitiveness in Brazil should prompt policy-makers to act, several areas identified within the framework of this report require particular attention in order to close the competitiveness gap with higher-income countries. Given the pervasive levels of poverty and inequality, competitiveness policies in Brazil should consider inclusion as a cross-cutting issue. In this respect, it will be important to incorporate the inequality impact of the policy recommendations and prioritize those who support both productivity and equity.

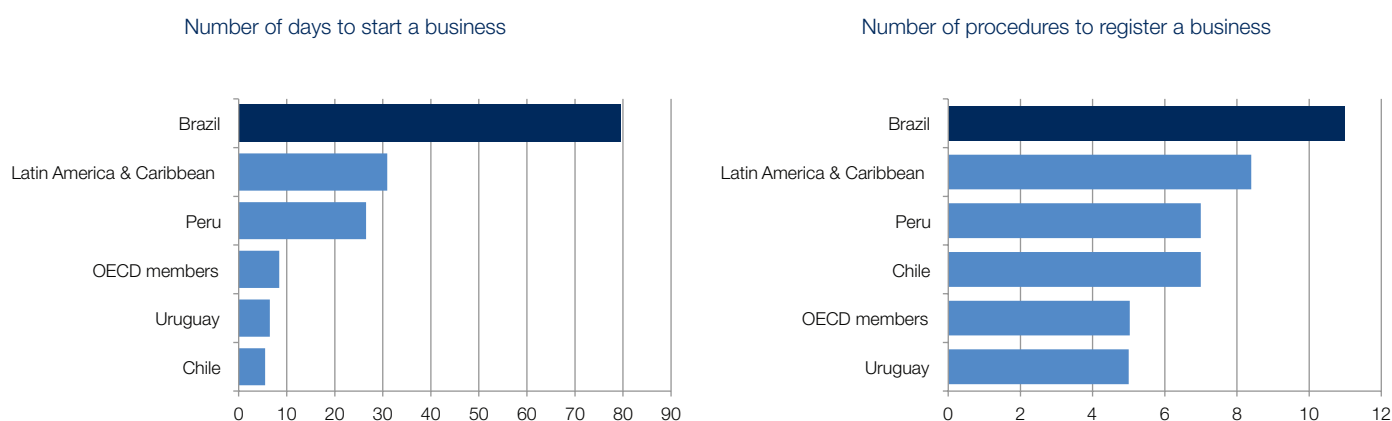
Shedding light on Brazil's challenging business environment

Partly at the root of Brazil's low productivity is the "Custo Brasil", or "Brazil Cost", which refers to a range of factors that impose substantial costs on operating a business. Among these factors is a highly complex tax system, poor infrastructure, an unpredictable regulatory and legal system and an inefficient bureaucracy. The successful implementation of the fiscal reforms proposed by the government, the closure of the infrastructure gap, as well as improvements in the business environment through structural reforms and a solid simplification agenda, such as the one introduced by the Debureaucratization Decree (March, 2017), will be essential for a sustainable return to growth.

The regulatory and legal framework in Brazil is overly cumbersome for businesses. The World Economic Forum's Executive Opinion Survey provides a qualitative assessment of the burden of regulations for 137 countries. The survey measures how burdensome it is for companies to comply with public administration's requirements (e.g. permits, regulations, reporting). Scores range from 1 (extremely burdensome) to 7 (not burdensome at all). On this indicator, Brazil and Venezuela have the lowest score (1.7) and rank at the very bottom of the 137-country sample. While, in many areas, regulations can be excessive and disrupt market forces, it is important to stress that strong and enforceable regulations are also vital to ensure workplace safety, consumer protection and environmental preservation.

Figure 3: Ease of starting a business in Brazil

Source: World Bank, Doing Business project (<http://www.doingbusiness.org/>).



Both heavy regulations and inefficient bureaucracy hinder the process of starting a business. It takes an estimated 11 procedures and close to 80 days to start a business in Brazil. The government has made significant progress in facilitating the process of starting a business by reducing the number of days from 152 since 2008. Despite these improvements, Brazil remains well behind other Latin American countries (Figure 3).

There are several ongoing initiatives at various levels of government attempting to address this issue. Some of these recent efforts are led by the Ministry of Industry, Foreign Trade and Services to simplify and integrate IT systems to facilitate opening and closing businesses – the so-called REDESIM. In 2017, significant reforms by the city of São Paulo led to the integration of federal, state and municipal procedures, dramatically decreasing the number of days to start a low-risk business from 101 to seven days.

Alongside inefficient bureaucracy, tax rates constitute one of the most problematic factors for doing business in Brazil (Figure 4). At 68.4%, the corporate tax rate is among the highest in the Global Competitiveness Index country sample (ranked 134th out of 137 countries). This indicator measures the amount of taxes and mandatory contributions payable by a business expressed as a share of commercial profits. Further emphasizing the complexity of the tax system, it takes an average 1,958 hours per year (in 2017) for businesses to prepare, file and pay taxes in Brazil. Although the average time has been brought down from 2,600 since 2015, the current average remains excessively high in comparison to the Latin American and OECD averages of 330.9 hours and 164.6 hours, respectively.

While regulations are problematic, the current tax system poses a significant barrier for businesses to invest. Results from the World Economic Forum’s Executive Opinion Survey suggest that firms in Brazil believe that taxes reduce their incentive to invest. Scores range from 1 (to a great extent) to 7 (not at all). On this measure, Brazil has the lowest score alongside Greece with 1.8, ranking 136th and 137th respectively. Incidentally, significant gains could be made to improve the business environment by tackling overregulation and reducing the complexity and burden of the tax system, which would raise investments and productivity.

Innovation remains below potential

Innovation is a vital driver of both productivity and competitiveness. Countries in which companies are exposed to international competition often need to innovate and adapt quickly to the pace of the technological change in order to remain competitive on the global market. In the context of this paper, innovation is defined as the capacity to generate, absorb and use technology and non-technology-based knowledge to create new products, services, processes or organizational change that can add higher economic, social or environmental value.

On measures of innovation and business sophistication, Brazil is lagging significantly behind advanced economies but performs relatively well in comparison to other Latin American countries. This is notably the case on innovation measures from the GCI (Figure 5). Business sophistication measures show relative weaknesses in terms of Brazil’s value chain breadth, nature of competitive advantage and production process sophistication.

Figure 4: Most problematic factors for doing business in Brazil

Source: World Economic Forum, Executive Opinion Survey 2017.

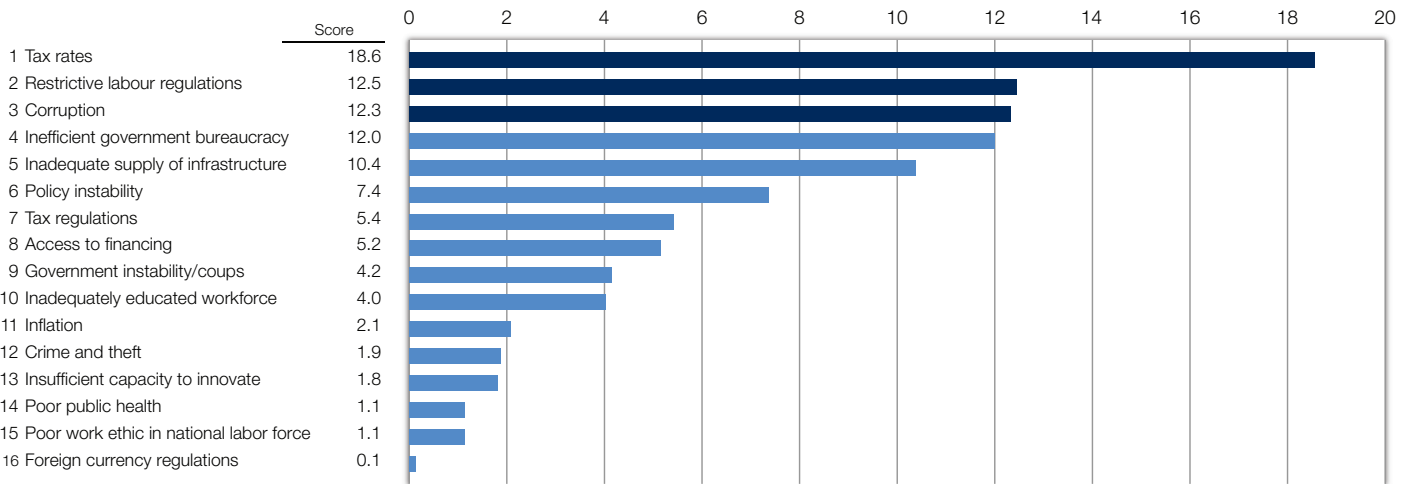
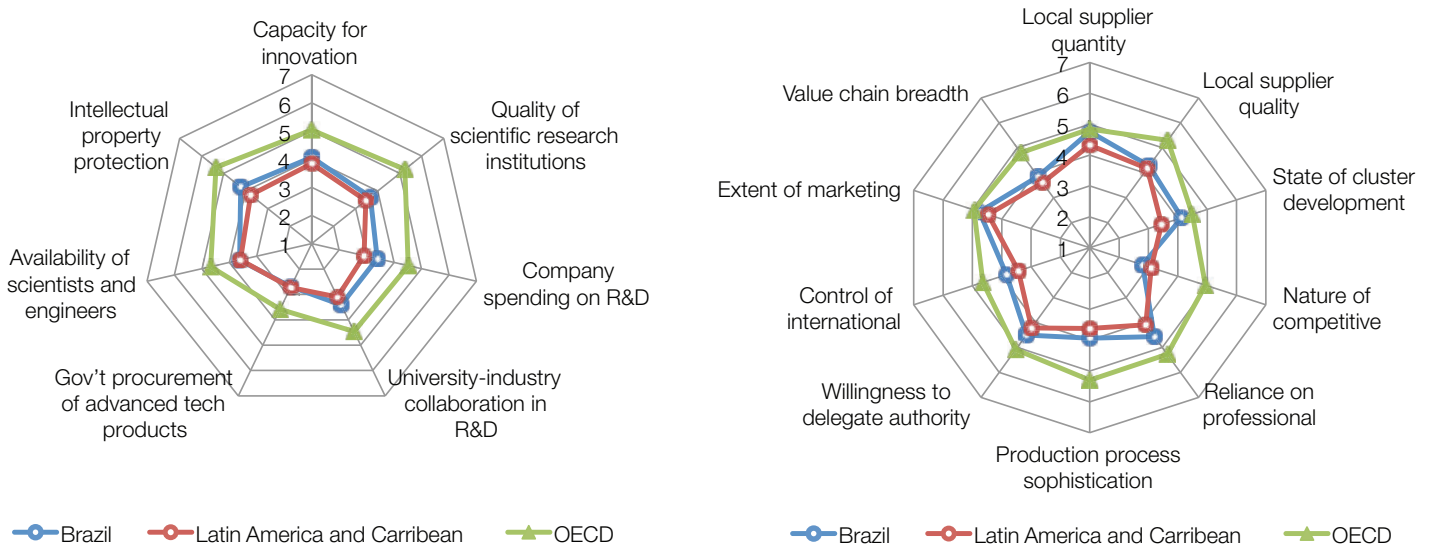


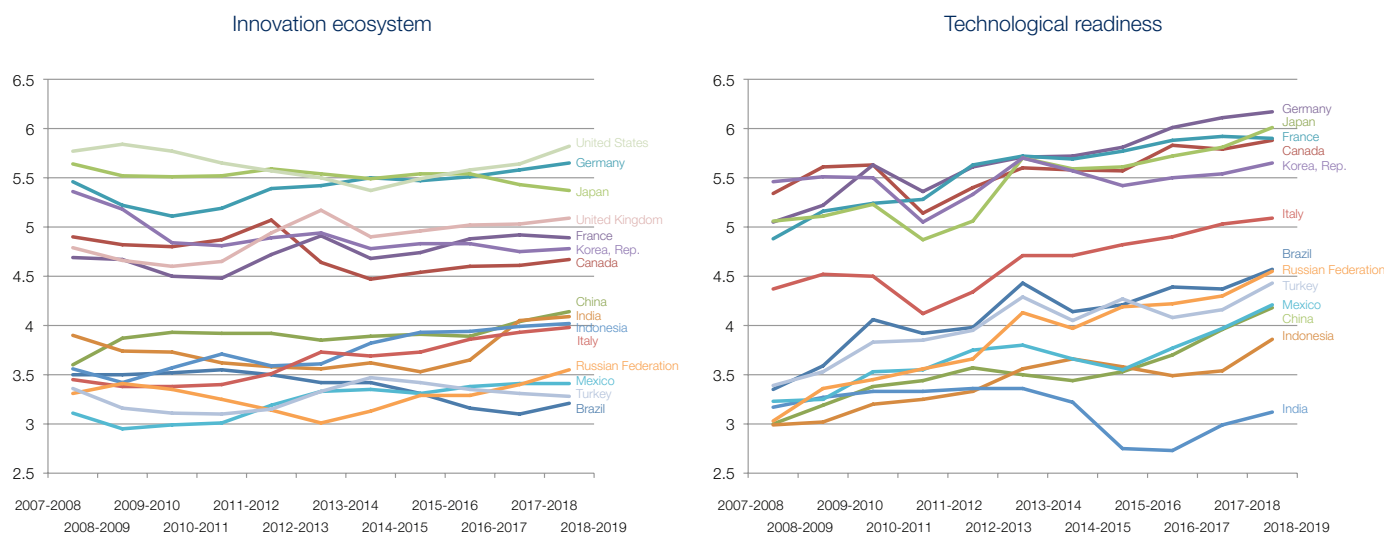
Figure 5: Brazil's performance on innovation and sophistication factors, 2017 (score 1–7)

Source: World Economic Forum, 2017.



Figures 6 & 7: Evolution of innovation and technological readiness in large advanced economies and large emerging economies.

Source: World Economic Forum, *Global Competitiveness Report 2017–2018*.

