

## **FISCAL MANAGEMENT SECTOR FRAMEWORK DOCUMENT**

**FISCAL MANAGEMENT DIVISION**

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## **ABBREVIATIONS**

CIT	Corporate income tax
ECLAC	Economic Commission for Latin America and the Caribbean
IFC	Independent fiscal council
IFD/FMM	Fiscal Management Division of the Institutions for Development Sector
IFMS	Integrated Financial Management System
IMF	International Monetary Fund
IPCC	Intergovernmental Panel on Climate Change
IPSAS	International Public Sector Accounting Standards
IT	Information technology
MNE	Multinational enterprise
MSMEs	Micro, small, and medium-sized enterprises
MTEF	Medium-Term Expenditure Framework
MTFF	Medium-Term Fiscal Framework
NNR	Nonrenewable natural resources
OBI	Open Budget Index
OECD	Organisation for Economic Co-operation and Development
OVE	Office of Evaluation and Oversight
PEFA	Public Expenditure and Financial Accountability
PFM	Public financial management
PPP	Public-private partnership
SDG	Sustainable Development Goal
SFD	Sector Framework Document
STR	Simplified tax regime
TSA	Treasury Single Account
VAT	Value-added tax
WEO	World Economic Outlook

## EXECUTIVE SUMMARY

### FISCAL MANAGEMENT SECTOR FRAMEWORK DOCUMENT

**For several decades, the countries of Latin America and the Caribbean have faced the structural challenges of low and unstable growth rates, high levels of inequality, and recurring episodes of macroeconomic and fiscal instability, all of which have been aggravated by the COVID-19 pandemic.** Adding to these challenges are the current and future effects of climate change. Fiscal policy and management cut across all sectors of government and the economy and thus provide a unique opportunity to help address these challenges. This is a result not only of direct intervention by the government but also the incentives that fiscal management creates for the private sector, which is a key actor in tackling the aforementioned structural challenges. For fiscal policy to help tackle structural challenges in this way, it will be essential to increase State capacities for designing and implementing fiscal policies. These must be based on solution-oriented approaches, strengthened legal and policy frameworks, expanded access to and use of technologies, and improved skills among public sector employees. It will be particularly important to strengthen ministries of finance, which play a key role due to their leadership of the public finances and the fiscal, financial, and technical guidance they provide to other sector ministries.

**Smart fiscal management can help to address these structural challenges.** Fiscal policies can improve the business environment, attracting investment and mobilizing private sector resources. Such processes will be key for tackling economic challenges and achieving higher growth and productivity in the post-pandemic period. Similarly, progressive tax policies and effective redistributive programs reduce income inequality and promote equality of opportunities, which leads to greater equity. Sound fiscal institutions, meanwhile, can restrain deficit bias, fostering sustainability in the public finances. Lastly, the fiscal sector can help to address climate change and its associated risks (such as stranded assets and lost fiscal revenue) through public spending that is consistent with adaptation and decarbonization strategies, as well as carbon pricing that promotes reduced emissions. Achieving these positive effects will involve comprehensive, solution-oriented strategies and robust institutions that are capable of designing and implementing effective fiscal policies, based on modern legal frameworks, cutting-edge technologies, and strengthened human resource skills. Comprehensive strategies will need to take into account differing economic and institutional contexts and the different interest groups that can create political economy obstacles to implementation.

**A number of weaknesses limit the impact of fiscal policy and management on the aforementioned structural challenges.** In terms of economic growth, the procyclical nature of fiscal policy in the region has a negative impact on the business environment. At the same time, the quality and relevance of public goods and services are reduced by technical and allocative inefficiencies, often resulting from a lack of transparency in policy design and implementation. Numerous preferential tax treatments and highly inefficient taxes in several countries reduce aggregate productivity in their economies, while the persistence of corrupt acts and cumbersome, costly processes for paying taxes affect trust in government and erode tax compliance. These deficiencies also undermine private sector resource mobilization. With respect to the challenge of equity, the redistributive impact of fiscal policy is lessened by targeting problems at both the individual and regional levels and in terms of gender and diversity. Meanwhile, high payroll and social security taxes and social transfer programs act as a disincentive to formal work. In terms of the

sustainability of public finances, existing fiscal responsibility institutions have not been sufficiently effective to contain growth in the public debt or effectively manage fiscal risks, and it has often been impossible to build effective fiscal consolidation programs. In the area of climate change, ministries of finance have failed to use fiscal policy as a strategy for climate change mitigation and adaptation, and they have not yet begun to manage the fiscal risks associated with the energy transition, which for several countries in the region are very high.

**International experience shows that fiscal management is effective in promoting growth, equity, and fiscal and environmental sustainability.** Where economic growth is concerned, fiscal rules, saving funds, and automatic stabilizers can foster more stable macroeconomic environments. Likewise, technical and allocative inefficiencies can be reduced through efficiency and transparency in budgeting arrangements, investment management, and procurement management, together with stronger institutional governance, thus improving the effectiveness and quality of public spending and the delivery of public goods and services. In addition, the structure, design, and administration of taxes all affect the incentives faced by the private sector, influencing levels of productivity and economic growth. Where they are effective and transparent, these factors serve to strengthen the legitimacy of the State. In terms of inequality, the availability of powerful tools to improve the targeting of policies and programs is essential for equity. Granting fiscal incentives to low-income households and small companies can also be effective in reducing informality. Meanwhile, fiscal sustainability is favored by sound institutions with robust monitoring and control systems and effective management of fiscal risks. Lastly, the inclusion of decarbonization criteria in the public investment project selection process, reductions in subsidies for fossil fuels, and carbon pricing are all recommended as policies for encouraging reductions in emissions. In the case of climate change, it is important to increase the resilience of public infrastructure and strengthen the management of fiscal risks associated with climate events. It will also be important to develop effective management of the fiscal risks arising from the transition to a low-carbon economy.

**A review of lessons learned from the IDB Group's work in the fiscal sector highlights the importance of institutional capacity and political economy constraints.** Institutional capacity is critical for the effective implementation of fiscal policy, and policy solutions must be adapted to different local contexts and incorporate strategies for sequencing, incremental change, and lessons learned. Similarly, the desired results cannot be achieved through the existence of appropriate policy frameworks alone: the way policies are managed is equally important. Robust accountability arrangements have also proven effective for both control and feedback on the effectiveness of the policies and tools used. Likewise, the use of new technologies is strengthening institutional capacity for fiscal management with respect to both expenditure and revenue. In terms of political economy constraints, it is important to identify at an early stage the parties affected by fiscal policies and programs and acknowledge their incentives. To the extent possible, these stakeholders should be involved in the development of the policies and programs concerned, thus securing their inputs and support for the design and implementation of reform processes that are both technically and politically feasible.

**The objective of the IDB Group's work in the fiscal sector will be to foster robust, equitable growth that is fiscally and environmentally sustainable.** It will focus on supporting the design and implementation of fiscal policies that build an appropriate structure of incentives for tackling the structural challenges mentioned above. It will also

support capacity-building in key institutions and across the public sector as a whole, with the aim of strengthening the implementation and management of fiscal actions. To this end, and in close coordination and partnership with other multilateral institutions and development stakeholders in the region, this Sector Framework Document establishes the following four lines of action, each of which will be adapted to the context in each country:

- (i) enhance the contribution of fiscal policy and management to economic growth, with a focus on attracting investments and mobilizing private sector resources;
- (ii) increase the redistributive impact of fiscal policy, including with respect to gender and diverse groups, through tax and spending reforms that improve targeting;
- (iii) support fiscal consolidation processes and strengthen fiscal institutions for sustainability of the public finances, through assistance to countries for the design and implementation of smart fiscal consolidation programs and policy reforms that fortify fiscal institutions; and
- (iv) enhance the contribution of fiscal policy to managing climate change and the energy transition based on the following actions: ensuring consistency between fiscal policy and national decarbonization strategies; strengthening public investment systems by incorporating carbon emissions and resilience criteria into project development, evaluation, and selection processes; developing methodologies to measure the exposure and vulnerability of public finances to climate events and the energy transition; and reviewing fossil fuel subsidies and other carbon pricing measures.

## **I. THE FISCAL SECTOR FRAMEWORK DOCUMENT IN THE CONTEXT OF EXISTING REGULATIONS, THE INSTITUTIONAL STRATEGY, AND INTERNATIONAL AGREEMENTS**

- 1.1 **This policy Sector Framework Document (SFD) guides the IDB Group's operational, dialogue, and knowledge generation activities in the fiscal sector.** It has been prepared in accordance with the provisions of the document "Strategies, Policies, Sector Frameworks, and Guidelines at the IDB" (document GN-2670-5), and it replaces the Fiscal Policy and Management SFD (document GN-2831-8) approved in November 2018.
- 1.2 **The document promotes actions to ensure that fiscal management contributes more effectively to addressing the key structural challenges affecting countries in the region.** Latin American and Caribbean countries face different structural challenges, including poor economic growth, high inequality, and substantial risks to fiscal and environmental sustainability. A variety of design and implementation weaknesses mean that existing fiscal policies and institutions in the countries of the region have not proven sufficiently effective to tackle these challenges. Accordingly, this SFD promotes actions to support robust, stable, sustainable, and equitable growth through (i) the design or reform of fiscal policies to create a favorable structure of incentives for mobilizing private sector resources, with a view to addressing the aforementioned structural challenges; and (ii) institutional strengthening to foster the effective and transparent implementation of fiscal policies and programs. These actions will be adapted to the diverse and dynamic political economy contexts of the different countries in the region.
- 1.3 **The Fiscal Management SFD is consistent with the IDB Group's current strategies.** The document is consistent with the Update to the Institutional Strategy (document AB-3190-2), which acknowledges weaknesses in fiscal management as one of the significant constraints on sustainable, inclusive growth in Latin America and the Caribbean. It is also aligned with the Bank's sector strategies, particularly the Sector Strategy on Institutions for Growth and Social Welfare (document GN-2587-2), the Strategy on Social Policy for Equity and Productivity (document GN-2588-4), and the IDB Integrated Strategy for Climate Change Adaptation and Mitigation, and Sustainable and Renewable Energy (document GN-2609-1).
- 1.4 **The Fiscal Management SFD is also consistent with other IDB Group SFDs.** The ability of the public sector to collect revenue and execute public spending is a cornerstone of State capacity; this SFD therefore relates to the full range of government activity and, consequently, to all IDB Group SFDs. Given the structural challenges that are the focus of this sector framework, however, complementarities with the following SFDs are particularly relevant: (i) Social Protection and Poverty (document GN-2784-12), which promotes policies to efficiently protect the incomes of poor and vulnerable populations; (ii) Labor (document GN-2741-12), which encourages multisector approaches to boost productivity growth and equity; (iii) Climate Change (document GN-2835-8), which promotes a fair transition to a climate-resilient economy with low carbon emissions; (iv) Extractive Industries (document GN-3028-2), which encourages the development of government institutions and policies to ensure these industries contribute to environmentally sustainable and socially inclusive economic development; (v) Decentralization and



Subnational Governments (document GN-2813-8), which focuses on building incentives and capabilities so that subnational governments can effectively perform the functions for which they are responsible; and (vi) Transparency and Integrity (document GN-2981-2), which emphasizes the quality of institutions and transparency as essential factors for democratic governance.

- 1.5 **This SFD supports several of the United Nations' Sustainable Development Goals (SDGs) for 2030.** It relates primarily to the following goals: SDG 5, achieve gender equality and empower all women and girls; SDG 8, promote sustained, inclusive, and sustainable economic growth, full and productive employment, and decent work for all; SDG 9, build resilient infrastructure, promote inclusive and sustainable industrialization, and foster innovation; SDG 10, reduce inequality within and among countries; and SDG 13, take urgent action to combat climate change and its impacts.
- 1.6 **This document is divided into five sections, including this first section that places the SFD in context.** Section II describes the main fiscal management challenges faced by countries in Latin America and the Caribbean in their efforts to promote growth, reduce income inequality, strengthen the sustainability of the public finances, and mitigate, adapt to, and manage the risks associated with climate change. Section III reviews the empirical evidence regarding the effectiveness of fiscal policies and programs for addressing the challenges identified in the previous section. Section IV summarizes the main lessons learned based on the IDB Group's experience in the fiscal sector. Lastly, Section V presents a set of strategic lines of action that will guide the IDB Group's operational, analytic, and dialogue activities in the sector, with the aim of assisting the countries in the region to tackle the challenges identified in Section II.

## **II. MAIN CHALLENGES FOR THE REGION IN THE FISCAL SECTOR**

- 2.1 **For several decades, the countries of Latin America and the Caribbean have faced the structural challenges of low growth, high inequality, and recurring episodes of fiscal instability, all of which have been compounded by climate change-related challenges.** Fiscal policy and management can help to tackle these challenges both directly, through government fiscal actions, and indirectly, by altering the behavior of individuals and companies through changes in their incentives. In Latin America and the Caribbean, however, the contribution of fiscal management to addressing these challenges has been constrained by weaknesses in institutional and policy frameworks.
- A. **Challenge 1. Enhance the contribution of fiscal policy and management to growth**
- 2.2 **Most countries in Latin America and the Caribbean have experienced decades of low economic growth.** Annual growth in countries in the region averaged 3.1% between 1960 and 2019—below the level experienced in similar countries (see [Figure 1](#)). Weak growth rates have left development in Latin America and the Caribbean trailing behind that of other emerging economies. In 2019, prior to the pandemic, the per capita income of an average country in the region was equivalent to just 22% of that of the United States, practically identical to the ratio observed in 1960 (see [Figure 2](#)). This contrasts with the experience in other regions, particularly Asia and emerging Europe, where per capita income relative to the United States doubled between 1960 and 2019.

- 2.3 **The COVID-19 pandemic has had a severe impact on economic activity, and its effects on the potential long-term growth rate are uncertain.** COVID-19 had a profound economic impact in the region, and 2021 levels of economic activity in most countries were still below those seen in 2019 (see [Figure 3](#)). The effects of the pandemic on long-term growth remain uncertain.
- 2.4 **The Latin American and the Caribbean countries require a new approach to public financial management that drives growth while also promoting macroeconomic stability.** Fiscal policy and management by countries in the region has been characterized by low quality and efficiency in public spending and inefficient revenue policy and management, which have led to volatile macroeconomic environments. Changing this reality will require smart fiscal management that accelerates the economic recovery process and boosts long-term growth on the basis of private sector resource mobilization.
- 1. Procyclical fiscal policy amplifies macroeconomic volatility**
- 2.5 **The marked economic volatility observed in the countries of the region generates uncertainty and affects economic growth.** In the 60 years prior to the pandemic, Latin America and the Caribbean experienced the highest volatility in national growth rates of any world region, as well as the most frequent contractions in economic activity (see [Figure 4](#)). These high levels of economic instability affect growth by increasing uncertainty and altering business investment decisions and the accumulation of human capital by individuals (Fatás and Mihov, 2013).<sup>1</sup>
- 2.6 **One of the determinants of high economic volatility in Latin America and the Caribbean is the procyclical nature of fiscal policy.** Although the marked economic volatility observed in the region is the result of a variety of factors, one of these factors is fiscal policy. Public spending was highly procyclical prior to the pandemic (see [Figure 5](#)), and this was also the case for tax policy (Vegh and Vuletin, 2015). Fiscal policy thus amplified business cycles in the region, raising their costs and aggravating fiscal sustainability risks.
- 2.7 **Fiscal institutions in the Latin American and Caribbean countries have not proven effective in containing the high degree of procyclicality in fiscal policy.** The procyclical nature of fiscal policy in the region is mainly a result of increased public spending in boom times, followed by expenditure adjustments and higher taxes in times of recession.<sup>2</sup> These behaviors are to be expected in economies with weak fiscal institutions, where the existence of different political economy incentives creates a deficit bias in government activities (Alesina and Tabellini, 1990; Velasco, 2000). Most Latin American and Caribbean countries have introduced fiscal rules to contain this bias, while some countries with high earnings from nonrenewable natural resources (NNR) have also introduced stabilization funds. However, these fiscal institutions have not been effective in reversing the procyclicality in fiscal policy in the region. In the case of fiscal rules, these have sometimes been procyclical by design. In other cases, there has been insufficient supervision of compliance, or a continuous relaxation of targets, leading to a failure to comply with the rules. With respect to stabilization funds, the

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<sup>1</sup> High macroeconomic volatility also increases the margins charged by banks, thus reducing credit access and, as a result, investment and growth (see the Long-Term Financing SFD).

<sup>2</sup> Procyclical fiscal policy is partly the result of debt crises, which lead to fiscal adjustment in times of recession.

main weaknesses concern their institutional design and operating rules (Lopez-Murphy, Ossowski, and Villafuerte, 2010).

- 2.8 **The absence of powerful, automatic fiscal stabilizers<sup>3</sup> contributes to fiscal procyclicality.** One of the main advantages of automatic stabilizers is that, in contrast to discretionary interventions, there is no delay in implementing them and they are reversed by changes in business cycles. In developed countries, automatic stabilizers account for most of the stabilizing capacity of fiscal policy (Fatás and Mihov, 2001). The impact of automatic stabilizers in Latin America and the Caribbean is weak due to low individual income tax revenue and the limited role of unemployment insurance. In some countries, moreover, the social assistance programs that should serve as automatic stabilizers have discretionary features that make them procyclical (Izquierdo et al., 2018).

## **2. Spending inefficiencies reduce the quality and relevance of public expenditure**

- 2.9 **The countries of Latin America and the Caribbean exhibit numerous allocative and technical inefficiencies in their public expenditure that hinder economic growth.** In addition to a lack of transparency and persistent corruption, allocative and technical inefficiencies in public spending<sup>4</sup> affect the quantity and quality of infrastructure, public services, and human capital available in the population (Izquierdo and Pessino, 2018), all of which are key inputs for attracting investment and boosting growth. Allocative efficiency in public spending is important, as the way public funds are used has an impact on growth. Different studies find that investment in infrastructure and human capital tends to increase growth (see paragraph 3.4). This indicates that to achieve higher growth levels, countries should protect investment spending on infrastructure and human capital. This has not always been the case in the region, at either the national or subnational level.
- 2.10 **Low investment in infrastructure with high social returns is one of the primary allocative inefficiencies in public spending in the region.** Although investment spending on physical capital has increased in absolute terms in recent decades (Armendariz and Carrasco, 2019), it has declined as a share of government budgets in the region (see [Figure 6](#)). In addition, the management of these infrastructure assets has been suboptimal, partly due to the insufficient resources allocated to maintaining them (Serebrisky et al., 2020a). As a result, Latin America and the Caribbean currently has one of the lowest per capita stocks of public capital in the world, and the quality of public infrastructure remains behind that of other regions (see [Figure 7](#)). This pushes up the cost of transportation, reducing private sector resource mobilization.
- 2.11 **Weak public investment management exacerbates the negative impact of low investment levels.** Inefficiencies in public investment management and the presence of corruption in the awarding and implementation of investment projects

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<sup>3</sup> Automatic stabilizers are programs or legal provisions that increase spending or reduce taxes during recessions (and vice versa during periods of economic expansion), without any need for government action.

<sup>4</sup> Resource allocation is considered to be efficient when public funds are used for the activities and programs that offer the highest returns in relation to the policy objective pursued. Technical efficiency is maximized when the greatest quantity and quality of public services are obtained based on the resources allocated for that purpose.

reduce the amount of productive capital added per unit of investment spending. These inefficiencies can be seen across the different phases of the investment cycle (Armendariz et al., 2016). In particular, countries in the region lack robust long-term strategic plans for prioritizing public investments and coordinating with the private sector. In addition, there is a high degree of political interference in the annual budgeting process for investment projects, thus marginalizing efforts to prioritize projects based on technical criteria. There are also important weaknesses in project preparation and evaluation processes, as well as in monitoring and execution systems, leading to significant cost overruns (Serebrisky, Suárez-Alemán, and Pastor, 2020a). The intergovernmental coordination of public investment also exhibits deficiencies (Eguino et al., 2020). To address these challenges, several countries in the region have involved the private sector in developing and managing infrastructure projects. When appropriately structured and implemented, public-private partnerships (PPPs) can increase the profitability of investments and improve the quality and performance of infrastructure assets and services (Cavallo et al., 2020). In Latin America and the Caribbean, weaknesses in institutional, regulatory, and management arrangements for PPPs reduce transparency, clarity, and equity for both public and private stakeholders, undermining the effectiveness of this instrument (Siqueira et al., 2018).

- 2.12 **The management of human capital-related public expenditure is also characterized by technical and allocative inefficiencies.** Although the countries in the region have been increasing social expenditure to promote human capital accumulation (see [Figure 8](#)), substantial allocative and technical inefficiencies mean that the quality of human capital in the region has not improved significantly (Pessino and Alaimo, 2018). For example, much of the increase in social spending has been in social security programs, which lack a strong focus on the most disadvantaged population groups (Pessino and Alaimo, 2018). This reduces equality of opportunity and growth. In addition to these allocative inefficiencies, there are numerous technical inefficiencies in each sector that affect the quality of social spending.<sup>5</sup>
- 2.13 **Increasing the quality and relevance of public spending requires key aspects of public financial management to be strengthened.** The Latin American and Caribbean countries have adopted numerous public financial management reforms and have made significant progress in this area (Pessoa et al., 2015) (see Annex II). Nonetheless, many challenges still need to be addressed, including (i) inertial processes in the determination of budget allocations, (ii) inefficiencies in procurement management, and (iii) insufficient fiscal transparency. Digital transformation is a powerful tool for addressing these challenges, but implementation in the region has been slow (see Annex III).
- 2.14 **With respect to public expenditure quality reforms, little progress has been made in linking budget allocations with performance indicators.** Many countries in the region have been working to modernize budgeting, with significant investments in systems development and the adoption of program-based budgeting methodologies. Despite this, a focus on compliance rather than results-focused solutions, together with the significant budget rigidity stemming from expenditures being tied to specific purposes, has meant that there have been few

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<sup>5</sup> These deficiencies are discussed in detail in other IDB Group SFDs, such as the Social Protection and Poverty SFD, Early Childhood Development SFD, Health SFD, and Skills Development SFD.

advances toward effectively linking budgets with results or any substantial improvements in the allocative efficiency of the budget. This is the result, in part, of significant institutional capacity constraints for the execution and quality of expenditure, as well as weak governance in the budget system. All of this has meant that, in practice, budgets continue to be prepared on an incremental basis, with marginal increases or reductions in budget lines compared with previous years and no regular reviews of expenditure quality. As a consequence, inefficient budget programs and expenditures last over time, reducing the quality of public spending.

- 2.15 **The information produced by integrated financial management and payroll systems is not used to its full potential.** These systems are currently used exclusively for budget formulation and execution, and there is scant use of the information contained in them for data analysis that would help to improve resource allocation or redefine public spending execution processes (Pessoa et al., 2015). This is partly due to a lack of maintenance, which means that many integrated financial management systems in the region are becoming obsolete (Pimenta and Seco, 2019). The same is the case with respect to payroll systems (see Annex II).
- 2.16 **Efforts must continue to strengthen procurement systems so as to enhance their impact on expenditure quality and efficiency, as well as transparency in the use of public resources.** Public procurement in the Latin American and Caribbean countries is equivalent to around 8% of GDP and 30% of total spending (IDB, 2018a), thus highlighting the potential of procurement systems to become a powerful fiscal policy tool for increasing public spending quality and efficiency and promoting private sector development and productivity. There has been progress in the region toward more efficient, competitive, inclusive, and transparent procurement management systems, strengthening technological tools, procurement methods, and the institutional framework for the sector (see Annex II). Nonetheless, modernization processes have been uneven, and corruption continues to exist together with numerous technical inefficiencies. With respect to the institutional framework, this remains focused primarily on ensuring compliance with rules, with little consideration of performance. In terms of processes, there is considerable room for improvement in the areas of competition and participation, particularly in the case of special regimes for State-owned enterprises and specific sectors.
- 2.17 **Inadequate fiscal transparency reduces accountability and fosters corruption, affecting the quality of public spending.**<sup>6</sup> Levels of transparency vary between the different countries in the region with regard to both the availability and scope of fiscal information. Some countries provide a wide range of information on budget planning and execution, while others provide only limited access (Pessoa et al., 2015). For example, several Caribbean countries either do not publish budget or financial execution information or they fail to do so in a timely manner (IDB, 2018b). In addition to deficiencies in the publication of information, there are also weaknesses in public sector accounting in the region, and this reduces transparency surrounding the true fiscal position of governments (see Annex II).
- 2.18 **All of the aforementioned inefficiencies and their implications for economic growth can also be seen at the regional level.** The inefficiency of subnational

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<sup>6</sup> The Transparency and Integrity SFD provides a detailed discussion of transparency and corruption issues.

spending in Argentina, Brazil, Colombia, Mexico, and Peru is estimated at two percentage points of GDP on average. This includes payroll spending, procurement, and transfers and subsidies, which together account for most decentralized expenditure (Braun, Di Gresia, and Radics, 2021). The causes of these inefficiencies are frequently rooted in perverse incentives in intergovernmental transfer systems, in addition to problems of coordination between levels of government and limited administrative and technical capabilities on the part of subnational entities (Gómez et al., 2022).

### **3. Tax policy and tax administration affect the quality of the business environment**

- 2.19 The tax structures of countries in the region have a negative impact on business environments and economic growth.** Although overall tax burdens differ widely across Latin America and the Caribbean, tax revenue in the countries of the region, on average, is low compared to OECD countries.<sup>7</sup> In addition, most countries exhibit significant dependence on the value-added tax (VAT) and the corporate income tax (CIT) (see [Figure 9](#)). Countries in the region are also characterized by low levels of revenue from those taxes considered least distortionary, such as property taxes or taxes that correct negative externalities (e.g., those on fossil fuels) (see paragraph 2.62). In addition, the fiscal regimes governing the extractive industries are not sufficiently progressive or efficient, and they provide opportunities for avoidance, as discussed in the Extractive Industries SFD.<sup>8</sup> Conversely, several Latin American and Caribbean countries collect high levels of revenue from very distortionary taxes, such as those on gross receipts, financial transactions, and external trade. This structure of taxation, with its marked focus on business earnings and the formal sector, together with the presence of highly distortionary taxes, has affected growth in the region's countries.
- 2.20 Businesses face high overall tax burdens in most countries in the region, affecting inbound investment and private sector development.** Countries in Latin America and the Caribbean impose steep overall levies on business profits (see [Figure 10](#)), and this may be affecting the incentives of companies to invest and grow (Djankov et al., 2010). These high levies are mainly the consequence of high statutory CIT rates and social security contributions. In several countries in the region—particularly Argentina, Brazil, and Colombia—taxes on gross receipts represent another substantial burden and can create a tax liability similar or very close to that of the CIT.
- 2.21 The design of the main taxes creates distortions that affect growth.** The design of taxes is essential for economic growth, as tax provisions affect the incentives faced by the private sector, with a consequent impact on consumption,

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<sup>7</sup> On average, in 2019 a typical country in the region collected taxes and social security contributions totaling the equivalent of 21.9% of GDP. In contrast, the OECD countries collected on average 33.4% of GDP. Personal income tax and social security contributions account for most of the gap in tax receipts. Personal income tax revenue was only 2.1% of GDP in Latin America and the Caribbean, on average, whereas for the OECD it was 8% of GDP. The gap in tax revenue for social security contributions was also wide, but less so (3.9% in Latin America and the Caribbean vs 8.9% in the OECD). The low level of tax receipts is primarily due to high levels of labor informality in the region. In the case of the personal income tax, it is also due to the high thresholds for beginning to pay the tax, tax expenditures, and tax evasion.

<sup>8</sup> Fiscal revenues from the extractive industries are highly important for several countries in the region, accounting for more than 20% of total revenue in four countries. Guyana is a particularly noteworthy case, with oil-related fiscal revenue expected to exceed 5% of GDP toward the end of the current decade.



savings, and investment decisions. Although the topic of tax design is too broad to be covered in detail in this SFD, the different taxes are generally characterized by relatively high statutory rates combined with numerous preferential treatments that reduce effective tax burdens (IDB, 2013). This combination of high rates and a narrow tax base is inefficient and hinders productivity. Not only do high marginal rates discourage investment, but preferential tax treatments mean that not all companies pay the same taxes (or that companies pay different rates depending on their activities). Unless such differential tax treatment is designed rationally and efficiently, it can lead to inefficient resource allocation, thus reducing productivity. These problems also exist at the subnational level. One example is Brazil's goods and services circulation tax, which fuels competition between subnational governments and promotes inefficient vertical integration (De Mello, 2008).

- 2.22 **Preferential VAT treatment distorts economic activity and creates large revenue losses for governments.** Although the VAT is considered to have low distortionary impact and is therefore relatively good for productivity and growth, the tax as implemented in the region is far from optimal. Instead, it is characterized by numerous preferential treatments involving either reduced rates or exempt goods. Different rates based on the type of product create distortions by modifying relative prices. They also facilitate evasion and reduce the efficiency of the VAT (see [Figure 11](#)). In the case of exempt goods, while these do not pay VAT, they also do not attract any input credits, making the VAT a highly distortionary de facto tax on production. These forms of preferential treatment also generate large revenue losses, averaging 2.4% of GDP in the region (Rasteletti and Saravia, 2022).
- 2.23 **Preferential corporate income tax treatments distort decision-making by agents, erode the tax base, and create horizontal inequities.** As in the case of the VAT, the CIT is characterized by high rates and numerous preferential treatments. With respect to the former, rates are high in most countries in the region (see [Figure 12](#)), and this reduces the region's competitiveness and depresses private sector investment. To reduce the burden of the CIT, several countries in the region have introduced numerous fiscal incentives and preferential treatments for taxpayers or sectors. These include incentives or special regimes for foreign investment, sectors, geographic regions, or small taxpayers. Although these incentives and preferential treatments are usually well-intentioned, they distort business decisions, erode tax bases, and create inequities. They are not always efficient in achieving the objectives being sought (see paragraph 3.14), and they can also involve substantial benefits, creating interest groups that lobby to extend their duration or make them permanent. The effectiveness of special regimes in attracting investment will also be reduced once the 15% global minimum tax is implemented. The details of this tax are currently being determined within the framework of the new consensus on international taxation, brokered by the Organisation for Economic Co-operation and Development (OECD) (see Annex IV).
- 2.24 **Given the complexity of tax systems in the region, tax administrations must redouble their efforts to facilitate taxpayer compliance.** The plethora of preferential tax treatments relating to the various taxes increases the complexity of tax systems and hinders compliance. Although tax administrations in the region have stepped up efforts to facilitate tax compliance (Barreix et al., 2018), cumbersome processes still exist that increase the amount of time it takes for both individuals and companies to pay their taxes (see [Figure 13](#)). This sometimes acts

as a disincentive to private investment. Facilitating tax compliance requires different strategies for different types of taxpayers. With respect to large taxpayers, collaborative approaches exist in only a few countries in the region and are at a relatively early stage of development. In the case of smaller taxpayers, some tax administrations have expanded their digital services to facilitate compliance, although in most cases these efforts are incipient or ad hoc in nature (Seco and Muñoz, 2018). The ability of tax administrations to improve taxpayer facilitation is limited by gaps in the modernization of their institutions, processes, digitalization, and technology. It is also hampered by insufficient digitalization of tax documents and limited access to third-party data, which hinder the implementation of mass facilitation processes based on data analytics and artificial intelligence (Gonzalez de Frutos et al., 2022; Calijuri et al., 2022). Tax administrations' insufficient digitalization also weakens enforcement, which leads to high levels of evasion to the detriment of tax receipts.

**B. Challenge 2. Increase the redistributive impact of fiscal policy<sup>9</sup>**

- 2.25 **Levels of inequality in Latin America and the Caribbean are high.** Before the COVID-19 pandemic, Latin America and the Caribbean had the highest level of inequality in disposable income in the world (Busso and Messina, 2020), with a regional Gini coefficient of 0.48. The economic and social crisis caused by the pandemic exacerbated the problem of inequality, increasing it by approximately 6% (IDB, 2021b). This was a consequence of the pandemic's greater impact on vulnerable groups and those with informal employment (Acevedo et al., 2021). Although employment has recovered, informality and the effects on equity and inequality are likely to persist into the medium term due to varying losses of human capital in the active and school-age populations.
- 2.26 **One of the main causes of high inequality in Latin America and the Caribbean is the weak redistributive impact of transfer and tax systems.** Household market income inequality in Latin America and the Caribbean is very similar to that seen in the eurozone (see [Figure 14](#)). However, in terms of disposable income—i.e., household income after receiving government transfers and paying direct taxes—the region is much less equal than the eurozone countries. This is because government interventions in Latin America and the Caribbean reduce income inequality by only 5% (as measured by the Gini coefficient), compared with 35% in the eurozone.
- 2.27 **Levels of social spending are partly responsible for the low redistributive impact of fiscal policy in the region.** In developed countries, public spending plays a more important role than taxes in the redistribution of income, accounting for around 70% of the redistributive impact of fiscal policy (Izquierdo and Pessino, 2020). In the vast majority of Latin American and Caribbean countries, public spending has a low redistributive impact, due in part to low levels of social spending that average less than half of those in OECD countries (10% versus 28% of GDP, see [Figure 8](#)). Moreover, approximately 60% of this spending is channeled into health and education, which do not have an immediate or direct impact on disposable income.

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<sup>9</sup> This SFD's analysis and emphasis on equity issues is consistent with the recommendation from the Bank's Office of Evaluation and Oversight in its "Review of Bank Support to Tax Policy and Administration" to understand and address the tradeoffs of fiscal reforms, particularly as regards equity issues.



- 2.28 **Tax systems have low redistributive impact in Latin America and the Caribbean.** The low redistributive impact of tax systems in the region is partly the result of low revenue from progressive taxes, such as the individual income tax and property taxes,<sup>10</sup> as well as the high share of total revenue accounted for by the VAT (usually considered to be regressive). In addition, the numerous existing tax benefits predominantly benefit higher income households in absolute terms (see paragraph 2.33). Compounding this are high levels of tax evasion, which reduce redistributive impact. These are a consequence of both weaknesses in tax administration and inadequate fiscal transparency.<sup>11</sup> All of these factors mean that tax burdens in the region are either regressive or have low levels of progressivity.
- 2.29 **The low redistributive impact of fiscal action is also the result of weaknesses in fiscal policies and fiscal management.** In particular, inequality and inequity are aggravated by inefficiencies in the targeting of public spending and tax benefits, and by policies and actions that encourage informality. Likewise, there are also deficiencies in fiscal management that limit redistributive impact from a gender and diversity standpoint. This is also the case with respect to regional equity: intergovernmental transfers systems have low equalizing ability and residual fiscal disparities are large (see Annex V).