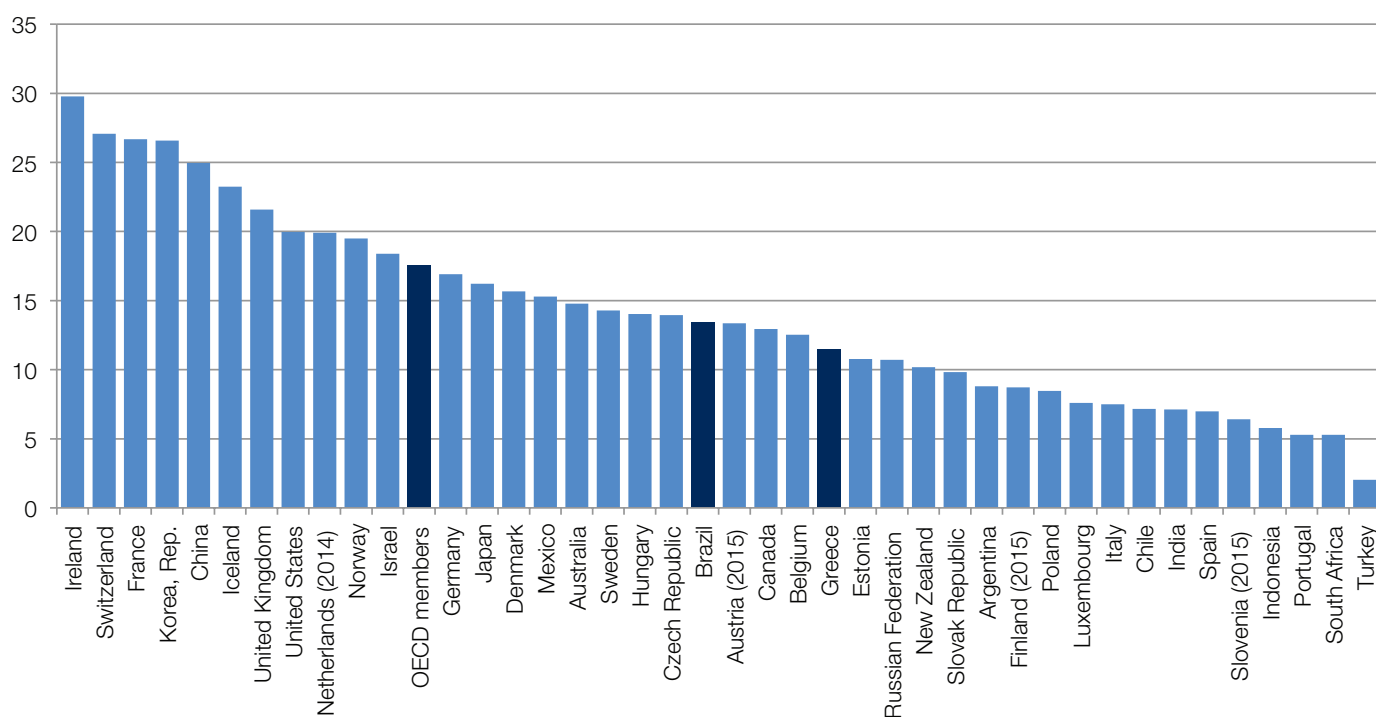


As illustrated in Figure 6, the largest emerging economies – including Brazil – have managed to improve their innovation environment (Figure 6) and technological readiness (Figure 7) over the past ten years, though a clear gap persists compared to leading economies.

Brazil’s overall competitiveness depends on its capacity to compete in high-technology markets. High-technology exports are products with high R&D intensity, such as in aerospace, computers, pharmaceuticals, scientific instruments and electrical machinery. While Brazil’s intensity in high-tech exports in manufacturing compares relatively well with its Latin American counterparts at 13.5%, it remains well below the OECD average (17.6%) and has shown little sign of convergence in the past decade.

Figure 8: Share of high-technology products, 2016 or latest observation

Source: United Nations, Comtrade database through the WITS platform.



Brazil's innovation output, as measured by the number of applications filed under the Patent Cooperation Treaty (PCT), is very low compared to leading countries.

Despite being the leader in Latin America in this measure, with 670 patent applications in 2014, Brazil accounts for only 2.2% of patents filed by BRICS countries. The gap with the leading nations is even more severe. While 74% of the 207,147 Patent Cooperation Treaty applications were filed globally from the United States, Japan, China, Germany and the Republic of Korea, Brazil's share is approximately 0.003%.

Although there is room for improvement on the global stage, innovation in Brazil has rather been inward-looking. Patent applications to the Brazilian patent office (INPI) increased by 10% in 2016 and 5% in 2017, totalling 8,404 applications.

There have been significant efforts from the government to bring down the processing time of patent applications. Recent efficiency gains by the INPI have allowed it to reduce its patent application backlog for the first time in 15 years, through increasing the number of annual decisions per examiner from 35 to 55 over a three-year period. Further progress is expected to come with the government's ongoing efforts to simplify IP processes and regulations and hire additional human resources, as well as further automation and international cooperation.

Brazil's expenditures from both the public and private sectors in research and development as a share of GDP remain low compared to higher-income countries.

Despite a 17% growth in R&D expenditures (from 0.988% to 1.17%) between 2006 and 2014, Brazil is currently spending approximately half of the OECD average (2.5%) as a share of GDP. Brazil's R&D spending is nonetheless significantly higher than most other Latin American countries. With the government currently under intense pressure to curb

public expenditures, the private sector will need to step up to boost R&D expenditures in the short to medium term in order to further close the gap with higher-income countries.

Brazil continues to rely on low-skill, labour-intensive sectors with low innovation and productivity potential.

With 21.6% of the workforce employed in knowledge-intensive sectors, Brazil's share is the second-highest in Latin America, behind Argentina (23.9%), though its share is about half of the average in OECD countries (39.8%). The percentage of the workforce employed in knowledge-intensive sectors is a measure of the presence of workers who are the most likely to generate innovative ideas and bring them to market.

The shortage of skilled labour appears particularly problematic for Brazilian firms. Some 61% of them declare having problems filling their vacancies – due to a lack of workers with adequate skills – compared to 45% on average in Latin America and 34% in OECD countries. The automotive and machinery sectors display the most acute skill gaps, accentuating the challenge to diversify into activities deemed more beneficial for development and industrial upgrading.

While Brazil is lagging behind, there have been recent efforts to close this gap. The Pronatec Indústria programme, a national technical vocational education training programme implemented by the government, has shown some success in aligning the needs of firm and skill supply. While addressing challenges related directly to innovation would raise productivity levels, a poor business and regulatory environment not only poses a significant barrier to developing skills and innovation, it impairs the quality and efficiency of the interactions between and within the public and private sectors.

Figure 9: Research and development expenditure (% of GDP), 2015 or latest observation

Source: United Nations Educational, Scientific, and Cultural Organization (UNESCO) Institute for Statistics.

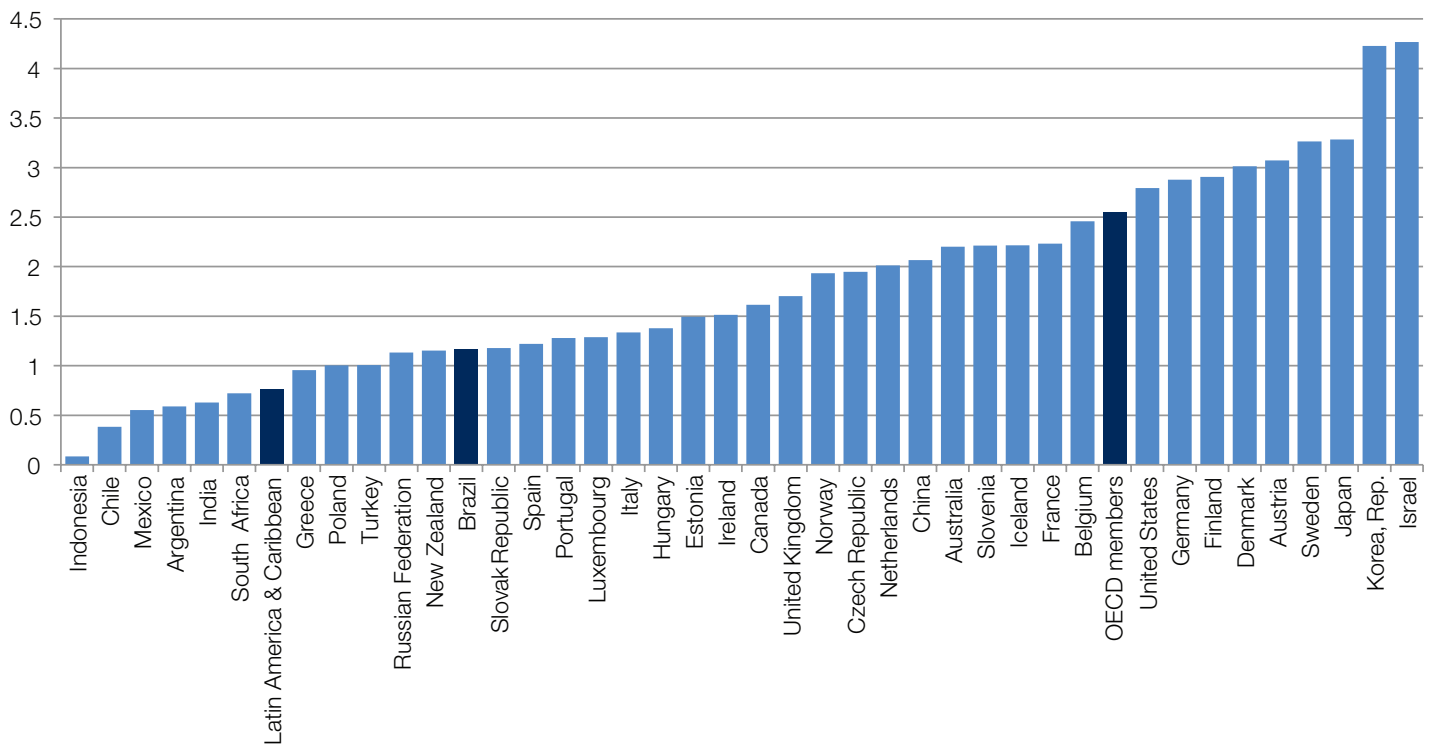
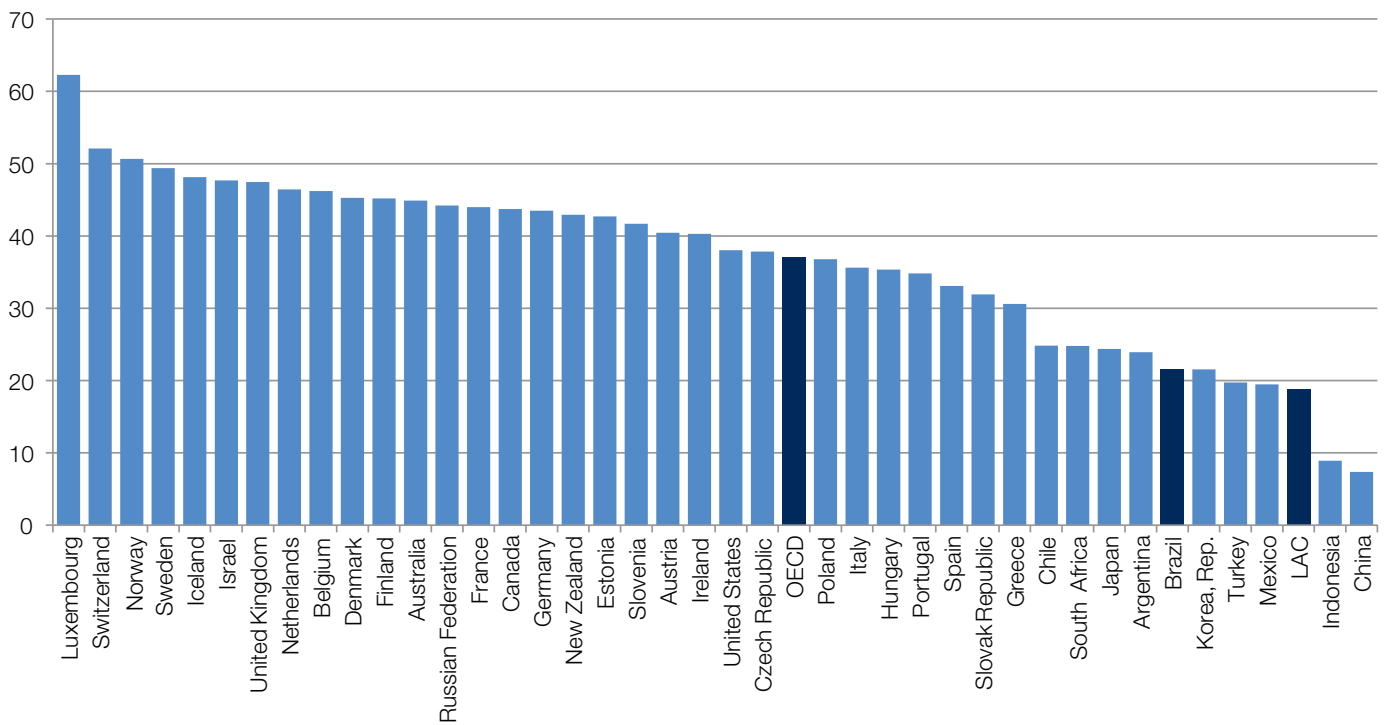


Figure 10: Share of knowledge-intensive jobs in the workforce (%), 2016 or latest observation

Source: United Nations Educational, Scientific, and Cultural Organization (UNESCO) Institute for Statistics.



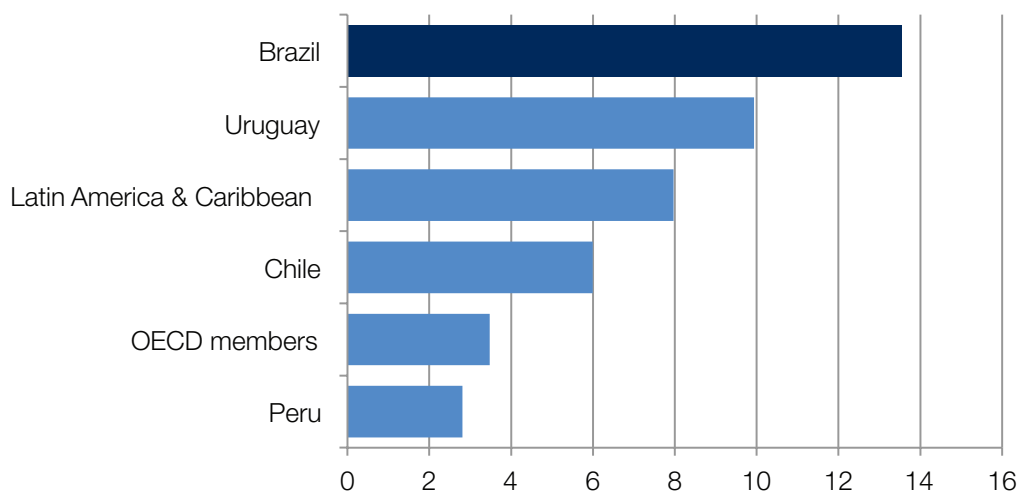
An unfulfilled potential: International trade and global value chain integration

Trade openness and integration to global value chains (GVCs) can be an important pathway to improve competitiveness and spur growth in Brazil. With exports and imports representing less than a quarter of GDP, Brazil is positioned with very limited insertion in GVCs. As the country remains one of the least integrated economies in the world, there is sizeable unfulfilled potential from further GVC participation. There are three main channels through which trade liberalization can reshape the competitive landscape: specialization in tasks, access to a larger variety and quality of intermediate inputs, and knowledge spillovers from multinational enterprises. Though further integrating Brazil into the global economy can lead to greater opportunities, there are also distributional risks involved that need to be acknowledged. Domestic policies that can support an educated and socially mobile workforce which can integrate high-producing sectors will be necessary to ensure that trade liberalization does not exacerbate inequalities.

Brazil exhibits relatively high barriers to international trade, which reduces the benefits from integration into the global economy. Nominal tariff rates on imported goods are high in Brazil compared to other economies in the region (Figure 11). The simple average of import tariff rates across all products was 13.6% in 2016, which is more than twice as high as Chile (5.99%) and Mexico (6.1%), and almost six times higher than the OECD average (2.39%). Though the average tariff rate has remained relatively stable since the onset of the 2008 financial crisis, it has nonetheless increased by 0.48%. While nominal tariffs are comparatively high, applied tariff rates tend to be lower due to a number of mechanisms in place that allow the exemption or reduction of import tariffs. For instance, 23% of Brazilian exports in 2017 (\$50 billion) were made under the drawback regime, which enables the import of inputs without imposing import duties. Furthermore, less than 40% of Brazilian imports of capital goods from 2015 to 2017 paid full import duties, while close to 20% of imports of information and communication technology (ICT) goods did not pay tariffs in 2017. (Data provided by the Ministry of Industry, International Trade and Services of Brazil, March 2018)

Figure 11: Tariff rate, applied, simple mean, all products (%)

Source: World Bank, World Development Indicators.



While import tariffs are relatively high, non-tariff barriers also pose a challenge to domestic competition and FDI. Results from the Executive Opinion Survey from the World Economic Forum suggest that firms consider non-tariff barriers – such as health and product standards, technical and labelling requirements – to strongly limit the ability of imported goods to compete in the domestic market. This can pose a challenge for firms that wish to acquire cheaper, high-quality intermediary goods for their own production. With a score of 3.4 on this indicator, Brazil ranks 130th out of the 137 economies in the sample (Figure 12). The perception from the business community regarding this indicator has been steadily deteriorating from 2012 to 2017, dropping from the 103rd to 130th position.

Following a similar pattern is the indicator of the perception of Brazilian firms in terms of the extent to which rules and regulations are restricting direct foreign investment (Figure 12). This score has also been on a negative trend over the past decade.

Another factor hindering foreign competition and GVC integration in Brazil is the burden of customs procedures related to the entry and exit of merchandise. In this regard, Brazilian firms view these procedures as highly inefficient, with the country ranking 124th in the GCI country sample.

In light of this evidence, it is apparent that Brazil will have to tackle the border and behind-the-border policies that hamper trade in order to allow resources to be allocated to the most competitive firms.

Enhancing public policies for greater impact

Raising productivity has been a priority for the Brazilian government for some time. However, past efforts to achieve higher levels of productivity – through what were viewed as pro-growth policies – have yet to generate any satisfying or sustainable results. This can be partly explained by poor policy design. As evidenced in the Global Competitiveness Index (Figure 13), Brazil's public-sector performance is below the Latin American average, which in turn, lags far behind the OECD average.

These results are notably driven by the perception from business communities that the government is spending public revenue inefficiently as well as a lack of transparency in policy-making. The latter implies that Brazilian companies find it extremely difficult, on average, to obtain information about changes in government policies and regulations affecting their activities. From a risk-management perspective, it is crucial for the private sector to have a predictable and transparent policy environment in order to adapt their firm strategies.

Furthermore, the systematic integration of monitoring and evaluation mechanisms in new policies and programmes is necessary to increase efficiency of government spending. For instance, subsidy programmes to private companies have failed to integrate such

mechanisms and this currently prevents the government from determining their impact. The benefits of implementing such mechanisms are far-reaching. They would allow the government to determine the impact of new measures, thereby allowing policy-makers to dispute redundant policies and facilitate the reallocation of investments from non-productive to productive sectors. Over time, this would enable policy-makers to take stock of successes and failures in designing new and improved policies. Ultimately, this would support the accountability of public expenditures to citizens and serve to build trust in institutions. With a high level of dissatisfaction among the Brazilian population towards public institutions and services, it is crucial for rigorous monitoring and evaluation mechanisms to be institutionalized to support greater transparency and accountability and enhance policy effectiveness.

Figure 12: The burden of non-tariff barriers

Source: Source: World Economic Forum, Global Competitiveness Report 2017–2018

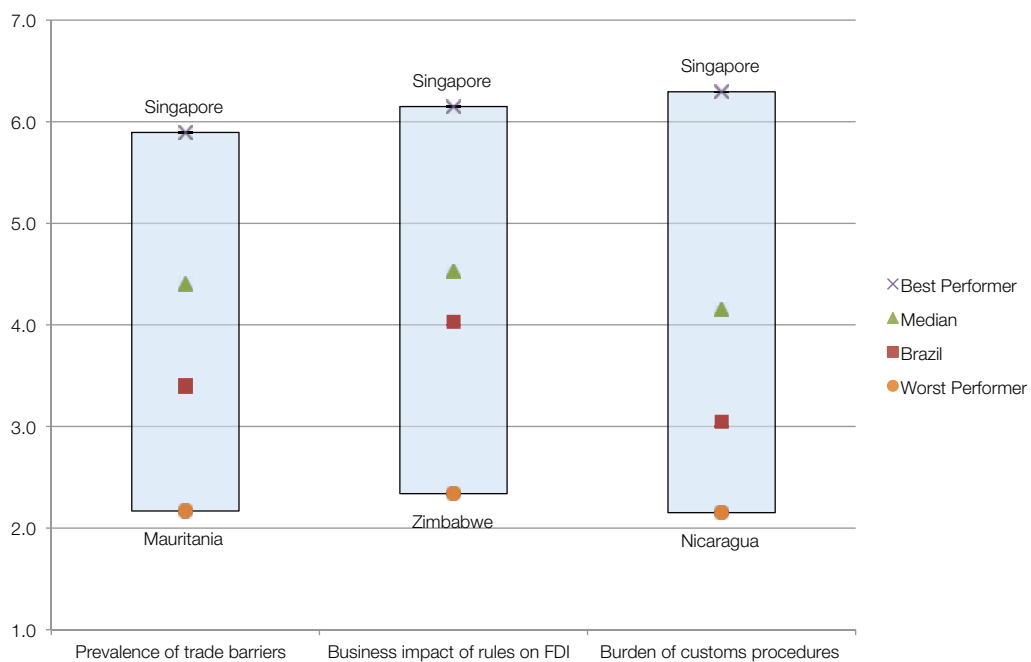
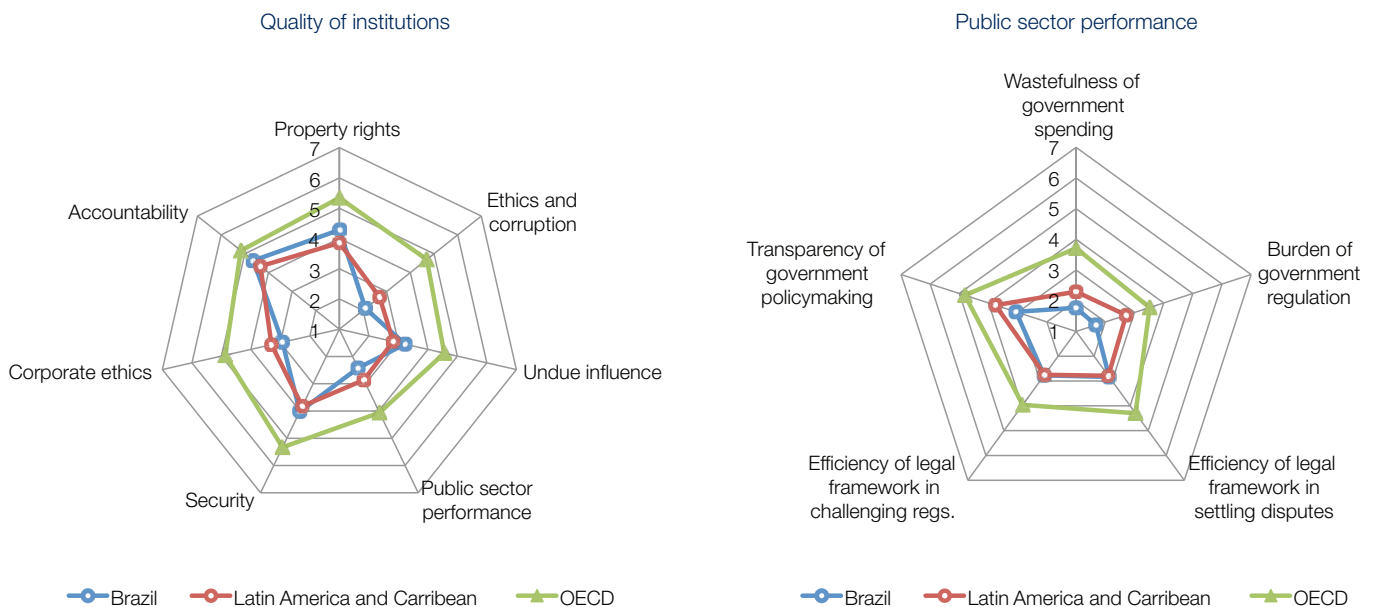


Figure 13: Brazil's performance on institutions and the public sector, 2017 (score 1–7)

Source: Source: World Economic Forum, Global Competitiveness Report 2017–2018



Methodology and Framework

This section provides a detailed overview of the methodology and framework of the Competitiveness and Inclusive Growth Lab (or Competitiveness Lab). More specifically, it provides information on the governance structure and the process that defined the framework of the lab, and documents the project activities and timeline.

Governance structure of the lab

The Competitiveness Lab requires the participation of two multistakeholder groups: a Steering Committee and a Working Group. Each group is chaired by one of its members to lead and facilitate discussions and convene the members to meetings. The Steering Committee consists of top leaders from government agencies, executives from the private sector and leaders from non-governmental organizations. The Working Group is composed of senior representatives from the government, experts from non-government organizations and the private sector.

The role of the Steering Committee is to provide input and guidance to the Working Group, while ensuring that the lab activities are aligned with the national strategy and existing initiatives. The committee also plays a crucial role in determining the priority areas to be tackled by the lab. The role of the Working Group is to propose a policy recommendation grounded in the framework defined by the Steering Committee and develop a concrete implementation plan for the proposed recommendation.

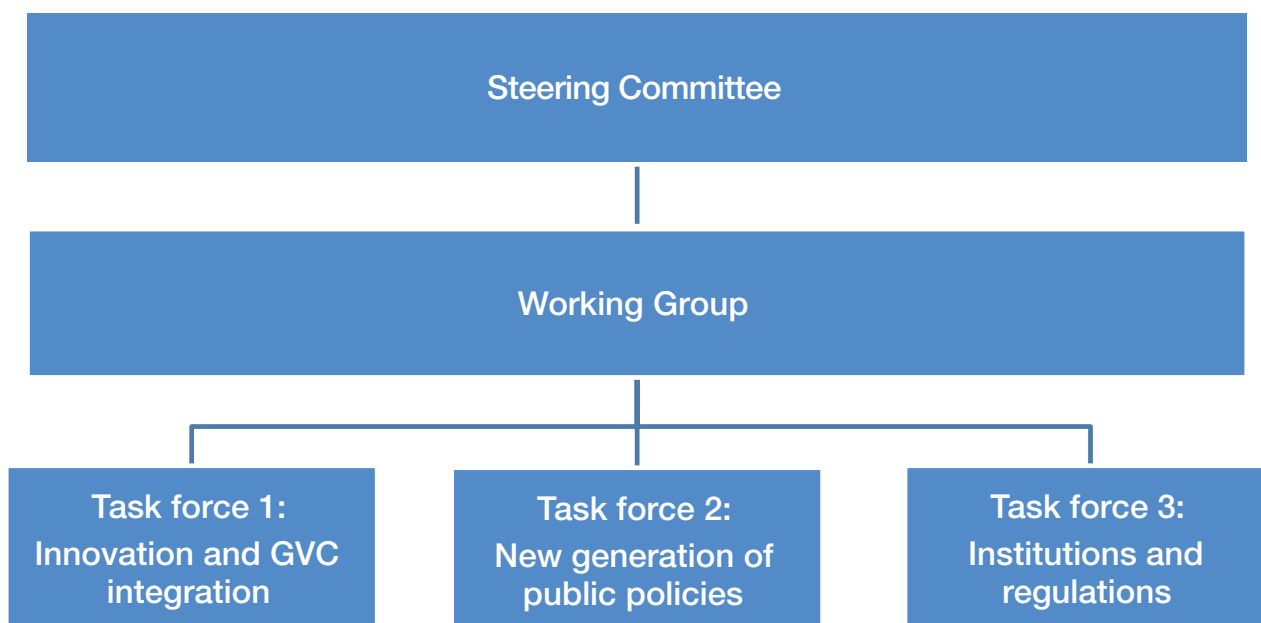
To facilitate the coordination of the activities around each of the priority topics, the Working Group is further divided into Task Forces. A lead is nominated in each Task Force to coordinate activities and manage the content of the recommendation.

Prioritization of the competitiveness agenda

In order to define the priority areas of the Competitiveness Lab, members of the Steering Committee convened in the early stages of the initiative. The members were asked to express their views and discuss what they believed were the most pressing challenges to improving the business environment and boosting competitiveness in Brazil. Discussions were guided by the following questions: 1. What are the main challenges and opportunities when improving competitiveness in Brazil? 2. Which initiatives could address these challenges and opportunities? Nearly 20 initiatives/opportunities were raised by the Steering Committee members. These can be summarized in Figure 15 under the following three priority areas:

1. **Global value chain (GVC) integration and innovation**, to enhance public-private collaboration frameworks to access GVCs through strategic innovation and trade facilitation.

Figure 14: Governance structure



2. **New generation of public policies**, to improve the effectiveness of government investments and policies through the implementation of monitoring and evaluation (M&E) mechanisms.
3. **Institutions and regulation reform**, to improve the business environment by simplifying the regulations framework, ensuring regulatory certainty and lowering the costs of firm entry and exit.

The broader impacts of addressing these priorities are expected to be two-fold. First, they should directly enhance competitiveness by strengthening institutions, promoting trade, innovation and improve policy effectiveness. The second impact would be indirect, by improving Brazil's reputation and branding through a move towards a country willing to modernize.

Methodology

Mapping the policy landscape

The Working Group members were first tasked with providing a list of existing state- and federal-level policies and initiatives with similar objectives to those of the priority areas of the Lab. The main purpose of this exercise was to provide an overview of the current policy landscape in Brazil, and to identify potential policy gaps for the Competitiveness Lab to address. This policy database would prevent the Working Group from proposing policies and initiatives that overlapped with existing ones.

Policy development and implementation plan

Once the policy mapping exercise was concluded, an in-person meeting with the Working Group was organized to talk with the task force leaders to determine the most promising paths to take. The following drafting guidelines were shared with the Working Group to facilitate the elaboration of the recommendations and the implementation plan.

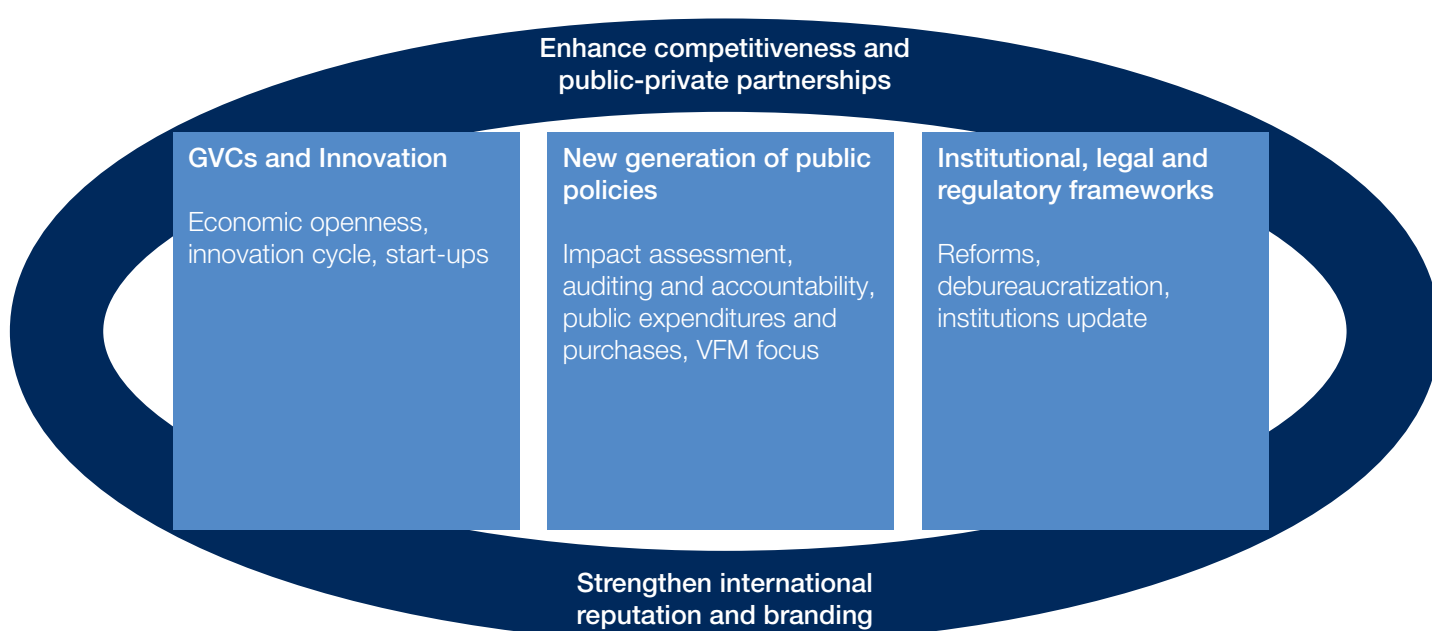
Diagnosis and impact

- What is it the proposed recommendation?
- What is the objective of the recommendation? What are the challenges that it aims to address?
- Do you foresee any risks or obstacles to its implementation?
- What are the expected impacts?