**1. Public policies are characterized by deficiencies in targeting strategies**

- 2.30 **Government efforts to reduce inequality are often affected by weaknesses in the design and management of targeting strategies,** which mean that government support is not always received by the intended beneficiaries. Targeting problems are of two different kinds: the design of social assistance policies, which sometimes lack effective targeting, and the targeting mechanisms themselves, which further dilute targeting. The deficiencies and complexities of targeting vary depending on the type of spending involved: social assistance programs, energy/public utility subsidies, or tax benefits.<sup>12</sup>
- 2.31 **Funding for social assistance is low and is characterized by leakages, thus reducing the redistributive impact of existing programs.** Most countries in the region spend relatively little on social assistance programs, leading to generalized undercoverage of poor segments of the population.<sup>13</sup> Benefits also leak to nonpoor individuals: on average in Latin America and the Caribbean, approximately 40% of the beneficiaries of conditional transfers and 60% of those receiving noncontributory pensions<sup>14</sup> are nonpoor. Such leakages are primarily to vulnerable households and individuals, while approximately 10% of conditional transfers and 20% of noncontributory pensions are received by middle- and high-income beneficiaries (Stampini et al., 2021). This is partly because program targeting usually relies on social records and household income estimates that are based

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<sup>10</sup> In the OECD countries, average revenue from individual income and property taxes stands at 8.1% and 1.2% of GDP, respectively, compared with only 2.1% and 0.3% in Latin America and the Caribbean.

<sup>11</sup> Several countries in the region have agreed to maximize the effective use and exchange of information to tackle tax evasion and avoidance, corruption, and other forms of illicit financial flows. Despite progress in this area, there are still numerous challenges in terms of fiscal transparency, particularly with respect to ultimate beneficiaries (IDB and OECD, 2019; OECD, 2021).

<sup>12</sup> Many countries also provide subsidies for contributory pensions, and these tend to be regressive.

<sup>13</sup> Average coverage of the extremely poor, moderately poor, and vulnerable populations stands at 56%, 43%, and 28%, respectively, in 17 Latin American and Caribbean countries (Stampini et al., 2021).

<sup>14</sup> Efforts to reduce social security contributions could include the universalization of noncontributory pensions, with the aim of improving resource allocation.

on demographic characteristics and assets. However, records for low-income individuals are generally incomplete and out of date, reducing their usefulness for effective targeting.

- 2.32 **There are weaknesses in the targeting of subsidies for energy and public utilities.** Subsidies for propane, gasoline, diesel fuel, and electricity predominantly benefit higher-income households, with the highest-income decile receiving five times more subsidies than the poorest one. This is a result of higher levels of consumption in these segments (Llerena et al., 2015). In the case of subsidies for electricity, gas, and water, some countries have differential rate policies that aim to provide lower rates to poorer households. However, this type of targeting is usually based on household records or consumption levels, leading to the reemergence of problems similar to those discussed in the paragraph above.
- 2.33 **Tax benefits are largely received by high-income households.** In the case of the VAT, most Latin American and Caribbean countries have implemented reduced rates or exemptions on goods that are disproportionately consumed by poor households, with the aim of reducing the tax burden on these households. This tax benefit on goods rather than individuals creates tax expenditures that benefit the entire population instead of just the poor. Indeed, more than 70% of VAT exemptions in Latin America and the Caribbean benefit nonpoor individuals (Pessino and Alaimo, 2018). In the case of the individual income tax, countries usually offer numerous deductions that account for revenue losses of approximately 1.6% of GDP and almost exclusively benefit higher-income groups.

## **2. High levels of informality increase inequality**

- 2.34 **Latin America and the Caribbean exhibits high levels of informality, which has a negative impact on equity.** Informal sector workers in Latin America and the Caribbean account for 53% of the total (see [Figure 15](#)). Labor informality affects inequality in the region in two main ways (Messina and Silva, 2017). First, informal workers earn considerably less than their peers with similar skill levels in the formal sector, partly as a result of minimum wage protections and the bargaining power of unions. Second, the wage differential between formal and informal workers is greater for lower-skilled workers. Accordingly, lower levels of informality would reduce inequality on two fronts: between workers with similar skills and between those with different levels of skills (Messina and Silva, 2018).<sup>15</sup>
- 2.35 **The design of social security systems encourages informality.** The combination of high social security contributions and the existence of similar social levies for informal workers means that workers place little value on the benefits they receive in exchange for social security contributions, and this encourages informality (Levy and Cruces, 2021). Companies must also pay social security contributions and, in some cases, payroll taxes, increasing the cost of hiring formal workers and reducing the demand for formal employment. This creates a situation in which taxes on the hiring of formal workers are relatively high in several countries in the region (see [Figure 16](#)).
- 2.36 **Unconditional transfer programs can create disincentives to formal employment.** In many countries in the region, benefits under social assistance

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<sup>15</sup> Problems of informality also affect growth and productivity in the countries in the region. This is partly because informality is accompanied by inefficiencies in capital and labor allocation, as well as inefficient investment decisions regarding physical and human capital (Levy, 2018).

programs are discontinued when a worker finds formal employment. When added to deficient targeting systems that fail to identify informal workers, this allows people to work informally and receive transfers that they would not receive as formal workers, thus fueling labor informality. Similarly, while the noncontributory pillars of health and pension programs have been effective in extending social protection to informal workers, these represent de facto subsidies to informality as they replace the contributory pillars that exist when a worker is formally employed (Levy, 2015).<sup>16</sup> All of this can create disincentives to formality, although the magnitude of those disincentives varies with the characteristics of the programs and the contexts in which they are implemented. For example, studies find unconditional cash transfer programs in Argentina and Uruguay had major effects on informality, while other studies found moderate to no effects on informality in unconditional cash transfer programs implemented in Brazil and other countries in Latin America and the Caribbean (see paragraph 3.27 and the Social Protection and Poverty SFD).

- 2.37 **Simplified tax regimes have failed to reduce business informality in most countries in the region.** With the exception of just a few countries, economic sectors, and time periods, the effectiveness of these regimes in encouraging small businesses and individuals to register or meet their tax obligations has generally been low. Nor is it clear that these schemes have a redistributive impact, given that they usually encourage firms to reduce their size, split into smaller units, or carry out formal transactions in order to remain below income or sales thresholds for the simplified regime (Azuara et al., 2019). This affects business productivity and the earnings of business owners and workers (Busso, Fazio, and Algazil, 2012).

### **3. Gender and diversity inequities account for a significant proportion of inequality**

- 2.38 **There are enormous economic gaps that reflect gender and certain diverse groups.** Prior to the pandemic, there were 112 women living in poor households for every 100 men in the same situation. Likewise, 28% of women over 15 lacked an income of their own, compared with 12% of men in the same group (ECLAC, 2020). The pandemic has aggravated the situation, drastically reducing women's economic empowerment. In addition, women perform more care work, affecting their participation in the remunerated labor market. In 2020, 67% of women of working age worked in the remunerated sector, compared with 93% of men (Azcona et al., 2020). There are also enormous inequities in other diverse groups, particularly those based on race and ethnicity (see Annex VI).
- 2.39 **There is little information regarding the contribution of fiscal policy and management to closing gender gaps in Latin America and the Caribbean.** Although several countries in the region have adopted some type of gender-related tagging in their budget execution systems, little is known about the impact of public spending on gender gaps. With respect to taxes, although tax systems are known to affect women's consumption patterns and decisions as to where and how much to work (Astudillo et al., 2022), little is known regarding the effects of the tax system on women's decisions and opportunities in the region. There is also no evidence

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<sup>16</sup> Rather than eliminating the noncontributory pillars of social security, Levy (2015) recommends universalizing these and decoupling them from the labor market.

of any targeting efforts, such as tax incentives to enhance opportunities for women (particularly lower-income women).

**C. Challenge 3. Strengthen fiscal institutions to bolster the sustainability of public finances**

**2.40 Many countries in Latin America and the Caribbean face growing risks to fiscal sustainability.** Although levels of indebtedness vary widely across the region (see [Figure 17](#)), they have been increasing in most countries as a result of recurring fiscal deficits prior to the pandemic, as well as the major efforts made to tackle the effects of the latter (see Annex VII). This increase in debt levels has also occurred at the subnational level (IDB-ECLAC, 2022). In addition, many countries have higher levels of contingent liabilities than in the past, linked to the explicit or implicit guarantees extended during the pandemic to protect businesses and employment. Some countries also face fiscal pressure due to migration-related demographic phenomena.<sup>17</sup> In addition to deteriorating fiscal prospects due to inflationary pressures, the war on Ukraine, and rising interest rates, all of which have exacerbated the structural challenges faced by the region (IDB, 2022a), this fiscal situation has caused the main ratings agencies to downgrade credit ratings for more than half of the countries in the region (see [Figure 18](#)). Given the growing fiscal sustainability risks faced by Latin American and Caribbean countries, several of these need to design and implement fiscal consolidation programs.<sup>18</sup> These programs should be adapted to the realities of each country and take political economy constraints into account (see Annex VII).

**1. The design of fiscal consolidation programs is important**

**2.41 Fiscal consolidation programs implemented by Latin American and Caribbean countries are based primarily on increased fiscal revenue.** Tax rises exceeded spending reductions in more than two thirds of fiscal adjustments in the region over the last 30 years (David and Leigh, 2018). In terms of specific instruments, tax rate increases or expansion of the tax base for indirect taxes have been more frequent than changes in direct taxes. This strong focus on the revenue side for adjustment is partly a consequence of the quest for immediate fiscal results, which often neglects the effects of fiscal consolidation on growth and equity.

**2.42 Public investment has also been an adjustment variable in fiscal consolidation processes in the region's countries, despite its greater recessionary impact on economic activity.** Investment spending was reduced by an average of 13.1% during fiscal consolidation periods that occurred after 2007, while total primary spending fell by less than half that amount (5.5%) (Vegh et al., 2018). This anti-investment bias is partly the result of the political economy of fiscal adjustment, as investment spending is usually more difficult to reduce than other types of spending (Ardanaz and Izquierdo, 2022). In addition, most countries

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<sup>17</sup> Although migration can create significant short-term fiscal pressures as a consequence of higher demands for public and social services to assist migrants, these pressures are reduced over the medium and long term thanks to increases in GDP, consumption, and unemployment—effects that boost tax revenue (Valencia et al., 2020). The scale of these effects depends partly on the regularization and formalization policies implemented by destination countries.

<sup>18</sup> The countries in Latin America and the Caribbean also face fiscal pressures from the aging of the population, which requires growing spending on pensions and health. This issue is covered in the Labor SFD and Aranco et al. (2022).

in the region lack institutional arrangements designed to safeguard productive public investment from budget cutbacks. This anti-investment bias has important consequences for economic growth (see paragraph 3.4).

## **2. Fiscal risk management must be strengthened**

- 2.43 **Countries in the region face growing fiscal risks, and there is therefore a need to strengthen institutional risk management capabilities.** Fiscal risks derive from a variety of sources but can be separated into two major categories: macroeconomic risks and specific fiscal risks (International Monetary Fund (IMF), 2018). Macroeconomic risks relate to changes in key macroeconomic variables, such as GDP, interest rates, and the exchange rate. Specific fiscal risks, meanwhile, arise from the materialization of explicit or implicit contingent liabilities, or other unpredictable events such as natural disasters, legal actions against the State, bank failures, or insolvencies in State-owned enterprises or subnational governments. The effective management of fiscal risks, including transparent reporting of these risks in budget instruments and fiscal statistics, is important due not only to their effects on the public finances, but also because sovereign risk usually has a contagion effect on the private sector.
- 2.44 **The public finances in several countries in the region are highly vulnerable to macroeconomic risks.** Higher levels of indebtedness expose countries in the region to the risks of increased interest rates and currency depreciation. In terms of interest rates, growing debt burdens pushed debt interest payments as a proportion of fiscal revenue up to a historical peak in 2020 (see [Figure 19](#)), even though countries had been able to secure finance at relatively low rates during the pandemic. With respect to currency exposure, this risk also rose in several countries due to a recent increase in foreign currency-denominated debt in relative terms (IDB, 2022a). This, in addition to high debt levels and a slowdown in the export sector, leaves the region increasingly vulnerable to a sudden stop in capital flows. Lastly, several countries are also vulnerable to commodity price shocks due to their dependence on nonrenewable natural resource earnings (Valencia, Rodríguez, and Siachoque, 2021). Due to this exposure to commodity price variations, there is still a need in most Latin American and Caribbean countries to develop active strategies to reduce the impact of shocks to these prices or to hedge against them.
- 2.45 **Contingent liabilities have been a significant source of fiscal risk for the region.** The materialization of contingent liabilities has led to substantial increases in public debt in the countries in the region, and this has sometimes precipitated fiscal crises (Bova et al., 2016). The largest events of this kind in the region have been related to financial sector bailouts, such as Ecuador from 1998 to 2002 and Uruguay from 2002 to 2005, where support to the financial system following bank runs resulted in costs of more than 20% of GDP to the State (Bova et al., 2016). There have also been high fiscal costs stemming from rescues of insolvent subnational governments and the materialization of guarantees and disputes with respect to PPPs and State-owned enterprises, among other things (Bova et al., 2016). Despite these potentially high fiscal costs, most ministries of finance in the region do not record contingent liabilities in their accounts or in traditional measures of fiscal sustainability. As a result, the scale of these liabilities and the risks that they represent to fiscal sustainability are unknown.

2.46 **Finance ministries in the region must be strengthened to ensure that macroeconomic risks are effectively managed.** Although several countries have improved debt management capabilities, the experience has been uneven across countries and challenges remain in terms of debt management planning (Prats and Chiara, 2022). Several countries have not yet adequately integrated monetary and fiscal policies into their debt projections, meaning that it is impossible to adequately simulate whether established risk and cost objectives can still be achieved under stress scenarios based on shocks in financial markets. In addition, several countries lack sufficient capability to analyze optimal portfolio composition (in terms of bond maturities, currencies, and interest rates) and manage contingent liabilities, making it difficult for them to assess the costs and benefits of minimizing financial costs versus minimizing budget risks that might affect fiscal sustainability (Valencia, Rodriguez, and Siachoque, 2021). This lack of capabilities, coupled with the challenges of rating investment projects, complicates the use of relatively innovative instruments, such as climate or NDC-indexed bonds.<sup>19</sup>

2.47 **The management of fiscal risks relating to PPPs, guarantees, State-owned enterprises, and other specific risks is mostly at an early stage in the region.** Although specific fiscal risks are generally difficult to manage, few countries in the region have taken any significant action to address them. With respect to PPP-related contingent liabilities, not all countries have limits on the total number of PPP contracts that can be awarded, while in other cases the limits are insufficient. Moreover, many countries lack strong technical teams that are able, during the project structuring process, to identify, dimension, and manage the potential risks to be assumed by the State, balancing these against the risks assumed by the private stakeholder in order to ensure the long-term viability of the project. With regard to government guarantees, there are generally no rules that clearly set out the terms and limits of guarantees. Moreover, the costs and risks of guarantees are not usually calculated before they are granted (Prats and Hinojosa, 2022). In terms of the fiscal risks associated with State-owned enterprises, there are governance issues in the fiscal relationship between the central government and State-owned enterprises in several countries in the region. This includes a high degree of discretionality in transfers that means these companies effectively face only a soft budget constraint (Musacchio, Pineda, and García, 2015).

### **3. Fiscal institutions are insufficiently robust in Latin America and the Caribbean**

2.48 **Macrofiscal institutions need to be strengthened in order to bolster fiscal sustainability.** Over the last few decades, most countries in the region have introduced reforms to strengthen fiscal institutions, thereby improving fiscal sustainability and market confidence. In addition to the growing adoption of fiscal rules (including at the subnational level), there has also been an increase in the number of independent fiscal councils, as well as other countercyclical measures such as sovereign saving funds. Despite the efforts so far, the region faces challenges in ensuring that these institutions are sufficiently sound to avoid sustained growth in the debt.

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<sup>19</sup> The green bond market in Latin America and the Caribbean continues to trend upward, although it is not very deep. To date, only 13 countries in the region have issued green bonds (see Long-term Financing SFD).

- 2.49 **The credibility of macrofiscal frameworks in the Latin American and Caribbean countries has been affected by weaknesses in annual budget planning processes.** Budget processes in the region exhibit weaknesses that reduce their credibility and quality. These include (i) repetitive budgeting, (ii) severe expenditure rigidities, and (iii) extrabudgetary operations (Debun and Kinda, 2017; Pérez, 2019). Repetitive budgeting undermines the validity of the budget as a point of reference, generating mistrust in the markets and on the part of the actors involved. Meanwhile, high levels of rigidities created by budget floors and earmarked taxes reduce adaptability in response to changes in the macroeconomic context, as well as creating and reinforcing allocation and technical inefficiencies. Lastly, the exclusion of operations from budget processes paves the way for increased spending and violations of fiscal rules. It also significantly increases the risks of clientelism, corruption, and inefficiency (Marcel, Guzmán, and Sanginés, 2014; Herrera and Olaberria 2020).
- 2.50 **Medium-term budget plans are insufficient to ensure fiscal discipline.** Countries in the region have made significant efforts to adopt improved medium-term fiscal planning practices, to make the general direction of fiscal policy more predictable. Eighteen countries currently prepare annual medium-term fiscal frameworks (MTFFs), while 10 prepare medium-term expenditure frameworks (MTEFs). Despite these efforts, most MTFFs and MTEFs in the region are simply medium-term projection exercises, as they do not link policies to resource allocations (IDB, 2018b). Nor do they take into account issues of the strategic prioritization of expenditure or results-based management, which foster technical efficiency in the use of resources. In most cases, these instruments do not exist at the subnational level.
- 2.51 **There is room to improve fiscal rules in the region in order to enhance their contribution to fiscal discipline.** Thirteen countries in the region have fiscal rules, of which 70% have two or three rules. In total, there are 28 fiscal rules in Latin America and the Caribbean, of which 46% relate to the fiscal balance, 35% to public expenditure, and the remaining 17% to the public debt (Davoodi et al., 2022). Before the pandemic, however, the level of compliance with implemented fiscal rules was relatively low (Valencia and Ulloa, 2021), undermining the credibility of the overall fiscal framework. This weak compliance is largely a result of how the rules were designed, as well as broader characteristics of the context in which they operate. The most frequent design failures relate to insufficient fiscal coverage, vague escape clauses, and low accountability.
- 2.52 **There are few independent fiscal councils (IFCs) in the region, and their functions are limited.** IFCs can help to improve the quality of fiscal policy by strengthening control over fiscal policy compliance. In addition to supervising compliance with fiscal rules, IFCs also usually monitor general fiscal performance and provide public assessments of short- and medium-term government fiscal policy, thus strengthening transparency and accountability mechanisms. To carry out these activities effectively, IFCs should be independent, as this creates confidence in their work. There are currently only nine IFCs in the region. Their functions are generally limited, and in many cases their institutional design means that they lack real independence or technical capacity to fulfill their role.
- 2.53 **There is also room to improve the design of sovereign saving funds in the region.** Several countries with high levels of nonrenewable natural resources (NNR) have created intergenerational saving funds aimed at addressing the

challenges of administering income from the extractive industries. These funds represent another type of fiscal institution that is governed by a set of rules for the saving and use of resources during commodity price cycles, thus improving fiscal sustainability. Although many countries in the region have high levels of revenue from NNR, only eight have saving funds. Many of these have design weaknesses that limit their effectiveness. There are very few funds in the region that seek to support subnational management or that belong to subnational governments.

**D. Challenge 4. Enhance the contribution of fiscal policy and management to the mitigation, adaptation, and management of climate change-related fiscal risks**

2.54 The efforts of countries in the region to reduce climate change-related risks and promote the transition to a zero-carbon economy are still insufficient. The countries of Latin America and the Caribbean are highly exposed to climate change (Intergovernmental Panel on Climate Change, 2022) due to the region's geographic location and the countries' high population density, demographic growth, and economic dependence on natural resources. This high exposure to climate change is compounded by insufficient adaptation capacity, which is in turn a consequence of high poverty levels, weak institutional governance in key sectors, and insufficient financing for adaptation projects (IPCC, 2022). Latin American and Caribbean countries are also vulnerable to the global energy transition that is being driven both by technological change and the international commitments established under the Paris Agreement. Despite this situation of high vulnerability, the efforts of countries in the region to reduce climate change-related risks and promote the transition to a zero-carbon economy remain insufficient.

2.55 **Fiscal policy and management in the region are insufficiently supportive of national climate targets and the swift, orderly transition to a low-carbon economy.** Achieving targets for reductions in greenhouse gas emissions will involve promoting behavioral changes and planning substantial transformations across all sectors of the economy so as to ensure an orderly transition to a low-carbon economy. Finance ministries play a key role in this area, not only because they allocate public resources to finance climate actions, but also because they can play a leadership role by using fiscal tools to modify private sector incentives and by establishing rules, mechanisms, processes, and controls to ensure that public program and project decisions support an orderly, just, and inclusive transition, thus avoiding future costs (Delgado, Eguino, and Lopes, 2021).

**1. Fiscal actions can help to mitigate climate change**

2.56 **Fiscal policies involving carbon pricing can contribute to countries' emissions reduction strategies.** There is a degree of consensus that carbon pricing policies that increase the cost of emitting greenhouse gases can play a role in countries' emissions reduction strategies (IMF, 2019a)—for example, where the price is applied to sectors in which green technologies are not yet competitive. This is because these policies provide incentives for cost-efficient reductions in emissions when implemented on the required scale and at the required levels. Carbon taxes and carbon emission markets are of particular importance; these are usually considered to be efficient tools for reducing carbon dioxide emissions (Akerlof et al., 2019; IMF, 2019a). There are currently carbon markets for 27 countries in the European Union and four other countries. In Latin America and the Caribbean, there is only one pilot in Mexico. Carbon taxes are currently applied



by 35 regional, national, and subnational governments. In Latin America and the Caribbean, only five countries have carbon taxes. However, these taxes are characterized by low rates and low levels of coverage (see [Figure 20](#)) (Forero, Rasteletti, and Urrea, 2022), and this reduces their effectiveness in reducing carbon dioxide emissions. It is important to take into account the political economy challenges associated with price reforms, for example by ensuring gradual implementation, compensating vulnerable families and businesses, and organizing public consultations and communication strategies (IMF, 2019b).

- 2.57 **In many countries in the region, setting efficient prices for carbon emissions will require reducing fossil fuel subsidies.** Fossil fuel taxes represent an important tool for influencing the price of carbon emissions, yet most countries in the region fail to deploy it effectively. This is due to the fact, firstly, that tax rates on fossil fuels are relatively low (Conte Grand, Rasteletti, and Muñoz, 2022), reducing the impact on emission reductions. Second, several countries in Latin America and the Caribbean provide high levels of subsidies for fuel prices. Fuel subsidies in the region averaged 1.1% of GDP in 2018—above the world average of 0.7% of GDP (Conte Grand, Rasteletti, and Muñoz, 2022). This combination of low taxes and high subsidies for fuels meant that Latin America and the Caribbean had the second lowest level of net tax collections on fossil fuels in the world (see [Figure 21](#)).
- 2.58 **Carbon pricing initiatives are insufficient as a stand-alone policy, and they should therefore form part of broader, comprehensive mitigation strategies.** Although many economists consider carbon pricing policies to be an important tool in countries' emissions reduction strategies (IMF, 2019c), they are usually considered insufficient on their own to bring about the desired reductions in emissions within the required time frame (Stock, 2019). It is therefore important that emissions reduction strategies be accompanied by a package of measures aimed at improving both their effectiveness and their acceptability (IMF/OECD, 2021). Accordingly, tools, sector regulations, and incentives for the private sector take on additional importance, together with measures to support vulnerable families and sectors (Vogt-Schilb et al., 2019). The fiscal sector can make a direct contribution through complementary actions based on different instruments, such as national public investment systems.<sup>20</sup>
- 2.59 **Public investment management must be strengthened to improve its contribution to reducing emissions in the countries.** Given the important role played by governments in the energy sector, as well as their potential influence over other sectors with high emissions (e.g., transportation and the extractive industries), public investment management is a crucial element in any decarbonization strategy. Despite this, public investment management in most Latin American and Caribbean countries lacks sufficient instruments for integrating climate action into the different stages of the investment cycle (Delgado, Eguino, and Lopes, 2021). In the investment prioritization stage, for example, there is usually no control over the alignment of investment programs and projects with national decarbonization commitments, meaning that investment plans are inconsistent with the commitments contained in Nationally Determined Contributions. Similarly, shadow prices for carbon are not systematically used in the evaluation of investment projects, leading to overestimations of project

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<sup>20</sup> Public procurement management is another potentially supportive fiscal tool (see Annex II).

benefits. Nor is consistency with a decarbonized world considered as a factor when evaluating projects, and this could lead to future fiscal costs due to stranded assets (Delgado, Eguino, and Lopes, 2021). Lastly, it is infrequent for projects to be classified based on their contribution to climate change; this prevents the development of green project portfolios and curtails the ability to access climate financing through climate bonds, NDC-indexed bonds, or other green finance instruments.

## **2. Fiscal actions can support climate change adaptation and risk management**

- 2.60 **Finance ministries must improve the efficiency with which they incorporate the management of climate event-related fiscal risks into fiscal management.** The annual frequency of climate events in Latin America and the Caribbean has risen by more than 50% over the last few decades, from 0.2 events per country each year between 1980 and 2000 to 0.3 between 2001 and 2019 (Alejos, 2021). In this context of increasingly frequent climate events of growing magnitude, fiscal strategies to reduce the fiscal impact of these events have become increasingly important (Alejos, 2021), yet these currently exist in only a few countries in the region. Similarly, although several countries have occasionally hedged against climate events through the issue of catastrophe bonds or insurance contracts, these actions are not generally carried out systematically or in coordination with a general strategy for managing climate risks. Lastly, not all countries have fiscal saving funds for responding to climate events—particularly for supporting affected subnational governments—and some of these lack sufficient funding and robust institutional frameworks.
- 2.61 **Public investment management must be strengthened to enhance the resilience of public assets, thus reducing the fiscal costs of climate events.** The resilience of public infrastructure has proven to be of crucial importance in reducing the fiscal costs of climate events, due not only to the direct impact of reconstruction costs but also the indirect costs stemming from disruptions to public services, telecommunications, and transportation (OECD, 2021a). Ensuring climate-resilient public infrastructure requires changes to public investment management. In particular, new projects must be designed and prioritized taking into account climate changes that may occur during the life of the project. At the same time, climate change means that existing infrastructure must be reinforced or managed differently (OECD, 2018). Although several countries in the region have included actions to increase the resilience of public infrastructure, these actions are mostly at an early stage of development.
- 2.62 **The transition to a low-carbon economy also raises very significant fiscal risks that are not being addressed.** The global energy transition will reduce future demand and prices for fossil fuels, as well as public revenues from this source. Accordingly, the finances of several countries in the region will be severely affected by falling hydrocarbon revenues and the existence of physical resources and assets that they will be unable to exploit. Despite this, the region continues to invest in fossil fuel-related sectors (e.g., energy, transportation, and the extractive industries) in a manner that is inconsistent with the Paris Agreement and without assessing the risks associated with technological or regulatory change and/or investors and consumers (Delgado, Eguino, and Lopes, 2021).

- 2.63 **Unless timely action is taken, the stranded assets created by the energy transition could have serious fiscal consequences for several countries in the region.** Stranded assets include fossil fuel power plants and oil, gas, and coal fields that due to the energy transition will be left unused within little more than a decade. They also include infrastructure for power transmission and/or the exploitation, transportation, and processing of oil, gas, and coal (Binsted et al., 2019). Stranded assets can create significant fiscal risks, due not only to drastic declines in public revenues but also the additional fiscal pressures deriving from contingent liabilities in the sectors concerned. For example, if the Paris Agreement targets are met, between 66% and 81% of Latin American and Caribbean oil reserves will be left unexploited in 2035 and tax revenue will decline by US\$1.3 billion to US\$2.6 billion (Solano-Rodríguez et al., 2021).

### **3. The need to strengthen ministries of finance**

- 2.64 **Increasing the quality and effectiveness of climate-related fiscal actions will require the strengthening of ministries of finance.** Although the countries in the region have implemented various fiscal initiatives to support climate change mitigation and adaptation and the management of transition risks, many of these actions have been implemented independently, lacking any coordination with national decarbonization strategies or an overall climate-sensitive strategy for public financial management (PFM). The lack of integration with national decarbonization strategies is due to either the inexistence of such strategies or the weak involvement of ministries of finance in their design. In terms of climate-sensitive PFM strategies, these are largely nonexistent in the region, and this has prevented finance ministries from playing a catalyzing role, encouraging and guiding climate action efforts in other ministries.
- 2.65 **The inclusion of climate considerations in PFM could help to improve the effectiveness of climate actions by governments.** Almost all countries in the region lack clear and effective ministry of finance guidelines that explain how to integrate climate change considerations into budget programs, public procurement, and the structuring of investments. This may be reducing the effectiveness of climate spending. In order for countries to assess the effectiveness of climate action and take action to improve its efficiency, effectiveness, and equity, the first required step is to calculate the total amount of resources allocated to climate expenditures, either positive or negative (Pizarro et al., 2020). Currently, little is known regarding climate spending by the countries in the region, mainly due to the absence of robust budget tagging that would allow these expenditures to be identified.

## **III. INTERNATIONAL EVIDENCE REGARDING THE EFFECTIVENESS OF FISCAL SECTOR POLICIES AND PROGRAMS**

### **A. Fiscal management and economic growth**

#### **1. Fiscal policy and economic volatility**

- 3.1 **Robust fiscal institutions can help to restrain economic volatility.** Fiscal rules and stabilization funds are the most frequently used tools for reducing procyclicality in public spending. Studies have found that fiscal rules are not always effective in controlling procyclicality in public spending (Bova, Carcenac, and Guerguil, 2014), as it is not only the existence of a fiscal rule that matters, but also how it is designed

and implemented. For example, fiscal rules with cyclically adjusted targets or well-defined escape clauses are usually more effective in developing countries (Bova, Carcenac, and Guerguil, 2014) and help to reduce the procyclical bias of expenditure components that are important for economic volatility, such as public investment (Ardanaz et al., 2021a). The more robust monitoring and compliance mechanisms are, the more effective a fiscal rule will be (Guerguil, Mandon, and Tapsoba, 2017). Combining fiscal rules with independent fiscal councils to monitor compliance has been effective in increasing compliance with the rules (Beetsma et al., 2019). With respect to stabilization funds, these have been effective in reducing procyclicality in the expenditures of countries with high levels of NNR (Asik, 2017).

- 3.2 **Powerful automatic stabilizers are effective in cushioning against overall instability and protecting the incomes of individuals.** In both developed and developing economies, the stability of economic activity can be strongly boosted by automatic stabilizers (Debrun and Kapoor, 2010). The latter explain most of the stabilizing capacity of fiscal policy in developed countries (Fatas and Mihov, 2001), and they are effective in protecting people's incomes at the individual level (Dolls, Fuest, and Peichl, 2012).

## **2. Public spending and growth**

- 3.3 **The composition of public spending affects long-term growth rates.** The literature on public spending and growth does not yield any definitive conclusions as to whether higher levels of spending increase growth rates. Independent of spending levels, however, the literature has been more consistent in identifying effects on growth from the composition of public spending. Studies that disaggregate expenditure by its components—usually consumption expenditure and capital expenditure (Barro, 2003)—find that government consumption expenditures are less effective in promoting growth. This may be linked to deficiencies in the quality of this spending. This contrasts with the positive effects of investment in infrastructure or human capital (Altinok, Pessino, and Chagajl, 2022).
- 3.4 **Economic growth is boosted by infrastructure spending and the effective management of that spending.** Different studies have found that public investment increases growth in the medium term (Furceri and Li, 2017). Studies have also found that the impact of investment on growth is higher where the governance of public investment management is stronger (IMF, 2015). In addition, the quality of the planning, allocation, and implementation stages of public investment is important for determining the impact of that investment on growth (Miyamoto et al., 2020). With regard to PPPs, the evidence indicates that countries with successful PPP programs are those with appropriate institutional structures and strong institutional capabilities for planning, managing, and monitoring PPPs (Reyes-Tagle and Garbacik, 2016).
- 3.5 **Human capital accumulation is affected by the management of social expenditure.** Various studies have found that human capital is one of the main determinants of economic growth (Gennaioli et al., 2013) and that social spending has a positive impact on human capital accumulation and growth (Baldacci et al., 2008). This effect has been found to vary between regions, however, probably due to factors affecting the quality of social spending (Altinok, Pessino, and Chagajl, 2022). The importance of spending quality has been intensely studied in regard to

education spending, where it has been found that is not the number of years of schooling of individuals that matters but their cognitive abilities (Angrist et al., 2021).

- 3.6 **Effective public financial management helps to improve the use of public resources.** The literature on PFM mostly presents case studies and lessons learned from reform projects in this area. One of the main lessons from these studies is that in order to achieve the objectives of effective resource allocation and execution, PFM procedures and systems must operate efficiently and comprehensively within an institutional framework that includes appropriate rules, structures, processes, and capabilities (Uña and Pimenta, 2016). With respect to integrated financial management systems, the literature indicates that the effectiveness of these systems depends not only on their technological soundness but also the regulatory and institutional framework in which they operate (Hashim and Piatti-Fünfkirchen, 2018).
- 3.7 **The quality of public spending is affected by the management capabilities of public officials and by institutional arrangements.** The management practices that public officials are obliged to follow when exercising their functions can have potentially large effects on the quality of public service delivery. For example, excessively rigid management procedures have a negative impact on the quality of public expenditure (Rasul and Roger, 2018). In terms of institutional arrangements, different studies have found that governance structures affect the efficiency of public spending through their impact on both the cost of inputs (Bandiera, Pratt, and Valletti, 2019) and the results achieved (Muralidharan, Niehaus, and Sukhtankar, 2021).
- 3.8 **Results-based management initiatives are not always effective.** The results-based budgeting methodologies adopted in developing countries tend to be more complex than those in advanced nations (Robinson, 2022). Government capacities for implementing this tool are also weak. Lessons learned suggest choosing mechanisms that are better matched to institutional capabilities, governance structures, and the political economy surrounding public expenditure accountability. In particular, experience suggests using a more selective approach, focused on priority and/or measurable areas for results. It is also important to undertake complementary exercises, such as comprehensive spending reviews (Robinson, 2022). For these reviews to be effective, the main lesson is that strong, high-level political support is needed to ensure that the resulting recommendations are implemented (OECD, 2019a).
- 3.9 **Efficient public procurement management generates savings, reduces opportunities for corruption, and can improve the quality of public spending.** The empirical literature on public procurement has focused primarily on studying the impact on fiscal savings, with less emphasis on other outcomes. In terms of procurement methods, the literature finds that methods that foster competition tend to reduce the prices paid by governments. In this respect, there is evidence that prices are reduced by the use of framework agreements (Baldi and Vannoni, 2019) and auction-based procurement methods (Decarolis, 2014). There is also evidence that electronic platforms have positive effects, not only in terms of savings (Yakovlev et al., 2014) but also certain outcomes relating to the quality of public spending. For example, the introduction of electronic platforms in India and Indonesia led to improvements in the quality of roads and compliance with project execution timelines (Lewis-Faupel et al., 2016). Lastly, reforms to the legal

framework and management strategies regulate discretionality and reduce opportunities for corruption (Bandiera et al., 2019; Lewis-Faupel et al., 2016; and Fazekas, 2017).