Design and implementation

- To implement the proposed recommendation, what are the activities that the implementation plan must consider?
- What are the important milestones you consider for the development implementation of the recommendation, for a) one year, and b) three years?
- How can its effectiveness and impact be monitored and measured?

Figure 15: The Brazil Competitiveness Lab framework



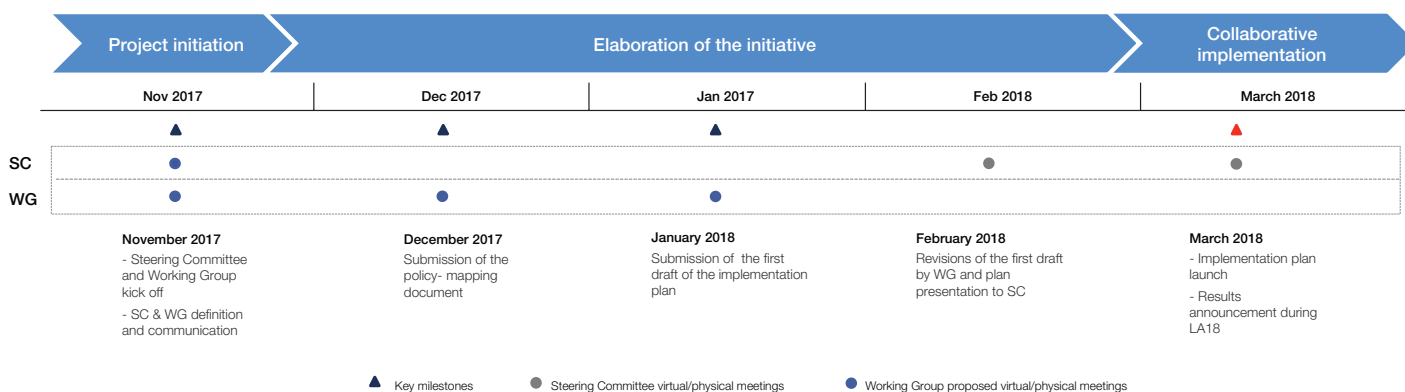
Identifying the relevant actor for implementation

- What is the organization (governmental or non-governmental) that can lead the implementation of the recommendation?
- What organizations (governmental or non-governmental) can be of support for this recommendation?
- How do you think these actors should be engaged?
By whom?

The Competitiveness Lab timeline

The Competitiveness Lab – Brazil initiative formally started with the Steering Committee meeting on 7 November 2017, leading to the launch of the Competitiveness Lab and Inclusive Growth Report at the World Economic Forum on Latin America in March 2018. Beyond the launch, it was crucial to secure the commitment from vital stakeholders to support the implementation of the proposed agenda. Three meetings with the Working Group took place during the duration of the project. A first meeting was held on 6 December 2017, over a conference call to discuss and validate the Lab framework. The second conference call with the Working Group was held on 20 December 2017, to discuss the findings of the policy-mapping exercise. A third meeting took place in person in Brasilia on 17 January 2018, to discuss a path forward to elaborate on the recommendations and implementation plans. A first draft of the Competitiveness and Inclusive Growth Lab report was presented and validated by the Steering Committee in February 2018.

Figure 16: The project timeline



The Competitiveness and Inclusive Growth Lab Findings

This section provides a detailed description of the findings from the Working Group on the priority topics, or work streams, defined by the Steering Committee.

The first work stream aims to promote better access for Brazil in global value chains. There is consensus around the fact that the global production landscape is no longer organized in vertical chains and is now organized according to tasks, with countries playing a role according to their competitive advantages. In this context, Brazil is losing wealth gains due to its poor integration in the global economy.

More specifically, this work stream highlights the need for Brazil to participate “more and better” in the global economy. The “more” refers to higher international economic integration, comprising initiatives related to market access, trade facilitation and trade infrastructure. The “better” refers to the need for a transformation in innovation policy, in order to promote an enabling innovation environment, support the capacity of Brazilian firms to access technology and therefore offer competitive products to new markets.

The second work stream, promoting a new generation of public policies, argues for more transparent, more focused and better-coordinated public policies, in order to deliver greater competitive and societal impact. These policies should be systematically implemented with rigorous monitoring and evaluation mechanisms, which are crucial to ensure accountability and increase their efficiency.

The third work stream, addressing Brazil’s institutional, legal and regulatory challenges, is less prescriptive and is rather a stocktaking exercise, highlighting the challenges and current efforts to improve the institutional and legal environment. This can be used as a starting point for a discussion on the best path towards improving the institutional environment in Brazil.

Work stream 1: GVC integration and innovation

Recommendations that support innovation

At the heart of productivity and competitiveness is innovation – the introduction of new ideas or upgraded products in the market, adoption of existing technologies or the improvement of business processes. Fostering firm innovation must be the main objective of innovation policies and a central tenet of competitiveness policies.

The centrality of innovation is even more preeminent in the current context of technological change. The Fourth Industrial Revolution is accelerating and will change production systems worldwide. New technologies are enabling mass custom manufacturing, and expanding sharing economies, advanced robotics, 3D printing, the Internet of Things and artificial intelligence, among others. Furthermore, as information and communication technology costs are decreasing, so are the entry barriers in technology-intensive sectors. At the same time, global value chains are increasingly flexible and specialized. This generates tremendous opportunities – and pressures – for emerging economies to develop their innovative capacities, and raises questions over how Brazil will be positioned in this fast- changing scenario for it to become a global platform of innovative products and services.

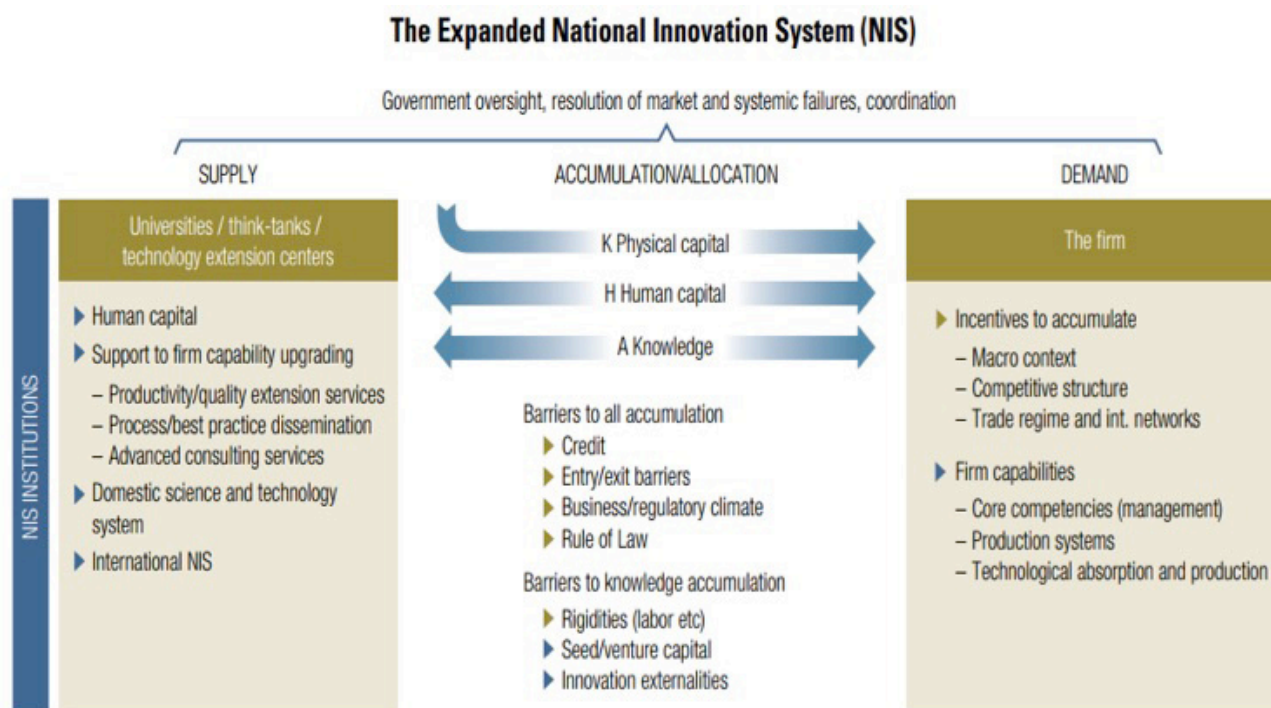
Over the past two decades, Brazil has made significant progress in modernizing its policies and institutions to support innovation. Sophisticated policy instruments available in most high-income countries – such as subsidized loans, grants, equity funds, fiscal incentives, public procurement and scholarships – are also available in Brazil, yet all actors closely involved in the innovation process remain in a low-maturity state. Furthermore, all these innovation efforts have not resulted in productivity gains, competitiveness enhancement or a stronger presence in the global value chain. With firms, universities and policy-makers still struggling to unleash their innovative potential, there is a need to measure the impact of current policies to recalibrate and improve them further.

A thriving innovation environment, as the Expanded National Innovation System (NIS) Figure 17 shows, requires a healthy business environment, efficient financial markets, effective judiciary system and a more open economy and society. Without a systemic approach to innovation, the returns on investments in R&D are likely to remain low, with limited social and economic impact. This thriving environment also requires appropriate policies and institutions that support innovation.

However, innovation policies face two challenges that partly explain the low innovation and competitiveness performance in Brazil. The first important challenge is the poor integration of policies, instruments and actors across the National Innovation System, with excessive fragmentation and insufficient coordination. The second challenge is the fact that innovation policies in Brazil are largely supply driven: they are mostly focused on universities and research centres, which are seen by the government as being at the centre of the innovation process. This requires a transformation whereby policies would be oriented to business and societal demands, and where an increase in productivity and competitiveness in the private sector is the main priority of innovation policies. To do so requires rebalancing R&D-oriented policies and taking into consideration the current status of Brazilian firms and building their innovation capabilities.

Figure 17: The Expanded National Innovation System (NIS)

Source: Maloney (2017).



Source: Maloney 2017.

The recommendations detailed in this section will not address all of the innovation and industrial problems of the country. As emphasized earlier, to be effective, these recommendations need to be implemented with measures that address important systemic constraints, such as business environments, trade regimes, entry and exit barriers, credit markets and regulatory frameworks. It is vital to solve those systemic constraints, which are crucial complementary factors, to have a functional innovation environment. But it is also critical to solve some of the important challenges surrounding existing innovation policies, which are the focus of this work stream.

The recommendations discussed below were selected as short-term priorities based on diagnostics and an evaluation of different national and foreign institutions, and are an important step towards improving the quality of existing policies. As illustrated in Figure 18, these are made at two levels: 1. at the strategic and institutional level; 2. at the programme- and policy-specific level.

1. Strategic and institutional objectives

Objective 1: Towards a paradigm shift in innovation policy

Context and analysis

Science, technology and innovation policies in Brazil have evolved considerably in recent years, but their impact on productivity and competitiveness remain timid. A recent analysis of Brazil's innovation policies and regulations displays instances of overlapping responsibilities, inefficient allocation of resources, discontinuity in investments and excessive bureaucracy within the government apparatus.

These factors arguably hinder progress in achieving meaningful national goals and in developing the innovative capacity of firms, especially small and medium enterprises (SMEs). Moreover, the complex and multilayered nature of the innovation environment suggests that it requires more than higher levels of investment in R&D to reach the desired level of physical capital and workforce depth. Institutional and policy fragmentation highlights an urgent need to better coordinate efforts among all stakeholders involved in the Expanded National Innovation System.

As a result, a new generation of policy, which places greater focus on the innovative capacity of Brazilian firms, must be developed. At the heart of this strategy is a demand-driven approach to solve business and societal challenges. This effort would require:

1. A high level of coordination between public institutions.
2. Better integration of different policies and institutions relating to science and technology, education, health, energy, agriculture, defence, foreign trade, etc.
3. Sustained government leadership and political commitment, with sufficient and stable budgets.
4. A shift from the current approach to policy instruments that are designed to address innovation needs according to firms' capabilities level.
5. Monitoring and evaluation of programmes and policies.

Effective coordination is crucial for this policy to succeed. Its cross-sectoral nature would require the Executive Office of the President to lead the strategy by creating a deliberative committee composed of relevant government agencies. One of the central roles of this committee would be to approve innovation programmes and instruments with the

support of a technical unit linked to the president's office. The main challenges from a governance perspective are multidimensional and should be tackled first at the highest level. First, firm-centred innovation policy needs to become a top priority in the government's agenda. Second, a centralized coordination system needs to be established between government agencies. Third, the government needs to craft a long-term vision for its innovation strategy. These solutions will require a strong political disposition from the highest leadership in government given the possible repercussions for the autonomy and structure of certain government agencies and the potential reorganization or elimination of existing institutional bodies. Nevertheless, the overall long-term impacts are expected to be positive through improved policy efficiency, cost-effective programmes and lean and agile institutions.

Recommendations

- **Position firm-centred innovation policy as a top priority for the government.** The goal is to have a long-term vision and strategy, an internationally competitive budget, effective monitoring and evaluation capacity, and the necessary political support to improve innovation environment.
- **Promote an integrated innovation policy.** Innovation policy must be integrated and aligned with education, science, technology, industrial and foreign trade policies, but also other sectors such as defence, health and energy.
- **Establish a “National Innovation Policy Coordination committee” or an “Innovation Chamber”.** This would act as a high-level body linked to the Office of the President. Its purpose would be to ensure coherence in innovation policy deliberations and the integration of policy instruments to improve the targeting and impact of programmes.

2. Programme- and policy-specific objectives

Objective 2: Establish a results-oriented innovation policy

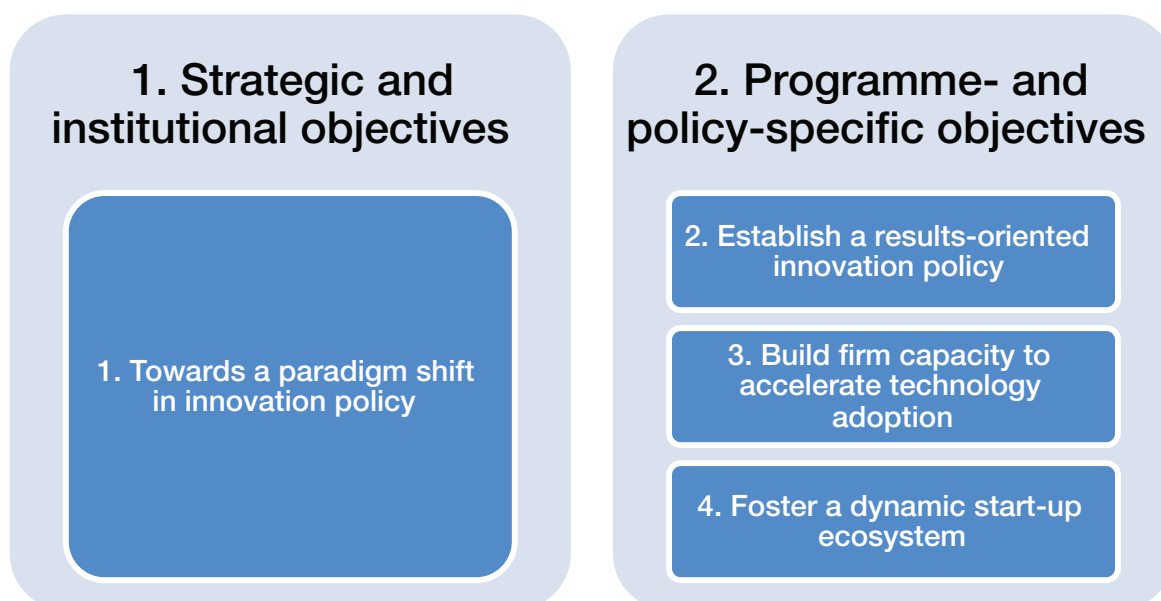
Context and analysis

Despite making significant investments in science, technology and innovation (S,T&I) over the past decade, Brazil has failed to raise the level of productivity and competitiveness of its firms. While these results may have had a tangible impact on research output – Brazil's share of international citable publications doubled from 1.5% to 3% in this period – there was no significant impact on patent applications, firm innovation, private R&D expenditures and high-tech exports.

Partly explaining this low performance on innovation metrics is the supply-driven character of current policies: 65% of Federal S,T&I investments are concentrated on universities and research centres, usually disconnected from business and societal demands. It is estimated that only 30% of Brazilian public R&D investments targeted sectoral ministries and agencies – compared to 90% in the United States, for instance – while 70% are concentrated in the Ministry of Education and the Ministry of Science, Technology and Innovation according to IPEA (Institute of Applied Economic Research).

Another critical factor to consider is the relatively high level of fragmentation of R&D investments, both across research disciplines and in terms of the number of research projects funded. Research projects are typically small in scale, which tends to generate little impact. This is compounded with a lack of prioritization in research areas that could otherwise see efforts concentrated to reach excellence. Moreover, projects are spread all over the country, delaying gains on a regional scale. More than half (52%) of Brazilian research laboratories are worth less than R\$500,000, while only 20 laboratories (less than 1% of the total number of laboratories) are worth more than R\$20 million. Addressing the fragmentation in R&D investment could potentially generate positive scale effects on research quality and support interactions with the private sector.

Figure 18: The objectives of the innovation sub-stream



In light of these challenges, it would be necessary for the Brazilian government to rebalance current investments to have a policy mix that involves ambitious and risky mission-oriented research projects, but also more general policy instruments dedicated to solving challenges experienced by business or social sectors.

While risky in nature, mission-oriented programmes can reap significant long-term rewards as shown by past experiences: aircraft technology research with Embraer; deep-sea oil exploitation technologies by Petrobras; and applied biotechnology on soy crops from Embrapa. These successful experiences are the ones that have markedly shaped the Brazilian economy.

Recommendations

- 1. Design and implement a mission-oriented programme** with a focus on high-risk activities on the knowledge frontier to attain specific goals. These programmes would have an encouraging role in supporting greater public-private partnerships. The focus must be on sectors and firms able to compete globally and become an export platform.
- 2. Rebalance R&D investments** to result-oriented projects in partnership with sectoral ministries and agencies: for instance, health, agriculture, defence, energy. The purpose would be to identify promising research areas across sectors that can potentially generate significant economic or societal impact.
- 3. Design mechanisms** to accelerate innovation diffusion of large-scale projects to the private sector.

Proposed next steps

- To pilot lower-risk mission-oriented projects to learn how to operate these mechanism through public-private partnerships. Successful experiences can potentially be scaled up.
- To identify vital priorities in sectoral areas and rebalance S,T&I investments to address those challenges in partnership with their respective agencies.

Objective 3: Build firm capacity to accelerate technology adoption

Context and analysis

The current context of technological change demands significant efforts to diffuse and adopt new technologies. However, this requires building the necessary absorptive capacity to use new technologies effectively. For example, for a company to become competitive through technology and innovation, several steps that go beyond R&D efforts must be fulfilled. Buying a new machine (physical capital) requires training (employees) and specialized labour, a good organization of the labour force and good integration in the production process. Similarly, R&D projects require professionals with specialized knowledge to manage the project efficiently but also good logistics and marketing specialists to take the product of R&D successfully to the market. Without these good managerial and organizational practices, the impact of R&D spending will be insignificant.

Building managerial and organizational capacity is vital for innovation. In the current context in Brazil, this would imply rebalancing priorities towards management and technology

extension instruments (and away from a focus mostly on R&D), to be able to increase productivity.

In addition, cost is the number one barrier to innovation, according to Brazilian firms. Technology imports have been subjected to significant tariff and non-tariff barriers that isolate the country, its institutions and firms, from the innovation frontier. There is a negative impact on the import cost of technology embodied in machinery, equipment, tools, blueprints, specialized inputs; and on disembodied forms – information, technical assistance – usually encapsulated in teams or individuals (capable of translating codified knowledge as carriers of tacit knowledge). Thus, for instance, the import of technical assistance entails a total tax wedge, which falls between 36.6% and 49.7%.

In terms of the workforce, part of the challenge is to promote vocational education on a large scale and align the curriculum of courses with business demands (O'Connell et al., 2017). In engineering, adapting curricula is also critical; quantitative knowledge alone does not mean productivity for companies – project management, technological innovation, cooperation and other soft skills are needed. Attracting selected international talent should also be considered a priority.

The service sector is vital to the success of industry 4.0 and important for productivity growth. Most innovation policy instruments remain focused on manufacturing and ignore the interconnections between goods and services. This approach overlooks the fact that the aggregate value of manufactured goods relies increasingly on embedded services.

In addition, it is necessary to support Brazilian companies with different levels of innovation maturity, designing policies and programmes specific to each type of company and to offer a full package of interventions in a cost-efficient and agile manner. This will enhance the innovation capacity of the whole country, not just a few large companies.

Recommendations

- **Increase firm managerial and technological capabilities through activities oriented to productivity growth:** for example, technology adoption/absorption, infrastructure and advisory services, technical services, innovation vouchers, technology extension, finance prototyping, testing and commercialization phase.
- **Attract R&D foreign investments** to generate spillover effects and advance in global value chain activities.
- **Align technical training and engineering courses** with market needs and technological changes.

Proposed next steps

- Rebalance public R&D investment to increase technological and managerial capacity of small and medium enterprises.
- Identify R&D products and services to negotiate tax reductions.

Objective 4: Support a dynamic start-up environment

Context and analysis

Raising productivity in Brazil requires encouraging new innovative ventures to enter the market and challenge existing incumbents by building attractive start-up environments. There are at least three vital factors for supporting an enabling start-up environment: (1) a workforce equipped, in quantity and quality, in technological competences but also in new business models, (2) local environment sophistication – cluster density, gathering entrepreneurs, investors, accelerators and academia, and (3) an efficient risk capital market – from seed capital to initial public offering (IPO). Besides these three main areas, the government must focus on other business environment requirements such as the rule of law in terms of limited liabilities for angel investors and venture capitalists. Furthermore, facilitated access to innovation instruments (despite having only intangible assets to offer as guarantees) and proof-of-concept stimulus mechanisms such as government procurement preferences for SMEs are necessary.

In Brazil, FINEP (Funding Authority for Studies and Projects) and BNDES (the Brazilian Development Bank) have been the main actors in supporting equity funds to innovative companies. Nevertheless, the targets of their investment efforts are companies with higher revenue streams and partnering with venture capital funds. There is a great opportunity to exploit private investment through angel investors and seed capital funds. With this approach, a growing number of start-ups could be reach nationwide.

Start-ups generally face challenges interacting with the public sector. Public procurement regulations in Brazil prioritize cost reduction and the previous experience of bidders, putting start-ups at a clear disadvantage. In addition, public procurement is usually not focused on technology advancements and innovative solutions. This is a missed opportunity considering that public procurement represents 15% of Brazil's GDP.

Innovative public procurement is an important instrument to support high-tech companies and it is widely used in many developed countries. For governments, there are two advantages: a) modernization of public services with higher-quality and more cost-efficient solutions; b) boosting a particular new market for innovative solutions through economies of scale.

The proposed recommendations may help start-ups through different channels, mainly: 1) public procurement can become an important source of demand and 2) procurement can potentially provide additional incentive for venture capitalists to fund start-ups.

The challenges involved are lack of knowledge of some public institutions about early-stage investments and the higher risks in this phase. Another challenge is to design innovation public procurement regulation that avoids corruption practices but is also transparent and agile.

Recommendations

- **Introduce tailored financing instruments adapted to the needs of innovative start-ups.**

Brazil has a growing venture capital and private equity

industry but fragile early-stage investment support. The government should focus on creating co-investment funds with private investors for early-stage companies. The aim of this measure would be to increase the number of deals and the volume of investments from angel investors and seed capital. New financial products specific to innovative start-up needs are required to support young firms aiming to commercialize technology. Hybrid schemes involving grants, subsidized loans and equity are potential solutions.

- **Create early-stage co-investment funds.** Brazil has a growing venture capital and private equity industry but fragile early-stage investment support. The government should focus on creating a co-investment fund investor for early-stage companies. The aim of this measure would be to increase the number of deals and the volume of investments from angel investors and seed capital.
- **Develop a regulatory framework to facilitate public procurement of innovative solutions from start-ups.** The public sector should use its purchasing power to act as an early adopter of innovative products and services not yet available on a large-scale commercial basis.
- **Provide tax incentives for start-up equity investors.** Start-up investment is one of the riskiest in the market and this measure would make it more competitive against other financial products.

Proposed next steps

- To develop an urgent legal proposal to Congress or a provisional measure.
- To rebalance equity investments to focus on angel and seed co-investment funds.
- To create an additional framework for innovative public procurement after legal approval.

Recommendations that support GVC integration and trade

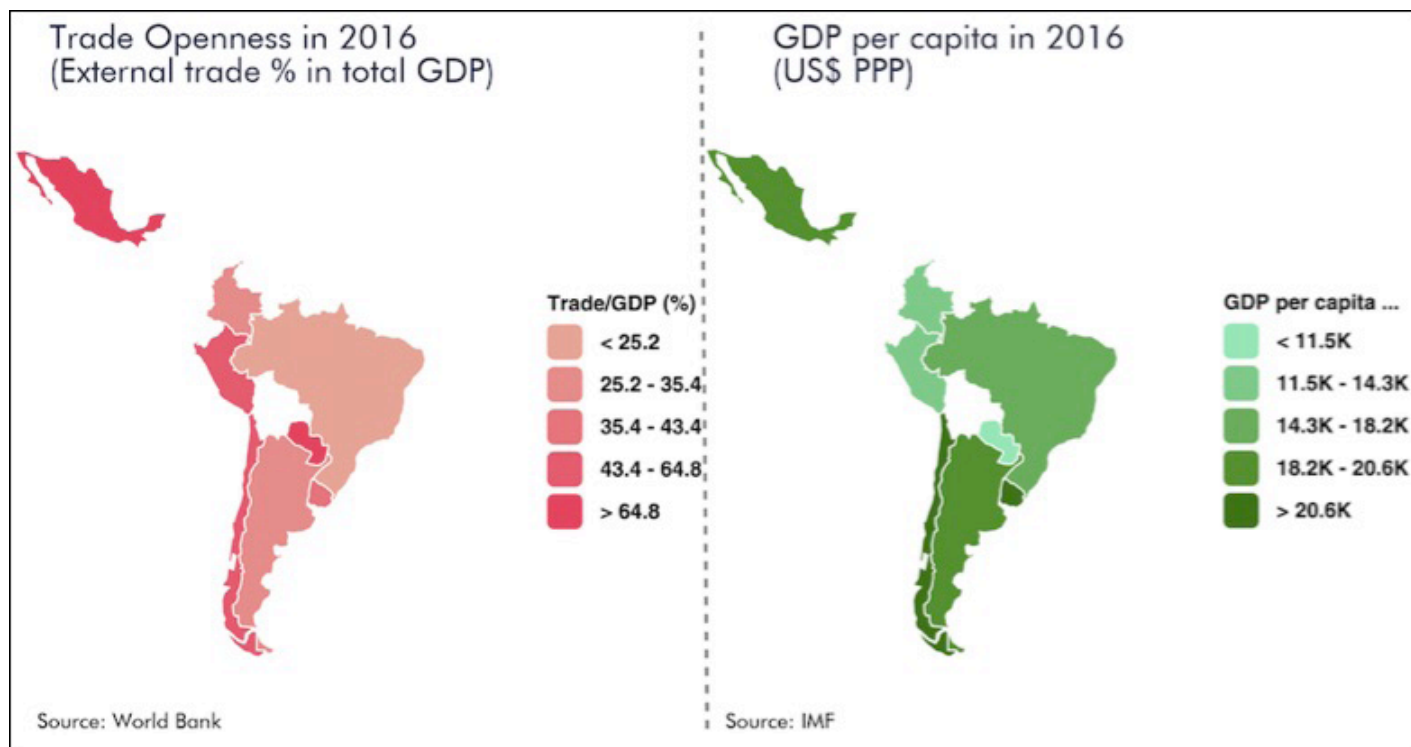
Despite the recent positive results of the Brazilian trade balance in 2017 – such as an increase of 15.1% in the trade flows of goods and a record trade surplus of US\$67 billion – there is still significant room for Brazil to advance in the area of trade. That is, both in relation to the share of trade in the Brazilian GDP (which accounted for 24.6% in 2016) and in relation to the participation of Brazil in international trade (which does not adequately reflect the size of the Brazilian economy). Whereas Brazil is the 8th largest economy in the world, it is only the 25th largest exporter of goods.

When compared with some of its peers in Latin America, Brazil holds the lowest trade-to-GDP ratio – also known as the trade openness level. Such poor integration affects the country's economic capacity in many aspects, namely high-production costs, weak competence within industries, high prices to end consumers and low international competitiveness for Brazil's exports. Along with other aspects, all of these effects result in lower purchasing power for Brazilian consumers.

Brazil ranks in the middle-lower GDP per capita in purchase power parity. This position contrasts with Brazil's economy size and variety of industry, but reflects the pernicious effects of over 60 years of domestic-driven trade, regulatory and industrial policies.

Figure 19: Trade openness and GDP per capita for selected Latin American countries.