- 3.10 **Fiscal transparency generates credibility and can reduce corruption.** Different studies have found that fiscal transparency levels are generally correlated with variables that reflect market perceptions of fiscal risk, such as credit ratings and credit default swap differentials on the sovereign debt (IMF, 2012; Araki and Panizza, 2019). Fiscal transparency also appears to have a positive impact in terms of reducing corruption (IMF, 2019a), thus strengthening the legitimacy of the State. The IMF's Fiscal Transparency Code emphasizes the importance of transparency regarding (i) the government's financial situation and performance; (ii) budgets and projected trends in the public finances; (iii) fiscal risks; (iv) the management of natural resource-related revenue.

### **3. Taxes and growth**

- 3.11 **Tax structures are important for economic growth and productivity.** The literature finds that economic growth is affected by both the composition of revenues and the design of specific taxes (Acosta-Ormaechea, Sola, and Yoo, 2019). These effects also depend on the economic structure of the countries concerned (García-Molina, Rasteletti, and Urrea, 2022).
- 3.12 **The existence of numerous preferential treatments in the value-added tax affects economic activity and growth.** The VAT is not considered to have a major impact on growth as it usually creates less distortions than other taxes, thus reducing the economic costs of collecting public funds (Keen and Lockwood, 2010). The design of the VAT does appear to affect economic growth. Acosta-Ormaechea and Morozumi (2021) find that in OECD countries, increased VAT revenues that are offset by reductions in the corporate income tax (CIT) boost growth where they stem from reductions in preferential treatments. This is not the case, however, when the increased revenues are due to a rise in VAT rates.
- 3.13 **The CIT ranks among the taxes with the greatest negative impact on growth.** Of all taxes, the CIT is considered to have the most negative effects on growth (Acosta-Ormaechea, Sola, and Yoo, 2019). At an aggregate level, the empirical evidence indicates that the effective CIT rate has a negative impact on aggregate investment (Bond and Xing, 2015). It also reduces foreign direct investment and entrepreneurship and increases the size of the informal economy (Djankov et al., 2010). Different microeconomic studies in developed economies find that the incentives embedded in taxes affect investment decisions (Ohrn, 2019). The effects of these incentives depend on the economic cycle (Winberry, 2021) and can be more significant for small and medium-sized enterprises (Zwick and Mahon, 2017), probably due to liquidity constraints.
- 3.14 **Preferential CIT treatments create distortions that affect economic productivity and are not always efficient in terms of achieving desired objectives.** Simplified tax regimes (STRs) can create incentives for some companies to avoid growth (Azuara et al., 2019). This, in common with other policies based on size, can have a negative impact on productivity levels in the economy (Garicano et al., 2016). These incentives to avoid growth are due not only to the higher levels of tax to be paid but also the greater compliance costs of

moving from an STR to a general regime (Harju, Matikka, and Rauhanen, 2019).<sup>21</sup> In terms of sector regimes or those aimed at attracting foreign direct investment, there is evidence that the effectiveness of these measures depends on the business climate (Van Parys and James, 2010) and that in countries with poor business environments, tax incentives are not successful in attracting investments (IDB, 2021).

#### **4. Evidence regarding the effects of tax administration**

- 3.15 The costs of tax compliance and corruption can affect taxpayer behavior.** There is some evidence that tax compliance costs affect taxpayer behavior. In the case of companies, there is evidence that these prefer to avoid growth so as to remain within an STR and avoid higher tax compliance costs (Harju, Matikka, and Rauhanen, 2019). In the case of individuals, there is evidence that some people forgo large tax savings to avoid compliance costs (Benzarti, 2020). Corruption can also affect tax morale by reducing citizens' confidence in the fiscal authorities, thus undermining tax compliance and revenue collection (Keefer and Scartascini, 2022; Gaspar and Hagan, 2016).
- 3.16 Collaboration with large taxpayers can reduce compliance costs.** Several tax administrations in OECD countries have introduced cooperative compliance programs to facilitate compliance and reduce the cost of tax enforcement with respect to large taxpayers. Although there is a lack of rigorous empirical evidence regarding the effect of these programs, participating companies and tax administrations have identified numerous benefits, such as more expeditious audits, swifter filing and settlement of returns, and fewer audits after adjusted returns are filed. These programs also help tax administrations to better use their scarce resources (OECD, 2013).
- 3.17 Digital mass communication strategies can facilitate tax compliance.** The main mass strategies implemented by tax administrations to facilitate compliance have focused on digitalizing services. Two strategies that have been used are prepopulated forms and tax payment reminders. With respect to the former, prefilled forms are often accepted by taxpayers without significant changes, pointing to a reduction in the costs of paying taxes (Chen, Grimshaw, and Myles, 2017). There is also evidence that prefilling services can affect the information and deductions reported by taxpayers, suggesting that these forms should be designed with a high degree of certainty (Chen, Grimshaw, and Myles, 2017). With respect to payment reminders, these have proven effective in increasing compliance, while the content of the messages and the method and timing of their delivery have also been found to be important (Schächtele, Eguino, and Roman, 2022).
- 3.18 There are substantial gaps in knowledge surrounding how fiscal management affects growth in Latin America and the Caribbean.** There are few rigorous studies of the practical effects of fiscal management on variables relevant to economic growth. These gaps are particularly important with respect to different tax administration practices and the management of budgets and public expenditure. In these areas, existing research consists mainly of case studies, and there are few impact evaluations. There are also knowledge gaps regarding the main determinants of foreign investment in the region and the effectiveness of

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<sup>21</sup> STRs are not always negative for growth: depending on their design and incentives, they can yield positive results (Fajnzylber, Maloney, and Montes-Rojas, 2011). They can also generate relevant third-party information for control activities by tax administrations.

fiscal incentives. Lastly, there are few studies of the potential role that can be played by automatic stabilizers in the region in promoting greater macroeconomic stability.

## **B. Fiscal management and equity**

### **1. The importance of targeting fiscal actions<sup>22</sup>**

- 3.19 **Managing targeting is essential for the efficient execution of social expenditure and subsidy policies.** The targeting problems that result from the use of static metrics are usually reduced when governments incorporate and make efficient use of the different sources of information to which they have access (Bah et al., 2019). In Pakistan, the modernization of administrative data systems and data use enhanced institutional capacity for improving the efficiency of social programs and facilitated better targeting under the national cash transfer program (Haseeb and Vyborny, 2022).
- 3.20 **Incorporating and analyzing administrative data on social identity, income, wealth, and consumption helps to identify and target informal workers more precisely** (Pessino, 2017). The success of these programs depends to a large extent on the capacity of finance ministries to implement them, as these ministries have a comprehensive, strategic overview of government expenditure and internalize the costs of budget allocations.
- 3.21 **There is potential to improve redistributive impact through individual income tax reforms that generate tax credits for low-income households.** In several developed countries with broad individual income tax coverage (e.g., the United States, Canada, and the United Kingdom), tax credits are offered to low-income households. As a result of these credits, for example, low-income workers receive subsidies for their formal work. These programs have encouraged increased labor force participation by poor households, particularly women and single mothers (Neumark and Shirley, 2020). In the United Kingdom, a tax credit increased labor participation and the number of hours worked in single-parent families (Brewer and Hoynes, 2019). In the United States, the earned income tax credit increases the likelihood of completing college by 4% and of being employed and having earnings as a young adult by 1% and 2%, respectively (Bastian and Micheltmore, 2018). Few developing countries with high levels of labor market informality offer these types of credits, and their effects in this type of context are therefore unknown.
- 3.22 **Equity may be improved by replacing current VAT exemptions on goods with refunds to low-income consumers.** This policy, which seeks to reconcile the efficiency and equity aspects of the VAT, involves eliminating exemptions from the tax base and refunding to low-income households the VAT paid on their purchases. Studies of this regime in Canada have concluded that the tax credit is a much more effective tool for improving the progressivity of consumption taxes than zero rates on basic food items (Godbout and St-Cerny, 2011). In Latin America and the Caribbean, microsimulation exercises find that these policies would increase the progressivity of the VAT and of tax systems overall (Barreix et al., 2022).

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<sup>22</sup> Policies to increase the redistributive impact of social programs are discussed in the Social Protection and Poverty SFD, Early Childhood Development SFD, Health SFD, and Skills Development SFD. Subsidies for power and other utilities are discussed in the Energy SFD, Water and Sanitation SFD, and Transportation SFD.



- 3.23 **Reducing corporate and individual income tax evasion would improve the progressivity of the tax system.** Equity is undermined by evasion concentrated among taxpayers with high levels of income and wealth (Alstadsæter et al., 2019). This is clear in Latin America and the Caribbean, given that this segment of individuals and companies potentially constitutes the main source of individual income tax revenue (Gómez-Sabaini and Morán, 2020). In addition, the analysis of information from audits, tax amnesties, and leaks from financial institutions shows that tax evasion by high-income, high-wealth taxpayers has large effects on inequality, due to these individuals' high concentration of wealth offshore and in tax havens (Alstadsæter et al., 2018). There are also various taxes that are not being adequately exploited and that could increase the progressivity of the tax system (e.g., those on property and gifts and inheritances) (Pineda et al., 2021).
- 3.24 **Accessing and using third-party information for analytical purposes is key for reducing evasion.** Recent studies show that the use of notifications based on information from third parties and the tax administrations themselves improved tax compliance and increased declared earnings in Ecuador and Costa Rica (Carillo et al., 2017; Brockmeyer et al., 2019;). In the state of Piauí, the PROFISCO fiscal modernization program allowed information from the electronic fiscal invoice (NF-e) to be cross-checked against taxpayer returns under the STR, allowing the tax administration to detect high rates of noncompliance (64%) (Bando et al., 2021).

## **2. Fiscal policy and informality**

- 3.25 **Reductions in employment taxes and contributions can encourage labor formalization.** In Colombia, a tax reform that reduced employer payroll contributions increased formal employment by more than 3% and reduced informal employment by more than 2.9%. Wages in the formal sector grew by around 1.9% (Kugler, Kugler, and Herrera-Prada, 2017). Nonetheless, reducing employment taxes and contributions may not lead to increased formality, particularly if there are weaknesses in monitoring companies, as in the case of Peru (Jaramillo, 2013).
- 3.26 **Tax subsidies or credits for low-income workers can also encourage formalization.** In the United States, studies estimate that increases of 10% in the earned income tax credit led to declines of 5.8 to 7.3 percentage points in male participation in the informal sector (Gunter, 2013). In Latin America and the Caribbean, simulations show that introducing a negative income tax in five countries could lead to a formalization rate of 57% among informal wage earners in the second quintile alone (with greater benefits for women, at 71%, versus 47% for men) (Pessino et al., 2021).
- 3.27 **The design of social policies can create unintended incentives for informality.** This can be the case with respect to conditional and unconditional transfers for poor and vulnerable individuals, who lose these benefits once they find sufficiently well-paid formal work. The magnitude of these effects can vary depending on the characteristics of the programs. Studies in Argentina and Uruguay have found large effects (Garganta and Gasparini, 2015; Bérgolo and Cruces, 2021), while one in Brazil found a moderate impact (De Brauw et al., 2015). In other cases, the effects can be nonexistent (see the Social Protection and Poverty SFD).
- 3.28 **The design of noncontributory benefits (health and pensions) can also discourage contributions during the active work stage.** In Colombia, Farné,

Rodríguez, and Ríos (2015) found that the subsidized health regime, which offers the same services as the contributory regime, increased the probability of informality by around 20 percentage points. In Chile, Attanasio, Meghir, and Otero (2011) found that formal labor market participation fell as a result of the 2008 social security reform, which provides an income to older adults who fail to save enough for a minimum pension. Participation declined by 4.1% in the case of workers over 40 and by 3.2 and 2.8 percentage points in the case of men and women ages 56 to 65, respectively.

- 3.29 **The effect of STRs on business informality levels depends on their design** (Galiani, Meléndez, and Ahumada, 2017). There have been some successful experiences in the region, particularly with respect to systems that provide very generous tax treatment. According to Alaimo et al. (2015), Brazilian companies that chose to formalize their operations after such a policy was implemented have exhibited higher revenue and profits, employ more workers, and are more capital-intensive. In Belo Horizonte, De Andrade, Bruhn, and McKenzie (2016) have found that an inspection increases the likelihood of formalization by 21 to 27 percentage points. Various studies have found that STRs can have a negative impact on economic efficiency (see paragraph 3.13).
- 3.30 **Promoting formalization also requires improvements in the auditing of productive enterprises (either labor or tax audits or ideally a combination of the two).** Brazil is a prime example of the use of greater numbers of inspectors, a process that was accompanied by a change in incentives for inspectors, with bonuses linking wages to performance targets. According to Fairris and Jonasson (2016), an increased rate of labor inspections had a positive impact on labor formalization. Moreover, according to Almeida and Carneiro (2012), the increase in labor inspections had no impact on employment or wages in the informal sector.
- 3.31 **The ability to implement tax enforcement measures needs to be expanded in order to lower informality rates.** The effectiveness of enforcement depends on the availability of reliable information to tax administrations and their ability to extract that information (Pomeranz and Vila-Belda, 2019). It is also important that the administrative records of different authorities (tax, labor, and social security) be shared in order to strengthen enforcement efforts. An evaluation of the PROFISCO program in Brazil's states shows that business formalization rose by 3% on average as a result of interventions to promote electronic tax invoices, as well as audit strategies that made use of the resulting data for analytical purposes.
- 3.32 **Access to third-party data can increase the formality of transactions.** In Chile, Pomeranz (2015) finds that the trail created between companies by the VAT system helps to discourage and prevent tax evasion. Similarly, in São Paulo, Naritomi (2019) finds that a program to combat tax evasion by compensating consumers for ensuring that companies report their sales led to an increase of at least 21% in reported sales over a four-year period.

### **3. Fiscal policies and gender equity**

- 3.33 **Incorporating a gender focus into budgets can help to promote gender equity.** International experience reveals the importance of incorporating a gender focus into the budget cycle, as this can help to highlight the relationship between government actions and gender gaps. The planning phase is crucial, as it allows the analysis of gaps and discussion of options for eliminating them. During the preparation stage, gender issues can be promoted across the entire government

through budget circulars that provide guidelines for taking gender impact into account when formulating the budget. Lastly, the inclusion of gender gap performance indicators can facilitate evaluation of the effectiveness and impact of programs and budget allocations in the area of gender (Alonso-Albarran et al., 2021).

- 3.34 **Public procurement provides opportunities to promote the inclusive economic growth of women and other diverse groups.** Public procurement is an important vehicle for implementing fiscal policies to promote women's economic advancement and empowerment. It can help to promote gender equality through the use of innovative contracting models, market studies, certification, business intelligence, targeted training, and digital tools, all of which can eliminate the gaps and barriers to entry faced by women-led companies and other underrepresented groups in the economy (OECD, 2021b).
- 3.35 **Tax systems can create differential incentives for women to participate in the labor force.** In OECD countries with joint individual taxation systems, post-tax earnings after entering employment can be lower for married women, who are often the secondary source of income within couples. This discourages them from participating in the labor market (LaLumia, 2017). Bick and Fuchs-Schündeln (2017) show that the supply of female labor would have been almost 8% higher in the United States and 35% higher in Belgium in the absence of joint labor taxation. Similarly, tax incentives for low-income households can have a greater impact on female labor supply. In the United States, the earned income tax credit encourages work by low-income individuals, with the most significant impact on the labor supply of single mothers (Bastian, 2020).
- 3.36 **Knowledge gaps remain surrounding the impact of fiscal policy on inequality and equity.** Although there are numerous studies of the redistributive impact of fiscal policy in Latin America and the Caribbean, the great majority of these are based on analyses of statutory incidence that do not take general equilibrium effects into account. As a result, little is known regarding the economic incidence of fiscal policy. Knowledge of the dynamic effects of fiscal policy on inequality and equity is also scant. With respect to informality, although numerous studies have been conducted, analysis needs to be deepened of the circumstances under which different policies are more effective. Lastly, in the area of gender equity, existing studies are almost exclusively focused on identifying best practices, with little or no knowledge of the real impacts of these practices on equity.

### **C. Fiscal management and sustainability of the public finances**

#### **1. Evidence regarding the effects of fiscal consolidation programs**

- 3.37 **Fiscal consolidation programs are usually more successful when they are based on structural reforms and robust fiscal institutions.** Fiscal adjustment plans are more likely to achieve debt reduction objectives where they are based on structural reforms that combine different fiscal instruments (Mauro and Villafuerte, 2013). It is also important that strong fiscal institutions exist that can sustain fiscal consolidation programs over time (Daniel et al., 2006).
- 3.38 **The costs associated with fiscal consolidation programs depend on how the latter are structured and whether they are accompanied by other, supporting policy instruments.** The main factors affecting the cost of consolidation programs are the composition of said adjustments (see paragraphs 3.38 and 3.39), their

timing, and the speed with which measures are introduced. In terms of timing, several studies have found that the economic costs of consolidation processes are lower during periods of expansion, due to lower spending and tax multipliers (Ramey and Zubairy, 2018). Although there is limited evidence regarding the speed of adjustment, gradual consolidations are usually considered more effective under normal circumstances, while “cold shower” adjustments are more effective during periods of rapid increase in the debt (Molnar, 2013). Lastly, supporting public policies also reduce the costs of fiscal consolidation programs. For example, accommodative monetary policy can reduce the costs of fiscal consolidation programs (Alesina et al., 2018).

- 3.39 **The composition of fiscal consolidations can influence the impact on economic activity.** In developed economies, adjustments based on expenditure cutbacks have a lower impact on GDP than those based on tax increases (Guajardo, Leigh, and Pescatori, 2014). This may be because taxes are already high in most developed economies, creating higher negative tax multipliers in these countries. This finding of lower negative impacts of revenue-based adjustments on economic activity does not appear to hold in Latin America and the Caribbean (Carriere-Swallow, David, and Leigh, 2018). Several factors may explain this result. First, taxes in most countries in the region are lower than those in the developed economies, implying a lower tax multiplier (Gunter et al., 2021). Second, high levels of informality in the region may reduce the contractionary impact of higher taxes (Lemaire, 2020).
- 3.40 **Not all expenditure cuts or tax adjustments have the same impact on economic activity.** On the expenditure side, the literature finds that not all expenditure cuts have the same contractionary effect. In particular, the literature finds that cuts to investment spending have a greater contractionary effect than those in other spending categories. In this respect, Ardanaz et al. (2021b) find that a fiscal consolidation of 1% of GDP reduces real GDP by 0.4% on average. Where public investment is penalized in relation to public consumption, however, leading to a reduction in its relative share of public spending, a 1% of GDP consolidation reduces output by 0.7%. In the case of taxes, although there is no definitive consensus surrounding the effects of different types of taxes, the evidence appears to indicate that adjustments based on expansion of the tax base have a lower contractionary impact than those based on increased tax rates (Dabla-Norris and Lima, 2018).
- 3.41 **The impact of fiscal consolidations on inequality can be reduced by measures to protect the most vulnerable groups during these processes.** Fiscal consolidation programs tend to create temporary increases in inequality due to their effects on employment and wages (Ball et al., 2013). The impact on inequality is also affected by the size of the adjustment (Agnello and Sousa, 2014) and the degree to which it is based on expenditure measures (Woo et al., 2013). These negative effects can be offset, for example, by considering tax progressivity or protecting social benefits and subsidies (Woo et al., 2013). In addition, the chances of successful consolidation are increased where measures are included to protect vulnerable groups (Agnello and Sousa, 2014).

## **2. Evidence regarding fiscal risks**

- 3.42 **Effective fiscal risk management can improve government financial planning and build market confidence.** The management of fiscal risks can be improved

by developing a good understanding of these risks and maintaining transparency surrounding them; this can reduce the negative fiscal effects of any risk materialization (IMF, 2018). The literature regarding fiscal risks is based primarily on case studies and the identification of good practices in relation to dissemination, analysis, and management. One such good practice is the creation of fiscal risk management units within ministries of finance or treasuries. These units have been useful for detecting, assessing, and mitigating different fiscal risks (Rivetti, 2021).

- 3.43 **Efficient management of the public debt is key for reducing fiscal risks.** Good public debt management can reduce fiscal pressures, free up resources for urgent fiscal expenses, and avoid debt crises (World Bank, 2022). Fiscal sustainability analyses are a critical tool for identifying fiscal risks (Valencia, Díaz, and Parra, 2022) and determining sustainable paths for the public finances (Powell and Valencia, 2022). It is important to incorporate the macroeconomic context effectively into these analyses so that monetary and fiscal policy stances are taken into account in the projected debt path. This facilitates more credible analysis of whether risk and cost objectives are met under stress scenarios (World Bank, 2021).
- 3.44 **The appropriate management of contingent liabilities should foster neutrality and transparency, converting implicit liabilities into explicit ones wherever possible** (OECD, 2013). The principle of neutrality refers to the more efficient use of financial instruments, regardless of their expediency in terms of the public accounts. To achieve neutrality, it is crucial for the authorities to have information on the possible effects of the materialization of contingent liabilities (Lindwall, 2013b). It is also recommended that the bias in favor of extending guarantees be reduced. To this end, and wherever possible, liabilities should be paid directly or charges imposed in return for explicit guarantees (Lindwall, 2013b). In terms of transparency, good practices entail revealing the full extent of the potential costs of contingent liabilities, both ex ante and ex post. In addition, the authorities should provide analysis of the nature of the different contingent liabilities and quantify these where possible (IMF, 2018).
- 3.45 **Specific actions should be undertaken to adequately manage the different types of fiscal risks and contingent liabilities.** Given the different nature of fiscal risks and contingent liabilities, different strategies are required to manage these effectively. Annex IX presents best practices for managing contingent liabilities relating to guarantees, PPPs, and State-owned enterprises, as well as risks arising from climate events and disasters.

### **3. Evidence regarding the effects of fiscal institutions**

- 3.46 **The flexibility and strength of mechanisms for monitoring fiscal rules can increase the effectiveness of these rules in promoting fiscal sustainability.** Following the 2008/2009 global financial crisis, the prevailing fiscal rules underwent a series of reforms (Eyraud et al., 2018). These reforms were characterized by an expansion of the flexibility of fiscal rules, with clearer escape clauses and rules governing the adjustment of fiscal indicators in response to factors other than the GDP cycle. Another observed trend is the implementation of expenditure rules, which are easier to monitor and facilitate countercyclical fiscal policies by restraining spending increases in times of expansion (Belu Manescu and Bova, 2020). Many reforms also improved accountability procedures, particularly those that included direct monitoring mandates for IFCs. Nonetheless,

the quest for greater flexibility has made fiscal rules increasingly complex, and in some countries an excessive number of rules have been created, creating inconsistencies and confusion (Odor and Kiss, 2017).

- 3.47 **Independent fiscal councils have proven effective tools for fostering fiscal sustainability.** Countries with IFCs tend to provide more precise, less biased macroeconomic projections and official budgets, and IFCs increase the probability of compliance with fiscal rules (Beetsma et al., 2019). The effectiveness of IFCs also depends on their political and institutional independence, a strong public profile, and an explicit role for them in monitoring fiscal rules (Debrun et al., 2013).
- 3.48 **Well-designed stabilization funds can contribute to fiscal sustainability.** The evidence indicates that stabilization funds can be effective in supporting fiscal sustainability. To this end, there is a need for (i) clear rules for the accumulation, investment, and use of resources, and (ii) transparency and accountability standards for compliance with the rules and the investment of funds (Bacon and Tordo, 2006; Asfaha, 2007). In addition, these funds are more effective when they are complemented by other instruments. A good practice, for example, is to adopt fiscal rules that separate out the component relating to the extractive industries, with the objective of isolating the impact of commodity price volatility on fiscal policy (Ossowski and Halland, 2016). Lastly, the evidence indicates that political economy and governance frictions can weaken the effectiveness of these funds (Dabán and Hélis, 2010).
- 3.49 **The main knowledge gaps with respect to fiscal sustainability are in the area of risk management.** Given the history of fiscal crisis in the region, there is a considerable amount of literature on this topic. The main knowledge gap surrounding fiscal sustainability relates to the management of specific fiscal risks. In this field, the literature on the countries in the region consists primarily of case studies, and there are no impact evaluations that would allow the quantitative effect on fiscal sustainability to be identified.

#### **D. Fiscal management and climate change**

- 3.50 **Carbon taxes can help to reduce emissions, but their impact has been marginal and they cannot, on their own, enable the transition to net zero emissions.** Economic theory has established that carbon taxes can, in principle, be an effective tool for reducing emissions (Nordhaus and Boyer, 2000). However, the transition to carbon neutrality will not be achieved through marginal reductions in emissions (for example, by encouraging reductions in vehicle use or incentivizing the use of existing gas-fueled power plants instead of coal plants). Rather it will require investing in the capital, technology, and infrastructure necessary to move toward net zero emissions (Vogt-Schilb et al., 2018). The empirical evidence to date indicates that the carbon pricing mechanisms used throughout the world have facilitated a marginal reduction in emissions but have failed to influence investment in the transition to net zero emissions (Lilliestam et al., 2021). In addition, the absence of a carbon price is just one of the barriers hindering the transition (Stock, 2019). Economic theory emphasizes the need to provide incentives for technology innovation and adoption to reduce emissions (Acemoglu et al., 2012). In addition to innovation, other examples of government and market failures that are as important as, or even more important than, the absence of a carbon price are the lack of adequate infrastructure, regulations and market designs that favor high-emission technologies, and a lack of information

and capacity. Accordingly, a broad array of government interventions will be required to enable the transition to a net zero economy.

- 3.51 **Reforms to fuel subsidies may be a powerful tool for reducing emissions, but they are complex to implement.** Several studies have used general equilibrium models to analyze reforms that reduce fuel subsidies, finding substantial benefits in terms of reducing emissions. For example, Merrill et al. (2015) simulate the elimination of fossil fuel subsidies in 20 countries, finding an average reduction in greenhouse gas emissions of around 11%. Meanwhile, Coady et al. (2019) find that reforms that establish efficient prices for fossil fuels would reduce annual carbon emissions by up to 28%. Despite the potential benefits in terms of reducing emissions, international experience shows the political difficulty of reducing these subsidies. This is partly due to the possible effects on inequality and poverty (Feng et al., 2018).
- 3.52 **Mainstreaming climate change in public financial management.** The literature in this area consists mainly of analyses of initiatives implemented by different countries, which are used to identify common principles and good practices. With regard to green budgeting, good practices include (i) determining plans and strategies to help guide fiscal planning, investments, and other revenue and expenditure decisions; (ii) designing strong institutional arrangements with clearly defined roles and responsibilities, together with a timeline for required actions and deliverables; and (iii) developing tools that support decision-making and strengthen monitoring and accountability mechanisms (OECD, European Commission, and IMF, 2021). International experience also reflects specific lessons learned in the implementation of green public financial management strategies. The main lessons learned indicate that green PFM reforms should (Gonguet et al., 2021) (i) be integrated with existing PFM reform programs to ensure that they reinforce each other; (ii) enjoy strong political support and ownership on the part of key actors; (iii) include training for key actors in PFM processes; and (iv) be sequenced appropriately.
- 3.53 **Planning with regard to different time horizons is crucial for ensuring consistency in public actions.** For long-term strategies to be effective and useful, these must include the participation of both environment and sector ministries and finance/planning ministries (Elliott et al., 2019). These overarching strategies should also be reflected in countries' medium-term fiscal plans (e.g., MTEFs and MTEFs). It is also important that results-based management actions be introduced in the area of climate expenditure. Important practices include ex post program evaluations and general evaluations of green expenditures (OECD, European Commission, and IMF, 2021). The use of budget tagging has also grown, representing an initial step toward linking government actions with climate targets (Bova 2021; OECD, 2021c). The main lessons emerging from budget tracking experiences include the importance of recognizing both positive and negative expenditures. It is also important to consider the level of granularity required in the tags, as well as flexibility in incorporating the changes into climate objectives (OECD, European Commission, and IMF, 2021).
- 3.54 **An important aspect of fiscal planning is the management of risks stemming from climate events.** A first significant step in developing fiscal strategies to address climate events is understanding the exposure and vulnerability of public finances to climate risks (OECD, European Commission, and IMF, 2021). Once the risks have been identified, it is important to ensure that the sustainability of the

public finances will not be endangered if events materialize. It has therefore been useful to incorporate climate risk-related shocks into traditional debt sustainability analyses (OECD, European Commission, and IMF, 2021). To reduce the impact on the public finances, many countries have transferred these risks to third parties through the use of hedging. As these risk-transfer instruments are usually costly, the recommendation arising from the literature is that countries should only insure against remote events in which access to financing may be interrupted (Cevik and Huang, 2018).

- 3.55 **Climate-sensitive public investments will require the strengthening of institutional frameworks.** The International Monetary Fund (IMF, 2021) identifies different key stages in the management of public investment to support climate mitigation and adaptation objectives. At the planning stage, it is key to promote alignment between investment portfolios and national and sector plans so that the climate resilience and sustainability of infrastructure is transformed. Consistency between strategies for the transition to a low-carbon economy should also be promoted at this stage, thus reducing fiscal risks associated with stranded assets. During the investment planning stage, financing strategies should also be considered. One tool that has proven useful in this area is green taxonomies, which facilitate the identification of sustainable investments (World Bank, 2020). With regard to the project evaluation and selection stage, it is important to develop tools and methodologies for including mitigation and adaptation analyses in project evaluations. In terms of mitigation, it is important that the social price of carbon be included so that the negative effects of climate change can be internalized in cost-benefit analyses (OECD, 2018). With respect to adaptation, it is important to include resilience evaluations for both new projects and maintenance ones, as the returns to including resilient designs and risk management actions are generally high (Mechler, 2016).
- 3.56 **Delays in implementing decarbonization actions may increase the cost of stranded assets in future, as investments will continue in fossil fuel power plants, oil and gas infrastructure, and refineries, among other things.** A study from South Africa finds that approximately 75% of the potential economic risks and effects of decarbonization relate to factors outside the control of the country's government but which nonetheless place significant pressure on the public finances. This study also shows that the government still has time to mitigate much of this risk if swift action is taken (Huxham, et al., 2019).
- 3.57 **There are wide knowledge gaps in the area of fiscal policy and climate change.** Most of the issues discussed above are based on case studies, and there is scant evidence regarding the real effectiveness of the measures proposed. This is particularly true with respect to public financial management. Despite their importance, the role that subnational governments can play in climate change mitigation and adaptation is unclear (Smoke et al., 2022).

#### **IV. LESSONS LEARNED FROM THE IDB GROUP'S EXPERIENCE IN THE FISCAL SECTOR**

- 4.1 **In collaboration with the Knowledge Management Division (KNL/KNM), a series of lessons learned were drawn from the IDB Group's experience in the fiscal sector.** The main lessons are summarized below, divided into categories based on whether they are strategic, technical, or operational in nature.



**A. Strategic lessons**

- 4.2 Being a key ally in the design and implementation of fiscal reforms requires technical capacity, ongoing dialogue, and knowledge of local realities.** In many countries in the region, the Bank has acted as an impartial mediator in different fiscal reform design and implementation processes, promoting dialogue and consensus between the different actors and building trust around the implementation of politically and institutionally complex processes. The Bank was able to play this role because of its technical expertise and continuing training for specialists, its close coordination with other development partners, and its permanent presence in the countries in the region, and understanding of local realities.<sup>23</sup> The latter has allowed it to maintain a permanent dialogue with national authorities, the private sector, civil society, and other development partners, resulting in deep institutional knowledge.
- 4.3 The use of different Bank instruments allows comprehensive support to be provided during the different phases of fiscal interventions.** It also makes it possible to create synergies between policy interventions and fiscal management ones.<sup>24</sup> Technical assistance and technical cooperation funding can deepen dialogue and the design of fiscal reforms. Policy-based loans can promote the enactment of legislative changes and fiscal regulations, while investment loans can foster the effective and sustainable implementation of these policy and management reforms. The use of different instruments in the different phases of fiscal interventions can therefore be advantageous.
- 4.4 Coordination with multilateral development organizations is key for making headway on designing and implementing fiscal reforms and modernizing management to shore up fiscal performance.** This coordination is based on various activities carried out together, including: (i) creating knowledge (i.e., books and various publications) and in-depth diagnostic assessments of fiscal management and policy (i.e., Public Expenditure and Financial Accountability, Public Investment Management Assessment; Tax Administration Diagnostic Assessment Tool, and Methodology for Assessing Procurement Systems); (ii) holding regional dialogues and seminars for sharing knowledge and exchanging experiences and good practices (i.e., fiscal policy and gender equality or international taxation in the digital economy); and (iii) designing and executing complementary operations that lead to synergies between fiscal targets, policy reforms, and modernization of fiscal management (i.e., sector development loans, programmatic policy-based loans, and investment projects under the framework of IMF programs). Regional coordination is also important for more effective taxation that reduces evasion and increases the tax base, such as the coordination with the OECD and other development partners on base erosion and profit shifting (BEPS) and ultimate beneficial ownership (UBO).
- 4.5 Progress toward mainstreaming climate change and gender considerations in fiscal interventions requires strategies for working with governments and other areas within the IDB.** In recent years, the Fiscal Management Division (FMM) has expanded the inclusion of aspects relating to climate change and

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<sup>23</sup> These lessons learned are also highlighted in the "Review of Bank Support to Tax Policy and Administration" prepared by OVE.

<sup>24</sup> Both lessons learned are covered in the aforementioned OVE document.

gender in its interventions. This has been due in part to the development and implementation of a joint work agenda with the climate change and gender and diversity divisions, which has helped to expand the fiscal sector's work in these areas. Given that the work of the region's finance ministries in this sphere is mostly at an early stage, the Bank has also organized events and provided support in specific areas. This has been key in facilitating subsequent dialogue with governments.