Source: Elaborated by the author based on data provided by the World Bank and the International Monetary Fund.



To maintain consistent and sustainable trade growth in the long term and to strengthen its role as a global player, it is essential for Brazil to increase competitiveness and to improve the domestic environment for Brazilian production and exports. The modernization of the economy is thus a fundamental condition for the enhancement of Brazil's trade performance.

From a comprehensive standpoint, such a challenge involves tackling several aspects of the aforementioned "Custo Brasil". It varies from solving bottlenecks in infrastructure and logistics to reducing costs related to tax, social security and labour. But this task also encompasses measures specifically in the field of trade, which include, among others, trade agreements, trade-related bureaucracy, trade infrastructure, regulatory coherence and the broader operational environment.

This section focuses on the trade approach. It seeks to offer concrete recommendations for policy measures that could significantly contribute to enhancing Brazil's competitiveness in trade. These focus on improving market access by expanding the network of trade agreements, the implementation of trade and investment facilitation policies, and improvement of the tax environment for trade. Efforts to improve these areas are already underway with noticeable success, but these gains need to be expanded and consolidated. Trade should be assimilated as a permanent drive for economic development in Brazil and not merely as a conjunctural solution in times of domestic recession. The moment is ripe for such a leap forward.

Objective 1: Improving market access by expanding the network of trade agreements

Context and analysis

World trade increasingly takes place by means of trade agreements. According to the WTO, in 1990 there were 70 agreements globally, which were responsible for 28% of the global exchange of goods and services. Today, there are more than 400 such agreements, accounting for more than 60% of all trade. Those are important tools for stimulating commercial relations and countries' participation in value chains.

Brazil already has an extensive network of trade agreements in Latin America, and expects to achieve free trade with almost all of the countries in the region by 2019. However, those treaties focus mainly on goods and tariffs. Outside Latin America, Brazil has trade agreements with only nine countries (Botswana, Egypt, Israel, India, Lesotho, Namibia, Palestinian Territories, South Africa and Swaziland). Consequently, most Brazilian goods and services exports do not yet benefit from trade preferences.

Current initiatives on the expansion of Brazil's trading partners include the ongoing negotiating processes between Mercosur and the European Union (EU), EFTA, Canada, Korea and Tunisia. Such negotiations could increase preferential access for Brazilian exports by more than 50%. On new disciplines, Brazil has recently concluded more than a dozen investment agreements, signed a deal with Mercosur on government procurement, and delivered a comprehensive bilateral agreement with Peru, including

chapters on services and government procurement. Brazil is negotiating an agreement with Mexico, which could cover areas such as regulatory coherence and non-trade barriers (NTBs). Mercosur and the Pacific Alliance are implementing a roadmap on issues varying from trade facilitation to SMEs.

Recommendation

Brazil should consolidate and increase ongoing efforts to expand its network of trade partners and deepen existing agreements.

Commitments should go beyond goods and tariffs, encompassing modern disciplines on investments, services, government procurement, e-commerce, trade facilitation, non-trade barriers (NTBs), regulatory convergence, small and medium enterprises, regulatory coherence and intellectual property.

In addition to negotiating new agreements, Brazil should also expand current agreements, especially in the Latin America region. These agreements should include tariff liberalization schedules that provide a reasonable period of adaptation for domestic industries and harness enough domestic political support for future legislative approval.

The negotiation of trade agreements should also be supported by investment in training, reskilling and job assistance programmes for targeted groups, taking into account the effects of stronger trade integration into the economy.

Proposed next steps

- a) Conclusion of ongoing negotiations (i.e. EU, EFTA, Mexico and India).
- b) Identification of relevant trading partners, both developed and developing countries, for the launching of new negotiations. Such a process of identification should result from public consultations with the private sector and from governmental analysis of the potential benefits and impact of each agreement.
- c) Negotiation of broader disciplines on non-tariff areas (from e-commerce to regulatory convergence), by means of:
 - d) 1) comprehensive trade agreements, encompassing several non-tariff chapters; or
 - e) 2) specific bilateral agreements (i.e. investment and public procurement agreements).
- f) Complementing the trade agreements agenda with targeted programmes of skill-enhancing strategies for the workforce (vis-à-vis the impacts of trade integration).

Objective 2: Implementing trade and investment facilitation policies

Context and analysis

Inefficient logistics and burdensome bureaucracy are relevant barriers to trade and investment. In many surveys, business and trade operators in Brazil emphasize problems such as excessive use of documents, lack of coordination among governmental agencies, high costs to comply with red tape, and slow and unpredictable inspection and analysis procedures.

The current framework for trade-related procedures and formalities in Brazil has been in place for 20 years or more. The tools for governmental agencies to enforce their trade-related policies in an efficient manner are insufficient and many of them are outdated. Many agencies have reacted by developing individual systems and requirements without coordinating with each other. This has increased and aggravated issues of fragmentation, duplication and lack of coherence in the whole process.

An effective approach to this shortcoming is the implementation of facilitation initiatives. These have the potential to greatly reduce the time and costs of export and import procedures, and of investment flows, and significantly contribute to boosting competitiveness. According to the 2015 WTO Report, the full implementation of the Trade Facilitation Agreement (TFA), which entered into force in 2017, could reduce countries' costs to trade on average by 14%, and stimulate the increase in global trade by up to US\$ 1 trillion per year. The report estimates that the potential gains from trade facilitation are greater than the complete elimination of all import tariffs in place worldwide.

In Brazil, the most comprehensive trade facilitation initiative is the Single Window Program (*Portal Único de Comércio Exterior*), which involves reengineering and reviewing all export and import procedures and formalities. Organized as a joint effort between more than 20 agencies and the private sector, it promotes the simplification, streamlining and cost reduction of trade-related procedures and formalities with the support of risk management, automation and information technology tools. It adopts the logic of a single entry point and a single database leading to greater coordination among all players involved. The reforms promoted by *Portal Único* are being concluded on the export side, and are advancing quickly on the import side. A study conducted by *Fundação Getúlio Vargas* estimates significant benefits arising from full implementation of *Portal Único*, such as an increase of 1.52% in GDP; an annual increase of 6%–7% in trade flows; and an increase of 10% in Brazilian exports of manufactured goods.

A second initiative is the Program of Authorized Economic Operator (AEO). This is designed in accordance with the TFA and other relevant international standards to enhance border controls for verified agents, based on better risk management. Its goal is to achieve 50% of export and import declarations being performed by certified companies (500 major importers and exporters) by 2019, improving time and security in trade procedures.

The results of Brazilian trade facilitation policies have already been captured by the 2018 World Bank Doing Business project, which portrayed Brazil as gaining 10 positions in the “trading across borders” index.

Another complementary policy area is trade facilitation investment, which, according to the United Nations Conference on Trade and Development (UNCTAD), could be summarized as a set of policy measures and activities aimed at making it easier for investors to establish, maintain and expand their investments in host countries, as well as conduct day-to-day business. In this sense, Brazil is successfully negotiating investment agreements focused on facilitating investment flows. Such instruments – known as Cooperation and Facilitation Investment Agreements (CFIAs) – establish a solid institutional framework to support investors and avert potential disagreement

Recommendations

Brazil should intensify the implementation of state-of-the-art trade and investment facilitation measures, to ease, streamline and reduce the costs of trade-related bureaucracy and to enhance Brazil's participation in global trade.

To further simplify efforts across agencies involved in foreign trade, the development and implementation of risk-management solutions for agencies other than customs must be an important next step. Also, it would be beneficial to try and connect the single window with other platforms that support trade in Brazil, such as port community and financial transactions systems. The main goal would be to reach an integrated electronic environment to process the many aspects of import and export transactions.

Since most countries are engaged in trade facilitation efforts, it would be rational to pursue international cooperation with a view to enabling the exchange of electronic trade documents – such as phytosanitary certificates and certificates of origin, as well as future interoperability and data sharing among national single windows and similar systems. Brazil should intensify its ongoing cooperation with Argentina, the Pacific Alliance and the United States, but also expand it to other trading partners.

Brazil should expand its network of CFIAs, which already covers seven of the ten main destinations of Brazilian investment. Brazil should also put to work its Ombudsman for Foreign Direct Investment, mandated by the CFIAs, whose role is to act as a focal point and facilitator for foreign investors in Brazil, assisting them with information and specific government-related difficulties, thereby helping to attract capital flows.

On the multilateral level, Brazil should remain engaged in exploring a possible common framework on investment facilitation. Some beneficial elements of this initiative include the creation of institutional arrangements to promote a friendlier climate for investments and improving global governance in this area. The designation of National Focal Points in each country would strengthen the interaction between investors and the host state. In turn, the establishment of a Committee for Investment Facilitation at the multilateral level would support the implementation of the agreement, as well as serving to exchange methodologies and stimulating cooperation among parties. Each country would also be encouraged to adopt a single

electronic window for investors to submit documents and comply with requirements related to investment. This would unify electronic procedures, make them more efficient and less bureaucratic, and improve transparency.

Facilitation initiatives must also look specifically at micro, small and medium enterprises. It is necessary to better understand the logistics, transparency and bureaucratic conditions that inhibit them from participating in international trade and investment flows. This is not a situation particular to Brazil, but a worldwide concern being discussed in many international forums. Brazil must be fully engaged in such discussions to help the global community meet this challenge.

Proposed next steps

- a) Full implementation of the National Single Window and Authorized Economic Operator programmes, according to schedules already in place.
- b) Improving coordination among governmental actors that intervene on foreign trade operations, which could be achieved by investing in and developing efficient technological tools and methodologies (i.e. advanced risk management and information sharing) and by reinforcing the role of trade coordinating bodies (National Committee on Trade Facilitation – CONFAC).
- c) Intensification and expansion of international cooperation on trade facilitation with relevant partners to allow data sharing on exports/imports and future interoperability between national single windows.
- d) Expanding the Brazilian network of investment agreements (CFIAs) by concluding ongoing bilateral negotiations and launching new ones.
- e) Establishing the Ombudsman for Foreign Direct Investment, within the framework of CAMEX, according to the role and structure established by Decree 8.863/2016.
- f) Participate in and support multilateral discussions in international fora for a common framework on investment facilitation.

Objective 3: Improving the tax environment for trade

Context and analysis

An intricate and complex tax system can become a major burden for business. It hinders competitiveness and poses an obstacle to more active participation in the global market. In many surveys and studies, such as the World Bank's Doing Business project, Brazil stands out as one of the countries with a higher tax burden and a costlier system. Brazil has a great number of different taxes, operated by different administrative levels of the government. Understanding and navigating the tax system is therefore difficult. Businesses must devote a significant number of hours to fulfilling their requirements to pay taxes, and this could be much simplified. The absence of a single value-added tax and the existence of cumulative and non-cumulative taxes both discourage value addition and make it difficult to fully exempt domestic taxes on Brazilian exports. As a result, this erodes competitiveness and makes Brazil a tax exporter. Taxation over trade of services is another concern and a source of complaints from the productive sector. This is especially relevant considering that services are increasingly being embedded in goods.

In addition to the domestic tax environment, an ever more important area of interest and debate in terms of trade in Brazil is the import tariff regime, which derives from Mercosur's Common External Tariff (CET). Forged mainly back in the 1990s, CET is said to contain substantial distortions with regard to the effective protection of goods and does not reflect the current productive framework of Mercosur. Mercosur's mechanisms for tariff review are slow and bureaucratic, making it difficult to quickly adapt the import tariffs to constant changes in production patterns and to the necessities of international trade. While many agree and advocate for the need to lower import tariffs, there is no consensus yet on the sectors in which to concentrate changes and the impacts on domestic industries. Also, it seems incoherent and insufficient to conduct reforms in import tariffs separate from concurrent reforms in the Brazilian tax system.

Recommendations

The Brazilian government should consider tax improvements focused on reducing costs and enhancing competitiveness for domestic production and foreign trade. It is crucial to pursue significant reforms in Brazil's tax system to enhance competitiveness for domestic production and trade. It would seem important to start by simplifying the tax system, making it easier and less costly to process and collect domestic taxes. The system should also be rationalized to reduce tax residue in exports and not to refrain from processes that add value to goods being sold abroad. In terms of services, Brazil should endeavour to simplify, reduce and grant more transparency to taxes on imports. At the same time, it is essential to implement mechanisms that allow full recovery of tax credits related to service exports.

Conducting a comprehensive analysis and review of Mercosur's CET would be helpful to abate tariff distortions and lead to a more competitive import tariff regime. Such changes should also be promoted by means of ongoing and new trade negotiations that will eventually open the Brazilian market and further integrate Brazil in global value chains. Reform of Mercosur's mechanisms for reviewing CET would be beneficial, allowing greater agility in the adaptation of the trade bloc's import profile to the ever-changing environments of domestic production and international trade.

Proposed next steps

- a) Conduct comprehensive consultations with relevant stakeholders to identify and build support for tax-reform proposals aimed at improving the tax environment for trade.
- b) Implement the selected proposals, such as those related to tax simplification and reduction or elimination of tax residue on exports.
- c) Conduct studies on Mercosur's CET profile aimed at identifying important distortions in terms of effective protection or in regard to the current productive framework of Mercosur.
- d) Debate Mercosur proposals to review the CET, in conjunction with proposals to reform the bloc's mechanisms for tariff review to allow for quicker decision-making.

Work stream 2: A new generation of public policies

The slow productivity growth of the past decades has provided a clear signal to the government that it needs to realign its strategic vision and put forth a new generation of public policies that promote economic growth under fiscal constraints.

Concrete steps have already been taken to promote the monitoring and evaluation of existing policies and programmes. For instance, the adoption of Constitutional Amendment No. 95, which implemented public spending, creates an incentive for the government to be more efficient and rational in its allocation of funds, highlighting the need to review and optimize public spending and prioritize initiatives that generate returns for society.

By studying the results and the impacts of different policies, the government can better assess which policies are yielding improved outcomes for society, given the resources invested. This cost-benefit ratio comparison between policies is paramount for the optimization and rationalization of public expenditure, and the quality of public investment will improve greatly when the government focuses its resources on policies, initiatives and programmes that give the best bang for its buck.

As part of the benefit of fine-tuned information resulting from public-policy management with an inherent focus on evaluation and monitoring, this new generation of public policies offers another desirable feature – *transparency*. This can control the quality of expenditures as it may generate social pressure for better usage of public funds, both in terms of policy effectiveness and allocation of funds to priority areas.

We should note that several policies implemented in recent years for the purpose of promoting competitiveness were initially designed for specific sectors, with several other sectors included ad hoc. Examples of this include reforms designed to reduce payroll taxes and the Greater Brazil Plan (PBM), implemented by the previous administration.

In this case, in addition to considerable increases in policy costs, the efficiency of expenditures may suffer as sectoral interests are not necessarily aligned with policy goals. Moreover, PBM was marked by an absence of proper impact evaluation of its policies, which raised many doubts about the effectiveness and achievability of their desired results.

We should also note that the heavily criticized policies were designed in response to other problems requiring broader and more complex solutions. Thus, the government created several special tax regimes to solve problems in Brazil's tax structure. In addition, subsidized credit increased considerably, based on the argument that the capital market was inefficient. It was therefore essential for public policies

to address the original problem rather than introduce palliative measures, which not only fail to resolve structural competitiveness problems in the economy but also create new distortions that can bring about negative impacts in the future.