## **B. Technical lessons**

### **1. Growth lessons**

- 4.6 **The design and implementation of loans to support structural reforms requires adequate sequencing of policy measures and an acknowledgment of political economy constraints.** IDB actions indicate that to enhance the likelihood a fiscal reform will be successful, it is important to (i) ensure that policy measures are adequately sequenced and introduced gradually, combining regulatory progress with improvements in technical capabilities; (ii) take into account the interests and capabilities of the organizations responsible for implementation; (iii) ensure appropriate coordination between the different bodies participating in the design of the reforms; and (iv) provide for early actions to enhance the sustainability of the reforms. To this end, it is also important to design and implement communication strategies that facilitate consensus for the design and approval of reforms.
- 4.7 **Digital tools and technologies are powerful instruments for increasing revenue collection and reducing public expenditure inefficiencies.** The inclusion of technologies in fiscal projects is usually more effective where it is part of a comprehensive strategy for the digital transformation of institutions and where there is strong leadership on the part of management bodies. Other lessons learned from technology projects involve the need to (i) use a gradual, modular approach to facilitate improved project management and sustainability; (ii) focus on users, fostering their participation in system design and implementation; (iii) ensure that there is a user service center available during transition periods; and (iv) ensure that sufficient financial and human resources are available for system maintenance and updates. With regard to analytics projects, it is important to develop robust data governance arrangements and data exploitation capabilities.
- 4.8 **A comprehensive approach to public investment management is required.** The Bank's experience underlines the need for a comprehensive vision of all stages of the project cycle, including, among other things, the introduction of an adequate balance between the influence of investment systems, capacity-building for the different stages of public investment management, and ensuring that investments are consistent with the countries' development plans. It is also important to have project information systems that facilitate the elimination of investment gaps, based on the creation of sound investment planning and prioritization processes; the participation of entities from all levels of government, sectors, and subsectors; and the real-time monitoring of execution. Likewise, it is important to strengthen preinvestment processes and methodologies in order to expedite subsequent stages of the investment cycle.

## 2. Equity lessons

- 4.9 **Importance of diagnostic tools for informing the redistributive impact of fiscal policies.** Most countries in Latin America and the Caribbean either lack powerful tools for carrying out analyses of the incidence of fiscal interventions (whether in relation to income levels, labor formality, geography, gender, or race and ethnicity) or fail to undertake such analyses systematically. Such tools have been useful for providing information on the redistributive impacts of reforms supported by the Bank.
- 4.10 **Digital technologies and data analysis are powerful tools for improving targeting and reducing leakages.** The use of government and third-party administrative data has been useful for reducing leakages. A recent Bank experience in preparing a program in Panama highlights the importance of early coordination with the different government agencies responsible for the information to be used, with a view to fostering cooperation, aligning expectations, and coordinating interventions.

## 3. Fiscal sustainability lessons

- 4.11 **Creating fiscal institutions does not always lead to improvements in fiscal outcomes.** The Bank has helped several countries to introduce or modernize their MTFs and fiscal rules, but these efforts have not always been effective in containing growth in the debt. This has sometimes been the result of a lack of accountability mechanisms, and in such cases the creation of an independent fiscal council (IFC) has been recommended. IFCs can be useful, but it is recommended that they receive technical support to strengthen their technical capabilities.
- 4.12 **The effective management of specific fiscal risks requires that methodologies be developed to quantify fiscal impacts.** The IDB Group's experience of specific fiscal risks relates mainly to the risks associated with PPPs and State-owned enterprises. IDB Invest's experience of PPP projects shows that structures that include government payment guarantees (minimum revenue payments, availability payments, etc.) help to ensure the feasibility of projects that otherwise would not be undertaken. Nonetheless, poorly structured projects can inflict high costs on governments and lead to the termination of PPPs. In the case of fiscal risks associated with State-owned enterprises, experience shows that operational deficits can be reduced through the creation of supervision and monitoring units, though these units must be robust and managed on the basis of technical criteria.

## 4. Climate change lessons

- 4.13 **Long-term decarbonization strategies are useful, as they help to identify the regulatory and policy reforms that are needed and can guide public investment prioritization.** Knowledge outputs that have been prepared highlight the importance of planning for effective spending and reducing the risks of the energy transition. IDB Group loans have supported the design and implementation of roadmaps for a fair and orderly transition, including the gradual closure of coal-fired power plants. To be effective and useful, it is important that the countries themselves design the strategies, with the participation of the environment ministry, sector ministries, and the finance or planning ministry. The strategies

must be subject to consultation when investments are being assessed and prioritized, so that the risk of stranded assets can be anticipated and managed.

- 4.14 **Progress toward the inclusion of fiscal climate actions requires the development of specific methodologies and guidelines to orient the different departments within finance ministries, as well as other ministries.** Given nascent capabilities and the lack of knowledge in many countries, the preparation of methodologies and guidelines has been effective for mainstreaming climate change issues. This has been useful in the areas of public investment, procurement, and risk management.

**C. Operational lessons**

- 4.15 **Use specialized assistance to review the technical specifications of information technology (IT) products and systems.** Interventions to modernize tax administration and public financial management have included increasingly substantial IT components that demand highly specific technical knowledge. Given that these components are crucial for the effectiveness and sustainability of interventions, operations benefit greatly from the availability of specialized assistance for reviewing technical specifications and preparing the bidding documents for IT products and systems. The creation of the digital services unit in FMM, responsible for supporting the preparation, execution, and evaluation of projects, has proven important for strengthening the design and execution of operations. There is also a need to build synergies with IDB Lab surrounding innovative digital ventures to improve the effectiveness of public management (GovTech), as in the case of smart government bidding processes in Costa Rica.
- 4.16 **Create synergies with other Bank sectors.** The use of double booking in the division's loans reflects the collaboration efforts of FMM specialists and a proactive attitude toward providing comprehensive solutions to the challenges faced by the countries. This mechanism also allows the division to develop new areas of work. Support provided by FMM to the following areas of the Bank has been of particular note: the environment division (regarding fiscal instruments for environmental sustainability); the migration unit (the fiscal impact of migration); and the social sector (for addressing the COVID-19 crisis). It has also collaborated with the trade and integration sector in relation to the business environment and coordination between tax and customs administrations.

## V. LINES OF ACTION FOR IDB GROUP WORK IN THE FISCAL SECTOR

- 5.1 **The Fiscal Management SFD proposes indicative activities for the IDB Group's work in the sector that seek to help improve the design and management of fiscal policies and institutions, so as to foster robust, equitable growth that is both fiscally and environmentally sustainable.** Given the significant challenges identified in Section II, the different indicative activities will seek at all times to attract investment and mobilize private sector resources in order to accelerate progress towards the proposed development objectives. Four lines of action are proposed that will be adapted to the realities of each country in the region (including fragility, conflict, and violence), with a view to taking regional heterogeneity into account. These lines of action will be addressed through policy dialogue and technical and operational assistance. The aim will also be to address the main knowledge gaps identified in this document. The IDB Group's three windows will address the lines of action in a coordinated manner.<sup>25</sup>
- A. Line of action 1. Enhance the contribution of fiscal policy and management to economic growth**
- 5.2 **Promote countercyclical fiscal policy** that fosters stability and certainty, thus encouraging private sector investment. This will seek to provide support to strengthen stabilization funds and reform fiscal rules at both the national and subnational levels, including the elimination of anti-investment bias. The Bank will also promote the greater use of automatic fiscal stabilizers.
- 5.3 **Improve the quality and efficiency of public spending** so as to expand the delivery of better-quality public goods and services that improve the business environment. To improve the allocative efficiency of public spending, the Bank will encourage comprehensive spending reviews and institutional strengthening for the design and monitoring of priority initiatives, allowing efforts to be focused on key projects. With respect to PFM, the Bank will aim to provide support for institutional and technological modernization processes, promoting the use of technologies for the efficient programming and execution of resources and for greater fiscal transparency, to allow for expanded access to information and improve its compilation and publication, thus potentially reducing corruption. Work will also endeavor to focus on two additional PFM fields: public investment management (including PPPs and intergovernmental coordination) and public procurement.
- 5.4 **Increase the efficiency of tax systems**, ensuring that adequate incentives are created for mobilizing private sector resources. In particular, the IDB Group will promote improvements in the efficiency, neutrality, and simplicity of tax systems, with a focus on reducing highly distortionary, regressive taxes and fiscal incentives, reforming preferential treatments that do not promote investment, and effective and efficient taxation of certain sectors linked to the digital economy and extractive industries. Regional coordination and coordination with development partners will be promoted, to reduce evasion, increase the tax base, and boost fiscal transparency, with synergies in knowledge production, holding seminars for

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<sup>25</sup> The main synergies between the IDB and IDB Invest will be in the areas of public-private partnerships, climate finance, and institutional and policy strengthening to buttress business environments. The main synergies between the IDB and IDB Lab will be related to strengthening partnerships with the private sector for innovation in the public sector (GovTech), to make public administration more effective.

dialogue and exchanging experiences, and with loan and technical cooperation operations.

- 5.5 **Facilitate tax compliance and strengthen enforcement.** The IDB Group will promote modernizing the institutional and technological features of their tax administrations. Given the importance of information for facilitating and enforcing tax compliance, advising will be provided on strengthening infrastructure, analytical capabilities, and governance and data security frameworks, to allow the development of solutions for facilitating and enforcing compliance. There will also be an effort to assist in the development and improvement of taxpayer services and to introduce collaborative schemes for large taxpayers.

**B. Line of action 2: Increase the redistributive impact of fiscal policy**

- 5.6 **Increase the impact of fiscal policy and management on inequality and equity.** The IDB Group will promote cross-sector reforms that increase the progressivity of public expenditure. It will also promote the elimination or curtailment of tax benefits that benefit the high-income population, together with the reimbursement to poor households of consumption taxes paid on formal sector transactions. In addition, it will promote improvements in reducing evasion and improving the targeting of expenditure and subsidies for electricity and public utilities. Regional, gender, and racial and ethnic equality will also be fostered. In relation to gender equity, based on an initial diagnosis of current conditions and the closing of knowledge gaps regarding intervention possibilities and their impacts, an effort will be made to provide assistance to develop and implement gender-focused approaches in budget and procurement management, as well as in capacity-building for the inclusion of gender and diversity perspectives in fiscal actions, including tax reforms and reforms related to private sector participation, in close coordination with IDB Lab and IDB Invest.

- 5.7 **Promote greater formalization of employment and businesses.** The IDB will promote formalizing employment, businesses, and transactions by expanding incentives and reducing explicit or implicit taxes and contributions for formal sector workers, particularly those with low incomes. It will also help to strengthen benefit targeting and audit processes, in addition to the cross-checking of data from tax, labor, and social security sources.

**C. Line of action 3: Support fiscal consolidation processes and strengthen fiscal institutions for the sustainability of the public finances**

- 5.8 **Improve the design of fiscal consolidation programs.** The IDB Group will seek to support the design and implementation of comprehensive fiscal consolidation programs that strike an appropriate balance between short-term adjustments to revenue and expenditure while bolstering the credibility and sustainability of the public finances in the medium and long term. These programs will seek to be adapted to local economic, institutional, and political economy contexts. The Bank will also endeavor to promote these programs including structural reforms aimed at protecting investment and social protection spending while promoting a rapid return to inclusive growth, sustained by private sector resource mobilization.
- 5.9 **Strengthen the management of fiscal risks and factors affecting medium-term sustainability.** Strengthening of national and subnational public debt management will be encouraged, so as to mitigate macroeconomic risks and improve the efficiency of debt management in terms of costs and financing risks.

Institutional strengthening will also be promoted to improve the management of fiscal risks associated with different contingent liabilities and to increase the use of financial instruments related to climate commitments.

- 5.10 **Improve the design of fiscal institutions to more effectively promote fiscal sustainability.** The IDB Group will seek to support the countries of the region in strengthening their macrofiscal institutions. To this end, it will promote building the capabilities of finance ministries to improve medium-term fiscal planning. The introduction or reform of fiscal rules to effectively promote fiscal sustainability and the countercyclical management of the public finances will also be encouraged, in addition to the creation of IFCs and improvement of their design and operation. In the case of countries with abundant NNR, the Bank will promote the introduction or reform of stabilization/intergenerational saving funds and the design of fiscal rules that minimize volatility stemming from NNR revenues.

**D. Line of action 4: Enhance the contribution of fiscal policy to climate change management**

- 5.11 **Contribute to reductions in greenhouse gas emissions to mitigate climate change.** The IDB Group will endeavor to assist the countries in the region to create the correct incentives for reducing emissions. On the revenue side, it will encourage policy reforms that increase the price of emitting carbon and other greenhouse gases, either through taxes, carbon markets, or by reducing energy subsidies, supplementing these reforms with measures to protect the most vulnerable population groups. On the expenditure side, it will seek to support reviews of fossil fuel subsidies and strengthen national public investment systems so that carbon emissions and alignment with national decarbonization strategies are taken into account when evaluating and prioritizing investment projects. The Bank will also promote the development and adoption of green taxonomies for investment projects, with a view to facilitating access to climate finance and mobilizing financing from private impact investors for activities that promote environmental and social sustainability in the region.
- 5.12 **Promote effective climate change adaptation.** The IDB Group will promote implementation of fiscal actions for climate change adaptation by finance ministries and subnational governments in the region. In particular, it will foster initiatives that strengthen national public investment systems by including the analysis and management of physical risks when structuring, evaluating, and selecting public investment projects, as well as projects with private sector participation. It will also assist with the adoption of resilience criteria in sustainable infrastructure maintenance projects. In addition, it will seek to support finance ministries in designing and implementing strategies for the management of fiscal risks stemming from climate change-related disasters.
- 5.13 **Strengthen institutions to increase the quality and relevance of fiscal actions relating to climate change.** The IDB will strive to assist the joint efforts of finance, environmental, and sector ministries to develop medium- and long-term strategies for an orderly transition to a low-carbon economy. In addition, to improve the effectiveness of fiscal actions in the area of climate change, the IDB Group will promote the development of comprehensive green PFM strategies, assisting with efforts to develop specific tools for the inclusion of climate considerations in medium-term fiscal planning, prepare budgets with climate guidelines, measure

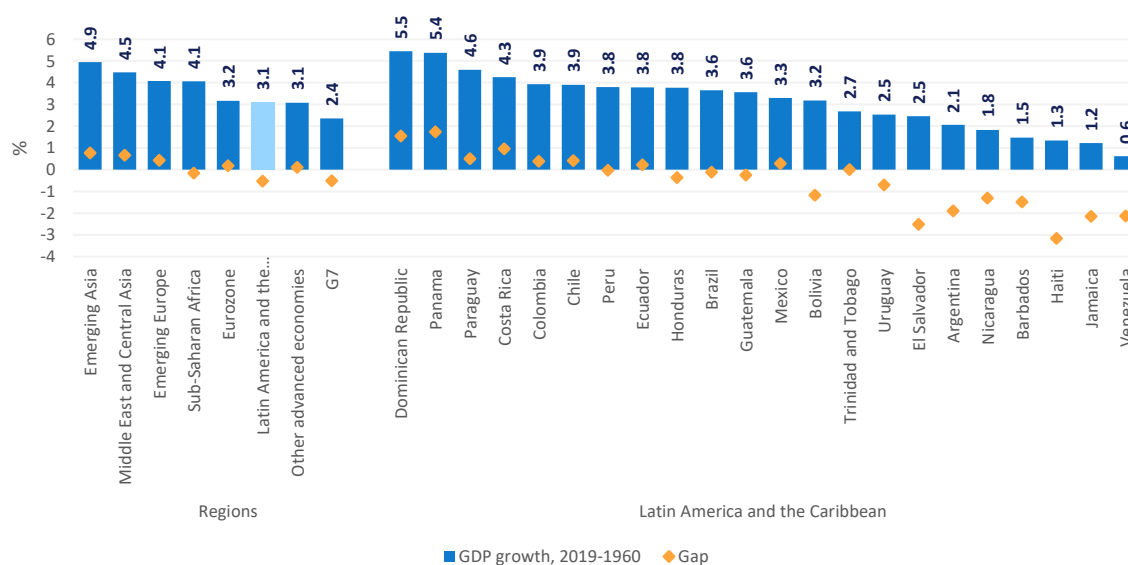
and evaluate climate change-related expenditure, and ensure transparency in climate actions.



## ANNEX I. FIGURES

Figure 1. Average GDP growth and output gap (1960-2019)

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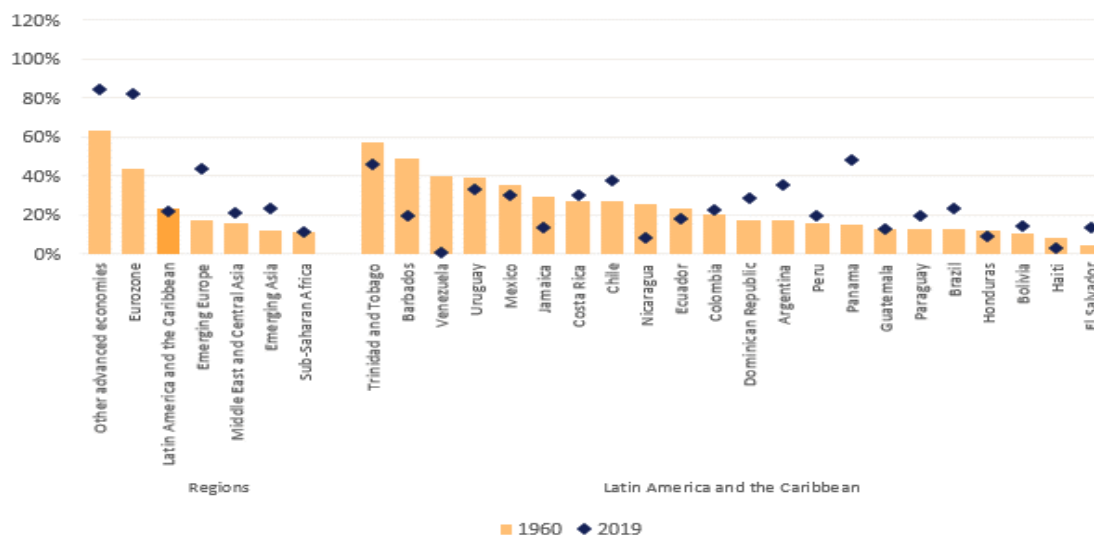


Source: Authors' estimates based on Penn World Tables 10.0. data.

Note: The output gap is the surplus or shortfall in growth with respect to international patterns, based on GDP per capita in 1960 adjusted for purchasing power parity (logarithmic), a 1960 index of human capital, and per capita physical capital (purchasing power parity) in 1960.

Figure 2. GDP per capita relative to the United States (purchasing power parity, 2019-1960)

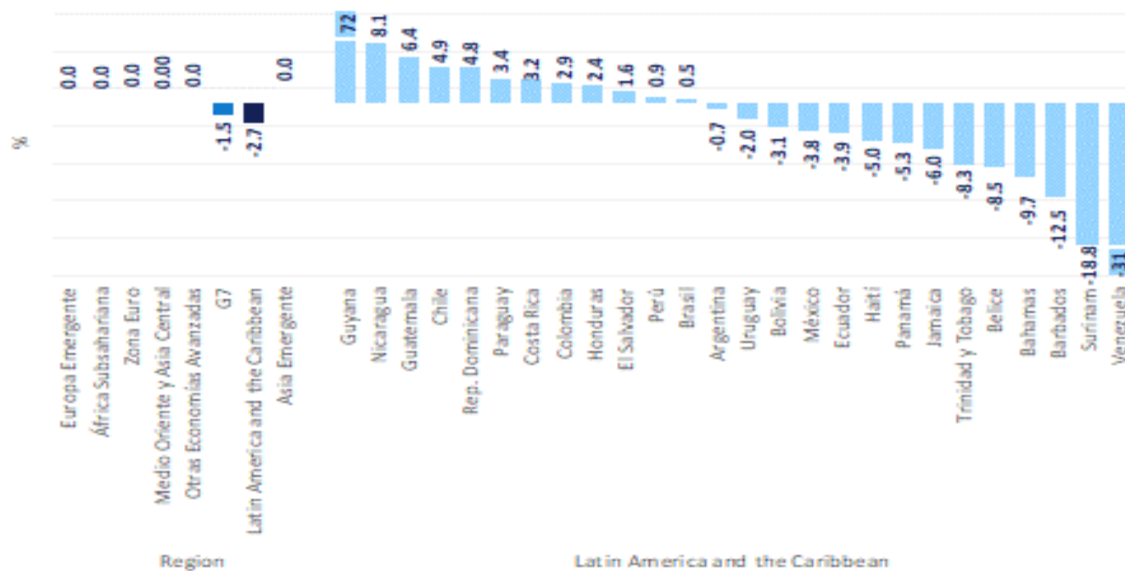
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Source: Authors' estimates based on Penn World Tables 10.0. data.

Figure 3. Percentage change in real GDP (2021 versus 2019)

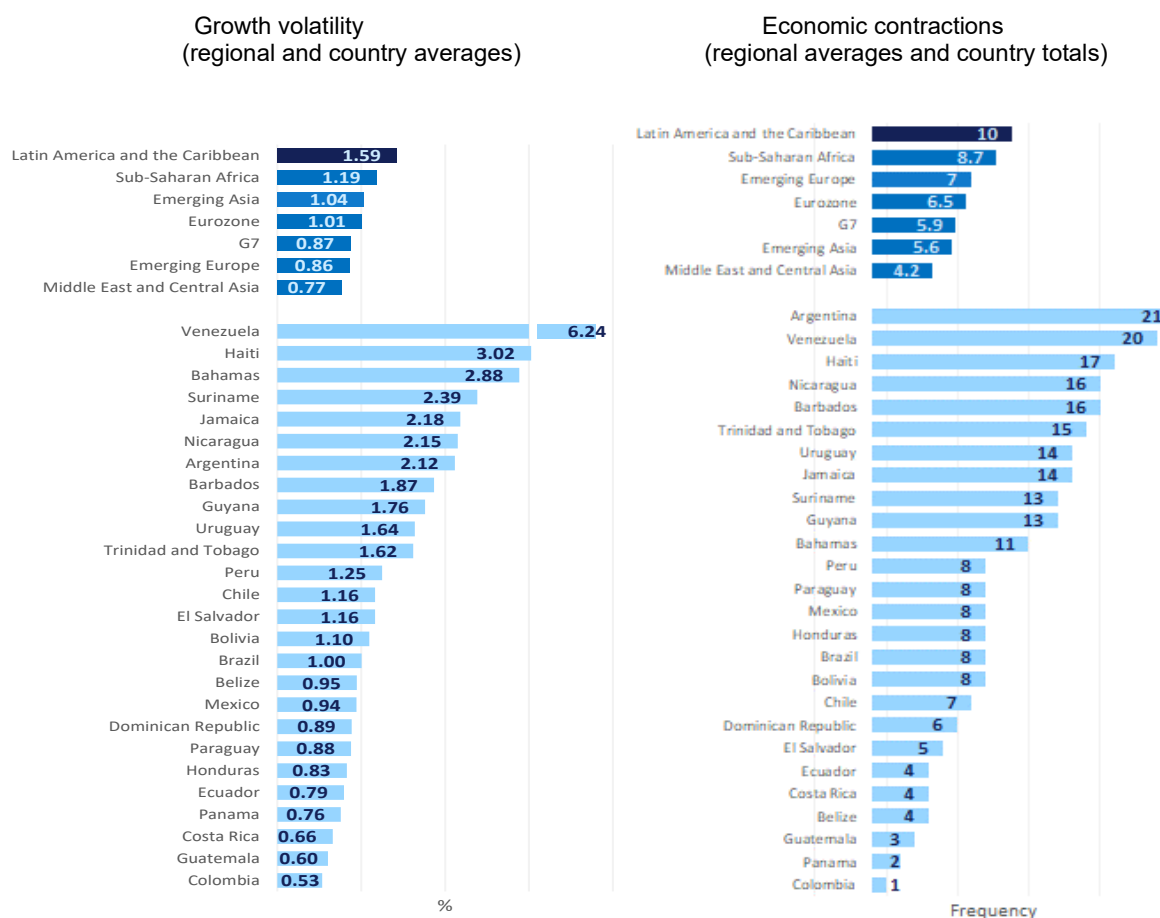
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Source: Authors' calculations based on WEO data (IMF).

Figure 4. Growth volatility and economic contractions (1960-2019)

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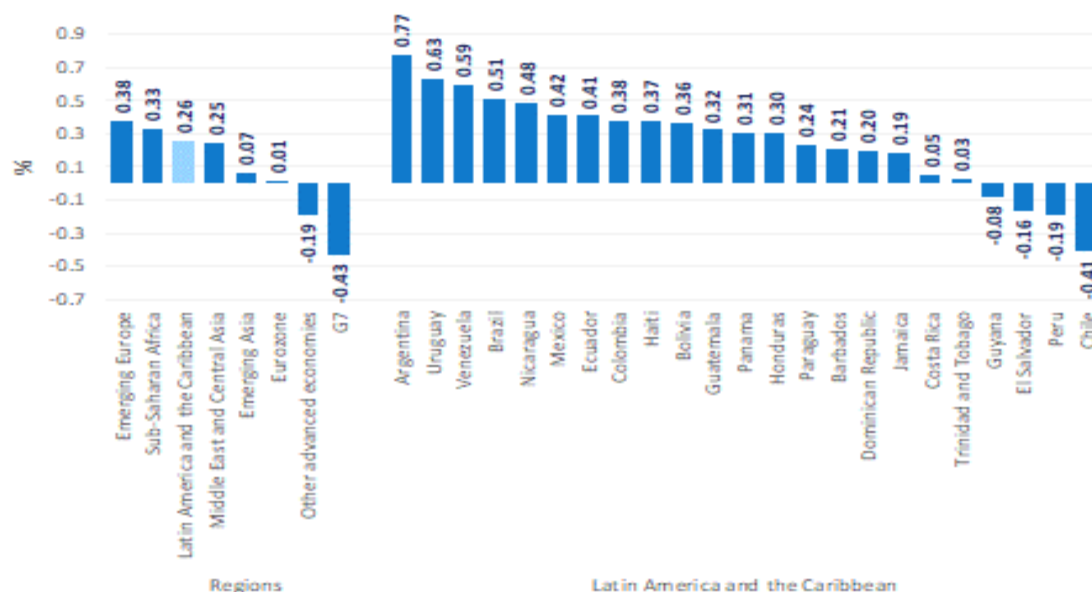


Source: Authors' estimates based on Penn World Tables 10.0. data.

Note: Volatility was calculated using the coefficient of variation. Economic contractions were calculated using annual data, with contractions defined as those years in which real GDP declined.

Figure 5. Correlation between GDP and total primary expenditure (2000-2016)

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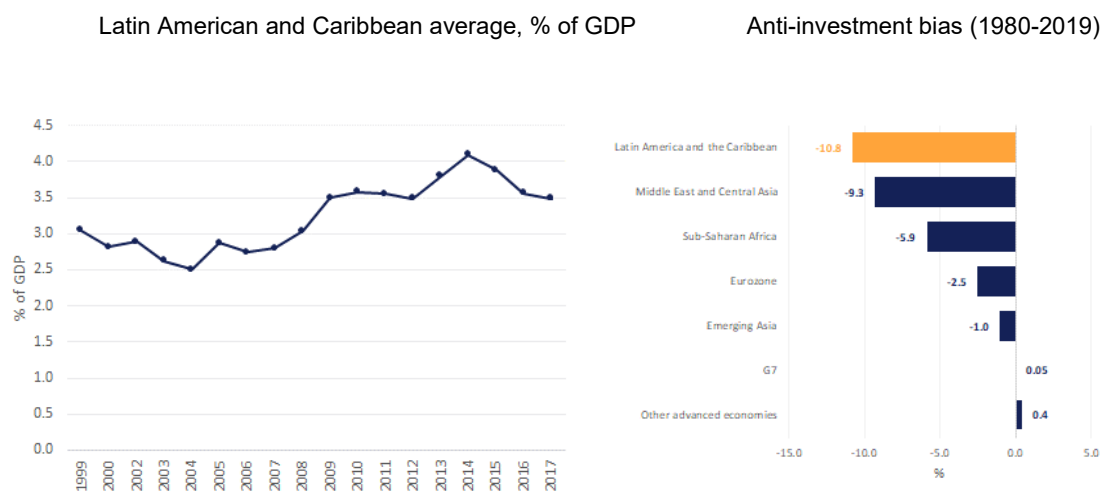


Source: Adapted from Izquierdo et al. (2018).

Note: Izquierdo et al. (2018) calculate the correlation for each country based on the cyclical components of total real primary expenditure and real GDP, using data for the 1980-2016 period. Cyclical components were estimated using the Hodrick-Prescott filter.

Figure 6. Public investment

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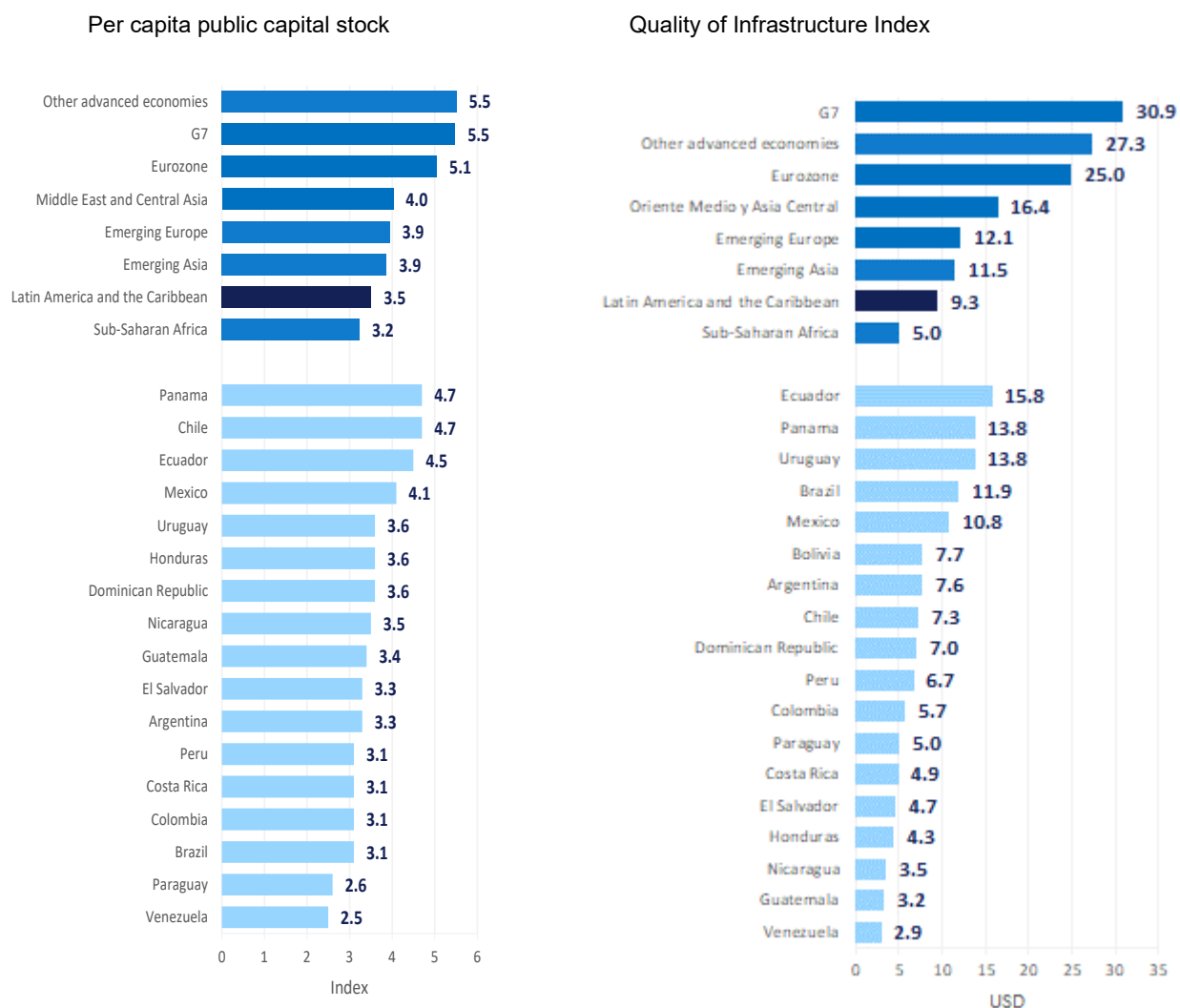


Source: Authors' calculations based on data from the Data Base for Public Investment Expenditure in Latin America (BDD-GIPAL) and WEO (IMF).

Note: This anti-investment bias is measured as the absolute variation in the ratio of investment to total public expenditure.

Figure 7. Quantity and quality of public infrastructure (2019)

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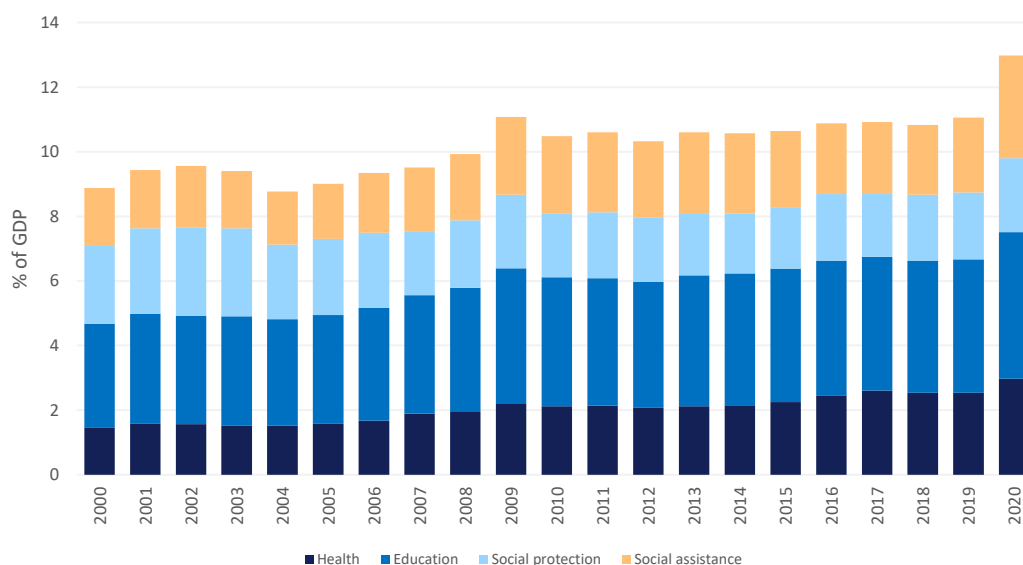


Source: Authors' calculations based on data from the Investment and Capital Stock dataset (IMF) and the Global Competitiveness Report (World Economic Forum).

Figure 8. Social expenditure (average for Latin American and Caribbean countries)

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[\[Go to main document, paragraph 2.27\]](#)

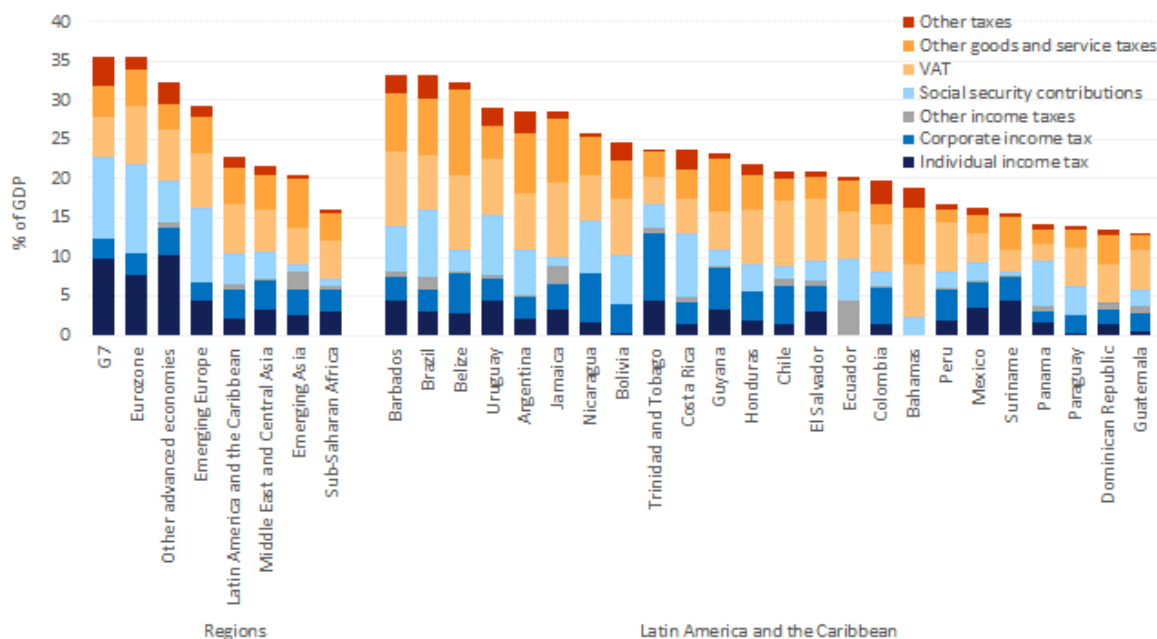


Source: Authors' calculations based on CEPALStats data.

Note: Social protection includes contributory programs for older adults, unemployment, and sickness and disability. Social assistance includes social exclusion, family and children, and housing programs.

Figure 9. Tax collection (% of GDP, 2019)

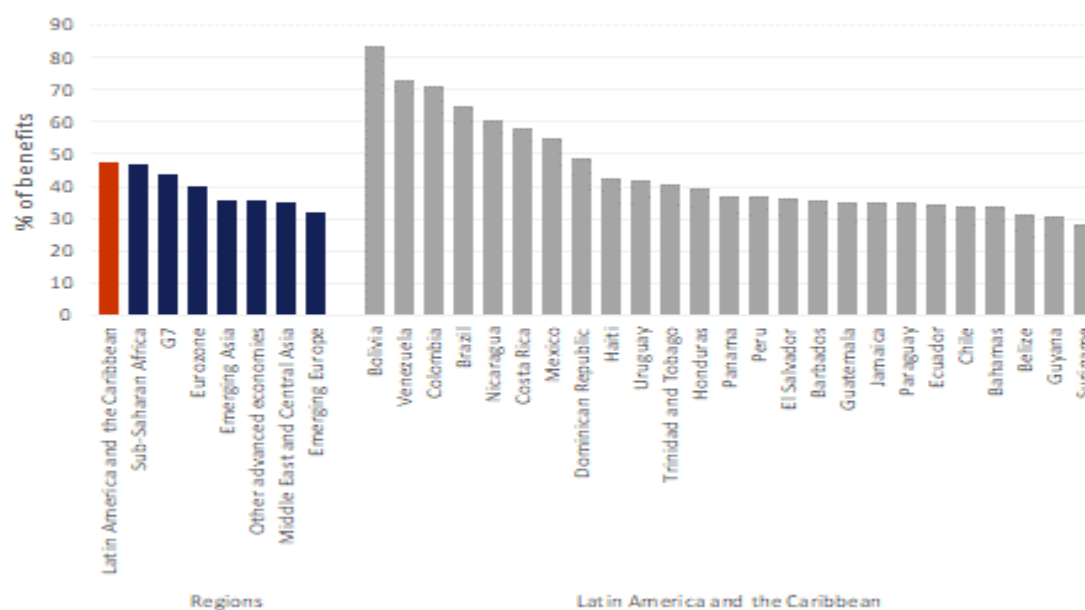
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Source: Own calculations based on Revenue Statistics data (OECD).

Figure 10. Tax burden on a typical business (% of benefits, 2019)

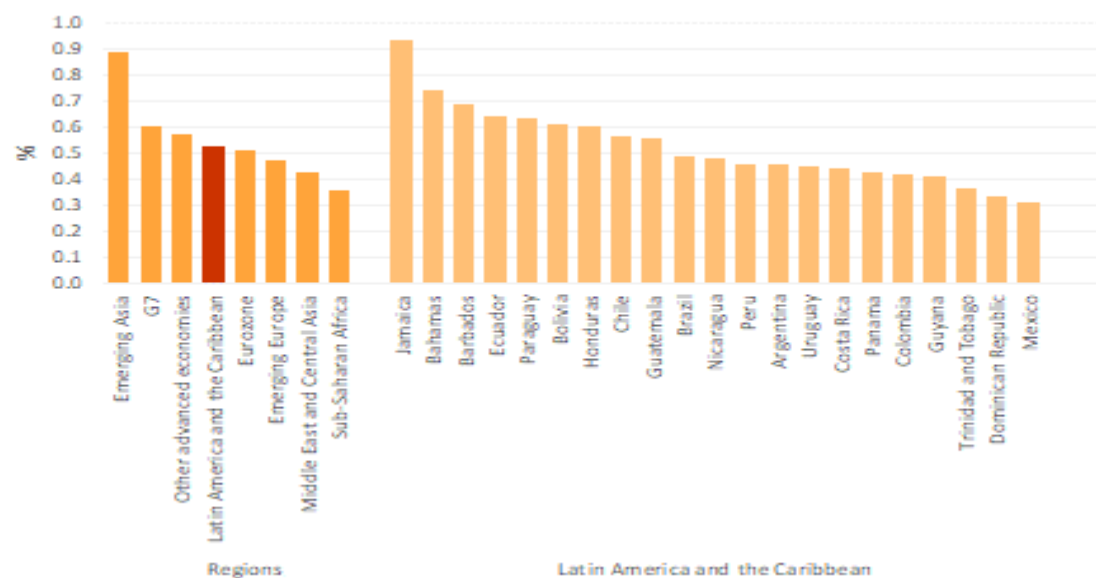
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Source: Authors' calculations based on World Development Indicators (World Bank).

Figure 11. VAT efficiency (2019)

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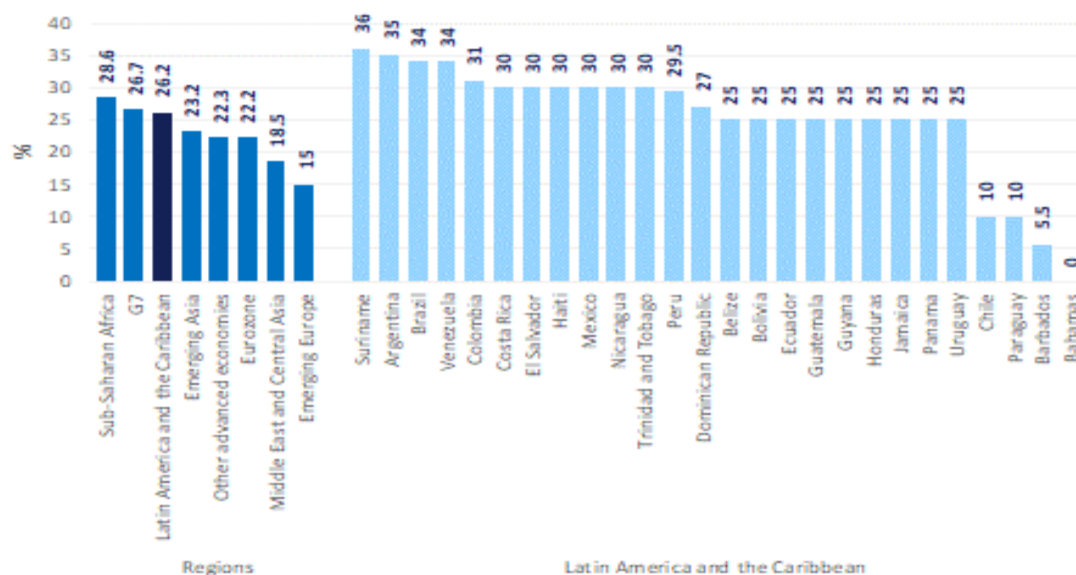


Source: Authors' calculations based on revenue data from Revenue Statistics (OECD) and rates from the IMF.

Note: VAT efficiency is measured as the ratio of observed revenue from the tax to potential revenue. The latter is calculated as the product of aggregate consumption in the economy multiplied by the general VAT rate.

Figure 12. Corporate income tax rates (2021)

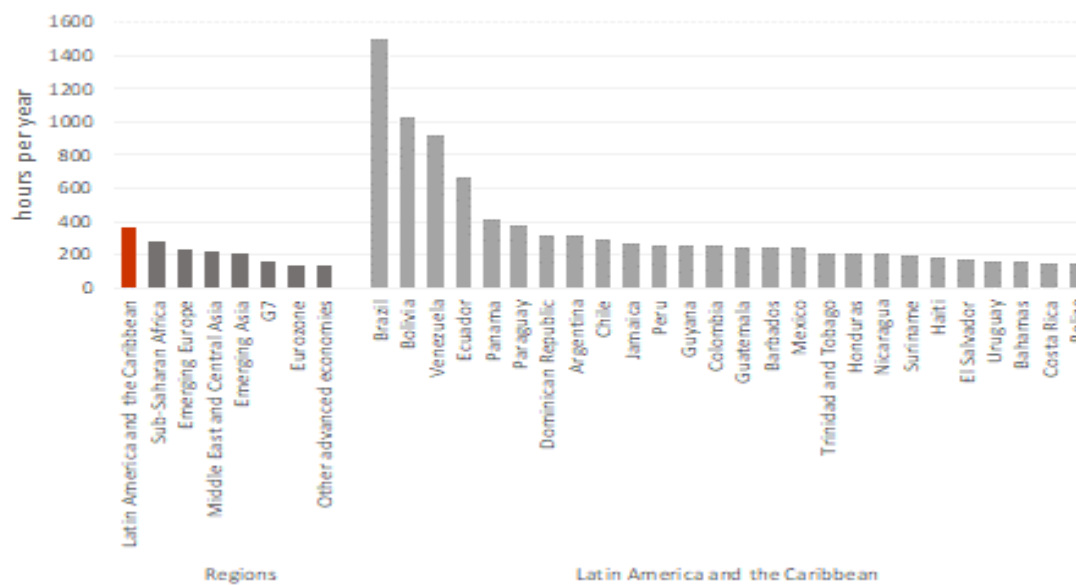
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Source: Authors' calculations based on Corporate Tax Rates Around the World, 2021 (Tax Foundation).

Figure 13. Time spent paying taxes (hours per year, 2020)

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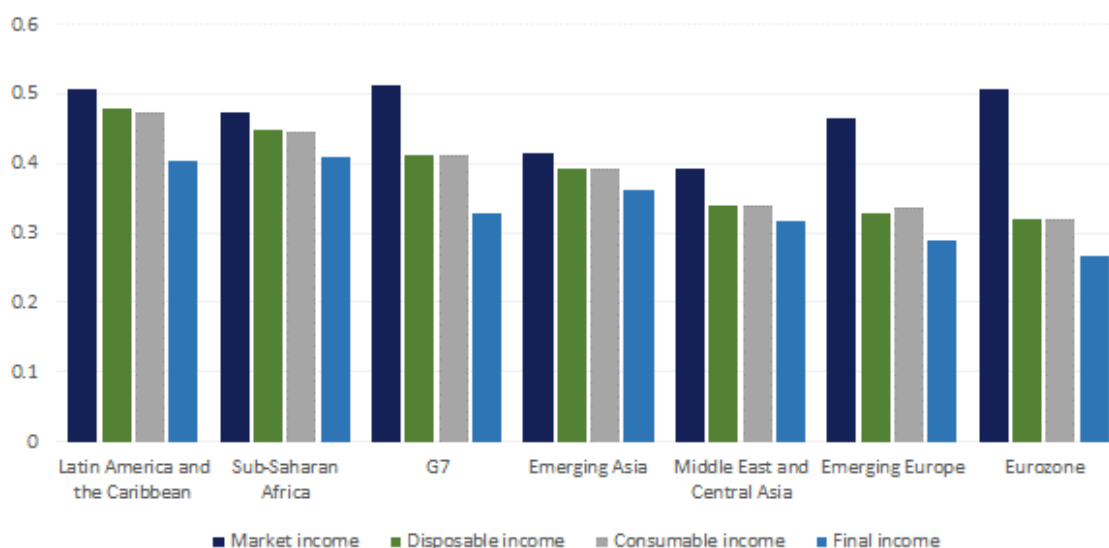


Source: Authors' calculations based on Paying Taxes scores, Doing Business (World Bank).



Figure 14. Inequality in different measures of income (Gini coefficients, various years)

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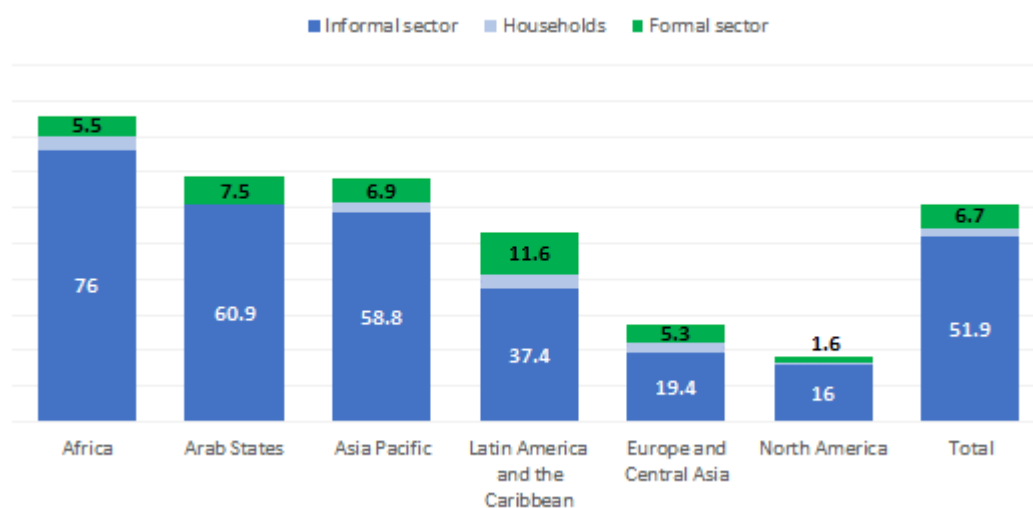


Source: Authors' calculations based on various studies by the Commitment to Equity Institute (various years).

Note: Market income is total current income before tax and direct government transfers. Disposable income is market income plus direct transfers minus direct taxes. Consumable income subtracts indirect taxes and adds indirect subsidies to disposable income. Final income is defined as consumable income plus in-kind government transfers (e.g., education and health).

Figure 15. Labor informality (% of total employment, 2019)

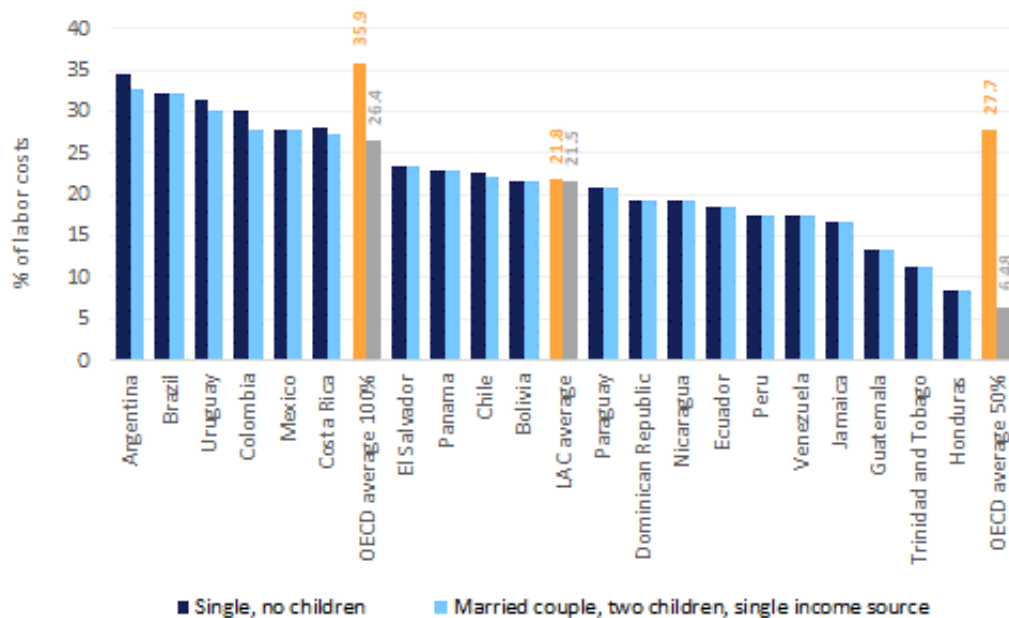
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Source: Cárdenas et al. (2021).

Figure 16. Employment taxes (2019)

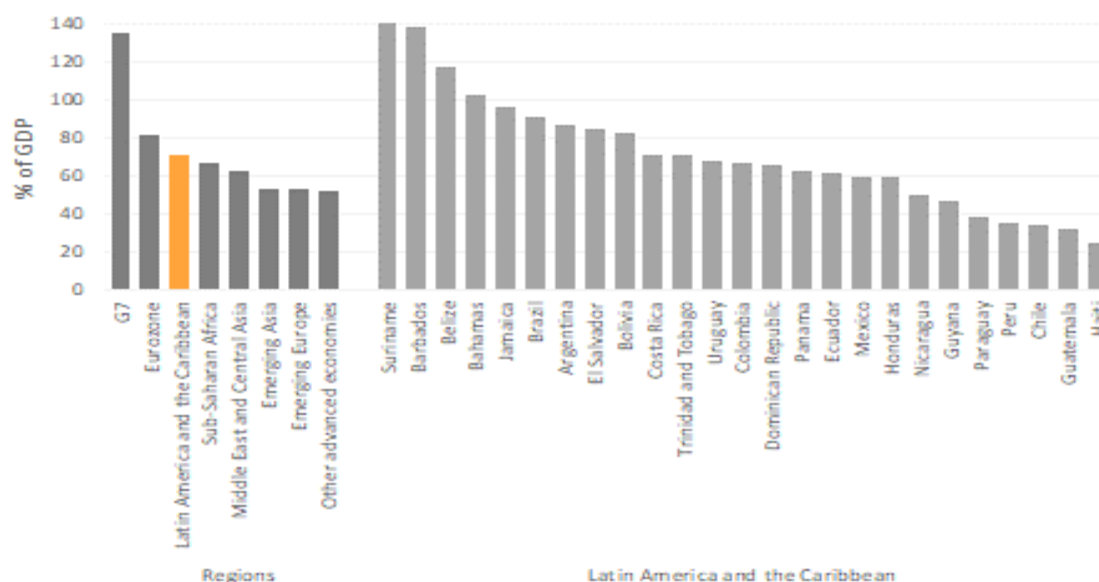
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Source: Authors' calculations based on payroll taxes in Latin America and the Caribbean (OECD).

Figure 17. General government gross debt (% of GDP, 2021)

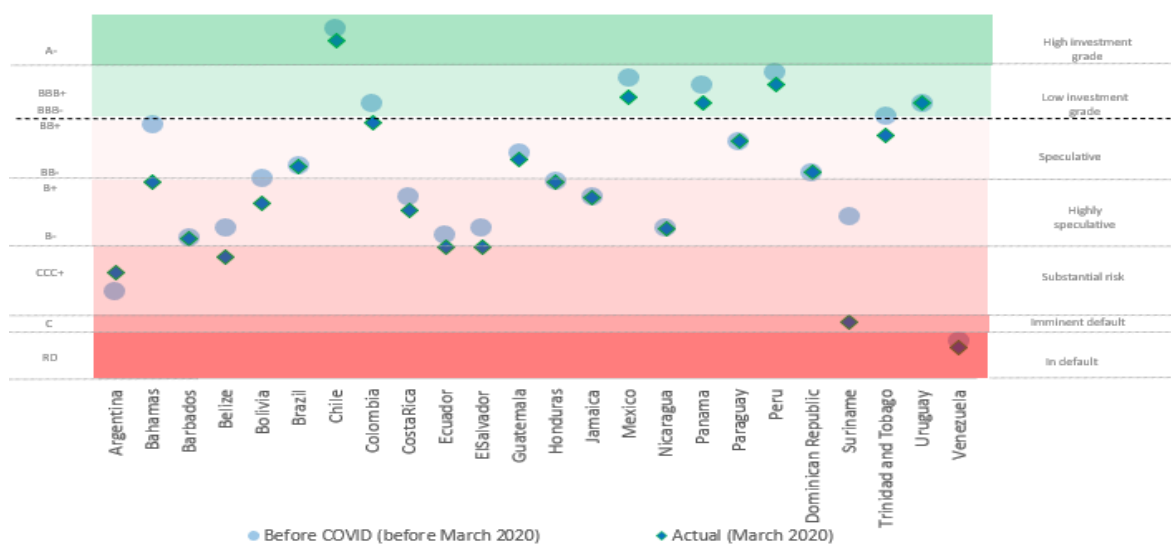
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Source: Authors' calculations based on WEO estimates (IMF, October 2021).

Figure 18. Sovereign debt ratings (2022 versus 2020)

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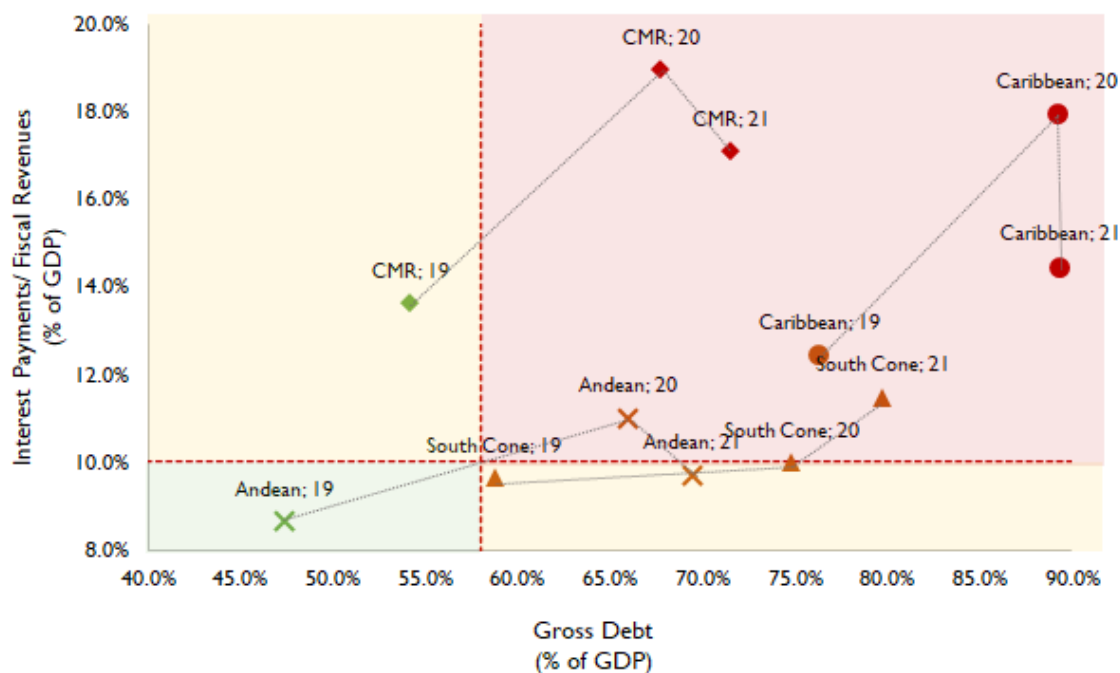


Source: Authors' calculations based on rating agencies' data.

Note: The ratings shown are the average of Fitch, Moody's, and Standard & Poor's ratings.

Figure 19. Accessibility of gross debt versus gross debt (2019-2021)

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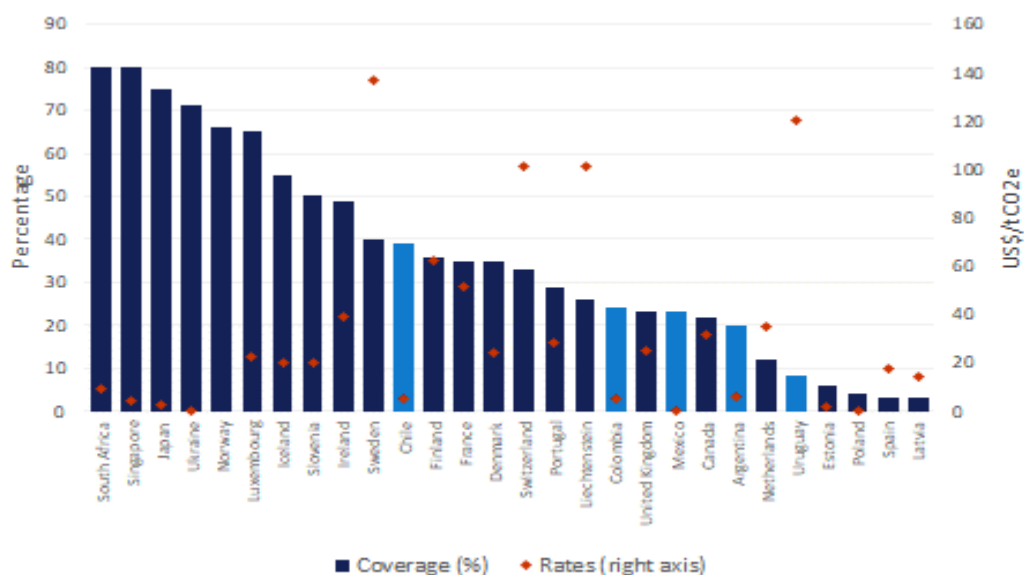


Source: IFD/FMM using WEO data.

Note: Thresholds are calculated using the IDB's Early Warning System.

Figure 20. National carbon taxes—coverage and rates (2021)

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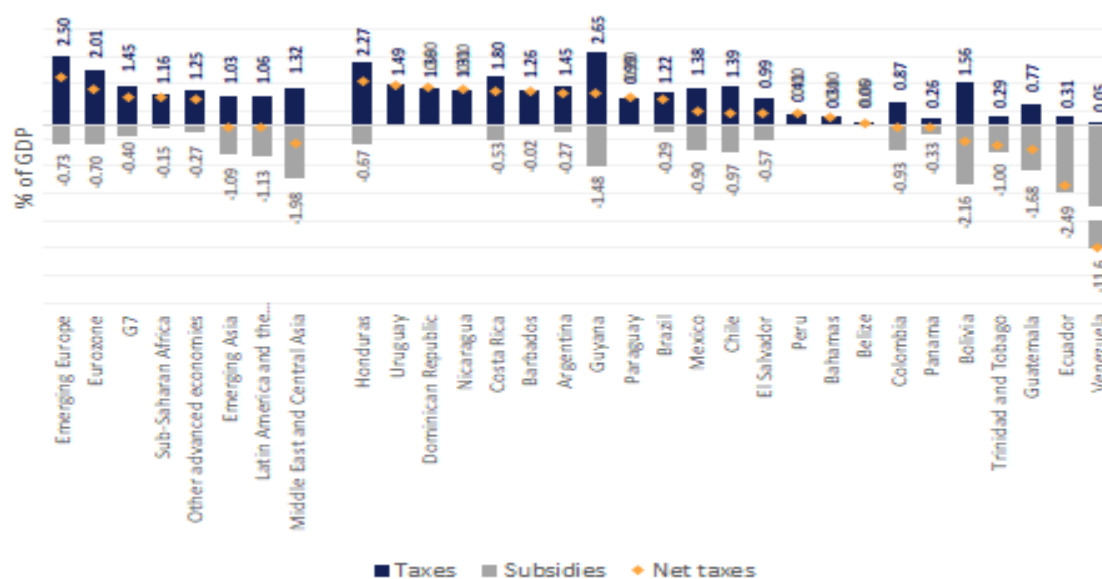


Source: Taken from the Carbon Pricing Dashboard. The World Bank.

Note: Prices for Denmark and Iceland are for fossil fuels. For Finland, the tax on fuels for transportation purposes was used. The figure for Uruguay is based on emissions data from EDGARv6.0 and the share of naphtha in total fuel consumption.

Figure 21. Net tax on fossil fuels (% of GDP, 2018)

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Source: Conte Grand, Rasteletti, and Muñoz (2022).

## ANNEX II. PUBLIC FINANCIAL MANAGEMENT IN LATIN AMERICA AND THE CARIBBEAN

Public financial management (PFM) refers to a set of rules, processes, systems, and institutions used by governments to administer and manage public resources in the short and medium terms to achieve their public policy objectives, while producing the information necessary to provide support for fiscal policy decisions and providing the instruments needed to implement those decisions (Andrews et al., 2014). Although fiscal policy refers to how to achieve certain policy objectives, PFM includes areas such as budgeting, treasury, accounting, debt management, public investment systems, procurement, administration and payroll payments for public administrations, Integrated Financial Management Systems (IFMSs), and audit and control. In recent years, the implementation and monitoring of fiscal rules and medium-term expenditure frameworks (MTEFs) started being considered part of PFM.

In the past two decades, PFM has become a very significant area of fiscal management action in virtually all countries. PFM includes four basic pillars or areas of action. The first refers to sustainability and macroeconomic stability, and it includes management of budgetary policy and fiscal rules, strategic planning and MTEFs, and fiscal risk management. The second pillar refers to effectiveness and efficiency in the use of government resources to properly deliver public services. This encompasses the management of public resources through treasury and public debt management, accounting and recording of financial and budgetary transactions, payroll management, procurement processes, and the management of national public investment systems and IFMSs. The third pillar relates to resource allocation and evaluation of the use of resources, and it includes evaluation of the technical allocation of expenditures, monitoring and evaluation of budget execution, and evaluation of the various short- and medium-term budget programs. Lastly, the fourth pillar refers to transparency and accountability, and it includes aggregating and reporting fiscal and budget information (including fiscal results and public balance sheets), information on the composition and financial structure of public debt and the fiscal risks and contingent liabilities of the public sector, transparency and accountability, and the public expenditure and resource audit and control processes.

The most commonly used tool for analyzing PFM quality in countries is the Public Expenditure and Financial Accountability (PEFA) Framework, which currently includes more than 500 assessments performed in 150 countries and on 136 subnational governments. The 31 PEFA indicators are comprised of the average of the scores of various variables or minimum requirements.<sup>1</sup> Between 2007 and 2021, PEFA assessments were published for 17 countries in Latin America and the Caribbean. Correlating grades D to A with a scale from 1 to 4, the region achieved an average score of 2.5 (62.5% of the highest possible score),<sup>2</sup> showing that there is still ample room for improvement. While the results are heterogeneous, all the Latin American and Caribbean countries evaluated showed strengths in terms of budget credibility (aggregate expenditure results in comparison to the originally approved budget) and the transparency of public finances (magnitude of government operations included in budget reports and sufficiency of information included in budget documents). However, there are weaknesses with respect to a multiyear perspective in terms of fiscal planning, expenditure policy, and budgeting, as well as scrutiny of the external auditor reports, particularly legislative scrutiny. For the countries evaluated with the new methodology,<sup>3</sup> there were strengths in terms of budget reliability and transparency of public finances, while there were significant gaps in the remaining pillars. This makes it difficult to overcome problems in relation to execution and the quality and efficiency of spending that sometimes arise due to the annual financial programming cycle.

Another tool for analyzing and assessing PFM quality is the Open Budget Index (OBI). The OBI makes it possible to monitor the management of public finances through indicators of the quantity and quality of published budget information in terms of: (i) transparency; (ii) participation; and

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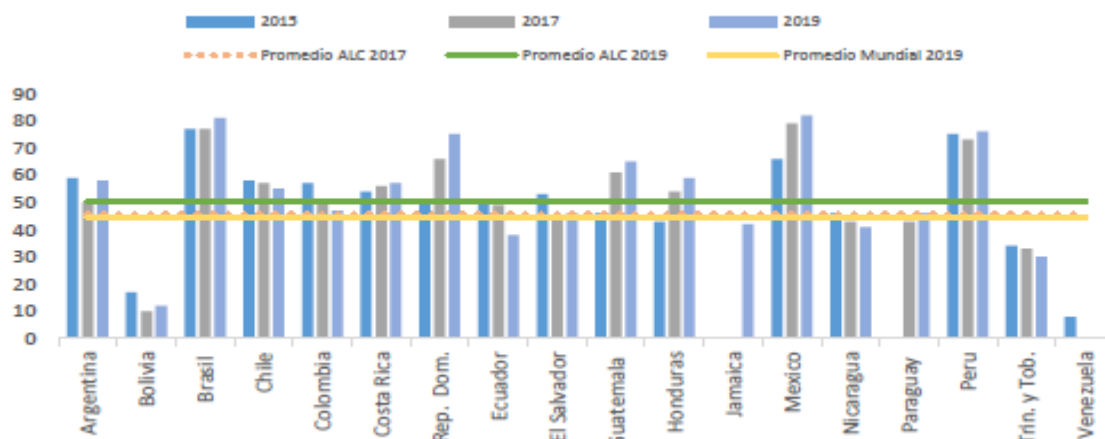
<sup>1</sup> The PEFA methodology changed in 2016, adding three new indicators and adjusting others.