To improve public spending efficiency and effectiveness, we understand that a new generation of public policies must also feature prioritization as a guiding principle. This criterion is consistent with the challenge imposed by fiscal imbalance, as budget restrictions make it imperative for the government to focus efforts on truly strategic measures. Similarly, we understand that initiatives with a clearly defined focus and goal tend to yield better results.

New policies that support competitiveness must be able to effectively coordinate across different sectors. This challenge requires the involvement of high levels of government if multiple federal entities and agencies are to be engaged.

A new generation of public policies should therefore be guided by the following principles:

- Focusing on **evaluation and monitoring** to enhance the quality of public policies and allocation of funds.
- **Transparency** – being accountable to society and improving the efficiency of public expenditure.
- **Prioritization**, with a well-defined focus and strategy.
- **Cross-cutting**, aligned with international methodologies and synchronized with production and technology changes.
- **Coordination** among all of the actors involved to support the adoption of more consistent public policies that offer clear guidelines.

New generation of public policies for productivity and competitiveness

In strategic terms, in addition to featuring the characteristics mentioned above, a new generation of public policies focused on competitiveness must forge ahead towards international methodologies with cross-cutting instruments designed to tackle the country's structural problems and be consistent with production and technology changes that are underway.

The digital revolution and its impact on the economy will require changes not only to production processes but also to public policies as a whole. To this end, a new generation of public policies must prepare society and the productive sector for change.

The strategy to implement a new generation of public policies may mature at different times. On the one hand, the conceptual recommendations, which require only a change in the principles of formulation, may be implemented in the short term with the design of new policies. On the other hand, the more strategic recommendations related to alignment with new technological demands will be incorporated as basic implementation capabilities are created.

Proposed next steps

- a) The effective design of industrial policies requires aligning strategies of different ministries to create collaboration among policy-makers and policies to move them forward. Pre-coordination of upcoming industrial programmes in the higher levels of government must ensure initiatives are moving towards the same objectives.
- b) The federal government should elaborate a common industrial policy to facilitate the prioritization of action and stakeholder engagement to develop Brazil's productive sectors.
- c) Establishing mechanisms to allow re-evaluation and modification of the conducted programmes based on the information gathered on the monitoring and evaluation process.

Monitoring and evaluation of public policies

CMAF – created in April 2016 – aims to improve Federal Executive Branch actions, programmes and public policies as well as enhancing the allocation of funds and the quality of public spending. We should note that, while the government policy and programme evaluation methodology has greatly improved, particularly in areas such as education, health, the labour market and poverty reduction, there is still no rigorous and systematic methodology to evaluate industrial policies. In general, the evaluation of government policies and programmes has focused on cost effectiveness and the notion of minimizing distortions caused by government actions.

However, it is important for this new generation of public policies to be designed, from its conception, with a concern for monitoring and evaluation. Thus, ex ante (forecasting) planning becomes necessary, beginning with the identification and characterization of a problem that requires government intervention, and establishing a policy design with clear goals and mechanisms to achieve them. The financial and budget impacts of the policy to be implemented also need to be estimated, with an emphasis on its cost-benefit ratio. Finally, it is essential to identify ahead of time how data will be obtained to monitor the indicators, based on the established goals and objectives. Only with a well-conceived ex ante analysis can the most effective and efficient decision be reached.

We note that periodic policy monitoring provides not only information on the initiative's partial results, but also allows the authorities to make adjustment during implementation to achieve the established objective. Therefore, policy implementation requires a certain flexibility that allows for changes when monitoring determines such needs. In addition, the quality of the policy impact evaluation may be improved when planning and design are carried out together.

In this regard, in March 2018 the Inter-Ministerial Governance Committee (CIG), approved an ex ante evaluation manual and is expected to propose another for ex post (actual) analysis. This will help standardize mechanisms to evaluate and monitor public policies throughout the federal government.

Proposed next steps

- a) The Inter-Ministerial Governance Committee (CIG) should publish guidelines for ex ante and ex post policy evaluations and build government-wide capacity for their use.
- b) The federal government should establish internal procedures and processes to enforce monitoring and evaluation of all of its policies, including training its staff in techniques required for the proper monitoring and evaluation of public policies.
- c) Government agencies should monitor and evaluate their policies, under the guidance of the Committee on Monitoring and Evaluation of Federal Public Policies (CMAP).

Work stream 3: Institutional, legal and regulatory framework

Though addressing broad institutional challenges extends well beyond the aim of this initiative, the purpose of this work stream is to shed light on a set of areas in which regulations and institutions pose a challenge to Brazil's competitiveness, but also to highlight existing efforts aimed at addressing these challenges.

Ten promising initiatives with the potential to further close Brazil's competitiveness gap with high-income countries are discussed. Some of these initiatives have been deliberated in high-level forums, particularly within the frame of the Economic and Social Development Council – CDES (see Box 1 below). A review of these initiatives provides a good starting point for a discussion on how to move forward to improve the institutional environment and promote competitiveness and policies that aim to enhance productivity.

Box 1 – The Brazilian CDES: A successful experiment in cooperation between government and the private sector

The Presidency of the Republic's Economic and Social Development Council (CDES) is a panel composed of civil society representatives from a wide range of segments. With 15 years' experience, the CDES is a setting for talks that directly inform the president on matters related to Brazil's economic and social development.

The council's recommendations are presented to the president, who in turn asks ministries and the appropriate agencies for implementation measures. Productivity and competitiveness, business environment improvement, international relations and trade policy, agribusiness, education, de-bureaucratization and modernization of the state, employability, investment and financial intermediation, health and public safety were topics recently discussed at the CDES, which resulted in various recommendations that have already been adopted by the federal government. By February 2017, more than 60% of member proposals had resulted in concrete actions. Actions that require continuous monitoring are reviewed periodically in meetings that involve the proposal originators as well as portfolio ministers and secretaries. All topics described below were the object of debate in council meetings.

1. Tax reform

Although the Brazilian tax burden, oscillating between 31.5% and 33.8% of GDP in the past decade, is not particularly high when compared to those of OECD countries that have the typical welfare-state features – including, for example, universal health and social security systems – it is deemed to be more complex and a source of legal (hence financial) insecurity, particularly with respect to access to the many forms of tax breaks.

On the other hand, recent studies show that the tax burden is much heavier on sectors producing tradable goods (farming excepted) than on personal services. The intersectoral distribution of the tax burden directly affects the external competitiveness of Brazilian companies. While a reform to simplify the system and ensure more balanced treatment among sectors would improve the competitiveness of Brazilian companies by 10% on average, the impact would be magnified, since essential inputs for production – such as electricity, fuel and telecommunications – are heavily taxed in Brazil, at rates higher than 40% in some cases.

The need for a comprehensive tax reform is virtually a consensus among a broad portion of the Brazilian business community and opinion makers, and was chosen as a priority topic by CDES working groups that focus on competitiveness and business environments. Residual resistance may arise, especially because details of the draft tax reform proposition are still unknown. And therefore, the lack of concrete inputs and parameters to the debate feed rumours around what Brazil's new tax structure would look like.

Also fuelling this debate is the potentially destabilizing effect of implementing a major tax reform on the economy. The uncertainty around the projected government revenues generated by implementing such a reform may pose a macroeconomic threat given the unsustainable levels of public debt.

In this scenario, the Brazilian Secretariat of the Federal Revenue Service (RFB) has proposed a partial solution: gradual adjustments based on rationalizing federal taxes on turnover of companies (such as the Program of Social Integration/PIS and the Contribution for the Financing of Social Security/Cofins) along the productive chains and among sectors, combined with a reduction and, whenever possible, the termination of special regimes, particularly those provided to specific sectors.

There are multiple studies touting the advantages of different models. It is essential to promote gradual changes without compromising the well-functioning aspects of the whole system, particularly regarding the fiscal health of the public sector. Although gradual, those changes should be capable of generating significant and long-lasting midterm results, as well as promoting the rationalization and reduction of direct and indirect tax costs to entrepreneurial activity.

Finally, it is important to communicate the reform in a transparent and effective manner to counter attempts at reducing the advantages of segments that currently benefit from it, and to highlight the significant social and economic gains in the short term.

2. Legal security

Brazil has a complex legal structure with different strata of judicial departments as well as specialized labour, electoral and military courts. The effects of independent judicial decisions at the trial and court of appeal levels often undermine the understanding of applicable legislation and change the legal framework that has been established for enterprises or businesses to prosper.

There are also a number of internal and external control institutions with the autonomy to challenge the decision-making of the government or private enterprises if they understand that a certain rule or initiative is not in accordance with current legislation.

This broad legal insecurity is not restricted to the judicial branch or the Federal Prosecution Service. Sometimes new rules are created by the legislative and executive branches – in all three levels – without due consideration regarding their possible impact on business competitiveness.

Furthermore, although the autonomy of federated units to propose laws and regulations must be preserved, an effective way of coordinating the different regulations of municipalities and states must be sought. The objective would be to avoid the multiplicity of laws that make firms' activities more cumbersome and harm economic activity, which generally happens when legislative competence is spread among different levels of the federation. Therefore, it is important to reconcile the autonomy given to the federated units with the need for cooperation between them.

Even though some regulations are presented as being beneficial to consumers, weighing up the costs that such regulations will bring to economic activity should influence the decision when proposing new regulations.

Among the principles that should be sought are: simplification of existing regulations; ex-ante analysis of the possible impact of new regulations on the productive sector; coordination between federated units on the same level and across different levels; and previous evaluations regarding the constitutionality of regulations, therefore avoiding overloading the judiciary system. These would contribute towards legal security and a stable business environment, favourable to new businesses and investments.

There is no simple solution for such a complex set of causes. However, there are initiatives that can potentially reorganize relations among these various actors, demarcating roles and transparently restricting the reach of their actions.

The CDES members, who agree with the diagnostic that legal insecurity causes damage to entrepreneurs, gave priority to the approval of PLS 7,448/2017 – known as a bill for legal security, which has enough reach to resolve issues related to the application of public law.

The exact extent to which this proposal would reduce the number of problems arising out of Brazilian legal insecurity cannot be accurately estimated. But it is likely to contribute significantly to eliminating unusual decisions at the mid- and

lower-level courts, to facilitating settlements between the government and companies (as a result of new norms or a new interpretation of the norms), and to marking out how these institutions act.

The measure has the support of the federal government and was approved by a sizeable majority in the senate and in the lower chamber's Committee on the Constitution and Justice (CCJ). The proposal is largely self-applicable.

In addition to judicial and administrative challenges that suspend or alter "game rules" that change investment, transaction and return-on-investment parameters, modifications introduced by regulatory agencies – by the discretionary enforcement of environmental laws, and by government entities such as the Brazilian Secretariat of the Federal Revenue – also have a major impact.

Therefore, two aspects of the problem of legal and regulatory insecurity in Brazil deserve a specific approach: the actions of regulatory agencies and legal and regulatory bodies must be observed in environmental licensing.

3. Environmental licensing

In Brazil, investments in infrastructure lag behind all types of productive investments. Furthermore, this inadequacy has not been fixed by the current level of infrastructure investment, which adversely affects the aggregated productivity and decreases Brazil's competitiveness. This problem is partly explained by the considerable reduction in fiscal room for public investment. On the other hand, the private sector's increased interest in infrastructure is fundamentally constrained by the high cost and instability of rules governing investments in logistics and power.

Brazil's environmental laws are recognized as some of the most advanced in the world and have in fact given the country prominence in international forums. In light of the country's rich environmental assets – with the second-largest forest cover and the largest drinking water reserve in the world – it is to be expected that the environment is central to foreign perceptions of Brazil and to public opinion of the nation. Nonetheless, the discretionary enforcement of legislation and the creation of new rules have generated high costs and made progress difficult for the infrastructure that the country needs to grow.

In this regard, continuing the efforts that began with the launch of the Growth Acceleration Program (PAC), the Federal Executive Branch has been leading a drive to consolidate and harmonize several environmental licensing rules in Brazil (proposed bill PL 3.729/2004) since 2016. The aim is to protect entrepreneurs from being blindsided by new infra-legal rules or court decisions on matters that are not altogether clear. The government proposal also seeks to simplify and increase the transparency of licensing reviews at the administrative level, to clearly demarcate the jurisdiction of each agency and to avoid long-term disputes between consultants and technical experts, which increase both the cost and implementation time of projects.

While the statute covered in this proposal – known as the General Law on Environmental Licensing – cannot individually resolve all of the existing problems, in combination with initiatives such as the senate-proposed bill PLS 7,448/17 (see above), it may create significant impacts, particularly on the time required to complete the licensing process and in reducing the number of unanticipated changes after the implementation of a project begins.

4. Regulatory reform and the law of agencies

Brazil has a multitude of agencies and entities with regulatory responsibilities, mostly among the economic sectors, each with its own clients and, as it consolidates, its own professionalized bureaucracy. This has enhanced the sophistication and technical specification of the rules. But it has also driven the creation of autonomous regulatory units at these agencies and their surroundings, further fragmenting public administration.

Ever more complex and impenetrable, these regulatory frameworks make it difficult for smaller companies to negotiate them and impose considerable direct and indirect costs to large companies, without providing substantial gains for citizens, who may be less capable of grasping the regulatory entanglements. As if this was not enough, these apparatuses continue to grow, ostensibly to cover all kinds of innovations created by companies.

To organize this progression and to prevent it from reaching levels that simply impede new investments, the Brazilian government has been working on a General Law of Regulatory Agencies (proposed bill PL 6.621/16). With regards to the required specificities of each regulated segment, this initiative seeks to reduce the insecurity generated by growing regulatory organizations, establishing the requirement for a “regulatory impact analysis” (AIR), weighing the potential benefits resulting from the adoption of each new measure against its cost.

The proposed law also would establish principles aimed to professionalizing agency heads and increasing transparency and accountability for their actions. It is paramount to establish minimal quality standards for the appointees to management positions – with no prejudice to the Republic’s right to appoint trusted individuals, with the approval of the senate. The current proposal is adequate with regard to this aspect, and it is extremely important to preserve this feature throughout the legislative process.

5. The federative issue

The peculiarities of the Brazilian federative system are well known, especially the one that grants the status of federated unit to the municipalities – 5,570 in total, spread across 27 states. Each federated unit has significant autonomy in countless matters and there are administrative and judicial institutions, or at least with relevant judicial competence, at state, municipal and regional levels.

Some important matters of debate and public policy are intrinsically attached to the federative problem. The most notable one is the so called “fiscal war”, in which states

compete among themselves for investments or temporary increases in tax collection as a means of reaching short-term objectives, always at the expense of the fiscal balance. Both the senate and the Federal Supreme Court (STF) have been adopting measures and debating further actions to restrict this kind of behaviour, including reinforcing the rule of existing high-level committees.

Therefore, it would be ideal to have a set of reforms focusing on the alignment of policies among different federated units to guarantee that specific structuring initiatives, which are decisive for competitiveness, must be followed by all institutions within each field of activity.

There is also the difficulty of implementing some policies and strategies due to the differences in human, financial and material resources between states and municipalities (or between those and the union). A robust programme is needed to level the capacity of implementing initiatives whose effectiveness relies on the coordination between federated units and the harmonization of policies and programmes. A discussion to achieve this balance between competences and capabilities would necessarily go through a tax reform discussion, as mentioned before.

6. Enhancements of technological innovation promotion laws

In the late 1990s, Brazil joined the group of 20 countries with the largest scientific production in the world, a remarkable feat considering its position in the 1970s. Nonetheless, the vast network of research centres and universities evolved in an independent and disorderly manner, with little awareness of the growing competitive pressure spurred by the increase in innovation in the private sector. A cycle of reforms, which began in 1999 and lasted until 2005, had multiple goals, including special attention being paid to the interaction between companies and universities.