<sup>2</sup> There was a slight decline compared with the average in the last Fiscal SFD, from 2.7 to 2.5.

<sup>3</sup> As of December 2021, nine countries in Latin America and the Caribbean had been assessed using this new methodology.

(iii) budget monitoring. The coverage of countries by the OBI has been gradually expanding and the index now reports information for 117 countries, 18 of them in Latin America and the Caribbean. The average available for 2019 for 18 Latin American and Caribbean countries was 50.6 points (from a maximum of 100), which is above the average of 44.6 for the rest of the world. Compared with the last Fiscal SFD, the average for Latin America and the Caribbean has risen, indicating an improvement in budgets in the region. The main improvements have been in transparency (which increased from 49.7 points to 50.5) and participation (14.8 to 16.3).

Figure A.II.1. Budget transparency index



Source: Budget transparency index from the Open Budget Partnership.

In addition to PEFA and the OBI, several international organizations have developed tools to evaluate certain aspects of these systems and guide the design of the PFM reform programs. These include the IMF's Fiscal Transparency Evaluation, which sets international standards for fiscal information disclosure, grouped into four pillars: (i) fiscal reporting; (ii) fiscal forecasting and budgeting; (iii) fiscal risk analysis and management; and (iv) fiscal resource management. From 2013 to 2021, the IMF methodology for evaluating fiscal transparency was applied in 8 countries in Latin America and the Caribbean and in a further 24 countries in other regions. The results in Latin America and the Caribbean were slightly below the average for all countries evaluated.

### Public sector accounting

One of the most widely accepted specific set of PFM standards worldwide related to fiscal transparency for public accounting is the International Public Sector Accounting Standards (IPSAS). These standards provide the methodology for recording and valuing financial and accounting transactions in the public sector, as well as public assets and liabilities. Much of this recording is still being done on a cash basis, although a growing number of countries have been moving to an accrual-based accounting system.

To date, no Latin American or Caribbean country has fully applied IPSAS or other wholly accrual-based accounting practices, although significant progress has been made. Most of the region's countries are implementing a mixed system that combines accounting regularization for certain elements and cash-based accounting for others. In some cases, the national legislation is consistent with the IPSAS, placing several countries in a better position for completing the reforms. For example, Mexico approved an IPSAS-based government accounting law with coverage throughout the public sector and reinforced it in 2012 through a reform that linked it to results-based budgeting; Ecuador enacted a law in 2010 that singles out accrual as the accounting principle that the nonfinancial public sector entities are required to follow; El Salvador, Guatemala, Nicaragua, and Panama are in the midst of an IPSAS-based accounting reform; Colombia, the Dominican Republic, and Honduras have prepared a strategy for transition or announced their transition to IPSAS; and Brazil, Chile, Costa Rica, and Peru have approved a plan including legal authority to converge with IPSAS or wholly accrual-based accounting.

## *Treasury*

Another important advance in PFM is the implementation of the Treasury Single Account (TSA). Through the TSA, governments centralize financial resources and flows that were previously managed on a decentralized basis by the various expenditure units or line ministries. The TSA allows for better control and information on the execution of expenditures and the use of resources, and greater coordination and integration between cash management and public debt management. Establishment of a TSA system does away with the treasury's role as a mere payor, creating instead a modern PFM structure with proactive cash management (Fainboim and Pattanayak, 2011). A TSA system generates savings by reducing the need to issue short-term debt while maximizing the returns of temporary cash surpluses. In order to adopt the TSA, governments need to have in place an IFMS that enables management, monitoring, control, reconciliation, accounting, and reporting on budget execution and accounting movements as well as on the management of bank account balances. The Integrated Financial Management Systems and the TSA require integration and automation of government budget and financial management, thereby fostering the modernization of public management (Andrews et al., 2014).

Cash and treasury management are not fully integrated in Latin America and the Caribbean. The consolidation of a TSA system in the region, albeit with limited public sector coverage, has been made possible by the significant spread of IFMSs (IDB, 2015). In most Latin American and Caribbean countries, more than 75% of revenue and payment transactions go through the TSA (World Bank, 2017). There is still much room in Latin America and the Caribbean to expand TSA coverage, mainly for the coverage of resources for decentralized agencies, social security, state universities, and other branches of government (IDB, 2015).

### *Integrated Financial Management Systems*

IFMSs and public resource management systems in the region need to be modernized. This is partly due to the inadequate maintenance and increasing obsolescence of many IFMSs in the region, which are caused by a variety of institutional and technological factors. The use of IFMS data for advanced data analytics is also low (Pimenta and Seco, 2019). Latin America and the Caribbean, where every country has an IFMS, is one of the world's regions with the most widespread use of this type of system. Nevertheless, IFMSs in the region face many challenges, such as (i) technological modernization through the use of web platforms and systems that have lower maintenance costs and greater flexibility for specific adjustments; (ii) alignment of the public accounting modernization processes in several countries in the region toward convergence with international standards; (iii) contributing to the integration of financial information with performance and impact indicators in the context of results-based budgeting and cost accounting initiatives, as well as expenditure initiatives relating to climate change and gender-based budgeting; (iv) extending the use of IFMSs to subnational governments (IDB, 2015); and (v) greater use of IFMS information to improve the efficiency of resource allocation or to redesign processes that strengthen public expenditure execution (Pimenta and Pessoa, 2015), as systems are currently used almost exclusively for budget formulation and execution, and little use is made of the data that they produce.

### *Payroll Management*

To complement the IFMSs, links to payroll (personnel payments), procurement, and planning systems are valuable for purposes of improving allocative efficiency and public resource management.

Wages account for a significant part of budget spending in Latin America and the Caribbean, yet there is still a lack of modern, integrated systems that would introduce greater efficiency and transparency into the management of this type of spending. The modernization of payroll information systems and employee payments in the public sector is key for improving human resource management, monitoring public spending, and modernizing PFM in Latin America and the Caribbean (Pimenta and Seco, 2021). These systems encourage economies of scale and greater operating efficiency, as public sector wage spending in the region is around 29% of total public spending: a significant amount for the purposes of fiscal sustainability and transparency.



Inefficiencies in this area are estimated at 1.2% of GDP (or 14% of wage spending) (Izquierdo and Pessino, 2018).

The study suggests that finance ministries should be responsible for coordinating fiscal policy as it relates to human resources, as this encourages good public financial management and greater macroeconomic discipline, facilitating both the planning and management of human talent, and taking into account the possible fiscal effects. Good examples of this are Brazil and Chile, where the civil services are among the strongest in the region.

There has been a tendency to centralize payroll systems in the Latin American and Caribbean countries. According to the results of the [2021 Survey](#) of payroll systems and their relationship to IFMSs, payroll systems are centralized in 15 countries in the region and decentralized in 6. In Latin America, the standard management model is based on lead agencies, while in more developed countries and some English-speaking ones, a shared services strategy is more common. There are pros and cons to each of these two approaches, which are valid alternatives for improving economies of scale, the control of wage spending, and civil service management. Complete centralization of payroll services, including payment calculations for each official, is subject to a high degree of risk. The most appropriate model is a single payroll system with a single, centralized database fed by decentralized units, which continue to calculate each payment (as in the case of Brazil).

The regulatory framework is still quite varied in Latin America and the Caribbean, and few countries have specific regulations or laws governing the payroll system. This represents a weakness for efforts to strengthen institutional capacity in the sectors and promote the use of more effective systems with greater coverage.

Payroll systems architecture in Latin America and the Caribbean is generally centralized, with a lead agency management model that often makes use of the IT centers and communications networks already available or contracted for IFMSs. In addition to reducing costs, this alternative encourages more integrated management with better implementation and control of policies, rules, audits, and management. Rules are centralized and a single information system is used, while operations are decentralized and shared with the government's different sector entities. In Brazil, the centralized payroll system implemented in the 1990s generated savings of 1% to 2% of wage spending each year during its initial years of operation.

The transparency of payroll data still needs to be improved in Latin America and the Caribbean. The 2021 Survey showed that only half of the 21 countries surveyed in the region made wage payment data available through a transparency portal, and even in these cases only aggregate data is frequently provided.

The use of new information technologies is essential for implementing and operating modern, efficient payroll systems, with the use of cloud computing, cybersecurity, advanced analytics, artificial intelligence, and dashboards that can assist in designing and implementing civil service reforms while also revealing long- or short-term trends and supporting fiscal decision-making.

#### Public procurement

In the public procurement area of PFM, reforms have been aimed at improving systems and procedures, using open, competitive, and transparent online systems. This has enabled the fulfillment of three fundamental principles or objectives: (i) effectiveness, for quick and timely procurement of the necessary works, goods, and services, including specialized services; (ii) efficiency, to obtain the best price-quality or cost-benefit ratio (value for money); and (iii) transparency, for the providers of these goods and services through an open and competitive electronic environment that ensures transparency in the award process, as well as for the budget monitoring and evaluation entities, the supreme audit and control entities, and the general public (Schapper et al., 2006).

Procurement systems have also improved in the region. Most countries have created national procurement agencies to develop policies and systems. Procurement agencies exist in 90% of Latin American and Caribbean countries (OECD, 2020b), focusing mainly on secondary regulation

and legal guidance, supervising compliance with rules and procedures, and monitoring results. Despite this progress, there are still challenges relating to both contract compliance and building trust among users and the officials responsible for procurement. Combined with advances in information technologies, the institutional and financial autonomy of these agencies has made it easier to promote significant reforms in the sector, including electronic procurement. Electronic government procurement platforms exist in 80% of countries in Latin America and the Caribbean. These usually allow for real-time access to information on current procurement processes and contracts that have already been awarded.

A review of indicators from 12 countries in the region (including information from the Methodology for Assessing Procurement Systems (MAPS) and public statistical dashboards) found that in case of the competition indicator, public bidding processes were used in only a few high-value processes. This method is used in 2.4% of processes on average, accounting for 35% of total contract values. This limited use of bidding processes may be a result of multiple available procurement methods, which may discourage the use of competitive methods. Each country has on average 9 different procurement methods, rising to as many as 24 in some countries.

In addition, public bidding processes attract an average of 2.7 bids per process. This is a relatively low number, and it is associated with obstacles to participation such as perceptions of prohibited practices (e.g., the manipulation of contract awards), excessive requirements for participation, very large contracts that limit the participation of micro, small, and medium-sized enterprises (MSMEs), and a lack of financing to compensate for delays in public sector payments. These restrictions hinder the participation of MSMEs and prevent procurement from being used as a tool for encouraging business formalization.

Lastly, two important aspects of public procurement systems should be highlighted, both of which relate to the structural challenges identified in this SFD. The first is that these systems are important for public investment projects with the private sector. In such cases, transparency, competition, and accountability are particularly important in bidding processes for long-term infrastructure development contracts with the private sector, including PPPs (Suárez-Aleman et al., 2021). Efficiency in processing and managing payments is also important and can substantially improve competition and reduce bidding costs.

The second aspect is that public procurement systems can also contribute to climate objectives. Given the economic weight of the public sector, sustainable public procurement rules can generate not only direct benefits in terms of reduced emissions,<sup>4</sup> but also wider benefits in terms of developing markets for new technologies that can accelerate shifts in consumption patterns (OECD, 2016). There has been progress with respect to sustainable procurement in Latin America and the Caribbean. Research by the Organization of American States, IDB, and the Inter-American Network on Government Procurement (2020) found that 20 of the 23 countries surveyed have a procurement regulatory framework that facilitates the implementation of sustainable procurement. Meanwhile, 21 countries have implemented sustainable procurement actions, 11 have at least one implementation tool, and 4 have measurement and monitoring systems.<sup>5</sup> Despite this progress with respect to regulation and specific implementation actions, in practice, sustainable procurement is generally at an early stage of development. Few countries estimate or systematically incorporate carbon costs when evaluating bids, let alone the carbon footprints of suppliers. Likewise, most countries lack sustainable procurement action plans and monitoring systems.

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<sup>4</sup> The main “green” contracts relate to energy efficiency (e.g., buildings, computers, etc.), electric or low-emission vehicles, the use of electricity from renewable sources, recycled paper, etc. Contracts with low-carbon footprints are also considered green.

<sup>5</sup> Sustainable procurement efforts are least developed in the Caribbean, where only a few countries have developed a strategy in this area or included sustainable procurement objectives in national legislation.

### ANNEX III. DIGITAL SOLUTIONS FOR FISCAL MANAGEMENT

**Digital transformation can help to address the main fiscal challenges in Latin America and the Caribbean.** There is significant potential for digital projects to make a powerful contribution to fiscal progress and economic growth (Gupta et al., 2017). By transforming and modernizing public finance activities, processes, skills, cultures, and business models, the use of digital and information technologies can enhance the efficiency and equity of fiscal policy for driving inclusive growth and consolidating fiscal sustainability. For example, the digital transformation is facilitating tax compliance and the enforcement of taxpayer obligations (OECD, 2016; Inter-American Center of Tax Administrations, 2020; IDB, pending publication). Improvements are also occurring with regard to information on taxpayers and their transactions (with a view to reducing evasion); the restructuring of operational processes (reducing administrative costs and improving the quality of service delivery); and changes in the business model in favor of a new operational paradigm that creates value for the wider economic, political, and social ecosystem, as well as promoting formalization, competitiveness, and transparency, among other issues.

**Although the implementation of digital transformation processes varies in Latin America and the Caribbean by country and by area of fiscal policy and management,<sup>1</sup> some recent trends show significant progress in implementing digital innovations for fiscal management.** For example, the use and analysis of data is a growing trend within digital solutions for the fiscal sector. New digital technologies help to increase access to relevant information on taxpayers and social program beneficiaries and their transactions. This information can be obtained at lower cost; with greater reliability, security, accuracy, and timeliness; and with swifter, more sophisticated analytical processing based on big data, data science, and artificial intelligence. Mobile apps allow the general population to check information and carry out transactions, while also assisting fieldwork by tax auditors and program managers. The technology of the Internet of Things facilitates more effective control over taxes relating to the management and monitoring of freight, as well as the management of investment in Building Information Modeling (BIM) projects. The functionalities underlying some of the digital technologies used in these exercises (e.g., automation, digitalization, integration and interoperability, analysis, and visualization) can increase the efficiency and effectiveness of tax management; support technical and allocative efficiency in public spending; reduce the costs of tax administration and PFM; facilitate fiscal transparency and accountability; and increase costs for actors involved in waste and corruption.

**Digital solutions have the potential to eliminate specific fiscal gaps.** Illustrating the potential of digital technologies, it is estimated that reducing the digitalization gap in developing countries by half could increase VAT revenue by 1.7% of GDP (IMF, 2018), while the use of big data and data analysis could recoup around 20% of lost government revenue (estimated at between US\$4 million and US\$5.5 million worldwide in 2015) (Cunningham, Davis, Dohrmann, 2018). The implementation of second-generation electronic procurement platforms (e-GP 2.0), with digital tools that facilitate contract monitoring and management, supports the calculation of reference prices and development of electronic markets. It also expands access to procurement catalogs in the cloud and allows information on public contracts to be accessed and visualized by region and territory. It could potentially allow the countries of the region to achieve advanced states of digital maturity, generating savings of approximately US\$15 billion annually.

**The effectiveness of the new digital trends in the fiscal sector is supported by rigorous evaluations.** Digitalization is evolving continuously in the fiscal sector, with a number of new trends that are worth noting: the prefilling of tax returns and electronic tax filing (aimed at supporting taxpayers and facilitating compliance) and electronic contracting and the Smart Fiscal Ecosystem (aimed at improving the efficiency of public spending). A prefilled tax return is a tax return that is

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<sup>1</sup> For example, although there has been considerable progress in implementing electronic invoicing across the region, only a few countries (such as Chile, Brazil, and Mexico) have exploited the resulting information and other, third-party data in a more systematic and sophisticated way (Barreix et al., 2018; Inter-American Center of Tax Administrations, 2020). The digital transformation of public administrations is also stronger than in other fiscal areas, such as investment management, where the adoption of digital technologies is still at an early stage.

prepared for the taxpayer by the tax administration. The evidence regarding the effectiveness of prefilled tax returns is mixed; however, some studies show that it can improve compliance and reduce tax evasion (Kleven et al., 2011; Kotakorpi and Laamanen, 2016; Gillitzer and Skov, 2018; Gonzalez de Frutos et al., 2022). E-filing is a faster, easier, and more accurate way of submitting tax returns online. The evidence shows that prefilling can reduce compliance costs for taxpayers (Okunogbe and Pouliquen, 2022; Jousté and Waiswa, 2021; Kochanova et al., 2020). With respect to the efficiency of spending, the evidence shows that the use of e-procurement platforms that facilitate swifter and more transparent public sector purchasing can lead to improvements in the efficiency and quality of government procurement projects (Lewis-Faupel et al., 2016; De Michele and Pierri, 2020; Singer et al., 2009). Lastly, Smart Fiscal Ecosystems facilitate information exchange between public administrations, departments, and agencies and can improve expenditure efficiency and targeting in social programs, while also reducing tax evasion (Fenochietto and Pessino, 2011).

## ANNEX IV. THE NEW GLOBAL TAX DEAL<sup>1</sup>

The digitalization of the economy has challenged century-old conventions about jurisdiction to tax economic activities carried out by nonresident taxpayers. Today, countries adhere to the brick-and-mortar concept of permanent establishment, disregarding the fact that the Internet supplies the infrastructure to conduct business in a foreign territory. Thanks to the Internet, multinational enterprises (MNEs) carry out businesses in market jurisdictions with minimum assets—or without any tangible asset at all—in what has been dubbed scale without mass. At the same time, it has been generally acknowledged that the 15 Base Erosion and Profit Shifting Actions, despite significant time and effort, failed to put an end to profit shifting.

The OECD, through the Base Erosion and Profit Shifting Project and the Inclusive Framework, is proposing a multilaterally agreed policy response. To the scale without mass problem, the proposal is to allocate 25% of the residual profits of the largest multinationals to market jurisdictions. To the profit shifting issue, the response is a 15% global minimum tax. On October 10, 2021, government authorities of more than 140 countries agreed to an ambitious timeline to implement the system on January 1, 2023. Latin American and Caribbean countries must now decide the extent to which they want to be part of the new system and how this will shape their tax policies for foreign trade and investment.

Pillar 1 is a tax that affects barely 100 companies in the world (those with sales above EUR-20 billion and profitability above 10%) and may reallocate, at best, EUR-125 billion to market jurisdictions ([OECD, 2021](#)). It is difficult to estimate the portion of profit that will accrue to Latin American and Caribbean countries; data from these companies would be required, but assuming it will be commensurate with GDP, then the region may expect to tax 3.4% of the global amount under Pillar 1. On the positive side, countries would receive this revenue with minimal administrative effort. On the negative side, they would commit to eliminate/nonproliferate unilateral measures such as digital services taxes, accept mandatory and binding arbitration, and adopt a fixed margin for baseline distribution activities.

The scope of Pillar 2 is broader, affecting multinationals above EUR-750 million. They will be liable to a top-up tax on profits booked on foreign jurisdictions and taxed below 15% (effective tax rate). This is expected to generate about US\$150 billion of revenue per year globally, but Latin America and the Caribbean may not collect much of it, as the tax will be paid by the MNEs to the country where they are headquartered. Only Latin American and Caribbean countries housing multinationals, and instances where two subsidiary rules are applied (the Undertaxed Payments Rule and the Subject to Tax Rule), will receive revenue from Pillar 2 in the region.

In this context, Latin American and Caribbean countries need to update their tax policies. For Pillar 1, the choice is basically between the OECD-Inclusive Framework package and unilateral measures. The problem is that the threshold is so high that most MNEs will fly below the radar. Imposing unilateral digital sales taxes may be more effective to achieve the policy goal of taxing scale without mass but may have adverse effects as a foreign investment policy, as unilateral measures impose compliance and certainty costs. An intermediate solution may be to renegotiate treaties using article 12 of the UN Model. In terms of Pillar 2, the challenge for Latin American and Caribbean countries is to retain the tax base in their jurisdiction. This calls for reconsidering tax incentive policies and, probably, enacting national minimum taxes of 15% (since it will be taxed anyway, better tax it at source). Equally important, countries should take steps to ensure robust implementation of transfer pricing legislation and other anti-avoidance rules.

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<sup>1</sup> This Annex reproduces Box 2.2 of IDB (2022a).

## ANNEX V. REGIONAL EQUITY

**Regional economic disparities are significant in Latin America and the Caribbean.** In a typical country in the region, GDP per capita in the wealthiest region is nine times higher than that of the poorest region, compared with just three times higher in the developed countries (Muñoz, Pineda, and Radics, 2017; Brosio, Jiménez, and Ruelas, 2018). Regional inequality levels in Latin America and the Caribbean remained constant between 2000 and 2017 (Jimenez, Muñoz, and Radics, 2022).

**Regional economic inequality translates into large fiscal disparities at the subnational level.** In Latin America and the Caribbean, per capita tax revenues in the 10% of intermediate-level governments where this indicator is highest are eight times higher on average than in the 10% where they are lowest. This compares with just two times higher in the OECD countries (Muñoz, Radics, and Bone, 2016). Disparities in revenues from nonrenewable natural resources are higher still, as most of these resources are received by the producing jurisdictions. In Brazil, for example, Rio de Janeiro accounts for 80% of all state-level royalty payments, while at the municipal level, only four municipios account for 40% (Ardanaz, 2014). The beneficiaries of royalties in Latin America and the Caribbean tend to be in the wealthiest regions of countries (Serra and Alfonso, 2007; Adrián et al., 2022). These differences in revenue lead to differences in the quantity and quality of public services, thus affecting equity.

**Fiscal disparities are only partly offset by transfer systems.** On average, fiscal transfers in Latin America and the Caribbean reduce disparities in subnational own-source revenue by just over one third. Nonetheless, the remaining disparities are still considerable: available fiscal revenues for expenditure by the most prosperous intermediate governments are four times higher than those of the least favored governments. None of the countries in the region have an explicit system of equalization transfers that distributes resources of the magnitude required to eliminate fiscal gaps based on the fiscal capacity and expenditure needs of subnational governments (Martinez-Vazquez and Sepulveda, 2011).

**National public investment systems and capital financing for subnational infrastructure tend to be regressive.** This is because, first, current project selection methods (i.e., social prices) do not include the effects on spatial equity (Ahmad and Zanola, 2015; Ahmad and Viscarra, 2016). Second, different capital funding programs require cofinancing from subnational governments and/or foster competition between these governments for financing. The more developed regional entities that are able to access capital funds are therefore either best positioned from a financial standpoint (and thus able to meet pari-passu requirements in projects or access credit) or are the most capable in technical and administrative terms (and thus able to provide the technical project guarantees required by public investment systems) (Martinez-Vázquez, Muñoz, and Angarita, 2022). In other cases, central government capital funding is allocated on a discretionary basis to subnational governments with weak management capabilities, undermining the efficiency and quality of that investment (Alcázar and Jaramillo, 2022).

**Most OECD countries have successfully implemented different equalization transfer arrangements to reduce horizontal fiscal gaps.** In this group of countries, transfers lead to a reduction of almost half in the differences in fiscal capacities between subnational governments, and disparities are almost eliminated (Muñoz, Pineda, and Radics, 2017; OECD, 2014). Various simulations have been performed of reforms to transfer systems in Argentina, Ecuador, Colombia, Mexico, Peru, and Uruguay, and these show that the introduction of equalization transfers based on calculations of the fiscal capacities and expenditure needs of subnational governments would reduce disparities at the intermediate and local levels by between one third and two thirds, respectively, compared with the current distribution (Porto, 2018; Díaz-Cassou et al., 2017; Bonet-Morón and Ayala-García, 2017; Pueblita, 2017; Muinelo-Gallo, Kyriacou, and Roca-Sagalés, 2017).

**Only well-designed equalization transfers can reduce regional inequality.** Weaknesses in the design of equalization transfers in China and India have prevented a significant reduction in regional fiscal gaps (Bahl, Goh, and Qiao, 2014). Persistent fiscal disparities in these countries

have a negative impact on the outcomes from local services, such as education and health, as well as other local development outcomes (Hofman and Cordeiro Guerra, 2005 and 2007).

**Policies to support regional economic convergence can boost growth rates in less-developed regions.** Internationally, a number of countries have implemented convergence funds that seek to help less-developed regions to achieve the same levels of investment, capital stock, and growth as their more dynamic peers. In the European Union, mechanisms of this nature exist that help to accelerate growth rates in the most disadvantaged regions, thus reducing differences in development levels between both regions and member states (Becker, Egger, and von Ehrlich, 2010).

**Social and infrastructure investment can help to reduce inequality** (Furceri and Li, 2017; Calderon and Chong, 2004; Hooper et al., 2017). Improved project prioritization and selection can help to achieve this. International experience suggests that developing national sustainable development strategies can help to prioritize public investment programs based on regional development and inclusive growth needs (IDB, mimeo). These strategies incorporate and leverage complementarities and synergies with sector and subnational government strategies (OECD, 2017). To implement them effectively, it will be essential to improve the analysis underpinning project selection by including regional inequalities and redistributive effects, among other things. In the case of Chile, Ahmad and Viscarra (2016) estimate shadow prices that they claim lead to significant improvements in information on different variables used in the project selection process, such as consumption patterns.

**Foster improvements in regional equity.** The IDB Group will support reforms to intergovernmental transfer systems that involve the design and implementation of equalization transfer mechanisms. Support will also be provided for the implementation of convergence funds for the least-developed regions, with a view to promoting increased private sector activity and economic growth. As part of the support for strengthening national public investment systems, assistance will also be provided for improving preinvestment and project selection management. The aim will be to introduce a focus on eliminating regional gaps by encouraging more balanced development and reducing income inequality in the regions.

## **ANNEX VI. ETHNIC AND RACIAL EQUITY**

### **Living conditions of ethnic groups**

Afro-descendant and indigenous populations represent around 58% of people living in extreme poverty in Latin America and the Caribbean. Afro-descendant households are 2.5 times more likely to live in chronic poverty than non-Afro-descendants (Freire et al., 2018). Meanwhile, indigenous peoples account for 8% of the region's population but constitute approximately 14% of the poor population and 17% of the extremely poor in Latin America.

Poverty has declined at a slower rate for Afro-descendants and indigenous peoples than for the rest of the population. Between 2005 and 2015, for example, the annualized poverty rate among Afro-descendants in Peru and Uruguay fell by 7% and 10%, respectively, compared with reductions of 9% and 14.5%, respectively, for non-Afro-descendants in these countries.

The pandemic has had a disproportionate impact on Afro-descendants and indigenous peoples. These populations have been most exposed to the risks of infection and mortality from COVID-19, as well as regression in terms of educational attainment, and this places them at greater risk of falling into poverty. People from ethnic minorities in Colombia and Mexico reported a lower probability of being hospitalized due to COVID-19. In Colombia and Brazil, mortality rates during the pandemic were higher for Afro-descendant and indigenous populations than for the rest of the population (Bustelo et al., 2021).

### **Levels of informality and social security coverage**

With respect to coverage, an analysis for four countries in Latin America—Brazil, Colombia, Peru, and Uruguay—reveals significant ethnic and racial gaps in coverage indicators for pension systems. In all of these countries, participation in pension systems is lower for employed Afro-descendants than for the rest of the employed population (ECLAC, 2020). Likewise, an 2008-2018 analysis covering Ecuador, Guatemala, Brazil, and Chile reveals that levels of formality are significantly lower for indigenous populations than for their nonindigenous counterparts (Bocarejo, Araujo, and Albertos, 2021).

### **Fiscal policies and ethnic and racial gaps**

Fiscal policies in the region may be progressive in ethnic and racial terms, but they benefit the indigenous and Afro-descendant poor less than other poor groups. One study found that public spending in Bolivia, Guatemala, Mexico, and Uruguay closes the income gap for indigenous peoples and Afro-descendants with respect to the rest of the population (Lustig et al., 2019). However, reductions in ethnic and racial inequality were minimal in these countries. Although conditional transfer programs are generally among the most progressive in ethnic and racial terms, they accounted for only a small share of social spending in the countries analyzed: between 2.2% (Bolivia) and 5.9% (Guatemala). In the case of Brazil, fiscal policy exacerbates racial inequalities: the proportion of total inequality accounted for by racial inequalities rises by 0.2 percentage points once taxes and transfers are taken into account.

Social spending can aggravate ethnic and racial inequalities where it focuses on certain employment features of the population. Lustig et al. (2019) argue that some fiscal interventions, particularly those linked to formal employment, have had a less progressive ethnic and racial impact than those targeting the poor alone. In the case of Brazil, for example, they find that special and contributory pensions and unemployment subsidies are regressive fiscal interventions in ethnic and racial terms for indigenous peoples, while for Afro Brazilians only unemployment subsidies are relatively progressive.

Fiscal policies can reduce ethnic and racial inequalities, but barriers remain in access to public services and fiscal interventions. Although several countries in the region have used taxes and direct social spending to reduce ethnic and racial inequalities, systemic inequalities remain a barrier to accessing social services. For example, Correa-Aste and Roopnaraine (2014) find that indigenous peoples in Peru face challenges in accessing conditional transfers due to their location and poor financial inclusion. Likewise, Lustig et al. (2019) find that the impact of programs targeted

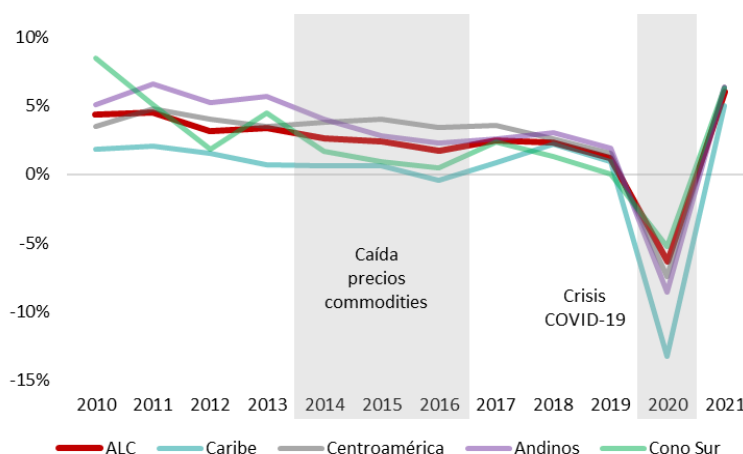


on the basis of labor market formality—although universal in their design—can be regressive in ethnic and racial terms due to differences in the socioeconomic and labor characteristics of different groups, which are not taken into account in this type of targeting.

## ANNEX VII. IMPACT OF THE COVID-19 PANDEMIC ON LATIN AMERICA AND THE CARIBBEAN

**The COVID-19 pandemic led to a deep contraction in economic activity in Latin America and the Caribbean in 2020.** The region experienced a sharp drop in GDP in 2020 (6.3%)—above that seen in both advanced and emerging countries (4.5% and 2%, respectively). The effect was uneven across the subregions, due to the different channels through which they were affected. In the Andean and Southern Cone countries, GDP contracted by 8.6% and 5.2%, respectively. In addition to the reduction in economic activity due to social distancing measures, the GDP performance in these regions was the result of a substantial drop in mining and energy prices and a severe decline in external commodity demand. In the Caribbean and Central American regions, meanwhile, economic activity fell by approximately 13.3% and 7.5%, respectively. This performance was the result of a sharp slowdown in sectors intensive in social contact (tourism), which due to the inherent nature of the epidemiological shock were seriously affected by restrictions on national and international mobility. However, inflows of remittances,<sup>1</sup> which are close to 1.8% of GDP in Central America and 12.6% of GDP in the Caribbean, have partly cushioned the decline in domestic demand and export earnings. As vaccination programs progress and governments strive to stabilize their fiscal position, post-pandemic recovery processes are expected to accelerate (Valencia, Arellano, and Angarita, 2021). Accordingly, the reactivation of production chains and greater dynamism in domestic and external demand are expected to lead to significant recovery in Latin America and the Caribbean in 2021, with growth of 6% (see Figure A.VII.1).

**Figure A.VII.1.** Economic growth in Latin America and the Caribbean and its regions  
(Real GDP, annual rate of change)



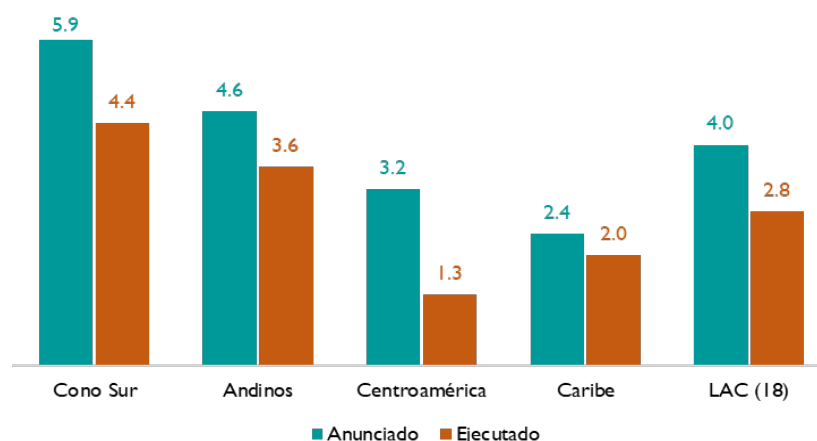
Source: IFD/FMM using WEO data.

**The region's governments have made significant fiscal efforts to address the consequences of the pandemic.** On average, spending stimulus of 2.8% of GDP was implemented to mitigate the economic, social, and health shock stemming from COVID-19. The package of measures announced by governments during 2020 was aimed primarily at improving the health sector and its hospital capacity, as well as providing transfers to the businesses and households most affected by the pandemic. They also implemented below-the-line liquidity measures. The Southern Cone and Andean countries announced and executed the highest levels of spending, with additional executed stimulus of 4.4% and 3.6% of GDP, respectively. In the case of the Andean region, most of this was allocated to below-the-line fiscal support. The Caribbean and Central American countries implemented expenditure measures totaling around 2% and 1.3% of GDP, respectively (see Figure A.VII.2). Fiscal stimulus declined in 2021 in Latin America and the Caribbean compared with 2020, but continuity in the vaccination and economic reactivation programs meant that the

<sup>1</sup> In contrast, remittances account for below 2% of GDP on average in the Andean and Southern Cone regions.

stimulus was not completely withdrawn. In this vein, primary spending declined by 1.7 percentage points of GDP in the region as a result of the strengthening of targeted expenditure policies and reduced transfers to businesses and households. Nonetheless, public spending remains one percentage point of GDP higher than before the pandemic, and even remains higher than actual spending during the 2008 international financial crisis. This suggests that challenges still exist in reversing the supportive fiscal policies during the COVID-19 pandemic.

**Figure A.VII.2.** Pandemic-related expenditure, announced versus executed (% of GDP)

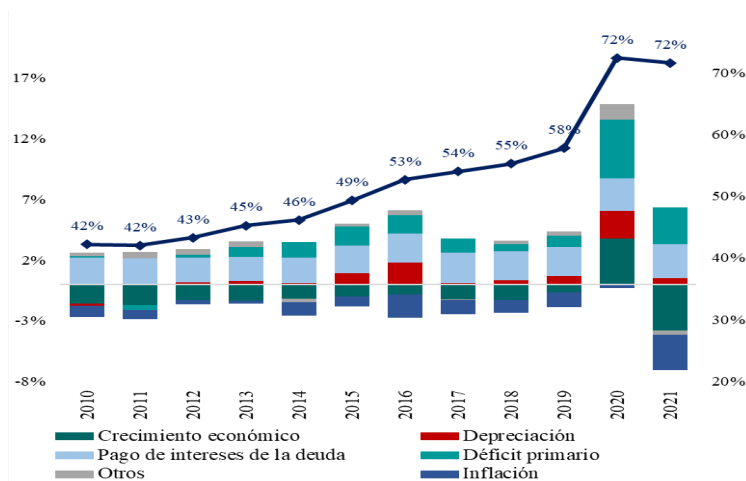


Source: Fiscal Monitor, official national sources, and authors' calculations.

**The COVID crisis has led to a sharp increase in the public debt.** The debt rose 15 percentage points in Latin America and the Caribbean in 2020, reaching 72% of GDP. This performance was due to an increase in the primary deficit (5 percentage points), a drop in economic growth (4 percentage points), and increased interest payments (3 percentage points). The main determinants of the increase in debt between the regions were the drop in economic growth and the wider primary deficit, as the impact of interest payments was even across the region. The regions with the greatest deterioration in gross debt were the Caribbean and the Andean countries, where the debt rose to around 99% and 66% of GDP, respectively. In both the Caribbean and the Southern Cone, the debt increase was the result of currency depreciation and the high levels of currency mismatch that have occurred. Lastly, Central America experienced the lowest average increase in debt, with gross debt standing at around 69% of GDP in 2020.

**Despite the recovery in economic growth, debt declined slightly in 2021,** despite inflationary pressures and increased financing costs. An accelerating economic recovery in 2021 created inflationary pressures that led to an increase in the benchmark interest rates of some central banks in the region. Similarly, recovery in the United States following the vaccination process, combined with higher commodity prices, led the Federal Reserve to increase its projections for interest rates, and this has raised expectations of an increase in debt financing costs for Latin America and the Caribbean over the next few years. Despite this, the debt-to-GDP ratio fell by 0.9 percentage points in 2021 (see Figure A.VII.3). In particular, higher inflation and economic activity combined to reduce the debt by 6.8 percentage points of GDP, offsetting the upward pressures exerted by primary deficits (3 percentage points), interest payments (2.8 percentage points), and currency devaluation (1.1 percentage points).

**Figure A.VII.3.** Breakdown of the change in gross debt  
(% of GDP)



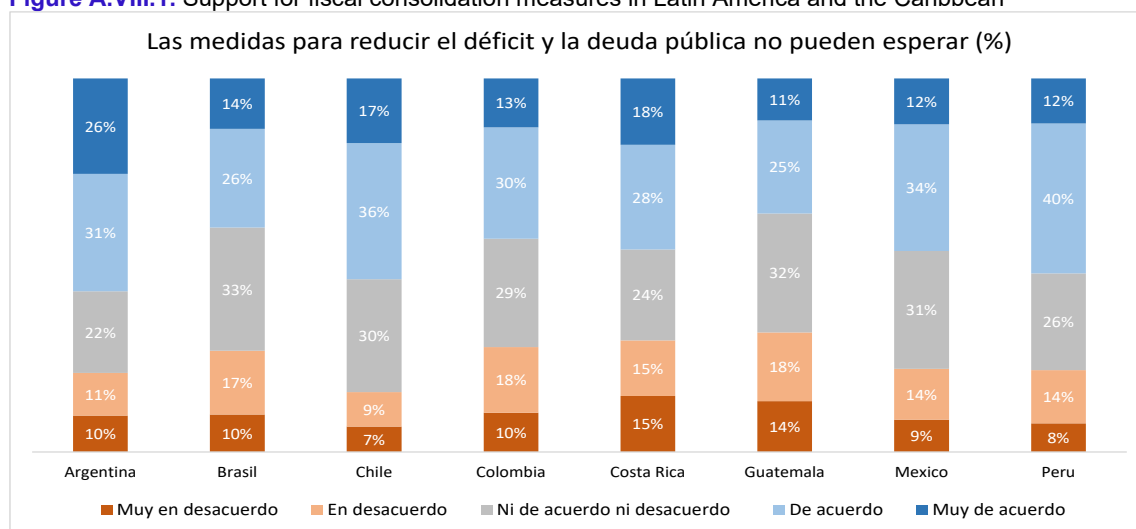
Source: IFD/FMM using WEO data.

## ANNEX VIII. THE POLITICAL ECONOMY OF FISCAL REFORMS

**Fiscal reform processes are politically complex.** Part of this complexity is intrinsic to fiscal policy, given that tax and expenditure policies reflect a distributive conflict between groups with differing interests. Nonetheless, the regional context has been characterized by a marked deterioration in socioeconomic conditions, combined with the emergence of protests and—in some cases—social conflict. This presents additional hurdles to moving forward with the fiscal reforms needed to achieve inclusive growth in the future.

**The political economy of fiscal reforms leads to their postponement.** Leaders may postpone reforms until they have no other option, due to organized groups that block budget cutbacks affecting their interests or fear on the part of politicians of major electoral costs. Because of this, fiscal reforms usually occur in moments of crisis or more intense fiscal need, when the different political actors internalize the severity of constraints (Hallerberg and Scartascini, 2017; Alesina, Ardagna, and Trebbi, 2006). In the region, popular opposition to measures to consolidate the public finances does not appear high (see Figure A.VIII.1). In this context, it is important to build broad political and social consensus surrounding the need for fiscal reforms that promote fiscal sustainability in an efficient and equitable manner.

**Figure A.VIII.1.** Support for fiscal consolidation measures in Latin America and the Caribbean

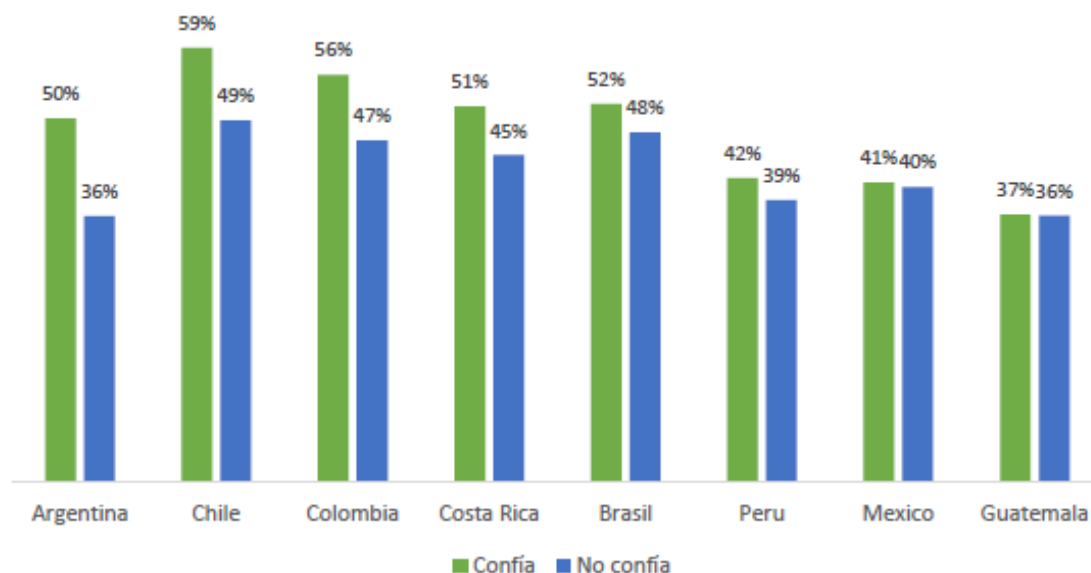


Source: IDB-Latin America Public Opinion Project (LAPOP) Survey (2022).

**The specific instruments that governments use to advance fiscal reforms are important,** as voters are not indifferent to these. There is evidence to show that voters prefer expenditure-based reforms to those based on higher taxes (Alesina et al., 2021; Ardanaz et al., 2020). In fact, lessons learned from recent fiscal reforms show that a balance between spending and tax measures, introduced gradually, can create the political coalitions needed to secure legislative support for fiscal reform (Ardanaz, Barreix, and Pineda, 2021).

**Trust among citizens affects the demand for different types of fiscal policies** (Keefer and Scartascini, 2022; Stantcheva, 2021). In particular, support for progressive tax reforms in the region is usually significantly higher among citizens who trust in the capacity of governments to provide public goods (see Figure A.VIII.2). Actions to enhance the credibility of fiscal policy can therefore help to elicit support for the approval and implementation of progressive fiscal reforms.

**Figure A.VIII.2** Support for a VAT increase with refunds for the poorest 30%, by level of trust (%)



Source: IDB-Latin America Public Opinion Project (LAPOP) Survey (2022). Note: The trust variable is based on responses to the question of whether taxes are used to finance public services with the aim of improving people's well-being.

## ANNEX IX. BEST PRACTICES FOR THE MANAGEMENT OF CONTINGENT LIABILITIES AND FISCAL RISKS

**Credit guarantees.** Best practices include (OECD, 2017) (i) calculating the costs and risks of guarantees and informing the decision-making authorities accordingly; (ii) establishing clear objectives and rules for loan guarantees; (iii) charging beneficiary fees that reflect at least the expected cost of the guarantee; (iv) clearly limiting guarantee contracts in time and scope; (v) imposing a ceiling on the issuance of credit guarantees; (vi) creating contingency reserve funds to increase the government's ability to cover possible future losses and monitor its financial position vis-à-vis existing guarantees; and (vii) continuously disclosing quantitative and qualitative information on the expected cost of guarantees.

**Public-private partnerships (PPPs).** The primary recommendations are to (i) strengthen regulatory frameworks and include PPPs in budget processes to mitigate fiscal risks (OECD, 2012); (ii) limit the value of projects to be executed through the PPP mechanism by applying specific annual and/or cumulative ceilings and setting quantitative limits on guarantees (OECD, 2012); (iii) value the risks allocated to public and private partners, treating the guarantees provided as a critical component when structuring PPPs; (iv) ensure that a unit exists to analyze the costs and risks associated with PPPs and keep the authorities informed of these (Valencia, Díaz, and Parra, 2022); (v) prepare projections and reports that include the effects of PPP-related contingent liabilities on the debt (OECD, 2017); (vi) record assumed commitments as debt, even in the case of pure concessions (Irwin, 2007; Funke, Irwin, and Rial, 2012); and (vii) ensure transparency and disclosure of the guarantees extended by governments in PPP contracts (IMF, 2018).

**State-run enterprises.** The literature suggests (i) reducing discretionality in the fiscal relationship between the central government and State-owned enterprises, to reduce expectations of a bailout (Musacchio Pineda and García, 2015; Ter-Minassian, 2017); (ii) reduce information asymmetries between the central government and State-owned enterprises by establishing centralized monitoring units (Musacchio, Pineda, and García, 2015) or strengthening market oversight (Wagner, 2017); (iii) introduce a rules-based regulatory framework for State-owned enterprise borrowing that takes corporate revenue into account (Ter-Minassian, 2017); and (iv) improve the corporate governance of State-owned enterprises (OECD, 2016).

**Fiscal risks arising from climate events and disasters.** Best practices include (OECD and World Bank, 2019) (i) identifying contingent liabilities, including both explicit liabilities (rooted in law or established political commitments) and implicit ones (post-disaster spending by governments in response to perceived moral obligations or political pressure); (ii) quantifying identified contingent liabilities based on disaster risk models;<sup>1</sup> (iii) continuously evaluating efforts to mitigate disasters and include them in the analysis of contingent liabilities undertaken by governments; (iv) disclosing contingent liabilities associated with disaster risks and providing information on how these are managed.

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<sup>1</sup> A review of government expenditures during past disaster events could provide an initial estimate of these costs. Nonetheless, countries are increasingly adopting probabilistic disaster risk models that provide more complete information on the potential cost of natural disasters. Examples of these models include Hazus in the United States and the Catsim model developed by the International Institute for Applied Systems Analysis.

## BIBLIOGRAPHY

- Acemoglu, D., Aghion, P., Bursztyn, L., and Hemous, D. (2012). The environment and directed technical change. *American Economic Review*, 102(1), 131-66. <https://doi.org/10.1257/aer.102.1.131>
- Acevedo, I., Castellani, F., Lotti, G., and Székely, M. (2021). Informalidad en los tiempos del COVID-19 en América Latina: Implicaciones y opciones de amortiguamiento. *IDB Working Paper 01232*.
- Acosta-Ormaechea, S., and Morozumi, A. (2021). The value-added tax and growth: design matters. *International Tax and Public Finance*, 28(5), 1211-1241. <https://doi.org/10.1007/s10797-021-09681-2>
- Acosta-Ormaechea, S., Sola, S., and Yoo, J. (2019). Tax composition and growth: a broad cross-country perspective. *German Economic Review*, 20(4), e70-e106. <https://doi.org/10.1111/geer.12156>
- Agnello, L., and Sousa, R. M. (2014). How does fiscal consolidation impact on income inequality? *Review of Income and Wealth*, 60(4), 702-726. <https://doi.org/10.1111/roiw.12004>
- Ahmad, E., and Viscarra, H. (2016). Public investment for sustainable development in Chile. Building on the national investment system.
- Ahmad, E., and Zanola, R. (2015). Chile: Regional Investments, Convergence and Local Governance. Some Preconditions for Sustainable and Inclusive Growth. London, UK: London School of Economics.
- Akerlof, G., Aumann, R., Deaton, A., Diamond, P., Engle, R., Fama, E., and Kahneman, D. (2019). Economists' statement on carbon dividends. *Wall Street Journal*, A13. <http://www.econstatement.org>
- Alaimo, V., and Pessino, C. (2018). Chapter 4: The Impact of Public Spending on Equity: Not Always as Intended. In A. Izquierdo, C. Pessino, and G. Vuletin (Eds.), *Better Spending for Better Lives: How Latin America and the Caribbean Can Do More with Less*. IDB.
- Alaimo, V., Bosch, M., Kaplan, D. S., Pagés, C., and Ripani, L. (2015). *Jobs for Growth*. IDB.
- Alcázar, L., and Jaramillo, M. (2022). Inversión Pública y Desigualdad en América Latina. *IDB Discussion Paper* (forthcoming).
- Alejos, L. A. (13 September 2021). ¿Cuáles son los riesgos fiscales de los eventos climáticos extremos y cómo enfrentarlos? *Blog Recaudando Bienestar*, IDB. <https://blogs.iadb.org/gestion-fiscal/es/cuales-son-los-riesgos-fiscales-de-los-eventos-climaticos-extremos-y-como-enfrentarlos/>
- Alesina, A., and Tabellini, G. (1990). A positive theory of fiscal deficits and government debt. *The Review of Economic Studies*, 57(3), 403-414. <https://doi.org/10.2307/2298021>
- Alesina, A., Ardagna, S., and Trebbi, F. (2006). Who adjusts and when? The political economy of reforms. *IMF Staff Papers*, 53(1), 1-29. <https://doi.org/10.2307/30036020>
- Alesina, A., Azzalini, G., Favero, C., Giavazzi, F., and Miano, A. (2018). Is it the "How" or the "When" that Matters in Fiscal Adjustments? *IMF Economic Review*, 66(1), 144-188. <https://doi.org/10.1057/s41308-017-0047-z>



- Alesina, M. A., Ciminelli, G., Furceri, D., and Saponaro, G. (2021). Austerity and Elections. *IMF Working Paper 21/121*.
- Almeida, R., and Carneiro, P. (2012). Enforcement of labor regulation and informality. *American Economic Journal: Applied Economics*, 4(3), 64-89. <https://doi.org/10.1257/app.4.3.64>
- Alonso-Albarran, V., Curristine, T. R., Preston, G., Soler, A., Tchelishvili, N., and Weerathunga, S. (2021). Gender Budgeting in G20 Countries. *IMF Working Papers*, 2021(269). <https://doi.org/10.5089/9781616354510.001>
- Alstadsæter, A., Johannesen, N., and Zucman, G. (2018). Who owns the wealth in tax havens? Macro evidence and implications for global inequality. *Journal of Public Economics*, 162, 89-100. <https://doi.org/10.1016/j.jpubeco.2018.01.008>
- Alstadsæter, A., Johannesen, N., and Zucman, G. (2019). Tax evasion and inequality. *American Economic Review*, 109(6), 2073-2103. <https://doi.org/10.1257/aer.20172043>
- Altinok, N., Pessino, C., and Chagalj, C. (2022). Smart and Efficient Spending for Growth in Latin American and Caribbean Countries. *IDB Mimeo*.
- Andersson, J. J. (2019). Carbon taxes and CO<sub>2</sub> emissions: Sweden as a case study. *American Economic Journal: Economic Policy*, 11(4), 1-30. <https://doi.org/10.1257/pol.20170144>
- Andrews, M., Cangiano, M., Cole, N., De Renzio, P., Krause, P., and Seligmann, R. (2014). This is PFM. *CID Working Paper Series*. 285.
- Andrián, L., Canavire-Bacarreza, G., Martinez-Vazquez, Jimenez, J.P., and Muñoz, A. (2022). Decarbonization, Stranded Assets and Subnational Revenue Collection in Andean Countries: Impacts and Reform Options. *Discussion Paper*, IDB (forthcoming).
- Angrist, N., Djankov, S., Goldberg, P. K., and Patrinos, H. A. (2021). Measuring human capital using global learning data. *Nature*, 592(7854), 403-408. <https://doi.org/10.1038/s41586-021-03323-7>
- Araki, S., and Panizza, U. (2019). The Use of Corruption Indicators in Sovereign Ratings: An Update. *Technical Note IDB-TN-1608*, IDB. <http://dx.doi.org/10.18235/0001565>
- Aranco, Natalia, Mariano Bosch, Marco Stampini, Oliver Azuara, Laura Goyeneche, Pablo Ibararán, Deborah Oliveira, Maria Reyes Retana, William Savedoff, and Eric Torres (2022). Aging in Latin America and the Caribbean: Social Protection and Quality of Life of Older Persons. IDB, Washington, D.C.
- Ardanaz, M. (2014). Fiscal windfalls, transparency, and the efficiency of public good provision: Evidence from Brazilian local governments. In *Transparent Governance in an Age of Abundance: Experiences from the Extractive Industries in Latin America and the Caribbean*. J.C. Vieyra and M. Masson (Eds.). IDB.
- Ardanaz, M., and Izquierdo, A. (2022). Current expenditure upswings in good times and public investment downswings in bad times? New evidence from developing countries. *Journal of Comparative Economics*, 50(1), 118-134. <https://doi.org/10.1016/j.jce.2021.06.002>
- Ardanaz, M., Barreix, A., and Pineda, E. (23 June 2021). Una reforma fiscal posible: el caso de Costa Rica. *Blog Gestión Fiscal*, IDB. <https://blogs.iadb.org/gestion-fiscal/es/una-reforma-fiscal-posible-lecciones-del-caso-de-costa-rica/>

- Ardanaz, M., Cavallo, E., Izquierdo, A., and Puig, J. (2021a). Output Effects of Fiscal Consolidations: Does Spending Composition Matter? *IDB Working Paper 1302*.
- Ardanaz, M., Cavallo, E., Izquierdo, A., and Puig, J. (2021b). Growth-friendly fiscal rules? Safeguarding public investment from budget cuts through fiscal rule design. *Journal of International Money and Finance*, 111, 102319. <https://doi.org/10.1016/j.jimonfin.2020.102319>
- Ardanaz, M., Hallerberg, M., and Scartascini, C. (2020). Fiscal consolidations and electoral outcomes in emerging economies: Does the policy mix matter? Macro and micro level evidence from Latin America. *European Journal of Political Economy*, 64, 101918. <https://doi.org/10.1016/j.ejpoleco.2020.101918>
- Armendáriz, E., and Carrasco, H. (2019). El gasto en inversión pública de América Latina: Cuánto, quién y en qué. *Discussion Paper 697, IDB*. <http://dx.doi.org/10.18235/0001816>
- Armendáriz, E., Contreras, E., Orozco S., and Parra, G. (2016). La eficiencia del gasto de inversión pública en América Latina. *IDB Mimeo*.
- Asfaha, S. G. (2007). National revenue funds: their efficacy for fiscal stability and intergenerational equity. *International Institute for Sustainable Development*.
- Asik, G. (2017). Effectiveness of Stabilization Funds in Managing Volatility in Oil-Rich Countries. *Unpublished Working Paper*.
- Astudillo, K., Fretes, V., Pessino, C., and Rossignolo, D. (2022). Making the invisible visible: applying a gender perspective to strengthen tax policy. *Unpublished Policy Paper*.
- Attanasio, O., Meghir, C., and Otero, A. (2011). Pensions, work, and informality: The impact of the 2008 Chilean pension reform. *Unpublished paper, University College London*.
- Azcona, G., Bhatt, A., Davies, S. E., Harman, S., Smith, J., and Wenham, C. (2020). Spotlight on gender, COVID-19 and the SDGs: Will the pandemic derail hard-won progress on gender equality?
- Azuara, O., Azuero, R., Bosch, M., and Torres, J. (2019). Special tax regimes in Latin America and the Caribbean: Compliance, social protection, and resource misallocation. *IDB Working Paper Series 970*. <https://doi.org/10.18235/0001586>
- Bacon, R., and Tordo, S. (2006). Experiences with oil funds: Institutional and financial aspects. *ESMAP Report 321/06, Energy Sector Management Assistance Program, World Bank*.
- Bah, A., Bazzi, S., Sumarto, S., and Tobias, J. (2019). Finding the poor vs. measuring their poverty: Exploring the drivers of targeting effectiveness in Indonesia. *The World Bank Economic Review*, 33(3), 573-597.
- Bahl, R., Goh, C. C., and Qiao, B. (2014). Reforming the public finance system to fit a more urbanized China. *China Financial and Economic Publishing House, Beijing*.
- Baldacci, E., Clements, B., Gupta, S., and Cui, Q. (2008). Social spending, human capital, and growth in developing countries. *World Development*, 36(8), 1317-1341. <https://doi.org/10.1016/j.worlddev.2007.08.003>
- Baldi, S., and Vannoni, D. (2019). The impact of centralization on pharmaceutical procurement prices: the role of institutional quality and corruption. *African Journal of Procurement, Logistics & Supply Chain Management*, 1(4), pp.44-59.

- Ball, L. M., Furceri, D., Leigh, M. D., and Loungani, M. P. (2013). The distributional effects of fiscal consolidation. *IMF Working Paper WP/13/151*.
- Bandiera, O., Prat, A., and Valletti, T. (2009). Active and passive waste in government spending: evidence from a policy experiment. *American Economic Review*, 99(4), 1278-1308. <https://doi.org/10.1257/aer.99.4.1278>
- Bando, R., Martínez Carrasco, J., and Dezolt, A. L. (2021). May I Calculate Your Taxes?: The Effect of Bookkeeping on Tax Compliance under a Simplified Regime. *IDB Working Paper* 01211.
- Barreix, A. D., Bes, M., Fonseca, O., Fontañez, M., Morán, D., Pineda, E., and Roca, J. (2022). Revisiting Personalized VAT: A Tool for Fiscal Consolidation with Equity. *Discussion Paper* 939, IDB.
- Barreix, A. D., Zambrano, R., Costa, M. P., da Silva Bahia, Á. A., de Jesus, E. A., de Freitas, V. P., and Servicios de Administración Tributaria. (2018). Electronic Invoicing in Latin America. *IDB*, 595.
- Barro, R. J. (2003). Determinants of economic growth in a panel of countries. *Annals of Economics and Finance*, 4, 231-274.
- Bastian, J. (2020). The rise of working mothers and the 1975 earned income tax credit. *American Economic Journal: Economic Policy*, 12(3), 44-75. <https://doi.org/10.1257/pol.20180039>
- Bastian, J., and Micheltore, K. (2018). The long-term impact of the earned income tax credit on children's education and employment outcomes. *Journal of Labor Economics*, 36(4), 1127-1163. <https://doi.org/10.1086/697477>
- Bataille, C., Waisman, H., Vogt-Schilb, A., Jaramillo, M., Delgado, R., Argüello, R., and Svensson, J. (2020). Net-zero Deep Decarbonization Pathways in Latin America: Challenges and Opportunities. *IDB Working Paper Series* 01157. <http://dx.doi.org/10.18235/0002717>
- Becker, S. O., Egger, P. H., and Von Ehrlich, M. (2010). Going NUTS: The effect of EU Structural Funds on regional performance. *Journal of Public Economics*, 94(9-10), 578-590.
- Beetsma, R., Debrun, X., Fang, X., Kim, Y., Lledó, V., Mbaye, S., and Zhang, X. (2019). Independent fiscal councils: Recent trends and performance. *European Journal of Political Economy*, 57, 53-69. <https://doi.org/10.1016/j.ejpoleco.2018.07.004>
- Belu Manescu, C., and Bova, E. (2020). National expenditure rules in the EU: an analysis of effectiveness and compliance. *European Economy Discussion Paper*, 124.
- Benzarti, Y. (2020). How taxing is tax filing? Using revealed preferences to estimate compliance costs. *American Economic Journal: Economic Policy*, 12(4), 38-57. <https://doi.org/10.1257/pol.20180664>
- Bergolo, M., and Cruces, G. (2021). The anatomy of behavioral responses to social assistance when informal employment is high. *Journal of Public Economics*, 193, 104313. <https://doi.org/10.1016/j.jpubeco.2020.104313>
- Bick, A., and Fuchs-Schündeln, N. (2017). Quantifying the disincentive effects of joint taxation on married women's labor supply. *American Economic Review*, 107(5), 100-104. <https://doi.org/10.1257/aer.p20171063>

- Binsted, M., Iyer, G., Edmonds, J., Vogt-Schilb, A., Arguello, R., Cadena, A., Delgado, R., Feijoo, F., Lucena, A. F., McJeon, H., Miralles-Wilhelm, F., and Sharma, A. (2019). Stranded asset implications of the Paris Agreement in Latin America and the Caribbean. *IDB Discussion Paper 699*.
- Bocarejo, D., Araujo, C., and Albertos, C. (2021). Brechas y desafíos socioeconómicos de los pueblos indígenas de América Latina: retos para el desarrollo con identidad. *Technical Note IDB-TN-2280. Washington, D.C.: IDB*.
- Bond, S., and Xing, J. (2015). Corporate taxation and capital accumulation: Evidence from sectoral panel data for 14 OECD countries. *Journal of Public Economics*, 130, 15-31. <https://doi.org/10.1016/j.jpubeco.2015.08.001>
- Bonet-Morón, J., and Ayala-García, J. (2017). The territorial fiscal gap in Colombia. *Documentos de Trabajo Sobre Economía Regional y Urbana*; No. 251.
- Bova, M. E. (2021). Green Budgeting Practices in the EU: A First Review. *European Economy-Discussion Papers 140*.
- Bova, M. E., Carcenac, N., and Guerguil, M. M. (2014). Fiscal rules and the procyclicality of fiscal policy in the developing world. *IMF Working Paper 122*.
- Bova, M. E., Ruiz-Arranz, M., Toscani, M. F. G., and Ture, H. E. (2016). The fiscal costs of contingent liabilities: A new dataset. *IMF Working Paper 14*.
- Braun, M., Di Gresia, L., and Radics, A. (2021). Perfiles de eficiencia del gasto subnacional. *X Jornadas Iberoamericanas de Finanzas Locales*.
- Brewer, M., and Hoynes, H. (2019). In-Work Credits in the UK and the US. *Fiscal Studies*, 40(4), 519-560. <https://doi.org/10.1111/1475-5890.12207>
- Brockmeyer, A., Smith, S., Hernandez, M., and Kettle, S. (2019). Casting a wider tax net: Experimental evidence from Costa Rica. *American Economic Journal: Economic Policy*, 11(3), 55-87. <https://doi.org/10.1257/pol.20160589>
- Brosio, G., Jiménez, J. P., and Ruelas, I. (2018). Territorial inequality, equalization transfers and asymmetric sharing of non-renewable natural resources in Latin America. *ECLAC Review* No. 126, December 2018, 57.
- Busso, M., and Messina, J. (2020). The inequality crisis: Latin America and the Caribbean at the Crossroads. IDB. <http://dx.doi.org/10.18235/0002629>
- Busso, M., Fazio, M., and Algazi, S. (2012). (In)formal and (un)productive: The productivity costs of excessive informality in Mexico. *IDB Working Paper 341*.
- Bustelo, M., Frisancho, V., Martinez, K., and Suaya, A. (2021). "COVID-19 Sets Back Progress Made on the Welfare of Women and Diverse Populations." *GDLab. Washington, D.C.: IDB*. <http://dx.doi.org/10.18235/0003955>.
- Calderón, C., and Chong, A. (2004). Volume and quality of infrastructure and the distribution of income: an empirical investigation. *Review of Income and Wealth*, 50(1), 87-106.
- Calijuri, M., García, G., Bravo, J. and Feres de Azeida, J. (2022). Documentos Tributarios Electrónicos y Big Data Económica para el Contributivo y Aduanero. *IDB Mimeo*.
- Cárdenas, M., Fernández, C., Rasteletti, A., and Zamora, D. (2021). Consideraciones para el diseño de políticas fiscales para reducir la informalidad en América Latina y el Caribe. *IDB Discussion Paper 882*.

- Carriere-Swallow, M. Y., David, M. A., and Leigh, M. D. (2018). The Macroeconomic Effects of Fiscal Consolidation in Emerging Economies: Evidence from Latin America. *Journal of Money, Credit and Banking*, 53(6), 1313-1335. <https://doi.org/10.1111/jmcb.12784>
- Carrillo, P., Pomeranz, D., and Singhal, M. (2017). Dodging the taxman: Firm misreporting and limits to tax enforcement. *American Economic Journal: Applied Economics*, 9(2), 144-64. <https://doi.org/10.1257/app.20140495>
- Cavallo, E., Powell, A., and Serevesky, T. (2020). From Structures to Services. The Path to Better Infrastructure in Latin America and the Caribbean. *IDB*.
- Cevik, M. S., and Huang, G. (2018). How to manage the fiscal costs of natural disasters. How to notes 18/03, *IMF, Fiscal Affairs Department*.
- Chen, J., Grimshaw, S., and Myles, G. D. (2017). Testing and Implementing Digital Tax Administration. *Digital Revolutions in Public Finance*, 363.
- Coady, M. D., Parry, I., Le, N. P., and Shang, B. (2019). Global fossil fuel subsidies remain large: An update based on country-level estimates. *IMF Working Papers*, 19, 39.
- Conte Grand, M., Rasteletti, A., and Muñoz, J. D. Impuestos a los combustibles en la teoría y en la práctica. *IDB Technical Note 2323*. <http://dx.doi.org/10.18235/0003994>
- Correa-Aste, N., and Roopnaraine, T. (2014). Pueblos indígenas y Programas de Transferencias Condicionadas (PTC): Estudio etnográfico sobre la implementación y los efectos socioculturales del Programa Juntos en seis comunidades andinas y amazónicas de Perú. *Washington, D.C.: IDB*.
- Cunningham, S., Davis, J., and Dohrmann, T. (29 January 2018). The trillion-dollar prize: Plugging government revenue leaks with advanced analytics. *McKinsey and Company*. <https://www.mckinsey.com/industries/public-and-social-sector/our-insights/the-trillion-dollar-prize-plugging-government-revenue-leaks-with-advanced-analytics>
- Dabán, T., and Héris, J. L. (2010). A Public Financial Management Framework for Resources-Producing Countries. *IMF Working Papers*, 2010(072).
- Dabla-Norris, M. E., and Lima, F. (2018). Macroeconomic effects of tax rate and base changes: Evidence from fiscal consolidations. *IMF Working Paper 220*.
- Daniel, M. J. (2006). Fiscal adjustment for stability and growth. IMF. *IMF Pamphlet Series 55*.
- David, M. A., and Leigh, M. D. (2018). A New Action-based Dataset of Fiscal Consolidation in Latin America and the Caribbean. *IMF Working Paper 94*.
- Davoodi, H. R., Elger, P., Fotiou, A., Garcia-Macia, D., Lagerborg, A., Lam, R., and Pillai, S. (2022). *Fiscal Rules Dataset: 1985-2021*. [Data set]. IMF.
- De Andrade, G. H., Bruhn, M., and McKenzie, D. (2016). A helping hand or the long arm of the law? Experimental evidence on what governments can do to formalize firms. *The World Bank Economic Review*, 30(1), 24-54.
- De Brauw, A., Gilligan, D. O., Hoddinott, J., and Roy, S. (2015). Bolsa Família and household labor supply. *Economic Development and Cultural Change*, 63(3), 423-457. <https://doi.org/10.1086/680092>
- De Mello, L. (2008). The Brazilian "Tax War": The Case of Value-Added Tax Competition among the States. *Public Finance Review*, 36(2), 169-193.