Many advances were made; however, they were not enough to reverse the situation. In fact, the two paths – that of companies and that of Institutes of Science and Technology (ICTs) and universities – remained virtually intact notwithstanding the reforms. Various mechanisms had little effect, particularly those related to technology orders and those designed to attract scientists to companies. Bureaucracy and the innovation difficulties created by the Law on Public Bids and the complexity of existing control systems were identified as major inhibitors of performance of the incentives for innovation and company-university interaction in general. Thus, in 2013, a new wave of reforms was launched with the so-called Legal Framework for Science, Technology, and Innovation (the objectives and general principles of which were consolidated under Law 13,243/16).

The new framework’s main feature was the provision of more adequate criteria to monitor and control research, development and innovation (RD&I) spending, different from those usually applied to public procurement and contracts in general. However, many members of the academic community are concerned that these changes

may ultimately drive an excessive shift towards research objectives dictated by companies and a sort of “non-explicit privatization” of universities. In addition, career bureaucrats fear a reduction in the scope of their role.

Nonetheless, the executive branch was able to form and move a working group forward – watched with great interest by the members of the CDES. This group has been developing a lean proposal for more appropriate innovation regulation. Such rule will potentially and significantly increase the capacity of the Brazilian science, technology and innovation system to generate innovations and create economic value (to the detriment of productivity measured according to criteria such as the publication of papers, citations and international awards).

7. Labour reform

While the topic is both politically and ideologically controversial, the discussions held within the CDES jointly came to the conclusion that Brazil’s labour laws – recently reformed – influenced decisions in the labour market, creating significant costs for employers, which did not benefit workers (or at least were not recognized as such). To accommodate innovations and to cope with other shifts that may emerge as the new digital revolution pushes forward, there was considerable progress in allowing new kinds of employment contracts.

The modernization of the labour law, altering about 100 provisions contained in the Consolidated Labour Laws (CLT, originally adopted in 1943), was approved in 2017. The government now has the important task of monitoring the effects of these legislative changes, particularly the impact on litigation levels.

The ongoing technological changes may demand additional rounds of adjustments in labour laws, even though these adjustments are not likely to be as significant as those introduced by Laws 13,467/2017 and 13,429/17.

8. Debureaucratization and the digital government programme

In March 2017, responding to a request from CDES, the Brazilian government created the National Council on Debureaucratization to propose measures to simplify administration, modernize public management and improve the provision of public services to companies, citizens and civil society.

These initiatives focus on reducing unnecessary stages of interaction between the various levels of government and citizens and companies, thus improving both access to public services and the business environment. As a result, the government has been working towards policies that increase the use of electronic systems within its administrative framework and the availability of online services for citizens to improve, and make more responsive, the relationship between government and society. On the other hand, a total of 125 initiatives aiming to enhance the business environment are being deployed.

An interesting feature of the National Council on Debureaucratization is that, partly emulating the CDES model, it gathers several social and private-sector representatives and state officers, allowing an open and creative dynamic panel debating a multitude of issues.

The combined initiatives are called *Brasil Eficiente* (Efficient Brazil) and either public or private participants can be enlisted to suggest and monitor actions. Although those actions are arranged according to their main focus (at internal government, social or corporate sectors), they are expected to generate connections and feedback among them. According to a recent account, 89 of the actions with expected effects on the business environment affect at least one of the two other branches of this policy.

9. Financial intermediation

In addition to the still relatively high basic interest rates, the cost of credit in Brazil is increased by high spreads, with obvious consequences for investment rates, which are relatively low in comparison to other emerging countries.

The federal government’s economic area (particularly the Ministry of Finance, the Central Bank and the Ministry of Industry, Foreign Trade and Services) works on an extensive agenda to optimize the so-called financial intermediation, reducing its fiscal cost and increasing its efficiency and effectiveness, which are significantly affected by a high level of credit earmarking. It is estimated that these measures could reduce spreads by more than 50% and, at the same time, stimulate growth in the private long-term credit market, which is incipient in Brazil.

The financial intermediation agenda’s main initiatives are listed below.

- The creation of an “Electronic Negotiable Invoice”: establishment of mechanisms to register financial assets as collateral for credit transactions. This initiative is at an advanced stage and has already been approved by congress in Law 13,476/2017, with administrative enhancements to come.
- National Land Information Management System (Sinter), created by Decree 8,764/2016: administered by RFB, it will significantly reduce transaction costs associated with the myriad land property registries in Brazil (with 5,570 municipalities, many with several notary publics, others with none).
- Enhancement of the “credit report”: potentially important to reduce average spreads of credit transactions for individuals. According to the new system (already established under Complementary Law 105/2001), a gradual and growing effect of credit differentiation is expected as the result of the possibility of rewarding “good creditors”.
- Enhancement of the Law on Judicial Recovery of Companies (proposed Senate bill PLS 18/2016): this will accelerate the process, allowing viable companies to reorganize, establishing clearer criteria to increase the discretion of creditor groups and reducing the risk of individual actions that ultimately cause a significant effect on the value of assets under reorganization.

- The creation of the Long Term Rate (TLP) under Law 13,483/2017 will, on the one hand, provide access to credit transactions with lower interest rates to companies in Brazil; on the other hand, it will mitigate government expenditures related to interest payments on public debt and subsidies for earmarked credit transactions. The Constitutional Funds for the North, Northeast and Centre-West regions need to be realigned to TLP by the application of a reduction on interest on debts calculated on the basis of TLP. Executive Order MP 812/2017 was issued for this purpose.

10. Mid- and long-term perspectives

Consistent with other work streams of the lab report, one of the emerging recommendations is the formulation of long-term plans that guarantee investment targeting, coherence in the destination of budgetary resources and prioritization of government strategies.

The multi-annual plan, whose compliance is mandatory for the public sector, has been weakened and its effectiveness on the annual allocation of budgetary resources is secondary, compromising the continuity of scheduled investments and the maintenance of priority public policies. This situation will probably get worse because of the expenditure cap, if the determination of eventual spending cuts is not related to established priorities, but rather is linked to conjunctural political interests. Therefore, it is extremely important that, in a situation of reducing government expenditure, the allocation of budgetary resources is guided by priorities established by mid- and long-term planning.

Many public institutions in Brazil currently lack a strategic vision or, more generally speaking, some perspective for the future, which would allow them to prepare and adapt in advance to changes in the general environment. This does not imply the creation of centralized planning units or the undertaking of long strategic-planning processes. Many institutions have done that, and even have elaborated broad and well-thought diagnoses to guide their plans. The vital step is to guarantee the existence of mid- and long-term perspectives (which generally means elaborating guiding documents) and to put this attitude into effect.

Some elements to guide sectoral strategies are less controversial. The adoption of productive development policies is critical to help in the transition to a knowledge-based economy and, as much as possible, to development patterns led by innovation.

Policies for education and skill development should adapt to this strategy, as a way of maximizing the insertion of workers in a new labour market and to favour employability.

As labour organization and productive clusters tend to be affected by technological progress, labour institutions and regulations should evolve as well.

Proposed next steps

While the ongoing institutional, legal and regulatory reforms are likely to have a positive impact on productivity, it will be crucial for the government to support a continuous dialogue with the national congress and other important actors to secure their commitment to reforms that will enhance the business environment. The success of the reform agenda in promoting a business-friendly environment will depend on the following three strategic factors:

- Elaborating a comprehensive analytical framework of the current tax reform proposals, while focusing on principles of simplification, investment and productivity, and using timely and accurate data to inform a sound strategy
- Securing congressional approval on the legal and regulatory reforms highlighted in this section
- Pursuing a general de-bureaucratization and policy simplification agenda in all spheres of public policies.

Concluding Remarks

The contributions of the Competitiveness and Inclusive Growth Lab report chart a course forward for improving Brazil's competitiveness and boosting productivity. While the country's overall competitiveness challenges extend well beyond the scope of this initiative, the aim of this effort was to lay out a roadmap to address several core issues defined by leaders from government, business, international organizations and academia.

The importance of adopting a multistakeholder approach for identifying policy priorities and solutions cannot be emphasized enough. Sustainable policy solutions are more likely to succeed and survive when they can gather broad support from all stakeholders.

While establishing consensus-oriented recommendations is a step in the right direction, the real challenge will be to follow through with the implementation of these recommendations to ensure that the problems identified are addressed. In doing so, it will be crucial not only to secure and deepen the commitment of important actors involved in the implementation process, but also to build bridges with others that may help secure the long-term viability of these policies.

As further dialogue will be required to extensively develop the recommendations proposed in this report, the present experience sets a positive tone for future collaboration between the public and private sectors over commonly defined goals.

With the 2018 elections approaching, the recommendations and actions proposed in this report will be viable for the next term of government. The validation of the Competitiveness Lab agenda by a broad range of stakeholders ensures a promising future for its implementation; it will nonetheless take years before any impacts are felt on a broad scale.

Annex – Members of the Brazil Competitiveness and Inclusive Growth Lab

The Competitiveness and Inclusive Growth Lab has gathered Brazilian leaders and experts from government agencies, the private sector and leaders of non-governmental organizations to contribute to this report. The present section lists the members of the Steering Committee and Working Group who have participated and contributed to the Competitiveness Lab initiative.

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Endnotes

1. World Economic Forum (2017), *The Global Competitiveness Report 2017–2018*. Geneva, Switzerland: World Economic Forum.
2. The World Bank (2018), *Jobs and Growth; Brazil's Productivity Agenda*, The World Bank Group, Washington DC.
3. Hausmann R., Hidalgo C.A., Bustos S., Coscia M., Chung S., et al. (2012), *The Atlas of Economic Complexity*. https://atlas.media.mit.edu/static/pdf/atlas/AtlasOfEconomicComplexity_Part_I.pdf (link as of 3/2018).
4. Melguizo, A., Nieto-Parra, S., Perea, J.R., and Perez, J.A. (2017), *No Sympathy for the Devil! Policy Priorities to Overcome the Middle-Income Trap in Latin America*, OECD Development Centre Working Paper, No. 340, OECD Publishing, Paris. http://www.oecd-ilibrary.org/development/no-sympathy-for-the-devil_26b78724-en (link as of 3/2018).
5. OECD (2016), *The Productivity-Inclusiveness Nexus*. OECD Publishing, Paris.
6. World Economic Forum (2017), *The Global Competitiveness Report 2017–2018*. Geneva, Switzerland: World Economic Forum.
7. The World Bank, *Doing Business* project. <http://www.doingbusiness.org/> (link as of 3/2018).
8. World Economic Forum (2017), *The Global Competitiveness Report 2017–2018*. Geneva, Switzerland: World Economic Forum.
9. The World Bank, *Doing Business* project (<http://www.doingbusiness.org/>).
10. This considers three major types of taxes: corporate income tax, value added or sales tax, and labour taxes, including payroll taxes and social security contributions.
11. The World Bank, *Doing Business* project (<http://www.doingbusiness.org/>).
12. World Economic Forum. *Executive Opinion Survey 2017*.
13. World Economic Forum (2017), *The Global Competitiveness Report 2017–2018*.
14. United Nations, *Comtrade* database through the WITS platform.
15. Ministry of Industry, International Trade and Services (2018), *INPI Activity Report 2017*. <http://www.inpi.gov.br/english> (link as of 3/2018).
16. Ibid.
17. United Nations Educational, Scientific, and Cultural Organization (UNESCO) Institute for Statistics.
18. International Labour Organization (ILO), *ILOSTAT Database*.
19. Melguizo, A. and Perea, J.R. (2016), *Mind the Skills Gap! Regional and Industry Patterns in Emerging Economies*, OECD Development Centre Working Papers, No. 329.
20. O'Connell, S.D., Mation, L.F., Bevilaqua Teixeira Basto, J.; Dutz, M.A. (2017), *Can Business Input Improve the Effectiveness of Worker Training? Evidence from Brazil's Pronatec-MDIC (English)*. Policy Research Working Paper No. WPS 8155. Washington, D.C. The World Bank Group.
21. OECD (2018, forthcoming), *OECD Economic Surveys: Brazil 2017*. OECD Publishing, Paris.
22. Ibid.
23. The World Bank staff estimates using the World Integrated Trade Solution system, based on data from the United Nations Conference on Trade and Development's Trade Analysis and Information System (TRAINS) database and the World Trade Organization's (WTO) Integrated Data Base (IDB) and Consolidated Tariff Schedules (CTS) database.
24. World Economic Forum, *Executive Opinion Survey* (various editions).
25. World Economic Forum (2017), *The Global Competitiveness Report 2017–2018*.
26. OECD/CAF/ECLAC (2018, forthcoming), *Latin American Economic Outlook 2018. Rethinking Institutions for Development*. OECD Publishing, Paris.
27. Maloney, W.F. (2017), *Revisiting the National Innovation System in Developing Countries*. Policy Research Working Paper; No. 8219. World Bank, Washington, DC. © World Bank.
28. Mazzucato, M., Pena, C. (2016), *The Brazilian Innovation System: A Mission-Oriented Policy Proposal*. Brazilian Center for Management and Strategic Studies (CGEE).
29. Dutz, M. (The World Bank), Zuniga, P. (OECD), De Negri, F. (IPEA) (2016), *Conditions for Innovation in Brazil: A Review of Key Issues and Policy Challenges*. IPEA.
30. Cirera, X., Maloney, W. (2017), *The Innovation Paradox*. The World Bank.
31. *A Nova Agenda da MEI Para Ampliar a Inovação Empresarial*. National Confederation of Industry (2014).
32. De Negri, F. (2017), *Políticas de Apoio à Inovação Tecnológica no Brasil*. IPEA.

33. De Negri, F., Rauen, A.T., SquEFF, F.H. (2017), *Ciência, Inovação e Produtividade: Por Uma Nova Geração de Políticas Públicas*. IPEA.
34. De Negri, F. (2017), *Políticas de Apoio à Inovação Tecnológica no Brasil*.
35. IBGE (2016), *Technology Innovation Survey – PINTEC*.
36. Frischtak, C., Dutra, C., Diniz, G. (2018), *Science and Innovation in Brazil: Where to Now?*. MIT IPC Workshop *Innovating in Brazil*.
37. Ministry of Planning, Development and Management–Brazil.
38. World Bank merchandise trade (% of GDP) indicator. <https://data.worldbank.org/indicator/TG.VAL.TOTL.GD.ZS> (link as of 12/2017).
39. IMF World Outlook Database. <http://www.imf.org/external/pubs/ft/weo/2017/02/weodata/index.aspx> (link as of 12/2017).
40. World Economic Forum Global Enabling Trade Report. <http://reports.weforum.org/global-enabling-trade-report-2016/> (link as of 12/ 2017).
41. World Trade Organization World Trade Report 2015. https://www.wto.org/english/res_e/publications_e/wtr15_e.htm (link as of 3/2018).
42. Ferraz, L. (2014), *Impactos da Facilitação do Comércio sobre a Indústria de Transformação no Brasil*. Fundação Getúlio Vargas. Valores estimados tomando-se como referência a taxa de câmbio do dólar no ano de 2013.
43. Receita Federal do Brasil, Instituição Fiscal Independente (2017), *Relatório de Acompanhamento Fiscal*, July 2017, http://www2.senado.leg.br/bdsf/bitstream/handle/id/530364/RAF_06_2017_pt05.pdf (link as of 3/2018).



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