- De Michele, R., and Pierri, G. (2020). Transparency and Digital Government: The Impact of COMPR.AR in Argentina. *IDB Discussion Paper 767*.
- Debrun, M. X., and Kapoor, R. (2010). Fiscal policy and macroeconomic stability: automatic stabilizers work, always and everywhere. *IMF Working Paper 111*.  
5890.12130
- Debrun, X., and Kinda, T. (2017). Strengthening post-crisis fiscal credibility: fiscal councils on the rise—a new dataset. *Fiscal Studies*, 38(4), 667-700. <https://doi.org/10.1111/1475->
- Debrun, X., Kinda, T., Curristine, T., Eyraud, L., Harris, J., and Seiwald, J. (2013). The functions and impact of fiscal councils. *IMF Policy Paper*, 16.
- Decarolis, F. (2014). Awarding price, contract performance, and bids screening: Evidence from procurement auctions. *American Economic Journal: Applied Economics*, 6(1), 108-32. <https://doi.org/10.1257/app.6.1.108>
- Delgado, R., Eguino, H., and Lopes, A. (2021). Fiscal Policy and Climate Change: Recent Experiences of Finance Ministries in Latin America and the Caribbean. *IDB*.
- Díaz-Cassou, J., Andrade, H. V., Radics, A., and Miranda, A. M. (2017). La brecha fiscal horizontal en Ecuador y su igualación. *Discussion Paper IDB-DP-547*. Washington, D.C.: IDB.
- Djankov, S., Ganser, T., McLiesh, C., Ramalho, R., and Shleifer, A. (2010). The effect of corporate taxes on investment and entrepreneurship. *American Economic Journal: Macroeconomics*, 2(3), 31-64. <https://doi.org/10.1257/mac.2.3.31>
- Dolls, M., Fuest, C., and Peichl, A. (2012). Automatic stabilizers and economic crisis: US vs. Europe. *Journal of Public Economics*, 96(3-4), 279-294. <https://doi.org/10.1016/j.jpubeco.2011.11.001>
- ECLAC. (2020). Fiscal Panorama of Latin America and the Caribbean, 2020: fiscal policy amid the crisis arising from the coronavirus disease (COVID-19) pandemic. *Economic Commission for Latin America and the Caribbean*.
- ECLAC. (2021). Fiscal Panorama of Latin America and the Caribbean 2021: Fiscal policy challenges for transformative recovery post-COVID-19. *Economic Commission for Latin America and the Caribbean*.
- Eguino, H., Capello, M., Farfán, G., Aguilar, J. C., and Menéndez, H. (2020). How Efficient Is the Management of Subnational Public Investment? The Situation in the Federal Countries of Latin America. *IDB*.
- Elliott, C., Worker, J., Levin, K., and Ross, K. (2019). Good Governance for Long-Term Low-Emissions Development Strategies. *World Resources Institute Working Paper*.
- Eyraud, L., Debrun, M. X., Hodge, A., Lledo, V. D., and Pattillo, M. C. A. (2018). Second-generation fiscal rules: Balancing simplicity, flexibility, and enforceability. *IMF Staff Discussion Note 04*.
- Fainboim-Yaker, I., and Pattanayak, S. (2011). La Cuenta Única del Tesoro: Una herramienta esencial para la gestión de tesorería del gobierno. *IMF Technical Notes and Manuals*.
- Fairris, D., and Jonasson, E. (2016). Determinants of Changing Informal Employment in Brazil, 2000–2010. *MPRA Paper, University Library of Munich*.

- Fajnzylber, P., Maloney, W. F., and Montes-Rojas, G. V. (2011). Does formality improve micro-firm performance? Evidence from the Brazilian SIMPLES program. *Journal of Development Economics*, 94(2), 262-276. <https://doi.org/10.1016/j.jdeveco.2010.01.009>
- Farné, S., Rodríguez, D., and Ríos, P. (2015). Impacto de los subsidios estatales sobre el mercado laboral en Colombia. *Universidad del Rosario*.
- Fatás, A., and Mihov, I. (2001). Government size and automatic stabilizers: international and intranational evidence. *Journal of international economics*, 55(1), 3-28. [https://doi.org/10.1016/S0022-1996\(01\)00093-9](https://doi.org/10.1016/S0022-1996(01)00093-9)
- Fatás, A., and Mihov, I. (2013). Policy volatility, institutions, and economic growth. *Review of Economics and Statistics*, 95(2), 362-376. [https://doi.org/10.1162/REST\\_a\\_00265](https://doi.org/10.1162/REST_a_00265)
- Fazekas, M. (2017). Red tape, bribery and government favouritism: evidence from Europe. *Crime, Law and Social Change*, 68(4), 403-429. <https://doi.org/10.1007/s10611-017-9694-2>
- Feng, K., Hubacek, K., Liu, Y., Marchán, E., and Vogt-Schilb, A. (2018). Managing the Distributional Effects of Energy Taxes and Subsidy Removal in Latin America and the Caribbean. *IDB Working Paper 947*. <https://doi.org/10.18235/0001331>
- Fenochietto, R., and Pessino, C. (2011). La efectividad de las redes de protección social. *IDB Technical Note 187*.
- Forero, D., Rasteletti, A. and Urrea, I. L. (2022). Cómo implementar impuestos al carbono en América Latina. *IDB Mimeo*.
- Freire, G., Díaz-Bonilla, C., Schwartz Orellana, S., Soler López, J., and Carbonari, F. (2018). Afro-descendants in Latin America: Toward a Framework of Inclusion.
- Fritz, V., Verhoeven, M., and Avenia, A. (2017). Political economy of public financial management reforms.
- Funke, K., Irwin, T., and Rial, J. (2012). Budgeting and Fiscal Reporting for Public-Private Partnerships. *International Transport Forum Discussion Paper 2012-8*, OECD.
- Furceri, D., and Li, B. G. (2017). The macroeconomic (and distributional) effects of public investment in developing economies. IMF Working Paper 17/217. IMF, Washington, D.C.
- Galiani, S., Meléndez, M., and Ahumada, C. N. (2017). On the effect of the costs of operating formally: New experimental evidence. *Labour Economics*, 45, 143-157. <https://doi.org/10.1016/j.labeco.2016.11.011>
- García-Molina, M., Rasteletti, A., and Urrea, I. L. (2022). Tax Structures, Economic Structures and Economic Growth. *IDB Mimeo*.
- Garganta, S., and Gasparini, L. (2015). The impact of a social program on labor informality: The case of AUH in Argentina. *Journal of Development Economics*, 115, 99-110. <https://doi.org/10.1016/j.jdeveco.2015.02.004>
- Garicano, L., Lelarge, C., and Van Reenen, J. (2016). Firm size distortions and the productivity distribution: Evidence from France. *American Economic Review*, 106(11), 3439-79. <https://doi.org/10.1257/aer.20130232>
- Gaspar, V., and Hagan, S. (2016). Corruption: costs and mitigating strategies. *IMF Staff Discussion Notes*, 2016(005).

- Gennaioli, N., La Porta, R., Lopez-de-Silanes, F., and Shleifer, A. (2013). Human capital and regional development. *The Quarterly Journal of Economics*, 128(1), 105-164. <https://doi.org/10.1093/qje/qjs050>
- Gillitzer, C., and Skov, P. E. (2018). The use of third-party information reporting for tax deductions: evidence and implications from charitable deductions in Denmark. *Oxford Economic Papers*, 70(3), 892-916. <https://doi.org/10.1093/oep/gpx055>
- Godbout, L., and St-Cerny, S. (2011). Are consumption taxes regressive in Quebec? *Canadian Tax Journal*, 59(3), 463-493. *Revue Fiscale Canadienne*.
- Gómez, J. L., Martínez-Vazquez, J., Muñoz, A. and Radics, A. (2022). Retos futuros de la descentralización en Latinoamérica. *Asociación Iberoamericana de Financiación Local*.
- Gómez-Sabaini, J. C., and Morán, D. (2020). Estrategias para abordar la evasión tributaria en América Latina y el Caribe: avances en su medición y panorama de las medidas recientes para reducir su magnitud. *Macroeconomía del Desarrollo* 215. Economic Commission for Latin America and the Caribbean.
- Gonguet, F., Wendling, C., Aydin, O., and Battersby, B. (2021). Climate-Sensitive Management of Public Finances—"Green PFM." *IMF Staff Climate Note* 2021/002. IMF.
- Gonzalez de Frutos, U., Yarygina Udoenko, A., and Alejos, L. (2022): Analítica Avanzada para el progreso de las Administraciones Tributarias de América Latina y el Caribe. In Moreno González, S. (Ed) *Nuevas Tecnologías Disruptivas y Tributación*, Ed. Thomson Reuters Aranzadi - Cizur Menor (Navarra).
- Groves, D. G., Syme, J., Molina-Perez, E., Calvo, C., Víctor-Gallardo, L., Godínez-Zamora, G., Quirós-Tortós, J., De León, F., Meza Murillo, A., Saavedra Gómez, V., and Vogt-Schilb, A. (2020). Costos y beneficios de la descarbonización de la economía de Costa Rica. Plan Nacional de Descarbonización bajo incertidumbre. *IDB*.
- Guajardo, J., Leigh, D., and Pescatori, A. (2014). Expansionary austerity? International evidence. *Journal of the European Economic Association*, 12(4), 949-968.
- Guerguil, M., Mandon, P., and Tapsoba, R. (2017). Flexible fiscal rules and countercyclical fiscal policy. *Journal of Macroeconomics*, 52, 189-220.
- Gunter, S. (2013). State Earned Income Tax Credits and participation in regular and informal work. *National Tax Journal*, 66(1), 33-62.
- Gunter, S., Riera-Crichton, D., Vegh, C. A., and Vuletin, G. (2021). Non-linear effects of tax changes on output: The role of the initial level of taxation. *Journal of International Economics*, 131, 103450.
- Gupta, M. S., Keen, M. M., Shah, M. A., and Verdier, M. G. (Eds.). (2017). Digital revolutions in public finance. *IMF*.
- Hallerberg, M., and Scartascini, C. (2017). Explaining changes in tax burdens in Latin America: Do politics trump economics? *European Journal of Political Economy*, 48, 162-179.
- Harju, J., Matikka, T., and Rauhanen, T. (2019). Compliance costs vs. tax incentives: Why do entrepreneurs respond to size-based regulations? *Journal of Public Economics*, 173, 139-164.



- Haseeb, M., and Vyborny, K. (2022). Data, discretion and institutional capacity: Evidence from cash transfers in Pakistan. *Journal of Public Economics*, 206, 104535.
- Hashim, A., and Piatti, M. (2018). Lessons from reforming financial management information systems: a review of the evidence. *World Bank Policy Research Working Paper*, (8312).
- Herrera, S., and Olaberria, E. (2020). Budget Rigidity in Latin America and the Caribbean. *World Bank*, Washington, D.C.
- Hofman, B., and Guerra, S. C. (2005). Fiscal Disparities in East Asia: How large and do they matter? *East Asia Decentralizes: Making Local Government Work*, 292, 67.
- Hofman, B., and Guerra, S. C. (2007). Ensuring inter-regional equity and poverty reduction. In *Fiscal Equalization* (pp. 31-59). *Springer, Boston, MA*.
- Hooper, E., Peters, S., and Pintus, P. (2017). To what extent can long-term investment in infrastructure reduce inequality? <http://dx.doi.org/10.2139/ssrn.2952365>
- Hussain, F. I., Tlaiye, L. E., and Jordan Arce, R. M. (2020). Developing a National Green Taxonomy: A World Bank Guide.
- Huxham, M., Anwar, M., and Nelson, D. (2019). Understanding the impact of a low carbon transition on South Africa. *Climate Policy Initiative (CPI)*.
- IDB and Deep Decarbonization Pathways in Latin America. (2020). Getting to Net-Zero Emissions: Lessons from Latin America and the Caribbean. <https://doi.org/10.18235/0002024>
- IDB and ECLAC. (2022). Panorama de las relaciones fiscales entre niveles de gobierno de países de América Latina y el Caribe. *Axel Radics, Francisco Vázquez, Noél Pérez Benítez, and Ignacio Ruelas*.
- IDB and OECD. (2019). A Beneficial Ownership Implementation Toolkit.
- IDB. (2013). Recaudar no basta: los impuestos como instrumento de desarrollo. *Ana Corbacho, Vicente Fretes Cibils, Eduardo Lora (Eds.)*.
- IDB. (2015). Public Financial Management in Latin America: The Key to Efficiency and Transparency. *Pimenta, C. and Pessoa, M. (Eds.)*.
- IDB. (2018a). Better Spending for Better Lives: How Latin America and the Caribbean Can Do More with Less. *Alejandro Izquierdo, Carola Pessino, Guillermo Vuletin (Eds.)*.
- IDB. (2018b). Fiscal Policy and Management Sector Framework Document.
- IDB. (2021). Opportunities for Stronger and Sustainable Postpandemic Growth. *2021 Latin American and Caribbean Macroeconomic Report, coordinated by Eduardo Cavallo and Andrew Powell*.
- IDB. (2022a). From Recovery to Renaissance. Turning Crisis into Opportunity. *2022 Latin American and Caribbean Macroeconomic Report, coordinated by Eduardo Cavallo, Arturo Galindo, Victoria Nuguer, and Andrew Powell*.
- IDB. (2022b). Development in the Americas, the Debt in Latin America and the Caribbean. *Forthcoming, coordinated by Powell, A., and Valencia, O. M.*
- IMF (2012). Fiscal Transparency, Accountability, and Risk.

- IMF and OECD. (2021). Tax Policy and Climate Change: IMF/OECD Report for the G20 Finance Ministers and Central Bank Governors, September 2021, Italy, [www.oecd.org/tax/tax-policy/imf-oecd-g20-report-tax-policy-and-climate-change.htm](http://www.oecd.org/tax/tax-policy/imf-oecd-g20-report-tax-policy-and-climate-change.htm)
- IMF. (2013). Public financial management and its emerging architecture. *Cangiano, M. M., Curristine, M. T. R., and Lazare, M. M. International Monetary Fund.*
- IMF. (2015). Making Public Investment More Efficient. *Choices, D.* Washington, D.C.
- IMF. (2018). Fiscal Transparency Handbook (2018). *Pattanayak, S. International Monetary Fund.*
- IMF. (2019a). Fiscal Monitor: Curbing Corruption.
- IMF. (2019b). Fiscal Monitor: How to Mitigate Climate Change. Washington, October.
- IMF. (2019c). Fiscal Policies for Paris Climate Strategies—From Principle to Practice. *IMF Policy Paper*, Fiscal Affairs Department, February 2019.
- IMF. (2021). Strengthening Infrastructure Governance for Climate-Responsive Public Investment. *IMF Policy Paper*, Fiscal Affairs Department, December 2021.
- Inter-American Center of Tax Administrations. (2020). ICT as a Strategic Tool to Leapfrog the Efficiency of Tax Administrations.
- IPCC (Intergovernmental Panel on Climate Change) (2022). Climate Change 2022: Impacts, Adaptation and Vulnerability.
- Irwin, T. (2007). Government guarantees: Allocating and valuing risk in privately financed infrastructure projects. *World Bank Publications.*
- Izquierdo, A., and Pessino, C. (2018). Chapter 3: The (In)efficiency of Public Spending. In A. Izquierdo, C. Pessino, and G. Vuletin (Eds.), *Better Spending for Better Lives: How Latin America and the Caribbean Can Do More with Less. IDB.*
- Izquierdo, A., and Pessino, C. (2020). Chapter 12: Limited Redistribution Through Fiscal Policies. In A. Izquierdo, C. Pessino, and G. Vuletin (Eds.), *The Inequality Crisis: Latin America and the Caribbean at the Crossroads. IDB.*
- Izquierdo, A., Puig, J., Riera-Crichton, D., and Vuletin, G. (2018). Chapter 2: Spending and the Cycle. In A. Izquierdo, C. Pessino, and G. Vuletin (Eds.), *Better Spending for Better Lives: How Latin America and the Caribbean Can Do More with Less. IDB.*
- Jaramillo, M. (2013). Employment growth and segmentation in Peru, 2001–2011. *ILO Employment Working Paper*, (151).
- Jiménez, J.P., Muñoz, A. and Radics, A. (2022). Desigualdad regional, recursos naturales e igualdad fiscal subnacional en América Latina. *Asociación Iberoamericana de Financiamiento Local* (forthcoming).
- Jouste, M., Nalukwago, M. I., and Waiswa, R. (2021). Do Tax Administrative Interventions Targeted at Small Businesses Improve Tax Compliance and Revenue Collection? Evidence from Ugandan Administrative Tax Data.
- Keefer, P., and Scartascini, C. (2022). Trust: The Key to Social Cohesion and Growth in Latin America and the Caribbean.

- Keen, M., and Lockwood, B. (2010). The value added tax: Its causes and consequences. *Journal of Development Economics*, 92(2), 138-151. <https://doi.org/10.1016/j.jdeveco.2009.01.012>
- Kleven, H. J., Knudsen, M. B., Kreiner, C. T., Pedersen, S., and Saez, E. (2011). Unwilling or unable to cheat? Evidence from a tax audit experiment in Denmark. *Econometrica*, 79(3), 651-692.
- Kochanova, A., Hasnain, Z., and Larson, B. (2020). Does e-Government improve Government capacity? Evidence from tax compliance costs, tax revenue, and public procurement competitiveness. *The World Bank Economic Review*, 34(1), 101-120.
- Kotakorpi, K., and Laamanen, J. P. (2016). Prefilled income tax returns and tax compliance: Evidence from a natural experiment.
- Kugler, A., Kugler, M., and Prada, L. O. H. (2017). Do payroll tax breaks stimulate formality? Evidence from Colombia's reform (No. w23308). *National Bureau of Economic Research*.
- LaLumia, S. (2017). Tax Policies to Encourage Women's Labor Force Participation. *Driving Growth through Women's Economic Participation*, 71.
- Lemaire, T. (2020). Fiscal Consolidations and Informality in Latin America and the Caribbean.
- Levy, S. (2015). *¿Están apuntando en la dirección correcta las políticas sociales en América Latina? Más allá de los programas de transferencias en efectivo condicionadas*. Brookings. <https://www.brookings.edu/es/opinions/estan-apuntando-en-la-direccion-correcta-las-politicas-sociales-en-america-latina-mas-alla-de-los-programas-de-transferencias-en-efectivo-condicionadas/>
- Levy, S. (2018). Under-rewarded efforts: The elusive quest for prosperity in Mexico. *IDB Publications* (Books).
- Levy, S., and Cruces, G. (2021). Time for a new course: an essay on social protection and growth in Latin America. *UNDP Latin America and the Caribbean Working Paper Series 24*.
- Lewis-Faupel, S., Neggers, Y., Olken, B. A., and Pande, R. (2016). Can electronic procurement improve infrastructure provision? Evidence from public works in India and Indonesia. *American Economic Journal: Economic Policy*, 8(3), 258-83.
- Lindwall, P. (2013). Budgeting for Contingent Liabilities. OECD Discussion Paper for Working Party of Senior Budget Officials.
- Llerena Pinto, F., Llerena Pinto, M. C., and Llerena Pinto, M. A. (2015). Social Spending, Taxes and Income Redistribution in Ecuador (No. 28). *Tulane University, Department of Economics*.
- Lopez-Murphy, P. L., Ossowski, M. R., and Villafuerte, M. M. (2010). Riding the roller coaster: Fiscal policies of nonrenewable resource exporters in Latin America and the Caribbean. *IMF*.
- Lustig, N., Morrison, J., and Ratzlaff, A. (2019). Splitting the Bill: Taxing and Spending to Close Ethnic and Racial Gaps in Latin America. *IDB*.

- Marcel, M., Guzmán, M., and Sanginés, M. (2014). Presupuestos para el desarrollo en América Latina. *IDB*.
- Martínez-Vasquez, J. (2021). Adapting Fiscal Decentralization Design to Combat Climate Change. *Climate Governance Papers. World Bank*. Washington, D.C.
- Martínez-Vázquez, J., and Sepulveda, C. F. (2011). Intergovernmental Transfers in Latin America: A Policy Reform Perspective. *International Studies Program, Andrew Young School of Policy Studies, Georgia State University*.
- Martínez-Vázquez, J., Muñoz Miranda, A., and Angarita, M. (2022). El sistema de las transferencias de capital en México: evaluación y propuestas de reforma. *IDB*.
- Mauro, P., and Villafuerte, M. (2013). Past fiscal adjustments: Lessons from failures and successes. *IMF Economic Review*, 61(2), 379-404.
- Mechler, R. (2016). Reviewing estimates of the economic efficiency of disaster risk management: opportunities and limitations of using risk-based cost-benefit analysis. *Natural Hazards*, 81(3), 2121-2147.
- Merrill, L. (2015). Tackling fossil fuel subsidies and climate change: Levelling the energy playing field. *Nordic Council of Ministers*.
- Messina, J., and Silva, J. (2017). Wage inequality in Latin America: Understanding the past to prepare for the future. *World Bank Publications*.
- Miyamoto, H., Gueorguiev, N., Honda, J., Baum, A., Walker, S., Schwartz, G., and Verdier, G. (2020). Growth Impact of Public Investment and the Role of Infrastructure Governance. *IMF*, Washington, D.C.
- Molnar, M. (2013). Fiscal consolidation: What factors determine the success of consolidation efforts? *OECD Journal: Economic Studies*, 2012(1), 123-149.
- Muinelo-Gallo, L., Kyriacou, A. P., and Roca-Sagalés, O. Hacia un sistema de transferencias gubernamentales ecualizadoras: El caso de Uruguay.
- Muñoz, A., Pineda, E., and Radics, A. (2017). Descentralización fiscal y disparidades regionales en América Latina: el potencial de las transferencias de igualación. *IDB Monograph (Institutions for Development Sector, Fiscal Management Division); IDB-MG-568*.
- Muñoz, A., Radics, G. A., and Bone, C. (2016). Subnational fiscal disparities and intergovernmental transfers in LAC. *Hacienda Pública Española*, (219), 35.
- Muralidharan, K., Niehaus, P. and Sukhtankar, S. 2021. General Equilibrium Effects of (Improving) Public Employment Programs: Experimental Evidence from India. NBER Working Paper 23838. DOI [10.3386/w23838](https://doi.org/10.3386/w23838).
- Musacchio, A., Ayerbe, E. I. P., and García, G. (2015). State-Owned Enterprise Reform in Latin America. *IDB*.
- Naritomi, J. (2019). Consumers as tax auditors. *American Economic Review*, 109(9), 3031-72.
- Neumark, D., and Shirley, P. (2020). The long-run effects of the earned income tax credit on women's labor market outcomes. *Labour Economics*, 66, 101878.

- Nordhaus, W. D. (2002). Modeling induced innovation in climate-change policy. *Technological change and the environment*, 9, 259-290.
- Nordhaus, W., and Boyer, J. (2000). *Warming the World: Economic Modeling of Global Warming*.
- OAS (Organization of American States), IDB, and RICG (Inter-American Network on Government Procurement) (2022). *Compras Públicas Sostenibles en América Latina y El Caribe. General Secretariat of the Organization of American States and IDB*.
- Odor, L., and Kiss, G. P. (2017). Lost in complexity: towards a decentralized and depoliticized fiscal framework in Europe. *Rethinking Fiscal Policy After the Crisis*, 189-231.
- OECD and World Bank. (2019). *Fiscal Resilience to Natural Disasters: Lessons from Country Experiences*. Paris.
- OECD, European Commission, and IMF. (2021). *Green Budgeting: Towards Common Principles. OECD, European Commission, and IMF*.
- OECD. (2012). *Recommendation of the council on principles for public governance of public-private partnerships*. Paris: OECD.
- OECD. (2013). *Co-operative compliance: a framework. From enhanced relationship to co-operative compliance. OECD*.
- OECD. (2014). *Addressing the tax challenges of the digital economy. OECD/G20 base erosion and profit shifting project*.
- OECD. (2016). *The Role of Public Procurement in Low-carbon Innovation, Background paper for the 33rd Round Table on Sustainable Development. Baron, R*.
- OECD. (2017). *The role of public debt managers in contingent liability management. Ülgentürk, L*.
- OECD. (2018). *Climate-resilient Infrastructure. OECD Environment Policy Paper No. 14*.
- OECD. (2019). *OECD Good Practices for Performance Budgeting. OECD Publishing, Paris*.
- OECD. (2020). *Government at a Glance: Latin America and the Caribbean 2020. OECD Publishing, Paris*.
- OECD. (2021a). *Building Resilience: New Strategies for Strengthening Infrastructure Resilience and Maintenance*
- OECD. (2021b). *Promoting gender equality through public procurement: Challenges and good practices. OECD Public Governance Policy Papers, No. 09. OECD Publishing, Paris*.
- OECD. (2021c). *Green Budget Tagging: Introductory Guidance and Principles*.
- Ohrn, E. (2019). The effect of tax incentives on US manufacturing: Evidence from state accelerated depreciation policies. *Journal of Public Economics*, 180, 104084.
- Okunogbe, O., and Poulighen, V. (2022). Technology, taxation, and corruption: evidence from the introduction of electronic tax filing. *American Economic Journal: Economic Policy*, 14(1), 341-72.

- Ossowski, R., and Halland, H. (2016). Fiscal management in resource-rich countries: essentials for economists, public finance professionals, and policy makers. *World Bank Publications*.
- Pérez, M. A. (2019). Enhancing Chile's Fiscal Framework: Lessons from Domestic and International Experience. *IMF*.
- Pessino, C. (2017). *Utilizando Big Data para construir un sistema de inteligencia fiscal para los gobiernos*. Recaudando bienestar. Available at: <https://blogs.iadb.org/gestion-fiscal/es/inteligencia-fiscal-para-los-gobiernos/>
- Pessino, C., Pineda, E., Rasteletti, A. and Alarcon V. (2021). *Ahora es el momento de impulsar la formalización laboral en América Latina y el Caribe*. Available at: <https://blogs.iadb.org/gestion-fiscal/es/formalizacion-laboral-en-america-latina-y-el-caribe/>
- Pessoa, M., Pimienta, C., Varea, M., Arosteguiberry, A., Yaker, I. F., de Albuquerque, C., and Rezai, N. (2015). Public Financial Management in Latin America: The Key to Efficiency and Transparency. *IDB*.
- Pimienta, C., and Seco, A. (2019). Technological Opportunities and Recommendations for Modernizing Integrated Financial Management Information Systems in Latin America and the Caribbean. DB-DP-651.
- Pimienta, C., and Seco, A. (2021). Los sistemas de pago de la nómina de personal en el sector público y la experiencia internacional. *Education*, 4, 3.
- Pineda, E., Pessino, C., Rasteletti, A. and Nicaretta, R. (2021). *¿Puede un impuesto a la riqueza reducir la desigualdad en América Latina y el Caribe?* Available at: <https://blogs.iadb.org/gestion-fiscal/es/puede-un-impuesto-a-la-riqueza-reducir-la-desigualdad-en-america-latina-y-el-caribe/>
- Pizarro, R., Delgado, R., Eguino, H., Pimienta, C. and Lopes, A. (2020). Marco Conceptual para la Clasificación del Gasto Público en Cambio Climático. *IDB*. Washington, D.C.
- Pomeranz, D. (2015). No Taxation without Information: Deterrence and Self-Enforcement in the Value Added Tax. *American Economic Review*, 105 (8): 2539-69. DOI: [10.1257/aer.20130393](https://doi.org/10.1257/aer.20130393)
- Pomeranz, D., and Vila-Belda, J. (2019). Taking state-capacity research to the field: Insights from collaborations with tax authorities. *Annual Review of Economics*, 11, 755-781.
- Porto, A. (2018). Transferencias intergubernamentales y disparidades fiscales a nivel subnacional en Argentina. *Discussion Paper IDB-DP-494*, IDB.
- Prats Cabrera, J. O., and Chiara, J. (2022). Debt Management Institutions in Latin America and the Caribbean: A Comparative Analysis. *IDB Discussion Paper*.
- Prats Cabrera, J. O., and Hinojosa, S. (2022). Gestión de Riesgos Contingentes en Proyectos de Asociación Público-Privada. *IDB Discussion Paper*.
- Ramey, V. A., and Zubairy, S. (2018). Government spending multipliers in good times and in bad: evidence from US historical data. *Journal of Political Economy*, 126(2), 850-901.
- Rasteletti, A., and Saravia, E. (2022). VAT Tax Expenditures and Evasion in Latin America. *IDB Mimeo*.



- Rasul, I. and Zubairy, S. (2018). Management of Bureaucrats and Public Service Delivery: Evidence from the Nigerian Civil Service. *The Economic Journal*, 128 (608): 413-446. <https://doi.org/10.1111/ecoj.12418>.
- Reyes-Tagle, G., and Garbacik, K. (2016). Policymakers' Decisions on Public-Private Partnership Use. *IDB Discussion Paper*.
- Rivetti, D. (2021). Debt Transparency in Developing Economies.
- Robinson, M. (2022). Results-Based Budgeting in Developing Countries: Stocktake and Future Directions. *IDB Mimeo*.
- Robles, M., Rubio, M. G., and Stampini, M. (2019). Have cash transfers succeeded in reaching the poor in Latin America and the Caribbean? *Development Policy Review*, 37, O85-O139.
- Rodriguez-Pueblita, J. C. R. (2017). Transferencias intergubernamentales y disparidades fiscales entre los estados en México.
- Schächtele, S., Eguino, H., and Roman, S. (2022). Improving taxpayer registration through nudging? Field experimental evidence from Brazil. *World Development*, 154, 105887.
- Schapper, P. R., Malta, J. N. V., and Gilbert, D. L. (2006). An analytical framework for the management and reform of public procurement. *Journal of Public Procurement*.
- Seco, A., and Muñoz, A. (2018). Panorama del uso de las tecnologías y soluciones digitales innovadoras en la política y la gestión fiscal. *IDB*, 22.
- Serebrisky, T., Suárez-Alemán, A., Brichetti, J. P., and Rivas, M. E. (2020). Chapter 1: Services: The Forgotten Side of Infrastructure. In E. Cavallo, A. Powell, and T. Serebrisky (Eds.), *From Structures to Services: The Path to Better Infrastructure in Latin America and the Caribbean*. IDB.
- Serebrisky, T., Suárez-Alemán, A., Brichetti, J. P., and Rivas, M. E. (2020). Chapter 2: Toward More—and More Efficient—Investment. In E. Cavallo, A. Powell, and T. Serebrisky (Eds.), *From Structures to Services: The Path to Better Infrastructure in Latin America and the Caribbean*. IDB.
- Serra, J., and Afonso, J. (2007). Fiscal federalism in Brazil: An overview. *CEPAL Review*, 91, 29-51.
- Singer, M., Konstantinidis, G., Roubik, E., and Beffermann, E. (2009). Does e-procurement save the state money? *Journal of Public Procurement*.
- Siqueira, M., Reyes-Tagle, G., Gómez, C. L., Park, Y., Heo, K. E., and Marquez, J. (2018). Bringing PPPs into the Sunlight: synergies now and pitfalls later? *IDB*.
- Smoke, P., Gómez Álvarez, D., Muñoz, A. and Radics, A. (2022). The Role of Subnational Governments in the Covid-19 Pandemic Response: Opportunities for Intergovernmental Fiscal Reform in the Post-Pandemic World? *IDB Discussion Paper*.
- Solano-Rodríguez, B., Pye, S., Li, P. H., Ekins, P., Manzano, O., and Vogt-Schilb, A. (2021). Implications of climate targets on oil production and fiscal revenues in Latin America and the Caribbean. *Energy and Climate Change*, 2, 100037.
- Stampini, M., Ibararán, P., Rivas, C. and Robles, M. (2021). Adaptive, but Not by Design: Cash Transfers in Latin America and the Caribbean Before, During and After the COVID-19 Pandemic. *IDB Technical Note 2346*.

- Stantcheva, S. (2021). Understanding tax policy: How do people reason? *The Quarterly Journal of Economics*, 136(4), 2309-2369.
- Stock, J. H. (2020). Climate change, climate policy, and economic growth. *NBER Macroeconomics Annual*, 34(1), 399-419.
- Suárez-Alemán, A., Castrosin, M. P., Fioravanti, R., Bonifaz, J. L., Chackiel, J. E., Debaeke, P., Leao Lima, C., Benozatti, E., Campos-Serna, M.E., Piantini Gil, S., Silva Zuniga, M., Valencia, A., Castillo Martínez, P., and Chansky, I. (2021). Planning and Prioritization in Infrastructure Development, and the Role of Public-Private-Partnerships: Seeking an Efficient Coordination of Investment, Budgeting and Financing Cycles in Latin America and the Caribbean. *IDB*.
- Ter-Minassian, T. (2017). Identifying and Mitigating Fiscal Risks from State-Owned Enterprises (SOEs). *IDB Discussion Paper*, (546).
- Uña, G., Pimenta, C. (2016). Integrated Financial Management Information Systems in Latin America: Strategic Aspects and Challenges. In M. Pessoa and C. Pimenta (Eds.), *Public Financial Management in Latin America: The Key to Efficiency and Transparency*.
- Valencia, O., and Ulloa, C. (2021). Numerical Compliance with Fiscal Rules in Latin American Countries. *IDB Mimeo*.
- Valencia, O., Angarita, M., Santaella, J., and De Castro, M. (2020). Do Immigrants Bring Fiscal Dividends? *IDB Working Paper 1170*.
- Valencia, O., Arellano, M., and Angarita, M. (2021) The New Fiscal Normal: Vaccinations, Debt, and Fiscal Adjustment in Emerging Economies.
- Valencia, O., Díaz, J., and Parra, D. (2022). Assessing Macro-Fiscal Risk for Latin American and the Caribbean Countries. *IDB Mimeo*.
- Valencia, O., Rodriguez, L., and Siachoque, J. (2021). Optimal Currency Composition in Emerging Economies. *IDB Mimeo*.
- Van Parys, and S., James, S. (2010). The effectiveness of tax incentives in attracting investment: panel data evidence from the CFA Franc zone. *International Tax and Public Finance* 17, 400–429. <https://doi.org/10.1007/s10797-010-9140-1>
- Vegh, C. A., and Vuletin, G. (2015). How is tax policy conducted over the business cycle? *American Economic Journal: Economic Policy*, 7(3), 327-70.
- Vegh, C. A., Vuletin, G., Riera-Crichton, D., Friedheim, D., Morano, L., and Camarena, J. A. (2018). Fiscal Adjustment in Latin America and the Caribbean. Washington, D.C.: *World Bank*.
- Velasco, A. (2000). Debts and deficits with fragmented fiscal policymaking. *Journal of Public Economics*, 76(1), 105-125.
- Wagner, R. (2017). Mechanism for Market Valuation of State-Owned Enterprises without Privatization. *IDB*.
- Winberry, T. (2021). Lumpy investment, business cycles, and stimulus policy. *American Economic Review*, 111(1), 364-96.
- Woo, J., Bova, M. E., Kinda, M. T., and Zhang, M. Y. S. (2013). Distributional consequences of fiscal consolidation and the role of fiscal policy: What do the data say? *IMF*.



- Yakovlev, A., Bashina, A., and Demidova, O. (2014). The Effectiveness of Simple Homogeneous Commodity Procurement Under Rigid Governmental Regulation: The Case of Granulated Sugar Procurement in Russia. *SSRN Scholarly Paper* ID-2397082. Rochester, NY: Social Science Research Network.
- Zaltsman, A. (2009). The effects of performance information on public resource allocations: A study of Chile's performance-based budgeting system. *International Public Management Journal*, 12(4), 450-483.
- Zwick, E., and Mahon, J. (2017). Tax policy and heterogeneous investment behavior. *American Economic Review*, 107(1), 217-48.